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## GOVERNMENT NOTICE GOEWERMENTSKENNISGEWING

### MINISTRY OF EDUCATION MINISTERIE VAN ONDERWYS

No. 788

6 June 1997

#### CALL FOR COMMENTS ON THE DRAFT STATEMENT ON THE NATIONAL CURRICULUM FOR GRADES 1-9

In August 1995 the Department of Education established, a Consultative Forum on the Curriculum (CFC) comprising representatives of the national and provincial education departments, as well as national stakeholders in education and training. To launch the process of curriculum restructuring, the CFC initiated, inter alia, an investigation which resulted in the report: *A Curriculum Framework for General and Further Education and Training*.

This document outlines the broad implications of the National Qualifications Framework (NQF) and an outcome-based approach for the different phases of the General and Further Education and Training Bands. All interested parties—individual and collective—were invited to respond to the document by March 1996. These responses were considered by the Curriculum Development Working Groups of the National Curriculum Development Committee (NCDC) and consensus were reached on an outcomes-based Lifelong Learning Development Framework of South Africa.

The curriculum development process was operationalised by instituting eight learning area committees (LACs) monitored by the NCDC. To ensure that the new learning programmes to be implemented in schools from 1998 comply with the outcomes-based approach of the NQF, the Department of Education decided to establish a Technical Committee to assist them in the development of such new learning frameworks and programmes for education up to the present Senior Certificate level.

The Department of Education called in the press, as well as in the *Government Gazette*, Vol. 379, No. 17724 of 10 January 1997 for nominations for members to serve on the Technical Committee to assist in the writing of standards and frameworks for learning programmes. This Technical Committee commenced with their task in February 1997 and completed it in March 1997 by issuing a draft document for further discussion.

Now, therefore, I, Sibusiso Mandlenkosi Emmanuel Bengu, Minister of Education, hereby in terms of section 3 (4) (l) of the National Education Policy Act, 1996 (No. 27 of 1996), request any person, society or organisation to submit to me, before **Monday, 14 July 1997**, comments on the aforementioned draft document.

*Comments should be forwarded to:*

The Director-General: Education  
(For the attention of Mrs M. Munday)  
Private Bag X895  
PRETORIA  
0001.

**S. M. E. BENGU**

**Minister of Education**

**No. 788**

**6 Junie 1997**

**OPROEP OM KOMMENTAAR OP DIE KONSEPVERKLARING VAN DIE NASIONALE KURRIKULUM VIR GRADE 1-9**

In Augustus 1995 het die Departement van Onderwys 'n Raadplegende Forum oor die Kurrikulum (RFK), bestaande uit verteenwoordigers van die nasionale en provinsiale onderwysdepartemente, asook nasionale belangegroepe in onderwys en opleiding gestig. Om die proses van kurrikulumherstruktuering bekend te stel, het die (RFK), onder andere, 'n ondersoek geïnisieer wat beslag gevind het in die verslag: *'n Kurrikulumraamwerk vir Algemene en Verdere Onderwys en Opleiding*.

Hierdie dokument verskaf 'n oorsig oor die breë implikasies van die Nasionale Kwalifikasiesraamwerk (NKR) en 'n uitkomsgebaseerde benadering vir die verskillende fases van die Algemene en Verdere Onderwys en Opleiding Afdelings. Alle belangstellendes—individueel of in groepsverband—is uitgenooi om op die dokument teen Maart 1996 te reageer. Hierdie reaksies is deur die Kurrikulumontwikkelingswerkgroepe van die Nasionale Kurrikulumontwikkelingskomitee (NKOK) oorweeg en konsensus is bereik oor 'n uitkomsgebaseerde Lewenslange Leerontwikkelingsraamwerk vir Suid-Afrika.

Die kurrikulumontwikkelingsproses is geoperasionaliseer deur die instelling van agt leerareakomitees (LAKs) wat deur die (NKOK) gemonitor is. Om te verseker dat die nuwe leerprogramme wat in 1998 in skole geïmplementeer word aan die uitkomsgebaseerde benadering van die NKR voldoen, het die Departement van Onderwys gevolglik besluit om 'n Tegnieese Komitee in te stel om hulle behulpsaam te wees met die ontwikkeling van sodanige leerprogramme en -programme vir onderwys tot en met die huidige Senior Sertifikaatvlak.

Die Departement van Onderwys het in die pers, asook in die *Staatskoerant*, Vol. 379, No. 17724 van 10 Januarie 1997, 'n oproep gemaak vir nominasies vir lede om op die Tegnieese Komitee te dien om bystand te verleen in die formulering van standaarde en raamwerke vir leerprogramme. Hierdie Tegnieese Komitee het in Februarie 1997 met hul taak begin en dit in Maart 1997 voltooi deur 'n konsep dokument vir verdere bespreking uit te reik.

Daarom versoek ek, Sibusiso Mandlenkosi Emmanuel Bengu, Minister van Onderwys, hiermee in terme van artikel 3 (4) (l) van die Wet op Nasionale Onderwysbeleid, 1996 (No. 27 van 1996), enige persoon, vereniging of organisasie om aan my voor **Maandag, 14 Julie 1997**, kommentaar op die voorgenoemde dokument voor te lê.

*Kommentaar moet gestuur word aan:*

Die Direkteur-generaal: Onderwys  
(Vir aandag: Mev. M. Munday)  
Privaatsak X895  
PRETORIA  
0001.

**S. M. E. BENGU**

**Minister van Onderwys**



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## 1. INTRODUCTION

The curriculum is at the heart of the education and training system. In the past the curriculum has perpetuated race, class, gender and ethnic divisions and has emphasised separateness, rather than common citizenship and nationhood. It is therefore imperative that the curriculum be restructured to reflect the values and principles of our new democratic society.

In view of the country's history and its legacy of inequality, it is important that the state's resources be deployed according to the principle of equity, so that they are used to provide essentially the same quality of learning opportunities for all citizens. The improvement of the quality of education and training services across the board is therefore essential.

The *National Curriculum Framework* (NQF) document, which is informed by principles derived from the White Paper on Education and Training (1995), emphasises the need for major changes in education and training in South Africa in order to normalise and transform teaching and learning. Emphasis is placed on the necessity for a shift from the traditional aims-and-objectives approach to outcomes-based education. This paradigm shift, the NQF document suggests, is a necessary prerequisite for the achievement of the following vision for South Africa:

*"A prosperous, truly united, democratic and internationally competitive country with literate, creative and critical citizens leading productive, self-fulfilled lives in a country free of violence, discrimination and prejudice."*

The purpose of this document is to serve as the basis for public discussion regarding the statement on the national curriculum. This statement is informed by the need to develop the norms and standards as determined by the National Education Policy Act, 1996 (No. 27 of 1996), which is the National Minister of Education's competency and includes the following:

Critical Cross-field Outcomes

Specific Outcomes

## INTRODUCTION

**Range Statement****Assessment Criteria**

This document should be viewed as an attempt to offer direction to the macro-level curriculum design process. The document provides a framework around which provinces and schools may build their learning programmes. It identifies important components of education for South African learners. It is descriptive rather than prescriptive. It does not provide a syllabus, and should not be used as such. The applications of such a statement are wide-ranging and may be used by all educationists and curriculum developers. It is intended that learning programmes will provide educators with the guidelines and detail necessary for curriculum development and application at school level.

The content of this discussion document will be reviewed and adapted in the light of the consultative process, as well as during its application in future curriculum development initiatives, e.g. the writing of learning programmes.

The Department of Education has committed itself to a fully participatory process of curriculum development and trialling, in which the teaching profession, teacher educators, subject advisors and other learning practitioners play a leading role, along with academic subject specialists and researchers.

The Department has further committed itself to an open and transparent process, with proposals and critique being requested from any person, parents or bodies with interest in the learning process and learning outcomes.

**2. POLICY BACKGROUND****2.1 Educational Focus****2.1.1 General Education and Training Band**

The General Education and Training band comprises:

- Foundation Phase
- Intermediate Phase
- Senior Phase



## INTRODUCTION

**Foundation Phase**

The development of curriculum policy for the foundation phase, which includes the Early Childhood Development (ECD) phase, has been based on the following national policy documents:

- *White Paper on Education and Training (March 1995)*
- *Interim Policy for Early Childhood Development*
- *Curriculum Framework Document.*

The *White Paper on Education and Training* (1995:33, par. 73) acknowledges that:

*"The care and development of young children must be the foundation of social relations and the starting point of human resources development strategies from community to national levels."*

ECD is defined as:

*"...an umbrella term which is applied to the processes by which children from birth to nine years grow and thrive, physically, mentally, emotionally, morally and socially." (Ibid. p. 33, par. 73)*

It is acknowledged that policy is ongoing and developmental. The overall goal of the curriculum is to provide children with opportunities to develop to their full potential as active, responsible and fulfilled citizens who can play a constructive role in a democratic, non-racist and equitable society. The development of the child in totality should lead to a balanced personality so that he/she may be equipped with the necessary life skills.

Some of the key principles guiding curriculum development for the ECD are:

- Integration
- Holistic development
- Relevance
- Participation and ownership

## INTRODUCTION

- Accountability and transparency
- Child-orientated approach
- Flexibility
- Critical and creative thinking
- Progression
- Anti-biased approach
- Inclusion of children with disabilities, out-of-school children and other children with special educational needs.

**Intermediate Phase**

In the Intermediate Phase (Grades 4 to 6), teaching and learning, while still highly contextualised and largely integrated (cross-curricular themes or topics), could begin to move in the direction of those individual areas of learning informing General and Further Education and Training. Learners in this phase are beginning to understand detailed relationships between materials, incidents, circumstances and people, and are able to infer the consequences of such relationships. This has significant implications for the selection of learning content and teaching and learning activities, which should develop these abilities to the full.

It is also important to note that peer acceptance is extremely important to learners in this phase. Group work, project work and peer assessment should, therefore, feature prominently in their learning.

**Senior Phase**

The Senior Phase (Grades 7 to 9) of the General Education and Training Band is the last phase of the General Education and Training Certificate. Learners are increasingly able to reason independently of concrete materials and experience. They are able to engage in open argument and are willing to accept multiple solutions to single problems. The learning content offered in this phase would, therefore, be less contextualised, more abstract and more area specific, than in the previous two phases.

At the same time there should be clear evidence that learners are being prepared for life after school, i.e. life in the world of work, at institutions for

## INTRODUCTION

further learning and for adult life in general. Learning programmes should create opportunities for learners to be informed about career and further learning opportunities, about ways and means of realising their expectations for the future, and about their rights and responsibilities as citizens in a democratic, multi-cultural society.

Because this phase concludes with national assessment and the possibility of obtaining national qualifications (the General Education and Training Certificate), there is a danger that the importance of attaining the unit standards required for this qualification becomes so important that it will have a negative effect on holistic teaching and learning in general, and the integration of education and training, theory and practice, and related areas of learning in particular.

Curriculum developers, formal providers and teachers need to ensure that integration, of subjects and of theory and practice, still takes place.

### **2.1.2 Further Education and Training**

Further Education and Training (FET) is made up of NQF levels two to four. This band will be non-compulsory. Various providers are involved in this band of education and training, such as:

- senior secondary schools
- technical colleges
- NGOs
- regional training centres
- private providers and private colleges
- private training centres
- private companies
- industry training centres
- community colleges.

At this level learners should be prepared for higher education, vocational education, careers and self-employment. Standards and curriculum on this band will have to be carefully co-ordinated, as the National Qualification Framework is based on the principle of integration of education and training, and the accumulation of credits across different institutions. These credits could consist



## INTRODUCTION

of core units and optional units in different combinations, undertaken in a variety of modes.

**2.1.3 Adult Basic Education and Training**

Adult Basic Education and Training comprises three benchmark levels below the General Education and Training Certificate. The ABET learning continuum therefore covers ABET Levels 1, 2, 3 and 4, with ABET Level 4 as equivalent to NQF Level 1 (GETC level).

The ABET sector has been engaged in a consultative standard-setting process for several years. The National Interim Guidelines document (Department of Education, ABET Directorate, August 1995) put forward outcomes for Language and Numeracy at ABET Levels 1-4 in order to provide transitional guidance for the ABET field. SAQA has agreed that there should be Unit Standards for ABET below GETC level, although this is not the case for formal schooling. Unit Standards for language and numeracy are currently being written on the basis of the outcomes in the National Interim Guidelines, taking into account work done by the Department of Education's Learning Area Committees in these two areas. Processes for developing unit standards at ABET Levels 1 - 3 in other learning areas are under way.

These unit standards will provide a pathway which will enable adult learners to achieve a GETC. While unit standards from the eight learning areas at GETC level will be the same for the ABET sector, as for schooling, rules of combination for qualifications for adults need to be flexible. Adult learners may well make up a GETC with unit standards which are taken from fields of learning other than the eight learning area for schools. Issues regarding rules of combination for qualifications on GETC and beyond, and the relationships between unit standards taken from the twelve fields put forward by SAQA, are still under debate.

**2.1.4 Education for Learners with Special Education Needs (ELSEN)**

The highly academic nature and simplistic approach to assessment, forced schools which provided ELSEN to adapt the previous curriculum to make it more

## INTRODUCTION

"learner friendly" and skills oriented. Thus a parallel 'lower academic level' system developed.

The new outcomes-based approach has taken the requirements of learners with special education needs (ELSEN) into account in the process of developing learning programme guidelines. For learners who experience problems with the basic functions of reading, spelling, writing and calculations, alternative means of assessing will be provided to evaluate their true potential and level of knowledge. The focus on demonstrations and alternative assessment methods, varying from complete exemption from all reading or writing inputs, to partial exemption by using tape recorders, amanuensis, etc., bears testimony to this paradigm shift.

The gifted learner has not been neglected either. The individualistic nature of OBE, where each learner will be working at his/her own pace, will enable the learner to accelerate through the curriculum. Each province, however, will determine its own policy whether acceleration or enrichment or both will form the basis of education for the gifted.

### **2.1.5 The Eight Learning Areas**

The document refers to the eight Learning Areas adopted by SAQA. These are:

- Language, Literacy and Communication
- Human and Social Sciences
- Technology
- Mathematical Literacy, Mathematics and Mathematical Sciences
- Natural Sciences
- Arts and Culture
- Economics and Management Science
- Life Orientation.

## INTRODUCTION

## PROPOSED STRUCTURE FOR AN NQF

NQF LEVEL	Band	Types of Qualifications and Certificates	
8	Higher Education and Training Band	Doctorates Further Research Degrees	
7		Higher Degrees Professional Qualifications	
6		First Degrees Higher Diplomas	
5		Diplomas, Occupational Certificates	
Further Education and Training Certificates			
4	Further Education and Training Band	School/College/Training Certificates Mix of units from all (NGOs)	
3		School/College/Training Certificates Mix of units from all (NGOs)	
2		School/College/Training Certificates Mix of units from all (NGOs)	
1 = General Education and Training Certificates = 4			
	General Education and Training Band	Senior Phase	ABET Level 4
		Intermediate Phase	ABET Level 3
		Foundation Phase	ABET Level 2
		Pre-school	ABET Level 1



## INTRODUCTION

**3. CURRICULUM FRAMEWORK: EXPLANATIONS OF TERMS**

The overall structure of the curriculum process is outlined in Annexure A on page 11.

**3.1 Critical Outcomes**

The critical outcomes which form the backdrop to this document are the broad, generic cross-curricular outcomes which underpin the Constitution and which are adopted by SAQA. These outcomes will ensure that learners gain the skills, knowledge and values that will allow them to contribute to their own success as well as to the success of their family, community and the nation as a whole. There are seven critical outcomes proposed by SAQA with an additional five outcomes which support development.

SAQA has proposed the following outcomes:

Learners will:

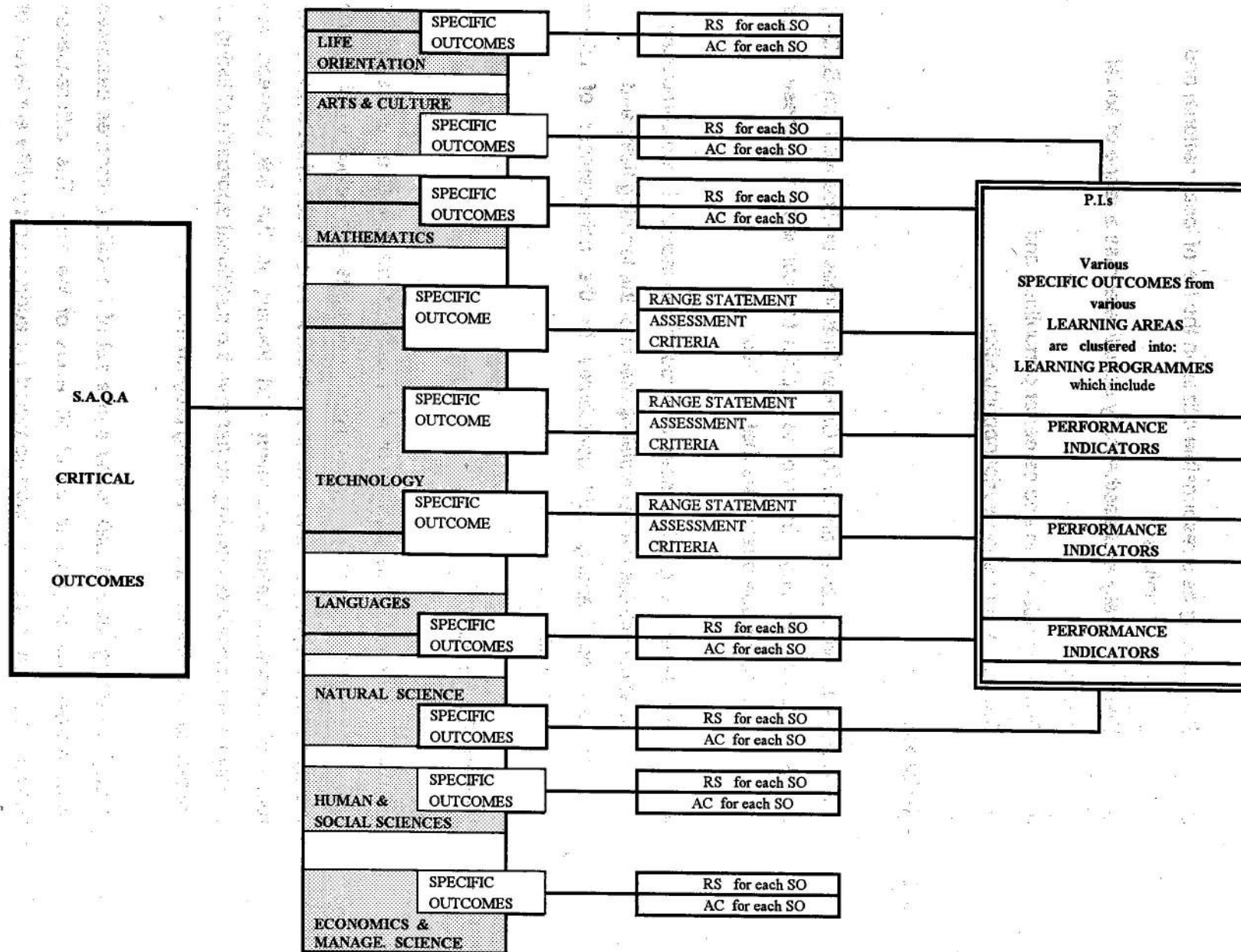
1. Identify and solve problems and make decisions using critical and creative thinking
2. Work effectively with others as members of a team, group, organisation and community
3. Organise and manage themselves and their activities responsibly and effectively
4. Collect, analyse, organise and critically evaluate information
5. Communicate effectively using visual, symbolic, and/or language skills in various modes
6. Use science and technology effectively and critically showing responsibility towards the environments and the health of others
7. Demonstrate an understanding of the world as a set of related systems by recognising that problem solving contexts do not exist in isolation.

In order to contribute to the full personal development of each learner, and social and economic development at large, it must be the intention underlying any programme of learning to make an individual aware of the importance of :

1. Reflecting on and exploring a variety of strategies to learn more effectively

# 8 LEARNING AREAS

Each specific outcome is expanded into Assessment Criteria and Range Statements. These are further expanded into Performance Indicators.



## INTRODUCTION

2. Participating as a responsible citizen in the life of local, national and global communities
3. Being culturally and aesthetically sensitive across a range of social contexts
4. Exploring education and career opportunities, and
5. Developing entrepreneurial opportunities.

### 3.2 Rationale

The eight learning areas relate to the Critical Outcomes and derive from SAQA's thirteen fields of learning. In order to explain the connection to these, it has been decided to include a rationale that clarifies:

- why the learning field is seen as important to include in the curriculum;
- what constitutes the essential elements of the learning field; and
- how the learning field contributes to the achievement of critical outcomes.

### 3.3 Specific Outcomes

Outcomes refer to the specification of what learners are able to do at the end of a learning experience. This includes skills, knowledge and values which inform the demonstration of the achievement of an outcome or a set of outcomes. The focus of outcomes-based education and training is the link between the intentions and results of learning, rather than the traditional approach of listing of content to be covered within a learning programme.

In each Learning Area, it was found that a set of Specific Outcomes describes what learners will be able to do at all levels of learning. The differentiation between different phases of learning would be addressed by different levels of complexity in the processes learners engage in and in the kinds of evidence through which learners demonstrate outcomes.

It will be left to learning programme designers to select and cluster certain outcomes for inclusion in learning programmes.



## INTRODUCTION

Certain specific outcomes are followed by explanatory notes. These notes are included to assist the reader to understand the purpose and intention of the outcome. The explanatory notes do not have any other status or function than to clarify the outcome.

### 3.4 Assessment Criteria

The assessment criteria provide evidence that the learner has achieved the specific outcome. The criteria indicate, in broad terms, the observable processes and products of learning which serve as culminating demonstrations of the learner's achievement. The assessment criteria are derived directly from the specific outcome and form a logical set of statements of what achievement could or should look like. To the extent that specific outcomes take the form of statements *that "Learners will..."* (verb + noun) the assessment criteria generally indicate that learners have achieved the point where *"nouns are passive" verb + qualifier*.

The assessment criteria are broadly stated and so do not themselves provide sufficient details of exactly what and how much learning marks an acceptable level of achievement of the outcome. For this reason the assessment criteria are explained and detailed in the range statement. The assessment criteria provide a framework for assessment, while the range statement fleshes out the substance of what assessment will be applied to.

### 3.5 Range Statements

Range statements indicate the scope, depth, level of complexity and parameters of the achievement. They include indications of the critical areas of content, processes and context which the learner should engage with in order to reach an acceptable level of achievement. While the range indicates the areas of content, product and process, it does not restrict learning to specific lists of knowledge items or activities which learners can work through mechanically. The range statements provide direction but allows for multiple learning

## INTRODUCTION

strategies, for flexibility in the choice of specific content and process and for a variety of assessment methods.

The range statement describes the level of complexity and the extent of rigour that learners are expected to master. While it is possible that the assessment criteria for an outcome may read the same for different phases and grades, they will be differentiated in the range statement through the descriptions of progressively increasing complexity and sophistication as learners progress to higher grades.

The range statement is an expansion and explanation of the critical terms and categories of the assessment criteria. The salient nouns and verbs of the assessment criteria are described in sufficient detail to assist in the planning of learning programmes and assessment strategies.

The range statements have the additional function of ensuring that balance is maintained between the acquisition of both knowledge and skills and the development of values.

The range statement should also describe the broad contexts of learning. It should provide broad indications that guide the choice of a range of methodologies and teaching and learning strategies that will support achievement of outcomes.

### 3.6 Performance Indicators

The Assessment Criteria and the Range statement give only broad indications of what evidence learners need to present before they are seen as having achieved the specific outcome. There is therefore a need to provide much more detailed information about what learners should know and be able to do in order to show achievement. We also need to ensure that learners have formed opinions and assumed values through their learning. Because the outcome is the culmination of the learning process there is a need to provide learners with indicators by which they can plan and measure their progress towards the achievement of the outcome.

## INTRODUCTION

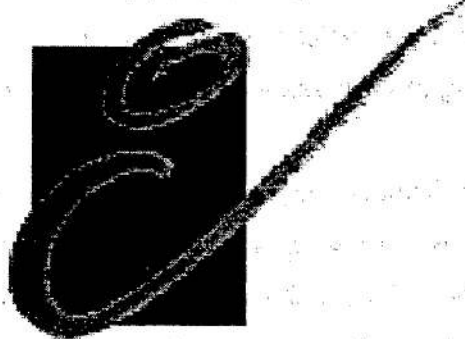
Performance indicators provide the details of the content and processes that learners should master, as well as details of the learning contexts in which the learner will be engaged. This will provide practitioners and learners with a breakdown of the essential stages to be reached in the process of achieving the outcome. Performance indicators will help in the planning of the learning process, the tracking of progress and the diagnosing of problems.

The performance indicators will show the level of achievement that the learner finally achieves. It will allow assessment of whether the learner has achieved the outcome or not. They will also allow statements to be made about the quality of achievement, that is, whether the achievement is at the level required or whether the learner has surpassed this level.

### 3.7 Learning Programmes

Learning programmes are the vehicles through which the curriculum is implemented at the various sites of learning, such as schools. They are the sets of learning activities in which the learner will be involved while working towards the achievement of one or more specific outcomes. These are being developed on an inter-provincial basis, and it is these learning programmes which will eventually be taken up as provincial curriculum statements.

## DISCUSSION DOCUMENT



# **DRAFT STATEMENT ON THE NATIONAL CURRICULUM FOR GRADES 1 - 9**

**APRIL 1997**

**DEPARTMENT OF EDUCATION**





# **LANGUAGE, LITERACY AND COMMUNICATION**

## LANGUAGES, LITERACY AND COMMUNICATION

**1. RATIONALE**

Language, literacy and communication are intrinsic to human development and central to lifelong learning.

Language (including Sign Language, and alternative and augmentative methods of communication) and language learning empower people to:

- make meaning;
- negotiate meaning and understanding;
- access education;
- access information and literacies;
- think and express their thoughts and emotions logically, critically and creatively;
- respond with empathy to the thoughts and emotions of others;
- interact and participate socially, politically, economically, culturally and spiritually;
- understand the relationship between language and power, and influence relationships through this understanding;
- develop and reflect critically on values and attitudes;
- communicate in different contexts by using a range of registers and language varieties; and
- use standard forms of language where appropriate.

The advancement of multi-lingualism as a major resource affords learners the opportunity to develop and value:

- their home languages, cultures and literacies;
- other languages, cultures and literacies in our multi-cultural country and in international contexts; and
- a shared understanding of a common South African culture.

## LANGUAGES, LITERACY AND COMMUNICATION

**2. SPECIFIC OUTCOMES**

The outcomes for this learning area are:

**Outcome 1: Learners make and negotiate meaning and understanding.**

**Outcome 2: Learners show critical awareness of language usage.**

**Outcome 3: Learners respond to the aesthetic, affective, cultural and social values in texts.**

**Outcome 4: Learners access, process and use information from a variety of sources and situations.**

**Outcome 5: Learners understand, know and apply language structures and conventions in context.**

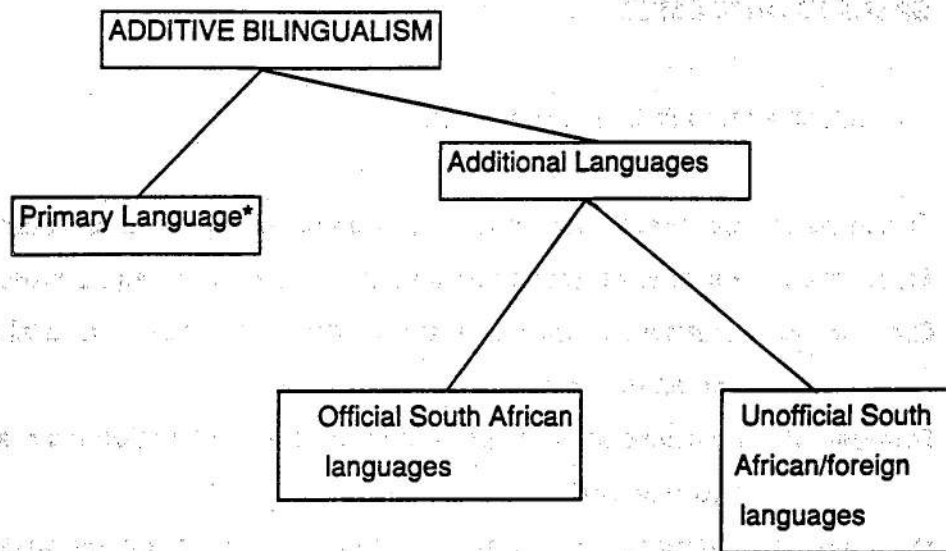
**Outcome 6: Learners use language for learning.**

**Outcome 7: Learners use appropriate communication strategies for specific purposes and situations.**

**3. EXPLANATORY NOTES****3.1 BACKGROUND**

The outcomes for this learning area should be seen in relation to the Constitution of the Republic of South Africa (1996), the South African Schools Act (1996) and all related language policy and guideline documents. The Constitution advocates a policy of multi-lingualism. The proposed Language in Education Policy subscribes to the additive bilingualism model.

## LANGUAGES, LITERACY AND COMMUNICATION



\*This is the first language a child acquires, which is sustained in a model of additive bilingualism.

### 3.2 Definition of Text

The term "text" refers to a unit of spoken, written, or visual communication, including Sign Language, and alternative and augmentative methods of communication.

*Spoken texts* include conversations, speeches and songs, etc.

*Written texts* include poetry, drama, novels, letters, magazine and newspaper articles and scripts, etc.

*Visual texts* include posters, cartoons, advertisements, environmental print (e.g. road signs, signs on electronic equipment, icons), maps, diagrams, and charts, etc.

Texts should always be interpreted within a context or contexts. Contexts could include:

- *linguistic context*: the words or sentences surrounding any piece of written (or spoken) text;
- *extralinguistic context (context of situation)*: the whole situation in which an utterance is made, taking into consideration, for example, the backgrounds of speakers, writers, listeners, and readers.

### 3.3 Literacy and literacies

**Literacy:** Initially "literacy" was seen as a cognitive process that enables reading, writing, and numeracy.

**Literacies:** Currently the use of the term "literacy" has expanded to include several kinds of literacies. "Literacies" stresses the issue of access to the world and to knowledge through development of multiple capacities within all of us to make sense of our worlds through whatever means we have, not only texts and books.

*Examples of kinds of literacies:*

- Cultural literacy - Cultural, social and ideological values that shape our "reading" of texts.
- Critical literacy - The ability to respond critically to the intentions, contents and possible effects of messages and texts on the reader.
- Visual literacy - The interpretation of images, signs, pictures and non-verbal (body) language, etc.
- Media literacy - The "reading" of e.g. TV and film as cultural messages.
- Computer literacy - The ability to use and access information from computers.

### 3.4 Language across the Curriculum

The outcomes in this learning area emphasise that language is not an end in itself. Language is a means to acting in the world in order to establish relationships, to engage with others in reciprocal exchange, to integrate new knowledge into existing knowledge, to obtain and convey ideas and information.

Competence in the language of learning and teaching (LoLT) is crucial for academic mastery across the curriculum. The learner's development of terminology and language relevant to the field of learning is the responsibility of the subject teachers in co-operation with language teachers.



### 3.5 Outcomes

The language outcomes are directed at an 'ideal language user' in that they relate to all languages and all levels of language learning.

The multi-dimensional and dynamic nature of language can hardly be expressed in a set of linear statements as found in the rationale, outcomes and assessment criteria. Different language outcomes tend to overlap. The function of an outcome is to **emphasise** a certain feature of language activity. This feature will often be exemplified in the context of an integrated set of language activities. An outcome and its associated assessment criteria and range statements should therefore not be viewed in isolation.

Learning programme designers could **select and cluster** certain outcomes as the main focus of a learning programme in order to meet the needs of a specific group of learners (e.g. for a phase, or for main, additional or foreign language learning).

### 3.6 Outcomes and Skills

The seven outcomes are achieved through the integrated use of listening, speaking, reading, and writing skills.

### 3.7 The Development of Differentiated Learning Programmes

The next step in curriculum development will be the development of learning programmes from:

- A. Specific Outcomes
- B. Assessment Criteria related to Specific Outcomes
- C. Range Statements
- D. Listening, Speaking, Reading and Writing Skills underpinning all outcomes
- E. Performance Indicators.

A, B, C and D apply equally to all learning programmes, whereas E creates a basis for differentiation. A variety of learning programmes will be developed to cater for learners' different needs. Differentiation between main and additional language learning

## LANGUAGES, LITERACY AND COMMUNICATION

programmes, for example, is achieved through the performance indicators. The table below suggests a mechanism to attain differentiation. Therefore, while all specific outcomes are achieved by all learners, the nature of achievement in main language learning programmes will differ from that in additional language learning programmes.

Skills	Foundation Phase	Intermediate Phase	Senior Phase	FET
<b>LISTENING</b>	<u>Main:</u>	<u>Main:</u>	<u>Main:</u>	<u>Main:</u>
	<u>Additional:</u>	<u>Additional:</u>	<u>Additional:</u>	<u>Additional:</u>
<b>SPEAKING</b>	<u>Main:</u>	<u>Main:</u>	<u>Main:</u>	<u>Main:</u>
	<u>Additional:</u>	<u>Additional:</u>	<u>Additional:</u>	<u>Additional:</u>
<b>READING</b>	<u>Main:</u>	<u>Main:</u>	<u>Main:</u>	<u>Main:</u>
	<u>Additional:</u>	<u>Additional:</u>	<u>Additional:</u>	<u>Additional:</u>
<b>WRITING</b>	<u>Main:</u>	<u>Main:</u>	<u>Main:</u>	<u>Main:</u>
	<u>Additional:</u>	<u>Additional:</u>	<u>Additional:</u>	<u>Additional:</u>

Different skills could be assessed to provide evidence of the achievement of outcomes. Learners with special education needs (LSEN) should be afforded the opportunity to demonstrate evidence through appropriate alternative skills or methods of communication where and when necessary.

### 3.8 Skills-related Assessment Criteria

It was felt that criteria for the assessment of written or spoken evidence, and for the assessment of the receptive skills of reading and listening, could be useful to Learning Programme developers. To this end generic grids of Skills-related Assessment Criteria are included. These go across all the outcomes, to be applied where appropriate to the evidence. See Annexure A.

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**1. Learners make and negotiate meaning and understanding.**

Meaning is central to communication. This specific outcome aims at the development of a learner's ability to understand, create and negotiate meaning in various contexts by using appropriate communication strategies and by using listening, speaking, reading and writing skills. These strategies and skills are developed and refined by constantly being exposed to a variety of situations which afford language users opportunities to interact in different ways.

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
<b>S</b>	<ol style="list-style-type: none"> <li>1. Original meaning is created through personal texts.</li> <li>2. A key message is identified and clarified.</li> <li>3. Inferences are made from texts.</li> <li>4. Meaning is constructed through interaction with other language users.</li> <li>5. Ways in which construction of meaning varies according to cultural, social and personal differences are identified.</li> <li>6. Ways in which context affects meaning and understanding are identified.</li> <li>7. Writer's/speaker's point of view is critically reflected on.</li> <li>8. Reasoned arguments about interpretation and meaning are developed.</li> <li>9. Discourse is sustained.</li> </ol>	At this level learners create a wide range of texts of different kinds. Learners also interact with and respond to a wide range of texts. Interaction with other language users takes place with a wide range of audiences from both familiar and unfamiliar contexts.
<b>I</b>	<ol style="list-style-type: none"> <li>1. Original meaning is created through personal texts.</li> <li>2. A key message is identified and clarified.</li> <li>3. Inferences are made from texts.</li> <li>4. Meaning is constructed through interaction with other language users.</li> <li>5. Ways in which construction of meaning varies according to cultural, social and personal differences are identified.</li> <li>6. Ways in which context affects meaning and understanding are identified.</li> <li>7. Writer's/speaker's point of view is critically reflected on.</li> <li>8. Reasoned arguments about interpretation and meaning are developed.</li> <li>9. Discourse is sustained.</li> </ol>	At this level learners create a wide range of texts of different kinds with some guidance. Learners also interact with and respond to a wide range of texts. Interaction with other language users takes place with a wide range of audiences from both familiar and unfamiliar contexts.

## LANGUAGES, LITERACY AND COMMUNICATION

<b>F</b>	<ol style="list-style-type: none"> <li>1. Original meaning is created through personal texts.</li> <li>2. A key message is identified and clarified.</li> <li>3. Meaning is constructed through interaction with other language users.</li> <li>4. Ways in which construction of meaning varies according to cultural, social and personal differences are identified.</li> <li>5. Ways in which context affects meaning and understanding are identified.</li> <li>6. Writer's/speaker's point of view is reflected on.</li> <li>7. Interpretation and meaning are discussed.</li> <li>8. Discourse is sustained.</li> </ol>	<p>At this level learners are guided to create a wide range of texts. Learners also interact with and respond to a wide range of texts. Interaction with other language users takes place with the emphasis on audiences from immediate and familiar contexts.</p>
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## LANGUAGES, LITERACY AND COMMUNICATION

**2. Learners show critical awareness of language usage.**

This specific outcome aims to develop a learner's understanding of the way in which language is used as a powerful instrument to reflect, shape and manipulate people's beliefs, actions and relationships. The complexity and sensitivity of a multi-lingual context specifically requires the development of a learner's skills to interpret and consciously reflect on language usage. For this reason the development of the decoding skills (reading and listening) is emphasised.

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENTS
<b>S</b>	<ol style="list-style-type: none"> <li>1. Purpose, audience, and source of texts are identified and analysed.</li> <li>2. Ways in which language is used to transmit and shape socio-cultural ideas and values are explained.</li> <li>3. Awareness of the power relations between different languages and between varieties of the same language is demonstrated by suitable responses.</li> <li>4. Awareness of how language changes over time and place is demonstrated.</li> <li>5. The manipulative uses of language and text are identified, analysed and responded to effectively.</li> <li>6. Visual and other non-verbal features of texts are identified and analysed.</li> <li>7. Ideologically driven and biased language is identified, analysed and responded to effectively.</li> <li>8. Biased attitudes towards languages and language varieties are explained, challenged and responded to.</li> </ol>	<p>At this level, learners engage with a wide range of texts, forms of discourse and a variety of contexts. These include texts created by learners themselves.</p> <p>The complexity of texts relates both to level of discourse and range of text types.</p> <p>Language as a social construct is discussed and analysed with emphasis on contexts such as:</p> <ul style="list-style-type: none"> <li>• civil society</li> <li>• literary contexts</li> <li>• media contexts</li> <li>• gender and race contexts</li> <li>• historical, social and political contexts</li> <li>• institutional contexts</li> <li>• personal relations and interpersonal relations</li> </ul>



## LANGUAGES, LITERACY AND COMMUNICATION

I	<ol style="list-style-type: none"> <li>1. Purpose, audience, and source of texts are identified.</li> <li>2. Ways in which language is used to transmit and shape socio-cultural ideas and values are explained.</li> <li>3. The relations between languages and language varieties are recognised.</li> <li>4. Awareness of how language changes over time and place is demonstrated.</li> <li>5. The manipulative uses of language and text are identified and analysed.</li> <li>6. Visual and other non-verbal features of texts are identified and analysed.</li> <li>7. Ideologically driven and biased language is identified, analysed and responded to effectively.</li> <li>8. Biased attitudes towards languages and language varieties are explained, challenged and responded to.</li> </ol>	<p>At this level, learners engage with an appropriate range of texts and contexts.</p> <p>Language as a social construct is discussed and analysed with emphasis on contexts such as:</p> <ul style="list-style-type: none"> <li>• community life</li> <li>• literary contexts</li> <li>• media contexts</li> <li>• gender and race contexts</li> <li>• historical and social contexts</li> <li>• institutional contexts</li> <li>• personal relations and interpersonal relations</li> </ul>
F	<ol style="list-style-type: none"> <li>1. Purpose, audience, and source of texts are identified.</li> <li>2. Ways in which language is used to transmit and shape socio-cultural ideas and values are explained.</li> <li>3. Awareness of how language changes over time and place is demonstrated.</li> <li>4. The manipulative uses of language and text are identified, analysed and responded to.</li> <li>5. Visual and other non-verbal features of texts are identified and analysed.</li> <li>6. Language reflecting bias is identified and responded to effectively.</li> <li>7. Biased attitudes towards languages and language varieties are explained, challenged and responded to.</li> </ol>	<p>At this level, learners engage with appropriate texts and contexts.</p> <p>Language as a social construct is discussed with emphasis on contexts such as:</p> <ul style="list-style-type: none"> <li>• community life</li> <li>• literary contexts</li> <li>• media contexts</li> <li>• gender and race contexts</li> <li>• school life and interpersonal relations</li> <li>• personal and interpersonal relations</li> </ul>

## LANGUAGES, LITERACY AND COMMUNICATION

**3. Learners respond to the aesthetic, affective, cultural and social values in texts.**

The aim of this outcome is to develop a learner's appreciation, use and creation of text as an artistic expression of thoughts, feelings, attitudes and values through exposure to a wide variety of genres. The development of learners' listening, reading and viewing skills to recognise and use literary devices enriches the quality of their own language use and lives.

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
<b>S</b>	<ol style="list-style-type: none"> <li>Responses to the artistic effects of texts are demonstrated.</li> <li>Literary effects of texts are identified, analysed and described.</li> <li>Opinions on texts are given and justified.</li> <li>Opinions are reviewed in relation to the opinions of others.</li> <li>Texts are critically evaluated.</li> <li>Response to text is linked to personal life and the lives of others.</li> </ol>	<p>At this level, learners engage with a wide range of texts in a variety of contexts.</p> <p>The emphasis in terms of content is on:</p> <ul style="list-style-type: none"> <li>the expression of stylistic devices (e.g. extended metaphor) in all kinds of texts.</li> <li>the study of literary, visual, auditory and multi media texts.</li> </ul> <p>The emphasis in terms of process is on the enriching effect of texts in relation to :</p> <ul style="list-style-type: none"> <li>knowledge (e.g. related to history, social conditions, human experiences, human rights)</li> <li>aesthetics (e.g. appreciation of the artistic elements)</li> <li>relationships (e.g. social sensibility, power relations)</li> <li>emotions (e.g. sympathy, empathy, identification, rejection)</li> </ul>
<b>I</b>	<ol style="list-style-type: none"> <li>Responses to the artistic effects of texts are demonstrated.</li> <li>Literary effects of texts are recognised and described.</li> <li>Response to text is linked to personal life and the lives of others.</li> <li>Opinions on texts are given and justified.</li> <li>Opinions are reviewed in relation to the opinions of others.</li> <li>Texts are critically evaluated.</li> </ol>	<p>At this level learners engage with a range of appropriate texts in different contexts.</p> <p>The emphasis is on :</p> <ul style="list-style-type: none"> <li>the expression of stylistic devices (e.g. personification, onomatopoeia) in all kinds of texts.</li> <li>responding to literary, visual, auditory and multi media texts.</li> </ul>

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		<p>The emphasis in terms of process is on the enriching effect of texts in relation to :</p> <ul style="list-style-type: none"> <li>• emotions (e.g. sympathy, empathy, identification, rejection)</li> <li>• knowledge (e.g. related to history, social conditions, human experiences, human rights)</li> <li>• relationships (e.g. social sensibility, power relations)</li> <li>• aesthetics (e.g. appreciation of the artistic elements)</li> </ul>
<b>F</b>	<ol style="list-style-type: none"> <li>1. Responses to the artistic effects of texts are demonstrated.</li> <li>2. Literary effects of texts are recognised.</li> <li>3. Response to text is linked to personal life.</li> <li>4. Opinions on texts are given.</li> <li>5. Opinions are reviewed in relation to the opinions of others.</li> <li>6. Texts are critically evaluated.</li> </ol>	<p>At this level learners engage with a range of appropriate texts in different contexts.</p> <p>The emphasis is on :</p> <ul style="list-style-type: none"> <li>• the expression of stylistic devices (e.g. rhyme, repetition, alliteration) in all kinds of texts.</li> <li>• responding to literary, visual, auditory and multi media texts.</li> </ul> <p>The emphasis in terms of process is on the enriching effect of texts in relation to :</p> <ul style="list-style-type: none"> <li>• emotions (e.g. sympathy, empathy, identification, rejection)</li> <li>• knowledge (e.g. related to history, social conditions, human experiences, human rights)</li> <li>• relationships (e.g. social sensibility, power relations)</li> <li>• aesthetics (e.g. appreciation of the artistic elements)</li> </ul>

## LANGUAGES, LITERACY AND COMMUNICATION

**4. Learners access, process and use information from a variety of sources and situations.**

This specific outcome aims to develop the capacity of learners to function fully in modern society by finding, evaluating and using information. The development of information skills is indispensable for the attainment of quality lifelong learning.

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
<b>S</b>	<ol style="list-style-type: none"> <li>1. The information need is defined.</li> <li>2. The aim of the information search is defined.</li> <li>3. Information is located, accessed and selected.</li> <li>4. The accuracy and relevance of the information is evaluated.</li> <li>5. The reliability of the information source is ascertained.</li> <li>6. Organisational skills are applied.</li> <li>7. The difference between fact, fiction and bias is identified.</li> <li>8. Reasoned arguments are developed in the course of applying information.</li> <li>9. The results of the information search and processing are presented.</li> <li>10. The relevance of the information search is evaluated by the learner(s).</li> <li>11. Awareness of the value of informed decision-making is demonstrated.</li> <li>12. The ability to integrate new information into existing knowledge is shown.</li> <li>13. The ability to apply the newly acquired knowledge to real-life situations is demonstrated.</li> </ol>	<p>At this level information is obtained from a variety of sources: e.g. factual articles, reports, magazines, manuals, journals, cartoons, books, the media, reference material (e.g. catalogues, glossaries, dictionaries), Internet, and graphic material. Information can also be accessed from others, for example through interviews.</p> <p>The information obtained is presented in accordance with the requirements of the different formats of presentation (e.g. essay, poster, drawing, speech, electronic message, written paper, model).</p> <p>The emphasis is on the production of integrated projects, expository texts (non-fiction writing), non-verbal conveyors of information (e.g. symbols, signs, graphs, illustrations) and structured debates. These should show selection, assimilation and comparison of information.</p> <p>Evidence of the use of resource centres, libraries or resource boxes should also be shown.</p>
<b>I</b>	<ol style="list-style-type: none"> <li>1. The information need is defined.</li> <li>2. The aim of the information search is defined.</li> <li>3. Information is located, accessed and selected.</li> <li>4. The accuracy and relevance of the information is evaluated.</li> <li>5. The reliability of the information source is ascertained.</li> <li>6. Organisational skills are applied.</li> <li>7. The difference between fact,</li> </ol>	<p>At this level information is obtained from a variety of sources: e.g. factual articles, reports, magazines, manuals, cartoons, books, the media, reference material (e.g., content pages, atlases, dictionaries), Internet, and graphic material. Information can also be accessed from others, for example through interviews.</p>

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	<p>fiction and bias is identified.</p> <p>8. Reasoned arguments are developed in the course of applying information.</p> <p>9. The results of the information search and processing are presented.</p> <p>10. The relevance of the information search is evaluated by the learner(s).</p> <p>11. Awareness of the value of informed decision-making is demonstrated.</p> <p>12. The ability to integrate new information into existing knowledge is shown.</p> <p>13. The ability to apply the newly acquired knowledge to real-life situations is demonstrated.</p>	<p>The information obtained is presented in accordance with the requirements of the different formats of presentation (e.g. essay, poster, drawing, speech, electronic message, written paper, model).</p> <p>The emphasis is on the production of integrated projects, showing selection, assimilation and comparison of information.</p> <p>Evidence of the use of resource centres, libraries or resource boxes should also be shown.</p>
<b>F</b>	<p>1. The information need is defined.</p> <p>2. The aim of the information search is defined.</p> <p>3. Information is located, accessed and selected.</p> <p>4. The accuracy and relevance of the information is evaluated.</p> <p>5. The reliability of the information source is ascertained.</p> <p>6. Organisational skills are applied.</p> <p>7. The difference between fact, fiction and bias is identified.</p> <p>8. Reasoned arguments are developed in the course of applying information.</p> <p>9. The results of the information search and processing are presented.</p> <p>10. The relevance of the information search is evaluated by the learner(s).</p> <p>11. Awareness of the value of informed decision-making is demonstrated.</p> <p>12. The ability to integrate new information into existing knowledge is shown.</p> <p>13. The ability to apply the newly acquired knowledge to real-life situations is demonstrated.</p>	<p>At this level learners are assisted to obtain information from a variety of sources: e.g. factual articles, reports, magazines, manuals, cartoons, books, the media, reference material (e.g., content pages, atlases, dictionaries), Internet, and graphic material. Information can also be accessed from others, for example through interviews.</p> <p>The information obtained is presented in accordance with the requirements of the different formats of presentation (e.g. paragraph, poster, drawing, speech, electronic message, model).</p> <p>The emphasis is on the production of integrated projects. The skills of selection, assimilation and comparison of information are developed in learners.</p> <p>Evidence of the use of resource centres, libraries or resource boxes should also be shown.</p>



## LANGUAGES, LITERACY AND COMMUNICATION

**5. Learners understand, know and apply language structures and conventions in context.**

This specific outcome aims to develop a language user's understanding and knowledge of grammar. The development of this grammatical competence empowers the learner to communicate clearly and confidently by using grammatical structures (e.g. word order) correctly. Clarity of communication is improved through the development of a learner's editing skills which includes a conscious awareness of the learner's own language usage.

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
S	<ol style="list-style-type: none"> <li>1. Knowledge of grammatical structures and conventions is applied to structure text.</li> <li>2. Incorrect and/or inappropriate language usage by self and others is edited.</li> <li>3. Common features and patterns of different languages are identified, explained and applied.</li> </ol>	<p>At this level learners study and apply a range of grammatical structures and conventions in a range of texts.</p> <p>A variety of texts is studied and generated. An activity for this outcome could be meaningful paragraphing using logical opening and concluding sentences.</p> <p>Similar grammatical structures and conventions are recognised across languages and applied in interpretation, translation and code-switching.</p>
I	<ol style="list-style-type: none"> <li>1. Knowledge of grammatical structures and conventions is applied to structure text.</li> <li>2. Incorrect and/or inappropriate language usage by self and others is edited.</li> <li>3. Common features and patterns of different languages are identified, explained and applied.</li> </ol>	<p>At this level learners study and apply grammatical structures and conventions in a range of texts.</p> <p>A variety of texts is studied and generated. An activity for this outcome could be combining simple sentences to form complex sentences using logical connectors.</p> <p>Similar grammatical structures and conventions are recognised across languages and applied in interpretation and code-switching.</p>

## LANGUAGES, LITERACY AND COMMUNICATION

F	<ol style="list-style-type: none"> <li>1. Knowledge of grammatical structures and conventions is applied to structure text.</li> <li>2. Incorrect and/or inappropriate language usage by self and others is edited.</li> <li>3. Common features and patterns of different languages are identified, explained and applied</li> </ol>	<p>At this level learners study and apply grammatical structures and conventions in a range of texts.</p> <p>A variety of texts is studied and generated. An activity for this outcome could be the logical construction of sentences introducing connectors and conjunctions.</p> <p>Similar grammatical structures and conventions are recognised across languages and applied in interpretation, and code switching.</p>
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## LANGUAGES, LITERACY AND COMMUNICATION

**6. Learners use language for learning.**

This specific outcome aims to develop the learner's ability to use language as a tool for learning in all learning areas. Learning is mediated through language as the learner interacts with new knowledge, materials, peers, teachers and other people. The intrinsic value of language as a tool for problem-solving, decision-making, and creative, critical and evaluative thinking should be developed across the curriculum. The role of language in cognitive and conceptual development should furthermore be reflected in and promoted by the total school environment.

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
<b>S</b>	<ol style="list-style-type: none"> <li>1. Different styles and terminology suited to the demands of a particular learning area are used.</li> <li>2. Learning strategies are evaluated and adapted according to the demands of the task.</li> <li>3. Language is used in order to refine ideas and solve problems.</li> <li>4. Language to talk about learning is used.</li> <li>5. The ability to transfer terminology and concepts from one language to another is demonstrated.</li> </ol>	<p>At this level learning strategies include memorisation, the transfer of information from one text form to another, synthesising, summarising, skimming, scanning, note taking, drafting and redrafting, asking for clarification, etc.</p> <p>At this level learners understand and use terminology about learning such as define, discuss critically, evaluate, etc.</p>
<b>I</b>	<ol style="list-style-type: none"> <li>1. Different styles and terminology suited to the demands of a particular learning area are used.</li> <li>2. Learning strategies are evaluated and adapted according to the demands of the task.</li> <li>3. Language is used in order to refine ideas and solve problems.</li> <li>4. Language to talk about learning is used.</li> <li>5. The ability to transfer terminology and concepts from one language to another is demonstrated.</li> </ol>	<p>At this level learning strategies include selecting, memorisation, underlining key words and key ideas, skimming, scanning, note taking, asking questions.</p> <p>At this level learners understand and use terminology about learning such as compare, explain, describe, etc.</p>

## LANGUAGES, LITERACY AND COMMUNICATION

F	<ol style="list-style-type: none"> <li>1. Different styles and terminology suited to the demands of a particular learning area are used.</li> <li>2. Learning strategies are evaluated and adapted according to the demands of the task.</li> <li>3. Language is used in order to refine ideas and solve problems.</li> <li>4. Language to talk about learning is used.</li> <li>5. The ability to transfer terminology and concepts from one language to another is demonstrated.</li> </ol>	<p>At this level learning strategies include selecting, memorisation, underlining key words, asking questions, etc.</p> <p>At this level learners understand and use terminology about learning such as explain, describe, etc.</p>
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## LANGUAGES, LITERACY AND COMMUNICATION

**7. Learners use appropriate communication strategies for specific purposes and situations.**

This specific outcome aims at the development of the learner's ability to apply communication skills and strategies appropriately to a specific purpose and a defined situation.

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
S	<ol style="list-style-type: none"> <li>1. Appropriate medium of communication is chosen.</li> <li>2. Register, tone and body language are adapted for audience and situation.</li> <li>3. Purpose of the interaction is identified and achieved.</li> <li>4. Evidence of planning, drafting and checking is produced.</li> <li>5. Evidence of the following is shown: <ul style="list-style-type: none"> <li>• structural organisation</li> <li>• clarity of expression</li> <li>• originality of ideas</li> <li>• appropriate use of language (e.g. vocabulary, register, grammar, spelling, syntax, punctuation etc.)</li> <li>• care and attention to the quality of presentation.</li> </ul> </li> </ol>	At this level learners are proactive in identifying the situation and in applying the appropriate communication strategy.
I	<ol style="list-style-type: none"> <li>1. Appropriate medium of communication is chosen.</li> <li>2. Register, tone and body language are adapted for audience and situation.</li> <li>3. Purpose of the interaction is identified and achieved.</li> <li>4. Evidence of planning, drafting and checking is produced.</li> <li>5. Evidence of the following is shown: <ul style="list-style-type: none"> <li>• structural organisation</li> <li>• clarity of expression</li> <li>• originality of ideas</li> <li>• appropriate use of language (e.g. vocabulary, register, grammar, spelling, syntax, punctuation etc.)</li> <li>• care and attention to the quality of presentation.</li> </ul> </li> </ol>	At this level learners experiment with creating situations. Learners then apply the appropriate communicative strategies to these situations.

## LANGUAGES, LITERACY AND COMMUNICATION

F	<ol style="list-style-type: none"> <li>1. Appropriate medium of communication is chosen.</li> <li>2. Register, tone and body language are adapted for audience and situation.</li> <li>3. Purpose of the interaction is identified and achieved.</li> <li>4. Evidence of planning, drafting and checking is produced.</li> <li>5. Evidence of the following is shown:               <ul style="list-style-type: none"> <li>• structural organisation</li> <li>• clarity of expression</li> <li>• originality of ideas</li> <li>• appropriate use of language (e.g. vocabulary, register, grammar, spelling, syntax, punctuation etc.)</li> <li>• care and attention to the quality of presentation.</li> </ul> </li> </ol>	At this level situations are given. Learners experiment in applying a relevant communication strategy to the given situations.
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## LANGUAGES, LITERACY AND COMMUNICATION

## ANNEXURE A

## SKILLS RELATED ASSESSMENT CRITERIA

NB. Categories given below are intended to help develop a global assessment of a piece of evidence. Choice of organising principles reflected below is one approach amongst many.

## LISTENING

CATEGORIES	CRITERIA
Informative listening	Conscious Listening Listening for detail Understanding of literal meaning Extraction of main ideas Assimilation of details
Evaluative listening	Bias/ prejudices detected Interpretations made Note taking
Critical listening	Sequence of events determined Inferences made Outcomes predicted
Social listening (immediate comprehension)	Active engagement in communication/ ask questions/ respond verbally or gestures/ eye contact/ body language  Empathise with speaker in relation to cultural conventions

## SPEAKING

CATEGORIES	CRITERIA
1. CONTENT	Relevance to task/audience/situation/purpose
2. ORGANISATION	Coherence/cohesion/logical flow of ideas format Quality of presentation
3. LANGUAGE	Fluency/register/tone/pitch/pausing Vocabulary/idiom/expression Sentence construction

## LANGUAGES, LITERACY AND COMMUNICATION

**COMMUNICATION STRATEGY**

Examples of communication strategies relevant to listening and speaking skills.	Voice/pronunciation /enunciation Pausing and pacing Quality of presentation Body language/eye contact Turn taking/establish, manage and maintain discourse and interaction Using recovery strategies when interrupted (strategic competence) Checking own and others understanding/success of communication Empathising ( <i>tune into</i> ) with audience /sensitivity to cultural conventions/discourse interactions
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**READING**

<b>CATEGORIES</b>	<b>CRITERIA</b>
<b>Literal comprehension</b>	Ability to respond to explicit information: denotative meaning of words details of content sequencing of logical order paraphrased meaning of common idioms
<b>Inferential/interpretative comprehension</b>	Ability to read "between the lines" - implicit or connotative meaning/ making inferences based on a given text
<b>Evaluative comprehension</b>	The ability to read "beyond the lines" by assessing ideas or facts in a text according to: <ul style="list-style-type: none"> <li>• appropriacy</li> <li>• effectiveness</li> <li>• relevance</li> <li>• accuracy</li> </ul>
<b>Referential comprehension</b>	Ability to consult and use reference sources and to organise information: <ul style="list-style-type: none"> <li>• alphabetical order</li> <li>• dictionary techniques</li> <li>• symbols on maps /charts etc.</li> </ul>
<b>Classification skills applying knowledge to external criteria</b>	The ability to apply own knowledge (taught or intuitive) in classifying text: e.g. different genres or types of discourse, identify source etc.

## LANGUAGES, LITERACY AND COMMUNICATION

**WRITING**

<b>CATEGORIES</b>	<b>CRITERIA</b>
<b>1. CONTENT</b>	Relevance to topic/task/situation/ audience Originality/creativity/clarity/effect Purpose
<b>2. ORGANISATION</b>	Cohesion/coherence/logical flow of ideas Paragraphing Format of text/layout Quality of presentation
<b>3. LANGUAGE</b>	Vocabulary/idiom/expression Tone/appropriate register Grammatical structures <ul style="list-style-type: none"> <li>• concord</li> <li>• tense</li> <li>• sentence structure</li> <li>• word order</li> <li>• punctuation</li> <li>• spelling etc.</li> </ul>

# **HUMAN AND SOCIAL SCIENCES**

## HUMAN AND SOCIAL SCIENCES

**RATIONALE FOR HUMAN AND SOCIAL SCIENCES**

Human and Social Sciences contribute to developing responsible citizens in a culturally diverse, democratic society within an interdependent world. They will equip learners to make sound judgements and take appropriate actions that will contribute to sustainable development of human society and the physical environment.

Human and Social Sciences comprise the study of relationships between people, and between people and their environment. These interactions are contextualised in space and time and have social, political, economic, environmental and spiritual dimensions.

They develop distinctive skills and a critical awareness of social and environmental patterns, processes and events, based on appropriate investigations and reflection within and across related focuses.

**SPECIFIC OUTCOMES**

1. Demonstrate a critical understanding of how South African society has changed and developed.
2. Demonstrate a critical understanding of patterns of social development.
3. Participate actively in promoting a just, democratic and equitable society.
4. Make sound judgements about the development, utilisation and management of resources.
5. Critically understand the role of technology in social development.
6. Demonstrate an understanding of interrelationships between society and the natural environment.
7. Address social and environmental issues in order to promote development and social justice.
8. Analyse forms and processes of organisations.
9. Use a range of skills and techniques in the Human and Social Sciences context.

**ORGANISING PRINCIPLES**

The diagram below represents the way the learning area committee conceptualised the balance which needed to be achieved between the different aspects of Social and Human Sciences, in the context of General Education and Training.

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**Time and space****RELATIONSHIPS****SOCIAL PROCESSES  
AND  
ORGANISATION****ENVIRONMENT  
RESOURCES  
DEVELOPMENT****CITIZENSHIP  
CIVICS****CHANGE****MEHTODS AND SKILLS**



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**1. DEMONSTRATE A CRITICAL UNDERSTANDING OF HOW SOUTH AFRICAN SOCIETY HAS CHANGED AND DEVELOPED**

The intention of this outcome is to equip learners with the attitudes, skills, knowledge and critical understanding to locate themselves in their own society, history and country in a global context. This background will enable them to develop, meaningfully and critically, a sense of self-worth and identity; and help empower them to exercise their full rights and responsibilities as citizens. It is also intended to promote nation building.

*Where content or skills are differentiated by phase, this does not limit learning of that content or those skills to that phase: they can be learnt in any other phase in an appropriate way.*

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
S	(1)The sources from which a knowledge of the South African society is constructed are identified.	<p>Source</p> <ul style="list-style-type: none"> <li>• Oral tradition, especially to redress its past neglect in schools (e.g. accounts passed from generation to generation; praise songs, poetry, songs; accounts of myths, legends and natural events; interviews recorded; dance forms)</li> <li>• Contemporary oral sources (e.g. interviews of old people; interviews of people who lived during important events; oral testimony in courts and the Truth and Reconciliation Commission)</li> <li>• Archaeological sources (e.g. fossils; skeletal remains; rock paintings and engravings)</li> <li>• Sources of material culture (e.g. pottery remains; beadwork; iron tools)</li> <li>• Documentary sources (e.g. letters and diaries; government records; newspapers)</li> <li>• Cartographic sources (e.g. maps; aerial photographs; land use surveys; meteorological charts)</li> <li>• Statistical sources (e.g. population census; financial records; opinion surveys).</li> </ul> <p>One focus at this level should be on evaluating a wide range of sources and evidence; integrating them to arrive at reasoned judgements; and using them to construct knowledge. Oral sources should be given as much weight as any other sources. The socially constructed nature of knowledge should be discussed.</p>

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I		One focus at this level is developing awareness of the wide range of sources available and means of accessing them, with special reference to oral sources. Relevant information processing skills should be developed, as well as skills related to using evidence in arguments.
F		One focus is developing awareness of the wide range of sources available and means of accessing them, with special reference to oral sources. At this level oral histories and traditions from school, family and community must be accessed and discussed. In addition artefacts must be extensively used and sites visited.
S	(2) Key features of change over time are critically examined.	<p>Not all the aspects listed in the box below need be taught in all phases; but aspects should be selected <i>in a way which preserves the coherence of the whole</i>.</p> <p><u>Key features, to include:</u></p> <ul style="list-style-type: none"> <li>• socio-economic relations</li> <li>• forms of state and power relations</li> <li>• forms of social organisation (e.g. hunter-gatherer, herder, farming, colonial (including slavery), industrial)</li> <li>• ideologies and belief systems</li> <li>• levels of inequality (e.g. social / class, individual circumstances)</li> <li>• Period:</li> <li>• Pre-colonial (from earliest hominids), colonial, post colonial, Apartheid, post-Apartheid.</li> </ul> <p><u>Processes of change, to include:</u></p> <ul style="list-style-type: none"> <li>• dispossession</li> <li>• repression</li> <li>• resistance and struggle</li> <li>• liberation.</li> </ul> <p>The four processes above should provide a framework for dealing with all other processes, including</p> <ul style="list-style-type: none"> <li>• migration</li> <li>• settlement</li> <li>• co-operation and trade</li> <li>• colonialism</li> <li>• conflict over resources</li> </ul>

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		<ul style="list-style-type: none"> <li>• exploitation of resources (including human resources), especially in relation to minerals and farming</li> <li>• imperialism</li> <li>• nationalism (including African and Afrikaner)</li> <li>• different relations of production (e.g. unfree labour, wage labour, etc.)</li> <li>• formation of states and change in forms of states.</li> </ul> <p>Key activities in this phase should focus on integrating knowledge and understanding so the learner develops a comprehensive view of major processes such as: colonialism, imperialism, decolonisation and liberation.</p>
I		By the end of this phase the learner should be familiar with major change processes in, and periods of, South African history.
F		In this phase the main focus should be on exploring change processes in a variety of contexts, both familiar and unfamiliar.
S	(3) The interrelationships between South Africa, Africa and the rest of the world are explored.	<p>Particular attention to be paid to Southern Africa.</p> <p><u>Periods:</u></p> <ul style="list-style-type: none"> <li>• to include pre-colonial, colonial, post-colonial, Apartheid, post-Apartheid.</li> </ul> <p><u>Aspects to include:</u></p> <ul style="list-style-type: none"> <li>• trade and markets</li> <li>• technology (e.g. spread of new technologies such as iron-making)</li> <li>• slavery, colonialism, imperialism, decolonisation, neo-colonialism</li> <li>• ideologies, philosophies and religions</li> <li>• diplomatic and international agreements and organisations (e.g. UNO, SADC, OAU)</li> <li>• relations between less developed and more developed nations</li> <li>• globalisation (e.g. North-South relations, information revolution, entertainment).</li> </ul>

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		<p>Key activities in this phase should focus on integrating knowledge and understanding so the learner develops a comprehensive view of major interrelationships between South Africa, Africa and the rest of the world.</p>
I		<p>Particular attention to be paid to Southern Africa.</p> <p><u>Periods:</u></p> <ul style="list-style-type: none"> <li>to include pre-colonial, colonial, post-colonial, Apartheid, post-Apartheid.</li> </ul> <p><u>Aspects to include:</u></p> <ul style="list-style-type: none"> <li>trade and markets</li> <li>technology (e.g. spread of new technologies such as iron-making)</li> <li>slavery, colonialism, imperialism, decolonisation, neo-colonialism</li> <li>ideologies, philosophies and religions</li> <li>diplomatic and international agreements and organisations (e.g. UNO, SADC, OAU)</li> <li>relations between less developed and more developed nations</li> <li>globalisation (e.g. North-South relations, information revolution, entertainment).</li> </ul> <p>By the end of this phase the learner should be familiar with major kind of relationships between South Africa, Africa and the rest of the world. They must also be aware of the work of major international organisations, such as the UNO.</p>
F		<p>Particular attention to be paid to Southern Africa.</p> <p><u>Periods:</u></p> <ul style="list-style-type: none"> <li>to include pre-colonial, colonial, post-colonial, Apartheid, post-Apartheid.</li> </ul> <p><u>Aspects to include:</u></p> <ul style="list-style-type: none"> <li>trade and markets</li> <li>technology (e.g. spread of new technologies such as iron-</li> </ul>

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		<p>making)</p> <ul style="list-style-type: none"> <li>• slavery, colonialism, imperialism, decolonisation.</li> </ul> <p>By the end of this phase the learner should be able to identify major kind of relationships between South Africa, Africa and the rest of the world. They must also be able to identify major international organisations, such as the UNO.</p>
S	<p>(4) The impact of Apartheid on development is analysed by:</p> <ul style="list-style-type: none"> <li>• acquiring knowledge of the essential features of Apartheid</li> <li>• considering its impact on crucial aspects of South African society.</li> </ul>	<p><u>Scope of impact</u></p> <ul style="list-style-type: none"> <li>• local, national, regional(Southern Africa), international</li> <li>• the past, present and future.</li> </ul> <p><u>Impact on areas of social life</u>, including at least four of the following:</p> <ul style="list-style-type: none"> <li>• political system</li> <li>• sport and recreation</li> <li>• education</li> <li>• health</li> <li>• the economy</li> <li>• issues around land ownership and control</li> <li>• homeland system</li> <li>• housing</li> <li>• the environment</li> <li>• spiritual and cultural life</li> <li>• family life and children</li> <li>• women</li> <li>• workers</li> <li>• resistance by individuals, communities and organisations (locally, nationally and internationally).</li> </ul> <p>By the end of this phase the learner should be able to show how the impact of Apartheid on development reveals the nature of the system as a whole.</p>
I		<p>The main focus in this phase is to acquire a critical understanding of the basic nature of the Apartheid system and relate this to the everyday lives of ordinary people past and present.</p>
F		<p>Learners should be able to identify essential features of the Apartheid system and its impact on the lives of people past and present.</p>

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S	(5) Patterns of continuity and change in post-Apartheid South Africa are analysed.	<p><u>Patterns of redress and development</u>, related to at least four of the following, or any other significant area of development:</p> <ul style="list-style-type: none"> <li>• education</li> <li>• housing</li> <li>• health</li> <li>• infrastructure, including electricity, water and transport</li> <li>• employment and careers</li> <li>• the legal system</li> <li>• strategies for redress and development (e.g. RDP)</li> <li>• trade, aid and investment in Southern Africa</li> </ul> <p><u>Problems and possibilities in relation to development</u>, in two of the above areas at local, regional and national level</p> <p>Learners should make informed and reasoned judgements about the factors promoting and obstructing redress and development.</p>
I		Through in-depth studies of particular patterns learners should be able to identify key factors influencing redress and development.
F		The learner, through activities such as role-play, should develop an awareness of the need for redress and development.
S	(6) Relations within and between communities are critically understood.	<p><u>Note:</u> In at least two phases biographies (family and national or community figures) should be used to explore relationships within and between communities.</p> <p><u>Main focuses</u>, to include</p> <ul style="list-style-type: none"> <li>• Issues of unity, diversity and nation building</li> <li>• Policies, practices and attitudes which build identity, community and society, e.g. tolerance, equity, legislation, reconstruction, rehabilitation, positive perceptions of identity, valuing diversity, anti-bias action and conflict resolution</li> <li>• Policies, practices and attitudes which create division and conflict within and between communities, e.g. legislation (historically), discrimination and prejudice, exploitation, conflicts over resources, negative</li> </ul>



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		<p>perceptions of identity</p> <ul style="list-style-type: none"> <li>• Commonalities (e.g. same economic system, common past) and diversities (e.g. of culture); groupings and alliances around interests and needs;</li> <li>• Finding diverse solutions to common problems (e.g. shelter, clothing, food, security).</li> </ul> <p><u>Kinds of relations</u>, to include</p> <ul style="list-style-type: none"> <li>• power relations</li> <li>• socio-economic and class</li> <li>• religious, ideological</li> <li>• political</li> <li>• cultural (e.g. customs, food, dress)</li> <li>• language</li> <li>• "race" relations</li> <li>• gender relations</li> <li>• sexuality</li> <li>• age and disability</li> <li>• close ties with neighbouring countries (e.g. family and educational).</li> </ul> <p><u>Types of communities</u> (We all belong to many different communities. Definitions of each of these communities listed here should be problematised and seen as value-laden.) To include those based on:</p> <ul style="list-style-type: none"> <li>• origin / ethnicity</li> <li>• common experience</li> <li>• location</li> <li>• belief system</li> <li>• work</li> <li>• interests</li> <li>• gender</li> <li>• families and clans</li> <li>• age and disability.</li> </ul> <p>A major focus should be on the significance of communities in constructing both personal and national identities. Learners should have an appreciation of the complex nature of communities.</p>
I		Learners must study at least three communities in depth, and arrive at general conclusions about the nature of relations within and between communities.
F		Learners must be able to identify commonalities and differences. In addition they should explore key relationships, within and between a number of communities. A major focus must be on the contribution of each community to national life.

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S	<p>(7) Relationships between people and key features of the environment are critically examined by:</p> <ul style="list-style-type: none"> <li>• acquiring knowledge</li> <li>• identifying and analysing relationships.</li> </ul>	<p><b>Scope</b></p> <ul style="list-style-type: none"> <li>• local/community to South Africa to Southern Africa and Africa.</li> <li>• Periods should include from pre-colonial times to present, and on to predict the future.</li> </ul> <p><b>Key features</b>, to include</p> <ul style="list-style-type: none"> <li>• the natural environment (e.g. topography, climate, river and other eco-systems)</li> <li>• the built environment (e.g. infrastructure including transport systems, water and electricity services, rural and urban settlements).</li> </ul> <p><b>Context</b>, to include</p> <ul style="list-style-type: none"> <li>• exploitation of resources</li> <li>• settlement (e.g. urbanisation)</li> <li>• migration</li> <li>• co-operation and trade</li> <li>• transport</li> <li>• regional inequalities in Southern Africa</li> <li>• organisation of production</li> <li>• political (e.g. pass-laws, resettlement, 'Bantustan' system).</li> </ul> <p>An important focus in this phase is developing the ability to evaluate evidence and construct reasoned arguments about major issues: e.g., the location of a new factory or road.</p>
I		<p>By the end of this phase the learner should be familiar with key features of the physical and built environments; and be able to identify and analyse major relationships.</p>
F		<p>Learners should be able to identify key relationships in their immediate environment; as well as links between local and broader environments. E.g., people depend on a river for water and the river is polluted far upstream.</p>

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**2. DEMONSTRATE A CRITICAL UNDERSTANDING OF PATTERNS OF SOCIAL DEVELOPMENT**

This outcome compliments SO1. The broad intention is that learners will develop the ability to relate South African patterns of development with those they uncover in a global context. This provides a framework for the development of key concepts such as division of labour. Skills for the recognition and analysis of patterns are essential for effectively processing information.

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENTS
S	<p>(1) Key features of a social system are identified by:</p> <ul style="list-style-type: none"> <li>• acquiring information</li> <li>• defining characteristics</li> <li>• explaining significance.</li> </ul>	<p>Note: For this Specific Outcome contemporary as well as past societies should be studied. Too often learners have been taught as if societies in the past do not exist in the present: e.g., as if the San still depend on hunting and gathering.</p> <p>Key features, to include:</p> <ul style="list-style-type: none"> <li>• Socio-economic relationships (e.g. feudalism, wage labour)</li> <li>• Forms of state and power relations (e.g. slavery, wage labour, self-employment)</li> <li>• Ideologies and belief systems (e.g. colonial state, feudal state, democratic state)</li> <li>• Forms of social organisation (e.g. families, clans)</li> <li>• Levels of inequality (e.g. social classes, individual circumstances)</li> <li>• Division of labour</li> <li>• Production of a surplus.</li> </ul> <p>Learners should be able to identify the defining characteristics of particular societies. In doing so, they should be able to construct reasoned arguments about significance, using a range of evidence.</p>
I		Key features of societies should be seen in relation to patterns of development: e.g., changes in transport systems or the organisation of production.
F		The main focus is on being able to identify key features of a range of societies, familiar and unfamiliar; and explain their importance in the lives of people.

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S	(2) Types of societies are analysed.	<p>Learners should be aware that the categories used are socially constructed.</p> <p><u>Types of society, to include:</u></p> <ul style="list-style-type: none"> <li>• developed / less developed</li> <li>• feudal</li> <li>• colonial</li> <li>• capitalist</li> <li>• socialist.</li> </ul> <p>The learner should understand that societies are dynamic; and that each one is unique although they can fall into broad categories.</p>
I		Learners must be able to relate the defining characteristics of a society (e.g., slavery) to other characteristics (eg., culture).
F		Learners should be able to differentiate between types of societies and identify some major characteristics: e.g., of subsistence farming.
S	(3) Similarities and differences between societies are explored by: <ul style="list-style-type: none"> <li>• recognition of patterns of similarity and difference</li> <li>• analysis of patterns</li> <li>• recognition of the social construction of patterns.</li> </ul>	<p><u>Main focuses</u>, to include examination of concepts of development, progress, well being and change (<i>Definitions of value-laden terms such as progress should be problematised</i>).</p> <p><u>Scope</u></p> <ul style="list-style-type: none"> <li>• between two or more societies</li> <li>• between societies at different times (e.g. before and after colonialism).</li> </ul> <p><u>Skills</u>, to include reading and construction of maps, graphs and other techniques for recognising and describing patterns.</p> <p>Learners explore and investigate similarities and differences in order to arrive at an understanding of continuity and change in particular societies.</p>
I		By comparing societies, learners should be able to offer reasoned explanations of why particular changes have occurred in societies.
F		Learners must be able to recognise similarities and differences.

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S	<p>(4) Strategies of change and development in society are evaluated by:</p> <ul style="list-style-type: none"> <li>• identification of strategies and processes</li> <li>• consideration of theories of development where appropriate</li> <li>• analysis of strategies and processes.</li> </ul>	<p><u>Change and development strategies</u> e.g. Green revolution, urban planning, empowering women. <u>Types of impact</u>, at different scales: personal, community and global.</p> <p>At this phase the main focus should be on learners being able to explain the reasons for the success or failure of strategies, and identify the criteria used in the evaluation.</p>
I		<p>At this phase the main focus should be on learners being able to explain the extent to which strategies have succeeded and failed.</p>
F		<p>Learners should be able to demonstrate knowledge of the existence of development strategies and their impact on peoples lives: e.g., electrification schemes.</p>

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### 3. PARTICIPATE ACTIVELY IN PROMOTING A JUST, DEMOCRATIC AND EQUITABLE SOCIETY

A society in which citizens do not develop the capacity to participate democratically cannot be democratic. The intention of this outcome is to build such capacity through developing appropriate knowledge, skills and attitudes. Knowledge of the Constitution, and how to apply that knowledge in relation to real issues, is regarded as a main focus.

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENTS
S	(1) Key features of democratic processes are identified.	<p>Features, to include:</p> <ul style="list-style-type: none"> <li>• representivity (indirect and direct; self and others)</li> <li>• decision-making (mandates, accountability, consultation, communication, procedures and rules).</li> </ul> <p>South Africa and at least one other society with respect to the above to be compared. Explanations given as to similarities and differences found.</p>
I		Investigation of democratic processes in an organisation or in local or national elections.
F		Discussing examples of decision-making processes the learners were involved in.
S	(2) Democratic processes are critically understood by: <ul style="list-style-type: none"> <li>• participating in processes</li> <li>• investigating processes</li> <li>• reflecting on and evaluating processes.</li> </ul>	<p>Processes, to include:</p> <ul style="list-style-type: none"> <li>• decision making</li> <li>• reconciliation</li> <li>• conflict resolution</li> <li>• voting.</li> </ul> <p>Contexts</p> <ul style="list-style-type: none"> <li>• in present and past</li> <li>• active participation or observed</li> <li>• local, national, international.</li> </ul> <p>Activities</p> <p>authentic: classroom, school or community based.</p> <p>Participation in democratic processes in the school or community should be analysed. Reasoned explanations should be given of factors such as poor (or good) support for the democratic process.</p>
I		Investigation of a particular democratic process in depth. The main focus should be on examining processes such as: how the elections were organised; who participated and how; how issues were presented; how people were represented; (etc.)
F		Conducting an election or coming to a decision and then discussing the process to identify key aspects.



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S	<p>(3) A critical understanding of the South African Constitution is demonstrated by:</p> <ul style="list-style-type: none"> <li>• an awareness that constitutions are created by people to meet their common needs, in, e.g., schools, clubs, local organizations and other constitutions.</li> </ul>	<p><u>Nature of constitutions in general</u></p> <p><u>Nature, Origin &amp; Development of the SA constitution:</u></p> <ul style="list-style-type: none"> <li>• historical background, such as CODESA, Interim Constitution, previous constitutions</li> <li>• component parts and institutional structures (e.g. Constitutional Court).</li> </ul> <p><u>Reviews of other constitutions:</u></p> <ul style="list-style-type: none"> <li>• two from Africa demonstrating different approaches</li> <li>• two from the rest of the world (at least one from Latin America or Asia).</li> </ul>
I		<p><u>Nature and development of the SA Constitution</u></p> <ul style="list-style-type: none"> <li>• From 1983 to 1996</li> <li>• Component parts and institutional structures: Bill of Rights; levels of government; structure of government at all levels.</li> </ul> <p>The main focus must be on the difference the above processes made in the lives of people.</p>
F		<p><u>Nature of the SA constitution</u></p> <ul style="list-style-type: none"> <li>• Bill of Rights (e.g. children's rights)</li> <li>• Levels of government</li> <li>• Structure of government (e.g. premiers &amp; MECs).</li> </ul> <p>Learners discuss the above by drawing parallels with the 'constitutions' of the school, local clubs, etc.</p>
S	<p>(4) Informed judgments about issues are made in relation to the constitution by:</p> <ul style="list-style-type: none"> <li>• identifying the issues</li> <li>• analysing the issues</li> <li>• relating the issues to the constitution</li> <li>• arriving at a judgement</li> </ul>	<p><u>Scope, to include:</u> Past, present, and future perspective.</p> <p><u>Judgements, might include:</u></p> <ul style="list-style-type: none"> <li>• the significance of the issues in relation to the constitution</li> <li>• relationship to other issues</li> <li>• links with legislation and relevant organisations (e.g. labour law and trade unions).</li> </ul> <p><u>Issues, might relate to:</u></p> <ul style="list-style-type: none"> <li>• human rights</li> <li>• disability</li> <li>• gender</li> <li>• cultural issues</li> <li>• fairness and justice</li> <li>• racism, prejudice and forms of bias</li> <li>• distribution &amp; ownership of resources</li> <li>• environmental management.</li> </ul> <p>At least one issue should be local, one provincial and one national. Discussions should centre on what the issues had in common in relation to the constitution: that is, what general principles could be seen operating.</p>

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I		Links between issues and the constitution are explored in order to develop the learners appreciation of the concepts of equity, democracy and justice.
F		Nature of constitutions in general appreciated through engaging in activities designed to illustrate the need for a constitution. Eg., suggesting rules for the school or a club.
S	(5) Projects to develop democratic practices are undertaken.	<p><u>Projects conducted through:</u> individual and group activities</p> <p><u>Contexts might include:</u> school; community; nation; world (e.g. SRC, PTSA, RDP, etc.)</p> <p><u>Aspects to include:</u></p> <ul style="list-style-type: none"> <li>• design</li> <li>• strategy</li> <li>• effectiveness</li> <li>• impact.</li> </ul> <p>A major focus should be on defining areas which require democratic practices to be developed: E.g., improving the participation by all learners in democratic processes, which might in turn require an anti-bias campaign to empower certain groups of learners.</p>
I		The major focus should be on conducting an investigation ( eg., a survey) to establish what the needs are in relation to developing democratic practices. Knowledge of the legal and other bases for democratic practices in the school and / or community should be acquired.
F		The concepts of democratic practice, equity and justice should be reinforced through activities related to the actual provision for these aspects in the school.
S	(6) Ability to access constitutional structures is demonstrated.	<p><u>Access to include activities such as</u></p> <ul style="list-style-type: none"> <li>• writing letter</li> <li>• petitioning</li> <li>• lobbying.</li> </ul> <p><u>Structures to include:</u></p> <ul style="list-style-type: none"> <li>• Legal institutions ( e.g. courts, Human Rights Commission, public protectors)</li> <li>• Local, provincial and national government structures.</li> </ul> <p>The need to access structures about an issue is identified and debated. The issue might be local or wider in scope. The means of making voices heard , and for obtaining information, should be discussed and strategies agreed on.</p>
I		The main focus should be on activities designed to build an awareness that structures exist which serve all citizens with respect to supporting the principles enshrined in the constitution.
F		Role-play and similar means must be used so learners can demonstrate they are aware of agencies such as constitutional structures.

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**4. MAKE SOUND JUDGEMENTS ABOUT THE DEVELOPMENT, UTILISATION AND MANAGEMENT OF RESOURCES**

Resources as treated in this outcome includes both human and natural. The main intention is for learners to develop the critical skills needed to make decisions which lead to the use of resources for sustainable development.

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENTS
S	(1) Resources are defined and identified.	<p>Exploration of the concept of resources, to include:</p> <ul style="list-style-type: none"> <li>• consideration of how 'gifts of nature' become resources</li> <li>• the notion that what is considered a resource depends on social and historical contexts (examples to include historical and cultural contexts around the world).</li> </ul> <p>Categories of resources, to include:</p> <ul style="list-style-type: none"> <li>• human / natural</li> <li>• renewable / non-renewable</li> <li>• viable / non-viable, etc.</li> </ul> <p>In this phase learners should identify resources which are both local and distant, and be able to distinguish how the importance of these resources will have changed over time.</p>
I		In this phase learners should be able to identify, explore and define a resource, be able to understand that there are different perspectives on what a resource is, and be able to place resources in categories.
F		In this phase learners should be able to identify and explore a resource and to place it in a category.
S	<p>(2) Relationship between human development and resources is explored by:</p> <ul style="list-style-type: none"> <li>• showing how resources are accessed by integrating, knowledge, skill and technology.</li> </ul>	<p>Scope</p> <p>At different times and in different places</p> <p>Factors influencing the relationship between resources and human development, to include:</p> <ul style="list-style-type: none"> <li>• access to education and training</li> <li>• location and distribution</li> <li>• ownership and control</li> <li>• available technology</li> <li>• exploitation.</li> </ul> <p>Processes for accessing resources, to include:</p> <ul style="list-style-type: none"> <li>• extraction</li> <li>• utilisation</li> <li>• development</li> <li>• management.</li> </ul>

S = Senior Phase

I = Intermediate Phase

F = Foundation Phase

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		<p><u>Effects of resource development on individuals, communities and societies, to include:</u></p> <ul style="list-style-type: none"> <li>• benefits / advantages</li> <li>• disadvantages.</li> </ul> <p>In this phase the focus should be on appreciating how resources are exploited, distributed and utilised, and understanding the importance of resource management in these processes.</p>
I		<p>In this phase the focus should be on investigating the resources which influence development and gaining more than one perspective on their value.</p>
F		<p>In this phase learners should be able to understand the importance of the location of resources and their ownership and control, as well as their benefits and advantages.</p>
S	(3) The impact of the distribution of power relationships and resources on social and environmental issues is understood.	<p><u>Scale of issues</u></p> <ul style="list-style-type: none"> <li>• local, national, international</li> <li>• past and present.</li> </ul> <p><u>Impact to include:</u></p> <ul style="list-style-type: none"> <li>• evaluating how resources are used</li> <li>• consequences of good and poor resource management</li> <li>• consequences of the unequal distribution of resources.</li> </ul> <p><u>Power relations (and the conflicts they engender), to include</u></p> <ul style="list-style-type: none"> <li>• ownership of resources</li> <li>• management policies (e.g. between individuals and groups)</li> <li>• gender, class, race (etc.)</li> </ul> <p><u>Social issues, to include:</u></p> <ul style="list-style-type: none"> <li>• migration</li> <li>• colonisation</li> <li>• capitalism</li> <li>• urbanisation</li> <li>• globalisation.</li> </ul> <p><u>Environmental issues, to include:</u></p> <ul style="list-style-type: none"> <li>• deforestation</li> <li>• over-utilisation</li> <li>• soil erosion</li> <li>• pollution</li> <li>• conflict over land-use</li> <li>• conservation (etc.)</li> </ul> <p>In this phase the emphasis should fall equally on the social and environmental issues. Learners should reflect on power relations in terms of social, economic and political factors.</p>

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I		In this phase the focus will be on investigating the consequences of resource distribution and the conflict attendant on power relationships in ownership and management, against the background of migration and urbanisation, considering most of the environmental issues.
F		In this phase learners will be able make links between the distribution of resources and power relations, and will understand how resources relate to at least two of the environmental issues.
S	(4) Strategies to address issues are designed and evaluated.	<p><u>Designing strategies to include:</u></p> <ul style="list-style-type: none"> <li>• gathering information</li> <li>• analysing contexts</li> <li>• identifying strategies</li> <li>• taking action where appropriate</li> <li>• documenting what they have done.</li> </ul> <p><u>Evaluating strategies to include:</u></p> <ul style="list-style-type: none"> <li>• recognition of different perspectives on an issue</li> <li>• evaluating the merits of different perspectives.</li> </ul> <p>In this phase the emphasis will be on understanding the reasons for the need to manage resources well, with a view to practical action related either to future employment or developing useful research skills.</p>
F		In this phase learners should be able to design practical strategies of their own on a small scale to address a local issue(s).
I		In this phase learners should undertake small practical projects with assistance.

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**5. CRITICALLY UNDERSTAND THE ROLE OF TECHNOLOGY IN SOCIAL DEVELOPMENT.**

Technology has to do with the way we solve problems to meet human needs. A bookshelf designed by a learner is as much technology as a computer. There are, however, particular technologies which have influenced the course of history and impacted on the environment. Learners must be able to grasp, and apply, both these aspects of technology.

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENTS
S	(1) Factors contributing to development and change in technology over time are analysed.	<p>Areas of technology, to include:</p> <ul style="list-style-type: none"> <li>• agriculture</li> <li>• industry</li> <li>• transport</li> <li>• information / communication</li> <li>• organisation.</li> </ul> <p>Factors influencing the development of technology, to include:</p> <ul style="list-style-type: none"> <li>• discoveries and inventions</li> <li>• response to need</li> <li>• response to a market.</li> </ul> <p>Factors influencing changes in technology, to include:</p> <ul style="list-style-type: none"> <li>• economic necessity</li> <li>• markets</li> <li>• consumerism, discoveries and inventions</li> <li>• political changes.</li> </ul> <p>Evaluation of the effects of change in technology, to include:</p> <ul style="list-style-type: none"> <li>• identification of effects</li> <li>• assessing advantages and disadvantages.</li> </ul>
I		The learner should be able to identify and explore the relationship between development and technology; and be able to categorise factors and recognise their effects on societies.
F		Through activities, be able to understand that an influential relationship between technologies and development exists.
S	(2) Differences and similarities in the type, development and use of technology in different places are analysed.	<p>Types of technology, to include:</p> <ul style="list-style-type: none"> <li>• organisation of production (land, labour, capital)</li> <li>• resistance to technology</li> <li>• social barriers to the use of technology.</li> </ul> <p>Development and use, to include:</p> <ul style="list-style-type: none"> <li>• impact of technology in certain social contexts (e.g. home; community; workplace)</li> <li>• appropriate management of resources for</li> </ul>



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		<p>future generations.</p> <p><u>Differences and similarities, to include:</u></p> <ul style="list-style-type: none"> <li>• identification of differences and similarities</li> <li>• identification of contexts</li> <li>• assessment of the reasons for them</li> </ul>
I		The learner should be able to make a comparison between development and technology in use; be able to explore various perspectives on what technologies; and explore the impact of technology: e.g., on home, school and community.
F		Be able to make links between technological use and social development, in the context of home, school and community.
S	<p>(3) Interrelationships between technology and human activity in various contexts are evaluated by:</p> <ul style="list-style-type: none"> <li>• analysis of interrelationships between technology &amp; social change</li> <li>• exploration of social barriers to use of technology and action to overcome them</li> <li>• assessment of impact of technology on access to information and resources</li> <li>• critical evaluation of application of technology in different contexts.</li> </ul>	<p><u>Interrelationships, to include:</u></p> <ul style="list-style-type: none"> <li>• organisation of production (land, labour, capital)</li> <li>• resistance to technology</li> <li>• social barriers to the use of technology.</li> </ul> <p><u>Impact of technology on human activity, to include:</u></p> <ul style="list-style-type: none"> <li>• agriculture</li> <li>• industry</li> <li>• transport</li> <li>• information / communication</li> <li>• organisation</li> </ul> <p><u>Application of technology in different contexts:</u></p> <ul style="list-style-type: none"> <li>• e.g. agriculture, energy, manufacturing</li> </ul> <p><u>Evaluation of the interrelationships, to include:</u></p> <ul style="list-style-type: none"> <li>• assessing advantages / benefits</li> <li>• assessing disadvantages</li> <li>• for different interest groups</li> </ul>
I		Be able to critically investigate the interaction between people and technology over time and space.
F		Be able to understand that technology influences human relations and activities, and that people produce technologies: and be able to use activities to conceptualise how this extends through time and space.
S	(4) Appropriate technology is used safely and efficiently to contribute to development.	<p><u>Decisions about whether technology is appropriate, to include:</u></p> <ul style="list-style-type: none"> <li>• identification of technologies that can be used in various contexts</li> <li>• evaluation of technologies for various purposes</li> <li>• demonstration of appropriate use.</li> </ul>
I		Be able to critically investigate the uses of technology, its appropriateness, and its contribution to development.
F		Be able to critically examine the appropriateness of technology to peoples needs through investigations.

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**6. DEMONSTRATE AN UNDERSTANDING OF THE INTERRELATIONSHIPS  
BETWEEN SOCIETY AND THE NATURAL ENVIRONMENT**

One major focus in this outcome is for learners to equip themselves with the means of locating themselves in the universe, on Earth. Another is for them to understand how we interact with complex natural systems and the consequences of this relationship. A third focus is on the reciprocal nature of this interaction.

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENTS
S	(2) Understanding of the earth as a life-sustaining system in the universe is demonstrated.	<p>Conceptualization of links between people and the universe, to include:</p> <ul style="list-style-type: none"> <li>• appreciation of the contribution of astronomers and philosophers, from diverse cultures at different times and places (from at least South America, Africa and Asia)</li> <li>• myths, legends, theories and perceptions from a variety of perspectives (time and place)</li> <li>• the spiritual bond between people and the Earth at different times and in different places.</li> </ul> <p>Factors which contribute to the earth being a life-sustaining system, to include:</p> <ul style="list-style-type: none"> <li>• the earth's position and orientation in space, its size and composition</li> <li>• the distinctive ability of earth to sustain people</li> <li>• the earth as providing resources (e.g. water, air and soil) to meet people's basic needs for survival.</li> </ul> <p>Learners must be able to explain how various factors contribute to the sustaining of life on Earth.</p>
I		<p>Learners must demonstrate knowledge and appreciation of the contribution of different peoples to our understanding of the Earth and the Universe.</p> <p>Learners must be able to graphically represent the factors which contribute to the earth being a complex life-sustaining system.</p>
F		<p>Learners must be able to demonstrate that they appreciate attempts made by different peoples to make sense of the universe. Demonstrations could include the production of artistic representations and role play.</p> <p>Learners are able to show, through activities</p>

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		that they appreciate how we depend on the Earth for our survival. E.g., by collecting examples of different kind of resources and explaining their importance.
S	(2) Knowledge of the nature of ecosystems and the significance of their diversity and interdependence for people is demonstrated.	<p><u>Characteristics of ecosystems</u></p> <ul style="list-style-type: none"> <li>• common to all</li> <li>• diverse (selected examples at different scales).</li> </ul> <p><u>Significance of characteristics for people, to include</u></p> <ul style="list-style-type: none"> <li>• concept of biodiversity</li> <li>• provision of resources</li> <li>• environmental stability in complexity and balances.</li> </ul> <p><u>Links between ecosystems, to include</u></p> <ul style="list-style-type: none"> <li>• role of the atmosphere, ocean and coastal systems in linking energy flows</li> <li>• implications of these links for ecosystems and people.</li> </ul> <p>Learners should be able to conduct investigations and construct models which demonstrate the diversity and interdependence of ecosystems.</p>
I		Learners should demonstrate that they have grasped the concept of the complexity of ecosystems and our location within them. One ecosystem should be investigated in detail.
F		The concept of the complexity of ecosystems and that we are located within them is developed through practical activities.

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S	<p>(3) The impact of human activities on different natural systems is investigated by:</p> <ul style="list-style-type: none"> <li>• ascertaining impact</li> <li>• accessing information</li> <li>• identifying key causal factors and relationships</li> <li>• critiquing decision making processes and motives.</li> </ul>	<p><u>Scope</u></p> <ul style="list-style-type: none"> <li>• different types (e.g. commercial / subsistence farming)</li> <li>• different times</li> <li>• different places (local, South African, African, global).</li> </ul> <p><u>Human activities</u>, to include</p> <ul style="list-style-type: none"> <li>• Land issues (e.g. land ownership, and control)</li> <li>• economic activities (e.g. farming, mining, forestry, services)</li> <li>• construction (e.g. of settlements, transport routes, dams)</li> <li>• leisure (e.g. tourism and travel)</li> <li>• population movements (e.g. migration, resettlement, urbanization)</li> <li>• wars</li> <li>• trade.</li> </ul> <p><u>Natural systems</u>, to include</p> <ul style="list-style-type: none"> <li>• forests</li> <li>• river basins</li> <li>• the atmosphere and oceans, etc.</li> </ul> <p><u>Impacts</u>, to include</p> <ul style="list-style-type: none"> <li>• pollution</li> <li>• deforestation</li> <li>• species extinction, etc.</li> </ul> <p><u>Accessing information</u>, from</p> <ul style="list-style-type: none"> <li>• field observations</li> <li>• measurements</li> <li>• written and oral accounts</li> <li>• statistics</li> <li>• photographs, etc.</li> </ul> <p><u>Ascertaining impact</u>, to include</p> <ul style="list-style-type: none"> <li>• positive/negative</li> <li>• on the natural environment and thus on people linked to it</li> <li>• scale and scope.</li> </ul> <p><u>Key causal factors and relationships contributing to impact</u> :</p> <ul style="list-style-type: none"> <li>• social, economic, political and physical (e.g. soil erosion due to the homelands policy, not population pressure per se).</li> </ul> <p><u>Critique of decision making and motives</u>, from perspectives of</p> <ul style="list-style-type: none"> <li>• equity</li> <li>• power relations</li> <li>• tenets of the SA constitution.</li> </ul> <p>An investigation is conducted which allows the learner to analyse the connections between ecosystems and cultural, socio-economic or political factors.</p>
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I		An investigation is conducted which allows the learner to give an account of some of the underlying causes of the impact of human activity on ecosystems.
F		An investigation is conducted which allows the learner to identify connections between changes in the environment and human activity.
S	<p>(4) The impact of natural events and phenomena on people is investigated by:</p> <ul style="list-style-type: none"> <li>• accessing information</li> <li>• identifying key causal factors and relationships.</li> </ul>	<p><u>Context</u></p> <ul style="list-style-type: none"> <li>• local, South African, global</li> <li>• in the present and past.</li> </ul> <p><u>Identification of events and phenomena</u></p> <ul style="list-style-type: none"> <li>• (e.g. floods, desertification, cyclones, volcanic eruptions, earthquakes, droughts).</li> </ul> <p><u>Accessing information</u>, from</p> <ul style="list-style-type: none"> <li>• field observations</li> <li>• measurements</li> <li>• written and oral accounts</li> <li>• statistics</li> <li>• photographs etc.</li> </ul> <p><u>Ascertaining impact</u>, to include:</p> <ul style="list-style-type: none"> <li>• on the natural and built environment</li> <li>• on people (positive/negative; scale and scope; differences in impact across groups, places, structures).</li> </ul> <p><u>Key causal factors and relationships contributing to nature of impact</u></p> <ul style="list-style-type: none"> <li>• social, political and economic factors (e.g. when a settlement is flooded because it is too near to a river, the underlying cause is lack of access to land).</li> </ul> <p>Analysis showing the relationship between a natural force and the social, economic and political circumstances of the people involved. The analysis should reveal the complex nature of the consequences of the interaction: e.g., both negative and positive.</p>
I		An investigation of an event in which natural forces impacted on the lives of people in a community. The analysis should show how people in different circumstances were effected.
F		The learners should access oral accounts of the impact of a natural force on a community or school and construct a narrative showing how different people responded to the event.



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S	(5) Relationships between natural features and human activities are analysed.	<p><u>Scope</u> Regional and global</p> <p><u>Natural features</u>, to include</p> <ul style="list-style-type: none"> <li>• physical features (e.g. rivers, mountains)</li> <li>• climate distribution patterns soil types, etc.</li> </ul> <p><u>Relationships</u>, to include:</p> <ul style="list-style-type: none"> <li>• limiting human activity (e.g. mountains on traffic routes)</li> <li>• facilitating human activity (e.g. harbours or ports)</li> <li>• modification by human activity (e.g. draining of marshes).</li> </ul> <p><u>Factors contributing to relationships</u> :</p> <ul style="list-style-type: none"> <li>• (e.g. access to decision making power; wealth; available technology perceived needs).</li> </ul> <p>The main focus should be on the learner being able to give a relatively comprehensive account of the way human activity is patterned by natural features; and an account of mediating social factors.</p>
I		A particular natural feature is investigated and analysed with respect to its impact on the lives of a community. The analysis should include showing how people in different circumstances are affected.
F		Role play and other activities are used to show how people have interacted with a range of natural features.
S	<p>(6) Attitudes, values and perceptions regarding the environment are examined by:</p> <ul style="list-style-type: none"> <li>• identifying the attitude and perceptions</li> <li>• considering factors that influence attitudes and perceptions</li> <li>• reflecting on its origins and development.</li> </ul>	<p><u>Range of attitudes and perceptions</u>, to include</p> <ul style="list-style-type: none"> <li>• conservation of natural, cultural and historical heritages (e.g. game parks, museums, archeological sites)</li> <li>• appreciation of natural environments (e.g. silence / aesthetics / back-to-nature possibilities)</li> <li>• personal evaluations of places and environments (e.g. as unsafe / inferior)</li> </ul> <p><u>Factors impacting</u>, to include</p> <ul style="list-style-type: none"> <li>• context</li> <li>• historical and individual experience</li> <li>• collective memory</li> <li>• education</li> <li>• interest groups.</li> </ul> <p><u>Significance of attitudes and values</u></p> <ul style="list-style-type: none"> <li>• in conflict situations regarding the environment</li> <li>• in personal decision making.</li> </ul>



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		The learner is able to come to a reasoned judgement about the influence of various factors on attitudes and values regarding the environment.
I		The learner demonstrates an awareness that values and attitudes about a range of environmental issues are influenced by a range of factors.
F		The learner accesses the values and attitudes of others about environmental issues: E.g., through conducting interviews and surveys. Simple graphical techniques could be used to display the results and these could form the basis of debates and discussions around factors influencing people's attitudes and values.

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**7. ADDRESS SOCIAL AND ENVIRONMENTAL ISSUES IN ORDER TO PROMOTE DEVELOPMENT AND SOCIAL JUSTICE**

The central purpose of this outcome is for learners to develop a depth of understanding of issues which effect their lives and the lives of others; as well to develop the analytical and planning skills needed to address such issues within the framework provided by the constitution and the RDP.

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENTS
S	(1) Social and environmental issues related to development and social justice are identified.	<p>Social issues, to include:</p> <ul style="list-style-type: none"> <li>• good global citizenship</li> <li>• inequalities in distribution of and access to resources (within and between societies)</li> <li>• prejudice and discrimination (based on race, class, gender, age, ability)</li> <li>• poverty (e.g. lack of piped water)</li> <li>• exploitation (e.g. unfair labour practices; unbalanced trade agreements; some aspects of aid and development policies)</li> <li>• crime</li> <li>• population / resource imbalances</li> <li>• conflict (e.g. resistance; war; genocide; military aggression; persecution)</li> <li>• disease (e.g. AIDS, TB and malaria)</li> <li>• unemployment.</li> </ul> <p>Environmental issues might include:</p> <ul style="list-style-type: none"> <li>• environmental degradation (at various scales, of various kinds)</li> <li>• resource depletion;</li> <li>• global warming;</li> <li>• ozone hole;</li> <li>• population pressure.</li> </ul> <p>The learner should provide a reasoned argument, based on evidence from more than one source, justifying the identification of an issue in terms of causation. E.g., environmental degradation resulting from forced resettlement because of Apartheid laws.</p>
I		The learner should be able to justify the identification of an issue in terms of its relevance to development and social justice.
F		Issues should be identified in relation to their significance for the school and wider communities.

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S	(2) Identified issues are critically analysed.	<p>Account taken of the impact on development of society and the environment.</p> <p><u>Contributing factors, to include:</u></p> <ul style="list-style-type: none"> <li>• environmental</li> <li>• economic and social (e.g. actions of groups; attitudes; power relations)</li> <li>• interconnections between these factors</li> <li>• actions of different groups</li> <li>• the RDP and the Constitution.</li> </ul> <p><u>Different perspectives on issues, to include</u></p> <ul style="list-style-type: none"> <li>• political ideology</li> <li>• religious beliefs</li> <li>• culture</li> <li>• different contexts</li> <li>• different times.</li> </ul> <p>Learners must be able to produce holistic accounts of the issues, involving multiple factors and sources of evidence.</p>
I		Learners must be able to relate the issues to at least three factors, the significance of which they justify.
F		Learners must be able to identify and explore links between issues and factors.
S	(3) Strategies to address issues are developed and evaluated.	<p><u>Strategies, to take account of:</u></p> <ul style="list-style-type: none"> <li>• changing attitudes</li> <li>• using available resources</li> <li>• analysing causes and situations</li> <li>• power relations</li> <li>• impact of the issue</li> <li>• relevant theory</li> <li>• consultation</li> <li>• the RDP</li> <li>• the Constitution.</li> </ul> <p><u>Evaluation in terms of:</u></p> <ul style="list-style-type: none"> <li>• feasibility</li> <li>• likely benefits and negative responses</li> <li>• costs</li> <li>• conformity to principles of the constitution and human rights.</li> </ul> <p>In developing strategies learners must be able to predict their outcome based on analyses of current situations. At least one issue should be considered which enables the learner to relate local, provincial and national aspects.</p>

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I		In developing strategies learners must be able to take multiple factors into account and show how they have effected the outcome.
F		Learners must, with the teacher facilitating, be able to produce a coherent plan and justify it in terms of an analysis of the situation. Issues selected must be relevant to the needs of the learners and/or the community and be evaluated with respect to meeting those needs.
S	(4) Strategies are implemented to address particular issues.	<p><u>Issues</u> local (e.g. lack of security at school) to global (e.g. global warming).</p> <p><u>Strategies</u> individual or collective action.</p> <p><u>Activities</u>, to include</p> <ul style="list-style-type: none"> <li>• actions to address local issues (e.g. gangs)</li> <li>• actions to address global issues (e.g. conserving energy).</li> </ul> <p>Learners must be able to implement relatively complex strategies which require more than one phase and the involvement of a number of people.</p>
I		Learners must be able to implement strategies which require a number of steps to be identified and taken.
F		Learners must be able to implement 'authentic' strategies which have observable outcomes. E.g., which impact on the school or community environment.

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**8. ANALYSE FORMS AND PROCESSES OF ORGANISATIONS**

Organisations are broadly defined as those groups of people which were consciously formed for a particular set of purposes: hence families are generally excluded. The purpose of this outcome is chiefly to equip learners to deal with the reality that today we live in societies in which organisations - especially large organisations - play a crucial part in our lives.

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENTS
S	<p>(1) The different forms and purposes of organisations are identified by:</p> <ul style="list-style-type: none"> <li>• acquiring information</li> <li>• identifying forms and purposes</li> <li>• explaining their significance</li> </ul>	<p>Discussions to include finding similarities and differences between large and small, formal and informal, organisations.</p> <p><u>Forms</u>, to include:</p> <ul style="list-style-type: none"> <li>• schools, groups, gangs, associations, clubs, congregations, companies, unions, parties, non-governmental organisations.</li> </ul> <p><u>Purposes</u>, to include:</p> <ul style="list-style-type: none"> <li>• protection and security, provision, production, trade and commerce, recreation, information, mutual benefit, service to others, class/group rights, political interest.</li> </ul> <p><u>Scale</u>:</p> <ul style="list-style-type: none"> <li>• local, provincial, South African, and Southern African</li> <li>• in the present and the past</li> <li>• large and small organisations</li> <li>• formal and informal organisations.</li> </ul> <p>One organisation can be studied in depth and from this study inferences drawn about the forms and purpose of organisations.</p>
I		In this phase the main focus will be on investigating the forms and purposes of a range of specific organisations, including school, community and wider.
F		In this phase the nature of organisations should be explored and discussed through activities such as describing processes and routines they can observe in their school or community.

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S	<p>(2) Characteristics of organisations are analysed by:</p> <ul style="list-style-type: none"> <li>• accessing information</li> <li>• determining characteristics</li> <li>• explaining significance of characteristics.</li> </ul>	<p>Discussions to include finding similarities and differences between large and small, formal and informal, organisations.</p> <p><u>Characteristics:</u></p> <ul style="list-style-type: none"> <li>• formal and informal rules</li> <li>• hierarchy and management</li> <li>• division of functions</li> <li>• structure (e.g., departments)</li> <li>• membership (open or closed)</li> <li>• leadership / management</li> <li>• decision-making : democratic and non-democratic forms</li> <li>• interest groups within organisations.</li> </ul> <p><u>Scope:</u></p> <ul style="list-style-type: none"> <li>• large and small</li> <li>• local, provincial and national (clubs, corporations, unions)</li> <li>• democratic and non-democratic.</li> </ul> <p>In this phase the main focus must be on organisations related to career, employment or educational opportunities. One organisation can be studied in depth and from this study inferences drawn about the characteristics of organisations.</p>
I		<p>In this phase the main focus will be on investigating characteristics of a range of specific organisations, including school, community and wider.</p>
F		<p>In this phase the nature of organisations should be explored and discussed through activities such as describing processes and routines they can observe in their school or community.</p>



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S	(3) The origin and development of organisations are understood.	<p>Discussions to include finding similarities and differences between large and small, formal and informal, organisations.</p> <p><u>Aspects of origins to explore:</u></p> <ul style="list-style-type: none"> <li>• why people came together</li> <li>• why decisions were taken (who chose the leaders)</li> <li>• what programme was adopted.</li> </ul> <p><u>Aspects of development to investigate:</u></p> <ul style="list-style-type: none"> <li>• changes in the organisations goals</li> <li>• changes in leadership</li> <li>• changes in programmes</li> <li>• funding for the organisation</li> <li>• changes in structure</li> <li>• role of the organisation in the community,</li> <li>• community response to the organisation.</li> </ul> <p>In this phase the main focus must be on organisations related to career, employment or educational opportunities. One organisation can be studied in depth and from this study inferences drawn about the origin and development of organisations.</p>
I		In this phase the main focus will be on investigating origin and development of a range of specific organisations, including school, community and wider.
F		In this phase the nature of organisations should be explored and discussed through activities such as describing processes and routines they can observe in their school or community.
S	<p>(4) Information which can address personal and community needs is obtained by:</p> <ul style="list-style-type: none"> <li>• knowledge of relevant organisations</li> <li>• accessing information required</li> <li>• processing information</li> <li>• getting advice and assistance.</li> </ul>	<p><u>Needs might include:</u></p> <ul style="list-style-type: none"> <li>• health</li> <li>• education</li> <li>• careers and employment</li> <li>• sport</li> <li>• community development</li> <li>• school development.</li> </ul> <p>In this phase the main focus must be on organisations related to career, employment or educational opportunities.</p>
I		In this phase the main focus should be on exploring different ways of obtaining information from a range of organisations: e.g., by visits, writing letters, phoning. Needs can express a wide variety of interests, such as sports, hobbies, and questions related to important issues.

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F		In this phase the information must relate to concrete needs, such as finding out about the organisation of the school; but information about issues and community needs must also be obtained from other organisations.
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## HUMAN AND SOCIAL SCIENCES

**9. Demonstrate the ability to use a range of skills and techniques in the Human and Social Sciences context**

For outcomes-based approaches to succeed, learners need to acquire investigative and problem-solving skills. This crucially involves critical thinking, processing information and communicating effectively. In the Human and Social Sciences, certain skills require more attention than they might in other Learning Areas. This outcome is designed to provide a framework for the development of these skills and their application in all the other outcomes.

**Note:** Differentiation by phase in range statements has not been done. This is because the skills listed below are intended to be used in the context of all the other specific outcomes, and these have range statements which have been differentiated.

ASSESSMENT CRITERIA	RANGE STATEMENTS
<p>(1) A critical understanding of the nature and use of sources and evidence is demonstrated by:</p> <ul style="list-style-type: none"> <li>• demonstrating an understanding of the difference between sources and evidence</li> <li>• gathering and recording information from sources</li> <li>• deducing and synthesising information from sources and evidence</li> <li>• showing respect and sensitivity in deriving and using information from human and other sources</li> <li>• recognising the integrity of sources</li> <li>• recognising the problematic nature of sources and evidence</li> <li>• evaluating the reliability of sources and evidence in specific contexts</li> <li>• detecting bias in sources and evidence</li> <li>• recognising that bias is inherent in knowledge and its use</li> <li>• using sources and evidence to formulate arguments and to state a position.</li> </ul>	<p>Examples include:</p> <ul style="list-style-type: none"> <li>• A source provides information; analysing a number of sources might provide evidence for a conclusion to be made.</li> <li>• Interviewing someone and writing down what he or she says, in order to find out about what happened long ago.</li> <li>• combining different accounts of an event to make a new version.</li> <li>• respecting confidentiality</li> <li>• appreciating the particular circumstances under which a source was made</li> <li>• sources might have been altered; evidence based on source of one kind only might not be valid</li> <li>• by comparing different accounts of the same event</li> <li>• recognising when someone has promoted his or her own interest, or perspective</li> <li>• all knowledge can be biased in some form</li> <li>• collecting evidence to use to promote the protection of the environment; writing an account on the basis of the sources found and evidence deduced.</li> </ul>

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<p>(2) Ability to make informed judgements is demonstrated.</p>	<p><u>The ability includes:</u></p> <ul style="list-style-type: none"> <li>• clarification of attitudes and values (e.g. recognition of different perspectives on an issue)</li> <li>• distinguishing between conflicting values</li> <li>• empathising, i.e. understanding people's behaviour in the context of their circumstances, both past and present (e.g. suspending premature and uninformed judgements of other people's behaviour; appreciating the opportunities and constraints facing people in different situations)</li> <li>• evaluating the merits of different perspectives.</li> </ul>
<p>(3) Competence in the application of graphical techniques is demonstrated by :</p> <ul style="list-style-type: none"> <li>• accessing and interpreting graphically represented data</li> <li>• representing data graphically</li> <li>• translating data from one form of graphical representation to another</li> <li>• analysing graphically represented data</li> <li>• considering the problems of relevance and bias in graphically represented data</li> <li>• using graphically represented data.</li> </ul>	<p><u>Types of graphical representation, to include:</u></p> <ul style="list-style-type: none"> <li>• graphs ( e.g. pie, line, bar); flow diagrams, illustrations (annotated and other); cartoons and other drawings; photographs (vertical, oblique and orthophoto); time lines; maps (e.g. of different scales, areas subject matter, times/dates, areas, showing contours, sketch and accurate)etc.</li> </ul> <p><u>Interpretation, to include:</u></p> <ul style="list-style-type: none"> <li>• decoding of symbols and signs</li> <li>• recognising shapes and features from different perspectives</li> <li>• using a key</li> <li>• reading maps(e.g. using scale to measure distance; finding direction and fixing position; using contours to identify landforms and features).</li> </ul> <p><u>Analysis, to include</u></p> <ul style="list-style-type: none"> <li>• relationships and patterns (over time and space) rates of change.</li> </ul> <p><u>Uses:</u></p> <p>Making</p> <ul style="list-style-type: none"> <li>• inferences</li> <li>• decisions</li> <li>• recommendations</li> <li>• evaluations.</li> </ul> <p><u>Explanation, to include</u></p> <ul style="list-style-type: none"> <li>• proposed routes and other developments</li> <li>• impacts of events in the past</li> <li>• changes over time</li> <li>• differences/similarities from place to place.</li> </ul>
<p>(4) Independent and co-operative learning skills that promote critical understanding of social and environmental issues are demonstrated.</p>	<p><u>Skills of working in a group, to include</u></p> <ul style="list-style-type: none"> <li>• those associated with roles (e.g. facilitator, note-taker)</li> <li>• those associated with sharing ideas ( e.g. listening, responding supportively, participating actively, evaluating ideas, accepting critical comment)</li> </ul>

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	<ul style="list-style-type: none"> <li>• those associated with synthesising and integrating ideas</li> <li>• those associated with managing the process (e.g. keeping time, allocating and taking responsibility for tasks).</li> </ul> <p><u>Skills of working independently</u>, to include</p> <ul style="list-style-type: none"> <li>• personal skills (e.g. initiative, self discipline)</li> <li>• selecting and integrating these two sets of skills as appropriate for the task</li> <li>• reflecting on and evaluating processes of individual and group work.</li> </ul>
<p>(5) A systematic approach to problem solving in the human and social sciences is demonstrated, by:</p> <ul style="list-style-type: none"> <li>• identifying the problems</li> <li>• gathering information by appropriate means</li> <li>• analysing the context, components and causes of the problem</li> <li>• formulating research questions and hypotheses</li> <li>• using various methodologies to gain different perspectives on the problem</li> <li>• developing and negotiating strategies to solve the problem</li> <li>• using participatory and democratic approaches</li> <li>• critiquing proposals</li> <li>• taking appropriate action</li> <li>• reflecting upon and evaluating the processes and results</li> <li>• recording the problem-solving process and its outcomes, reporting and disseminating the results.</li> </ul>	<p><u>Examples include:</u></p> <ul style="list-style-type: none"> <li>• measuring, interviewing, analysing documents, using questionnaires and surveys</li> <li>• the question the research is expected to answer; the anticipated answer (if... then... )</li> <li>• choosing a suitable method of research, or more than one</li> <li>• communicating proposals to all stakeholders; taking account of feedback</li> <li>• in terms of values associated with the constitution and other aspects of human rights; of their impact, for their feasibility</li> <li>• considering how successful / unsuccessful they have been and why.</li> </ul>
<p>(6) Effective communication in social environments is demonstrated by:</p> <ul style="list-style-type: none"> <li>• Using communication to participate in local, regional and global activities</li> <li>• Critically understanding the role of communication in shaping society</li> </ul> <p>Applying outcomes from Language learning in the context of the Human and Social Sciences where applicable</p>	<p><u>Examples include:</u></p> <ul style="list-style-type: none"> <li>• accessing media to publicise issues, lobbying, protesting, petitioning, debating</li> <li>• the manipulative power of communication and the devices which make this possible; the role of mass media in society.</li> </ul>

# TECHNOLOGY



## TECHNOLOGY

**DEFINITION:** Technology is the use of knowledge, skills and resources to meet human needs and wants, and to recognise and solve problems by investigating, designing, developing and evaluating products, processes and systems.

**SPECIFIC OUTCOMES**

Learners will be able to:

1. Understand and apply the Technological Process to solve problems and satisfy needs and wants.
2. Apply a range of technological knowledge and skills ethically and responsibly.
3. Access, process and use data for technological purposes.
4. Select and evaluate products and systems.
5. Demonstrate an understanding of how different societies create and adapt technological solutions to particular problems.
6. Demonstrate an understanding of the impact of technology.
7. Demonstrate an understanding of how technology might reflect different biases, and create responsible and ethical strategies to address them.

**RATIONALE**

THE TECHNOLOGY LEARNING AREA SEEKS TO DEVELOP:

- an ability to solve technological problems by investigating, designing, developing, evaluating as well as communicating effectively in their own and other languages and by using different modes;
- a fundamental understanding of and ability to apply technological knowledge, skills and values, working as individuals and as group members, in a range of technological contexts;
- a critical understanding of the interrelationship between technology, society, the economy and the environment.

THIS UNDERSTANDING OF TECHNOLOGY SHOULD CONTRIBUTE TO:

- the development of learners' ability to perform effectively in their changing environment and to stimulate them to contribute towards its improvement;
- the effective use of technological products and systems;

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- the ability to evaluate technological products, processes and systems from functional, economic, ethical, social and aesthetic points of view;
- the designing and development of appropriate products, processes or systems to functional, aesthetic and other specifications set either by the learner or by others;
- the delivery of quality education and access and redress through
  - \* relevance to the ever-changing modern world
  - \* integration of theory and practice;
- the development of citizens who are innovative, critical, responsible and effective;
- the demystification of technology;
- the recognition of and respect for diverse technological solutions and biases that exist; and
- creating more positive attitudes, perceptions and aspirations towards technology-based careers.

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**1. UNDERSTAND AND APPLY THE TECHNOLOGICAL PROCESS TO SOLVE PROBLEMS AND TO SATISFY NEEDS AND WANTS.**

The Technological Process refers to the cycle of investigating problems, needs and wants and the designing, developing and evaluating of solutions in the form of products and systems. The technological process is the basis of all technological endeavour. An understanding of the process is fundamental to the acquisition of technological literacy. The Technological Process is an integrated and indivisible one and therefore assessment should apply to the whole process.

PHASE	Assessment Criteria	Range Statement
S	<p>Learners should indicate an understanding and application of the Technological Process by presenting work in which:</p> <ul style="list-style-type: none"> <li>• problems, needs and wants are identified and explained</li> <li>• a range of possible and relevant solutions are considered</li> <li>• an informed choice is made</li> <li>• a design is developed</li> <li>• solutions are realised according to design</li> <li>• realised solution is evaluated</li> <li>• process is recorded and communicated</li> </ul>	<p>At this level learners should show detailed, logical and articulate work indicating understanding of the integrated nature of the Technological Process.</p> <p>Learners should engage in processes of:</p> <ul style="list-style-type: none"> <li>• investigating (research, etc.)</li> <li>• planning and designing</li> <li>• developing (constructing, making, modelling, etc.)</li> <li>• evaluating (measuring, testing, deciding, etc.)</li> </ul> <p>Learners should apply the Technological process in respect of the following <b>South African and global themes</b>: housing, textiles, communications, water, transport, food, energy, health, tourism, agriculture, manufacturing, media, sport and recreation;</p> <p>and in the following <b>Learning Contexts</b>: Perspective: local, national, international Modes: individual, pair and group work Presentation styles: oral, written, graphical, modelling, products, artefacts and simulation Resources: texts, interviews, observation, experimentation</p>
I	<p>Learners should indicate an understanding and application of the Technological Process by presenting work in which:</p> <ul style="list-style-type: none"> <li>• problems, needs and wants are identified and explained</li> <li>• a range of possible and relevant solutions are considered</li> </ul>	<p>Learners should show detailed, logical and articulate work indicating understanding of the integrated nature of the Technological Process.</p> <p>Learners should engage in processes of:</p> <ul style="list-style-type: none"> <li>• investigating (research, etc.)</li> <li>• planning and designing</li> <li>• developing (constructing, making, etc.)</li> </ul>

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	<ul style="list-style-type: none"> <li>• an informed choice is made</li> <li>• a design is developed</li> <li>• solutions are realised according to design</li> <li>• realised solution is evaluated</li> <li>• process is recorded and communicated</li> </ul>	<ul style="list-style-type: none"> <li>• evaluation (measuring, testing, deciding, etc.)</li> </ul> <p>Learners should apply the Technological process in respect of the following <b>South African and global themes</b>: housing, textiles, communications, water, transport, food, energy, health, tourism, agriculture, manufacturing, media, sport and recreation;</p> <p>and in the following <b>Learning Contexts</b>: <u>Perspective</u>: local, national, international <u>Modes</u>: individual, pair and group work <u>Presentation styles</u>: oral, written, graphical, modelling, products, artefacts and simulation <u>Resources</u>: texts, interviews, observation, experimentation</p>
F	<p>Learners should indicate an understanding and application of the Technological Process by presenting work in which:</p> <ul style="list-style-type: none"> <li>• problems, needs and wants are identified and explained</li> <li>• a range of possible and relevant solutions are considered</li> <li>• an informed choice is made</li> <li>• a design is developed</li> <li>• solutions are realised</li> <li>• realised solution is evaluated</li> <li>• process is recorded and communicated</li> </ul>	<p>Learners should show detailed, logical and articulate work indicating understanding of the integrated nature of the Technological Process.</p> <p>Learners should engage in processes of:</p> <ul style="list-style-type: none"> <li>• investigating (research, etc.)</li> <li>• planning and designing</li> <li>• developing (constructing, making, modelling, etc.)</li> <li>• evaluation (measuring, testing, deciding, etc.)</li> </ul> <p>Learners should apply the Technological process in respect of the following <b>South African and global themes</b>: housing, clothing, water, transport, food, energy, health, agriculture, sport and recreation;</p> <p>and in the following <b>Learning Contexts</b>: <u>Perspective</u>: local, national, international <u>Modes</u>: individual, pair and group work <u>Presentation styles</u>: oral, graphical, modelling, products, artefacts and simulation <u>Resources</u>: texts, interviews, observation, experimentation</p>

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## 2. APPLY A RANGE OF TECHNOLOGICAL KNOWLEDGE AND SKILLS ETHICALLY AND RESPONSIBLY

Technological knowledge and skills form the backbone of this learning area as it increases the learner's capability to engage confidently with the technological process and within a technological world. This outcome further seeks to develop the learner's ability to apply this acquired knowledge and skills in an ethical and responsible manner.

In this outcome evidence of achievement should show the acquisition of knowledge and skills in respect of the nature, functions and applications of:

- safety
  - information
  - materials
  - energy
- in
- Systems and Control
  - Communication
  - Structures
  - Processing

In practice learners will engage the above in an integrated way.

PHASE	Assessment Criteria	Range Statement
S	<p>Learners should present work in which:</p> <ul style="list-style-type: none"> <li>• knowledge and understanding of: <ul style="list-style-type: none"> <li>Systems and Control</li> <li>Communication</li> <li>Structures</li> <li>Processing</li> </ul> </li> <li>is reflected</li> <li>• knowledge and understanding of: <ul style="list-style-type: none"> <li>safety</li> <li>information</li> <li>materials</li> <li>energy</li> </ul> </li> <li>as they manifest in Systems and Control</li> <li>• a range of hand and power tools and equipment are used</li> <li>• sensitivity to possible ethical issues and dilemmas is demonstrated</li> <li>• responsible behaviour is demonstrated</li> </ul>	<p><b>SYSTEMS AND CONTROL; COMMUNICATION; STRUCTURES AND PROCESSING</b></p> <p>At this level learners will practice and develop:</p> <ul style="list-style-type: none"> <li>• investigation skills which include researching, recording, investigating, etc.</li> <li>• design skills which include planning, communicating, graphics, etc.</li> <li>• manipulation skills which include creating and modification according to specifications</li> <li>• evaluation skills including testing, drawing conclusions etc.</li> <li>• sensitivity to problems, dilemmas, issues and choices in society</li> </ul> <p><b>Systems and Control</b></p> <p>These skills will be applied within an understanding of:</p> <ul style="list-style-type: none"> <li>• input, process, output</li> <li>• open and closed systems</li> <li>• concepts of technological systems</li> <li>• components and devices</li> <li>• the way signals and information flows in and between systems</li> <li>• the multiple and complex nature of interconnections between and within as well as the control of: <ul style="list-style-type: none"> <li>• mechanical</li> <li>• electrical and</li> <li>• hydraulics/pneumatics systems.</li> </ul> </li> </ul>

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		<p><b>Communication:</b> These skills will be applied within an understanding of:</p> <ul style="list-style-type: none"> <li>the use of appropriate technical design and development skills, technical language and conventions for product development to meet given purposes and specifications (eg layout, printing, graphics and data presentation)</li> </ul> <p><b>Structures</b> These skills will be applied within an understanding of:</p> <ul style="list-style-type: none"> <li>Complex, made structures</li> <li>Reinforcing within             <ul style="list-style-type: none"> <li>complex made structures</li> <li>composite materials</li> </ul> </li> <li>Internal and external forces</li> <li>Simple calculations and formulae associated with volume, force, and other structural theory concepts</li> </ul> <p>Context: Shelter, transport, storage, containerisation etc.</p> <p><b>Processing</b> These skills will be applied within an understanding of:</p> <p>The activity of processing raw materials into refined materials and into products, with waste as a by-product.</p> <p>Processes:</p> <ul style="list-style-type: none"> <li>conversion</li> <li>preservation</li> <li>reduction</li> <li>combination</li> </ul> <p>Context: biotechnology, manufacturing, agriculture, mining</p> <p><b>ENERGY; MATERIALS; INFORMATION AND SAFETY</b> Learners will develop a sensitivity towards, an understanding of and appropriate application skills in the use of energy, materials, information and safety as common features of all technology.</p> <p><b>Energy</b></p> <ul style="list-style-type: none"> <li>Types and sources</li> <li>Energy transformation</li> <li>Energy storage and distribution</li> <li>Energy as a resource - renewable, available</li> </ul>
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		<p>and cost</p> <ul style="list-style-type: none"> <li>• Application</li> </ul> <p><b>Materials</b></p> <ul style="list-style-type: none"> <li>• Sources</li> <li>• Types - natural, synthetic and composite</li> <li>• Techniques <ul style="list-style-type: none"> <li>• Processing (separating, combining, converting, joining, shaping and forming)</li> <li>• Storage</li> <li>• Preservation</li> <li>• Distribution</li> </ul> </li> <li>• Properties (physical, chemical and aesthetic)</li> <li>• Selection (form, function, potential and suitability)</li> <li>• Cost</li> <li>• Waste management of materials</li> </ul> <p><b>Information</b> Refer to specific outcome 3.</p> <p><b>Safety</b></p> <ul style="list-style-type: none"> <li>• Housekeeping, organisation and management</li> <li>• Occupational safety</li> <li>• Appropriate behaviour, dress and procedures</li> <li>• Safe use of tools, equipment and materials</li> <li>• First aid</li> </ul> <p><b>Tools and equipment</b> Understanding the operating principles of tools and equipment. Selection, use and maintenance of tools and equipment:</p> <ul style="list-style-type: none"> <li>• hand tools and power tools</li> <li>• simple and complex</li> <li>• electric, pneumatic, electronic, mechanical</li> <li>• applications (cutting, soldering, cooking, etc.)</li> </ul> <p>Learners should apply the Technological process in respect of the following <b>South African and global themes</b>: housing, textiles, communications, water, transport, food, energy, health, tourism, agriculture, manufacturing, media, sport and recreation;</p>
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I	<p>Learners should present work in which:</p> <ul style="list-style-type: none"> <li>• knowledge and understanding of: Systems and Control Communication Structures Processing is reflected</li> <li>• knowledge and understanding of: safety information materials energy as they manifest in Systems and Control</li> <li>• a range of simple and appropriate hand and power tools and equipment are used</li> <li>• sensitivity to possible ethical issues and dilemmas is demonstrated</li> <li>• responsible behaviour is demonstrated</li> </ul>	<p><b>SYSTEMS AND CONTROL; COMMUNICATION; STRUCTURES AND PROCESSING</b></p> <p>At this level learners will practice and develop:</p> <ul style="list-style-type: none"> <li>• investigation skills which include researching, recording, investigating, etc.</li> <li>• design skills which include planning, communicating, graphics, etc.</li> <li>• manipulation skills which include creating and modification according to specifications</li> <li>• evaluation skills including testing, drawing conclusions etc.</li> </ul> <p><b><u>Systems and Control</u></b></p> <p>These skills will be applied within an understanding of:</p> <ul style="list-style-type: none"> <li>• input, process, output</li> <li>• open and closed systems</li> <li>• concepts of technological systems</li> <li>• simple components and devices</li> <li>• the multiple nature of interconnections between and within and the control of:             <ul style="list-style-type: none"> <li>• mechanical</li> <li>• electrical and</li> <li>• hydraulics/pneumatics systems</li> </ul> </li> </ul> <p><b><u>Communication:</u></b></p> <p>These skills will be applied within an understanding of:</p> <ul style="list-style-type: none"> <li>• the use of technological language and convention and a variety of techniques to communicate technological ideas (eg. writing, drawing, modelling and layout)</li> </ul> <p><b><u>Structures</u></b></p> <p>These skills will be applied within an understanding of:</p> <ul style="list-style-type: none"> <li>• Simple, made structures</li> <li>• Stability and instability in structures</li> <li>• Types of forces and simple ways to counteract them</li> <li>• Simple calculations and formulae associated with mass, length and areas, and simple structural theory concepts.</li> <li>• Ergonomics and aesthetics</li> </ul> <p>Context: Shelter, transport, storage, containerisation</p> <p><b><u>Processing</u></b></p> <p>These skills will be applied within an understanding of:</p>
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		<p>The activity of processing raw materials into refined materials and into products, with waste as a by-product.</p> <p>Processes:</p> <ul style="list-style-type: none"> <li>• conversion</li> <li>• preservation</li> <li>• combination</li> </ul> <p>Context: Biotechnology (eg compost making, etc), manufacturing, agriculture, mining</p> <p><b>ENERGY; MATERIALS; INFORMATION AND SAFETY</b></p> <p>Learners will develop a sensitivity towards, an understanding of and appropriate application skills in the use of energy, materials, information and safety as common features of all technology.</p> <p><b>Energy</b></p> <ul style="list-style-type: none"> <li>• Types and sources</li> <li>• Energy transformation</li> <li>• Energy storage and distribution</li> <li>• Energy as a resource - renewable, available and cost</li> <li>• Application</li> </ul> <p><b>Materials</b></p> <ul style="list-style-type: none"> <li>• Sources</li> <li>• Types - natural and synthetic, composite</li> <li>• Techniques <ul style="list-style-type: none"> <li>• Processing (separating, combining, converting, joining, shaping and forming)</li> <li>• Storage</li> <li>• Preservation</li> <li>• Distribution</li> </ul> </li> <li>• Properties (physical, chemical and aesthetic)</li> <li>• Selection (form, function, potential and suitability)</li> <li>• Cost</li> <li>• Waste management of materials</li> </ul> <p><b>Information</b></p> <p>Refer to specific outcome 3</p> <p><b>Safety</b></p> <ul style="list-style-type: none"> <li>• Housekeeping, organisation and management</li> <li>• Occupational safety</li> <li>• Appropriate behaviour, dress and procedures</li> <li>• Safe use of tools, equipment and materials</li> <li>• First aid</li> </ul> <p><b>Tools and equipment</b></p> <p>Selection, use and maintenance of tools and</p>
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## TECHNOLOGY

		<p>equipment:</p> <ul style="list-style-type: none"> <li>• simple hand tools and power tools</li> <li>• electric, pneumatic, electronic, mechanical</li> <li>• applications (cutting, soldering, cooking, etc.)</li> </ul> <p>Learners should apply the Technological process in respect of the following <b>South African and global themes:</b></p> <p>housing, textiles, communications, water, transport, food, energy, health, tourism, agriculture, manufacturing, media, sport and recreation;</p>
F	<p>Learners should present work in which:</p> <ul style="list-style-type: none"> <li>• knowledge and understanding of: Systems and Control Communication Structures Processing is reflected</li> <li>• knowledge and understanding of: safety information materials energy as they manifest in Systems and Control etc. is reflected</li> <li>• a range of tools and equipment are used</li> <li>• sensitivity to possible ethical issues and dilemmas is demonstrated</li> <li>• responsible behaviour is demonstrated</li> </ul>	<p><b>SYSTEMS AND CONTROL; COMMUNICATION; STRUCTURES AND PROCESSING</b></p> <p>At this level learners will practice and develop:</p> <ul style="list-style-type: none"> <li>• investigation skills which include researching, recording, investigating, etc.</li> <li>• design skills which include planning, communicating, graphics, etc.</li> <li>• manipulation skills which include creating and modification according to specifications</li> <li>• evaluation skills including testing, drawing conclusions etc.</li> </ul> <p><b><u>Systems and Control</u></b></p> <p>These skills will be applied within an understanding of:</p> <ul style="list-style-type: none"> <li>• input, process, output</li> <li>• open and closed systems</li> <li>• types of systems</li> <li>• simple components and devices</li> <li>• the nature of basic interconnections in:             <ul style="list-style-type: none"> <li>• mechanical</li> <li>• electrical and</li> <li>• hydraulics/pneumatics systems.</li> </ul> </li> </ul> <p><b><u>Communication:</u></b></p> <p>These skills will be applied within an understanding of:</p> <ul style="list-style-type: none"> <li>• the use technological language and conventions and use a variety of techniques to communicate technological ideas (eg. oral/writing, drawing and modelling)</li> </ul> <p><b><u>Structures</u></b></p> <p>These skills will be applied within an understanding of:</p> <ul style="list-style-type: none"> <li>• Simple made and natural and structures</li> <li>• The effect of forces on simple structures</li> </ul> <p>Context: Shelter, transport, storage</p>

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		<p><b>Processing</b></p> <p>These skills will be applied within an understanding of activities of processing raw materials into refined materials and finished products, by-products and waste using the following processes:</p> <ul style="list-style-type: none"> <li>• conversion</li> <li>• preservation</li> <li>• combination</li> </ul> <p>Context: Local contexts such as home, school etc.</p> <p><b>ENERGY; MATERIALS; INFORMATION AND SAFETY</b></p> <p>Learners will develop a sensitivity towards, an understanding of and appropriate application skills in the use of energy, materials, information and safety as common features of all technology.</p> <p><b>Energy</b></p> <ul style="list-style-type: none"> <li>• Types and sources</li> <li>• Energy transformation</li> <li>• Energy storage and distribution</li> <li>• Energy as a resource - renewable, available and cost</li> <li>• Application</li> </ul> <p><b>Materials</b></p> <ul style="list-style-type: none"> <li>• Sources</li> <li>• Types - natural and synthetic, composite</li> <li>• Techniques <ul style="list-style-type: none"> <li>• Processing (separating, combining, converting, joining, shaping and forming)</li> <li>• Storage</li> <li>• Preservation</li> <li>• Distribution</li> </ul> </li> <li>• Properties (physical, chemical and aesthetic)</li> <li>• Selection (form, function, potential and suitability)</li> <li>• Cost</li> <li>• Waste management of materials</li> </ul> <p><b>Information</b></p> <p>Refer to specific outcome 3</p> <p><b>Safety</b></p> <ul style="list-style-type: none"> <li>• Housekeeping, organisation and management</li> <li>• Occupational safety</li> <li>• Appropriate behaviour, dress and procedures</li> <li>• Safe use of tools, equipment and materials</li> <li>• First aid</li> </ul>
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## TECHNOLOGY

		<p><b><u>Tools and equipment</u></b></p> <p>Use and maintenance of tools and equipment:</p> <ul style="list-style-type: none"><li>• simple hand and power tools</li><li>• simple electric, electronic, mechanical</li><li>• applications (cutting, cooking, etc.)</li></ul> <p>Learners should apply the Technological process in respect of the following <b>South African and global themes:</b></p> <p>housing, clothing, water, transport, food, health, agriculture, sport and recreation.</p>
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## TECHNOLOGY

**3. ACCESS, PROCESS AND USE DATA FOR TECHNOLOGICAL PURPOSES**

One of the features of a rapidly changing world is the accumulation of vast amounts of information and data which has an increasing impact on technology and all other aspects of modern life. In order for learners to engage effectively in the Technological Process, they need to be competent and confident in working with various forms of information and data.

PHASE	Assessment criteria	Range statement
S	<p>Learners should produce work in which:</p> <ul style="list-style-type: none"> <li>• various types of data are accessed</li> <li>• various types of data are processed</li> <li>• various types of data are used</li> </ul>	<p>At this level learners should produce work that is articulate, logical and detailed. They should use combinations of data types in an integrated way to investigate, analyse and make decisions. Learners should understand:</p> <p><b>Data storage and communication forms:</b></p> <ul style="list-style-type: none"> <li>• verbal / non-verbal</li> <li>• audio</li> <li>• visual</li> <li>• electronic</li> </ul> <p><b>Data types:</b></p> <ul style="list-style-type: none"> <li>• numerical</li> <li>• text</li> <li>• graphics</li> </ul> <p>within the context of the following processes:</p> <ul style="list-style-type: none"> <li>• access (identify, observe, research, locate etc.)</li> <li>• process (collate, communicate, compare, evaluate etc.)</li> <li>• use (apply, make choices, accept, reject etc.)</li> </ul> <p>Learners should apply data for technological purposes in respect of the following <b>South African and global themes:</b></p> <p>housing, textiles, communications, water, transport, food, energy, health, tourism, agriculture, manufacturing, media, sport and recreation.</p> <p>and in the following <b>Learning Contexts:</b></p> <p><u>Perspective:</u> local, national, international</p> <p><u>Mode:</u> individuals, pairs, groups</p> <p><u>Presentation:</u> oral, written, graphical, modelling and simulation</p> <p><u>Resources:</u> texts, interviews, observation, experimentation</p>

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I	<p>Learners should produce work in which:</p> <ul style="list-style-type: none"> <li>• various types of data are accessed</li> <li>• various types of data are processed</li> <li>• various types of data are used</li> </ul>	<p>At this level learners should produce work which is articulate and reasoned. They should use combinations of data types in an integrated way to analyse and make decisions.</p> <p>Learners should understand:</p> <p><b>Data storage and communication forms:</b></p> <ul style="list-style-type: none"> <li>• verbal, non-verbal</li> <li>• audio</li> <li>• visual</li> <li>• electronic</li> </ul> <p><b>Data forms:</b></p> <ul style="list-style-type: none"> <li>• numerical</li> <li>• text</li> <li>• graphics</li> </ul> <p>within the context of the following processes</p> <ul style="list-style-type: none"> <li>• access (identify, observe, research, locate etc.)</li> <li>• process (collate, communicate, compare, evaluate etc.)</li> <li>• use (apply, make choices, accept, reject etc.)</li> </ul> <p>Learners should apply data for technological purposes in respect of the following South African and global themes:</p> <p>housing, textiles, communications, water, transport, food, energy, health, tourism, agriculture, manufacturing, media, sport and recreation.</p> <p>in the following <b>Learning Contexts</b></p> <p><u>Perspective:</u> local, national, international</p> <p><u>Mode:</u> individuals, pairs, groups</p> <p><u>Presentation:</u> oral, written, graphical, modelling and simulation</p> <p><u>Resources:</u> texts, interviews, observation, experimentation</p>
F	<p>Learners should produce work in which:</p> <ul style="list-style-type: none"> <li>• various types of data are accessed</li> <li>• various types of data are processed</li> <li>• various types of data are used</li> </ul>	<p>Learners at this level should produce work which is well presented, reasoned and logical. Learners should use simple data to analyse and make decisions.</p> <p>Learners should understand:</p> <p><b>Data storage and communication forms:</b></p>

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		<ul style="list-style-type: none"> <li>• verbal, non-verbal</li> <li>• audio</li> <li>• visual</li> <li>• electronic</li> </ul> <p><b>Data forms:</b></p> <ul style="list-style-type: none"> <li>• numerical</li> <li>• text</li> <li>• graphics</li> </ul> <p>within the context of the following processes</p> <ul style="list-style-type: none"> <li>• access (identify, observe, research, locate etc.)</li> <li>• process (collate, communicate, compare, evaluate etc.)</li> <li>• use (apply, make choices, accept, reject etc.)</li> </ul> <p>Learners should apply data for technological purposes in respect of the following <b>South African and global themes:</b></p> <p>housing, clothing, water, transport, food, health, agriculture, sport and recreation.</p> <p>in the following <b>Learning Contexts</b></p> <p><u>Perspective:</u> local, national, international</p> <p><u>Mode:</u> individuals, pairs, groups</p> <p><u>Presentation:</u> oral, written, graphical, modelling and simulation</p> <p><u>Resources:</u> texts, interviews, observation, experimentation</p>
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## TECHNOLOGY

**4. SELECT AND EVALUATE PRODUCTS AND SYSTEMS**

All learners are exposed to a wide variety of products and systems. They, therefore, need to acquire the critical skills necessary to operate as confidently as discerning consumers and users of technology.

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
S	<p>Learners should be able to present work in which:</p> <ul style="list-style-type: none"> <li>• Products and systems are effectively selected</li> <li>• Products and systems are effectively evaluated</li> </ul>	<p>Learners at this level should produce work which is logical and articulate indicating evidence of the selection and evaluation of products and systems</p> <p><b>Selection and Evaluation</b></p> <ul style="list-style-type: none"> <li>• understand the need</li> <li>• derive and prioritise the constraints that may influence the choice</li> <li>• compare the characteristics and function of a range of similar products in respect of prioritised constraints</li> <li>• test and evaluate products and systems</li> </ul> <p><b>Products and Systems</b></p> <ul style="list-style-type: none"> <li>• a range from simple to complex designs</li> <li>• a range from simple to complex applications</li> <li>• mechanical, electrical and electronic</li> <li>• services (eg postal service)</li> </ul> <p><b>Constraints and factors</b> In drawing comparisons learners should consider factors such as:</p> <ul style="list-style-type: none"> <li>• costs and value</li> <li>• aesthetics and ergonomics</li> <li>• social</li> <li>• environmental</li> <li>• materials</li> <li>• durability</li> <li>• life expectancy</li> <li>• fit to purpose</li> <li>• availability and maintenance</li> </ul>
I	<p>Learners will be able to present work in which:</p> <ul style="list-style-type: none"> <li>• Products and systems are effectively selected</li> <li>• Products and systems are effectively evaluated</li> </ul>	<p>Learners at this level should show logical and articulate work indicating evidence of the selection and evaluation of products and systems</p> <p><b>Selection and Evaluation</b></p> <ul style="list-style-type: none"> <li>• understand the need</li> <li>• prioritise the given or derived constraints that may influence the choice</li> <li>• compare the characteristics and function of a range of similar products in respect of prioritised constraints</li> <li>• test and evaluate products and systems</li> </ul>

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		<p><b>Products and Systems</b></p> <ul style="list-style-type: none"> <li>• a range from simple to complex designs</li> <li>• a range from simple to complex applications</li> <li>• mechanical, electrical and electronic</li> <li>• services (eg postal service)</li> </ul> <p><b>Constraints and factors</b></p> <p>In drawing comparisons learners should consider factors such as:</p> <ul style="list-style-type: none"> <li>• costs and value</li> <li>• aesthetics and ergonomics</li> <li>• social</li> <li>• environmental</li> <li>• materials</li> <li>• durability</li> <li>• life expectancy</li> <li>• fit to purpose</li> <li>• availability and maintenance</li> </ul>
F	<p>Learners will be able to present work in which:</p> <ul style="list-style-type: none"> <li>• Products and systems are effectively selected</li> <li>• Products and systems are effectively evaluated</li> </ul>	<p>Learners at this level should show simple and reasoned work indicating evidence of the selection and evaluation of products and systems</p> <p><b>Selection and Evaluation</b></p> <ul style="list-style-type: none"> <li>• understand the need</li> <li>• prioritise the given constraints that may influence the choice</li> <li>• compare the characteristics and function of a range of similar products in respect of the given constraints</li> <li>• test and evaluate products and systems</li> </ul> <p><b>Products and Systems</b></p> <ul style="list-style-type: none"> <li>• simple designs</li> <li>• simple applications</li> <li>• mechanical, electrical and electronic</li> <li>• services (eg postal service)</li> </ul> <p><b>Constraints and factors</b></p> <p>in drawing comparisons learners should consider factors such as:</p> <ul style="list-style-type: none"> <li>• costs and value</li> <li>• aesthetics and ergonomics</li> <li>• social</li> <li>• environmental</li> <li>• materials</li> <li>• durability</li> <li>• fit to purpose</li> </ul>

## TECHNOLOGY

**5. DEMONSTRATE AN UNDERSTANDING OF HOW DIFFERENT SOCIETIES CREATE AND ADAPT TECHNOLOGICAL SOLUTIONS TO PARTICULAR PROBLEMS**

Technology is interwoven with the economic, social and cultural fabric of societies. These and other factors have influenced the way technology has evolved in different places and at different times. Learners need to understand the complex and diverse ways in which technology evolves.

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
S	<p>Learners should be able to present work in which:</p> <ul style="list-style-type: none"> <li>• Various factors are considered</li> <li>• Different technological solutions are compared</li> <li>• new solutions are predicted?</li> <li>• Causal relationships between main factors influencing technological development are reflected upon</li> <li>• A variety of perspectives, modes, presentations and resources are used</li> </ul>	<p>Learners at this level should show detailed, logical and articulate work which reflects:</p> <p><b>Content</b></p> <ul style="list-style-type: none"> <li>• historical</li> <li>• geographical</li> <li>• cultural</li> <li>• economic</li> </ul> <p><b>Process</b></p> <ul style="list-style-type: none"> <li>• research</li> <li>• observation</li> <li>• analysis</li> </ul> <p><b>Context</b></p> <p>Perspective: local, national, international  Mode: individuals, pairs, groups  Presentation: oral, written, graphical, modelling and simulation  Resources: texts, interviews, observation, experimentation</p>
I	<p>Learners will be able to present work in which:</p> <ul style="list-style-type: none"> <li>• The main factors are considered</li> <li>• Different technological solutions are compared</li> <li>• New solutions are predicted</li> <li>• Causal relationships between given factors influencing technological development are reflected upon</li> <li>• A variety of perspectives, modes, presentations and resources are used</li> </ul>	<p>Learners at this level should show logical and articulate work which reflects:</p> <p><b>Content</b></p> <ul style="list-style-type: none"> <li>• historical</li> <li>• geographical</li> <li>• cultural</li> <li>• economic</li> </ul> <p><b>Process</b></p> <ul style="list-style-type: none"> <li>• research</li> <li>• observation</li> <li>• analysis</li> </ul> <p><b>Context</b></p> <p>Perspective: local, national, international  Mode: individuals, pairs, groups  Presentation: oral, written, graphical, modelling and simulation  Resources: texts, interviews, observation, experimentation</p>



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F	<p>Learners will be able to present work in which:</p> <ul style="list-style-type: none"> <li>• Specific factors are considered.</li> <li>• The different technological solutions are compared.</li> <li>• A variety of perspectives, modes, presentations and resources are used</li> </ul>	<p>Learners at this level should show simple and reasoned work which reflects:</p> <p><b>Content</b></p> <ul style="list-style-type: none"> <li>• historical</li> <li>• geographical</li> <li>• cultural</li> <li>• economic</li> </ul> <p><b>Process</b></p> <ul style="list-style-type: none"> <li>• research</li> <li>• observation</li> </ul> <p><b>Context</b></p> <p><u>Perspective:</u> local, national, international</p> <p><u>Mode:</u> individuals, pairs, groups</p> <p><u>Presentation:</u> oral, written, graphical, modelling and simulation</p> <p><u>Resources:</u> texts, interviews, observation, experimentation</p>
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## TECHNOLOGY

**6. LEARNERS WILL DEMONSTRATE AN UNDERSTANDING OF THE IMPACT OF TECHNOLOGY**

Human values and other factors influence technology. Technology in turn shapes and influences the nature and well being of society, the economy and the natural environment, in both intended and unintended ways. Learners need to appreciate the ways in which technology effects all aspects of life. Outcomes 6 and 7 should preferably be achieved by integrating them with tasks and activities designed to achieve outcomes 1 to 5

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
S	<p>Learners should be able to present work in which:</p> <ul style="list-style-type: none"> <li>technological impact in a variety of contexts is reviewed</li> </ul>	<p>At this level learners should be able to research, analyse and draw conclusions and make predictions about the positive and/or negative impact of technology in the following:</p> <p><b>Contexts</b></p> <ul style="list-style-type: none"> <li>society</li> <li>the environment</li> <li>the economy;</li> </ul> <p><b>Perspectives</b></p> <ul style="list-style-type: none"> <li>local</li> <li>national and</li> <li>global</li> </ul> <p><b>Time scales</b></p> <ul style="list-style-type: none"> <li>short</li> <li>medium and</li> <li>long term</li> </ul> <p><b>Consequences</b></p> <ul style="list-style-type: none"> <li>intended and unintended nature</li> </ul>
I	<p>Learners should be able to present work in which:</p> <ul style="list-style-type: none"> <li>technological impact in a variety of contexts is reviewed</li> </ul>	<p>At this level learners should be able to research, analyse and draw conclusions about the positive and/or negative impact of technology in the following</p> <p><b>Contexts</b></p> <ul style="list-style-type: none"> <li>the home and school</li> <li>community and work</li> <li>the environment</li> </ul> <p><b>Perspective</b></p> <ul style="list-style-type: none"> <li>local</li> <li>national and</li> <li>global</li> </ul> <p><b>Consequences</b></p> <ul style="list-style-type: none"> <li>intended and</li> <li>unintended nature</li> </ul>

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F	<p>Learners should be able to present work in which:</p> <ul style="list-style-type: none"><li>• technological impact in a variety of contexts is reviewed</li></ul>	<p>At this level learners should be able to investigate, discuss and record the positive and/or negative impact of technology in the following:</p> <p><b>Contexts</b></p> <ul style="list-style-type: none"><li>• home</li><li>• school and</li><li>• environment</li></ul> <p><b>Perspective</b></p> <ul style="list-style-type: none"><li>• local and</li><li>• global</li></ul>
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## TECHNOLOGY

**7. LEARNERS WILL DEMONSTRATE AN UNDERSTANDING OF HOW TECHNOLOGY MIGHT REFLECT DIFFERENT BIASES AND CREATE RESPONSIBLE AND ETHICAL STRATEGIES TO ADDRESS THEM**

During the course of human history technology has been used to both promote and counter bias. Bias has also influenced the development and use of technology. Learners need to be aware of these relationships and aware of possible bias in their involvement in technological activities.

Outcomes 6 and 7 should preferably be achieved by integrating them with tasks and activities designed to achieve outcomes 1 to 5

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
S	<p>Learners should be able to present work in which:</p> <ul style="list-style-type: none"> <li>The concept and types of biases are understood and identified</li> <li>Biases limiting access to and the application of technology are identified.</li> <li>Strategies to address biases are developed.</li> </ul>	<p>At this level learners should:</p> <ul style="list-style-type: none"> <li>understand the nature and causes of bias</li> <li>be sensitive to and understand the complex ways in which bias affects important groups such as               <ul style="list-style-type: none"> <li>gender</li> <li>race</li> <li>age</li> <li>disability</li> </ul> </li> </ul> <p>At this level learners should:</p> <ul style="list-style-type: none"> <li>research and analyse how access to and benefits of technology have been denied to various groups</li> <li>understand the impact of this bias on such groups.</li> <li>understand how the use and application of technology reflects, interests, priorities and biases in society.</li> </ul> <p>At this level learners should identify existing and suggest possible strategies to counter biases and address their effects.</p>
I	<p>Learners should be able to present work in which:</p> <ul style="list-style-type: none"> <li>The concept and types of biases are understood and identified</li> </ul>	<p>At this level learners should:</p> <ul style="list-style-type: none"> <li>understand the nature and causes of bias</li> <li>be sensitive to and understand the ways</li> </ul>

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	<ul style="list-style-type: none"> <li>• Biases limiting access to and the application of technology are identified. (RS should include design).</li> <li>• Strategies to address biases are developed.</li> </ul>	<p>in which bias affects important group such as</p> <ul style="list-style-type: none"> <li>• gender</li> <li>• race</li> <li>• age</li> <li>• disability</li> </ul> <p>At this level learners should:</p> <ul style="list-style-type: none"> <li>• research and present ways in which access to and the benefits of technology have been denied to various groups;</li> <li>• understand the impact of this bias on such groups.</li> <li>• understand how the use and application of technology in the wider community reflects priorities and biases in society.</li> </ul> <p>At this level learners should develop basic strategies to counter biases and address their effects</p>
F	<p>Learners should be able to present work in which:</p> <ul style="list-style-type: none"> <li>• The concept and types of biases are understood and identified</li> <li>• Biases limiting access to and the application of technology are identified. (RS should include design).</li> <li>• Strategies to address biases are developed.</li> </ul>	<p>At this level learners should:</p> <ul style="list-style-type: none"> <li>• understand the nature and causes of bias</li> <li>• be sensitive to and understand the more obvious ways in which bias affects certain groups such as               <ul style="list-style-type: none"> <li>• gender</li> <li>• race</li> <li>• aged</li> <li>• the disabled</li> </ul> </li> </ul> <p>At this level learners should:</p> <ul style="list-style-type: none"> <li>• Find out how access to and the benefits of technology have been denied to various groups;</li> <li>• understand the impact of this bias on such groups.</li> <li>• Give examples of how the use and application of technology reflects priorities and biases in society.</li> </ul> <p>At this level learners should consider and discuss ways to counter biases and address their effects</p>

**MATHEMATICAL  
LITERACY,  
MATHEMATICS  
AND  
MATHEMATICAL  
SCIENCES**





## MATHEMATICAL LITERACY, MATHEMATICS AND MATHEMATICAL SCIENCES

**DEFINITION**

Mathematics is the construction of knowledge that deals with qualitative and quantitative relationships of space and time. It is a human activity that deals with patterns, problem-solving, logical thinking, etc., in an attempt to understand the world and make use of that understanding. This understanding is expressed, developed and contested through language, symbols and social interaction.

**RATIONALE**

Mathematical literacy, mathematics and the mathematical sciences as domains of knowledge are significant cultural achievements of humanity. They have both utilitarian and intrinsic value. All people have a right of access to these domains and their benefits. These domains provide powerful numeric, spatial, temporal, symbolic, communicative and other conceptual tools, skills, knowledge, attitudes and values to:

- analyse;
- make and justify critical decisions; and
- take transformative action,  
thereby empowering people to:
  - work towards the reconstruction and development of South African society;
  - develop equal opportunities and choice;
  - contribute towards the widest development of the society's cultures;
  - participate in their communities and in the South African society as a whole in a democratic, non-racist and non-sexist manner;
  - act responsibly in protecting the total environment;
  - interact in a rapidly-changing technological global context;
  - derive pleasure and satisfaction through the pursuit of rigour, elegance and the analysis of patterns and relationships;
  - understand the contested nature of mathematical knowledge; and
  - engage with political organisational systems and socio-economic relations.

**SPECIFIC OUTCOMES****1. Demonstrate understanding about ways of working with numbers.**

The development of the number concept is an integral part of mathematics. All learners have an intuitive understanding of the number concept. This outcome intends to extend that understanding. Its aim is to enable students to know the history of the development of numbers and number systems and to use numbers as part of their tool kits when working with other outcomes. Solving problems and handling information, attitudes and awareness may depend crucially on a confident understanding and use of number.

**2. Manipulate number patterns in different ways.**

Mathematics involves observing, representing and investigating patterns in social and physical phenomena and within mathematical relationships. Learners have a natural interest in investigating relationships and making connections between phenomena. Mathematics offers a way of thinking, of structuring, organising and making sense of the world.

**3. Demonstrate understanding of the historical development of mathematics in various social and cultural contexts.**

Mathematics is a human activity. All peoples of the world have contributed to the development of mathematics. The view that mathematics is a European product must be challenged. Learners must be able to understand the historical background of their communities' use of mathematics.

**4. Critically analyse how mathematical relationships are used in social, political and economic relations.**

Mathematics is used as an instrument to express ideas from a wide range of other fields. The use of mathematics in these fields often creates problems. This outcome aims to foster a critical outlook to enable learners to engage with issues that concern their lives individually, in their communities and beyond. A critical mathematics curriculum should develop critical thinking about how social inequalities, particularly concerning race, gender and class, are created and perpetuated.

**5. Measure with competence and confidence in a variety of contexts.**

Measurement in mathematics is a skill for universal communication. People measure physical attributes, and estimate and develop familiarity with time. The aim is to familiarise learners with appropriate skills of measurement, relevant units used, and issues of accuracy.

## MATHEMATICAL LITERACY, MATHEMATICS AND MATHEMATICAL SCIENCES

**6. Use data from various contexts to make informed judgements.**

In this age of rapid information expansion and technology, the ability to manage data and information is an indispensable skill for every citizen. There is an ever-increasing need to understand how information is processed and translated into useable knowledge. Learners should acquire these skills for critical encounter with information and to make informed decisions.

**7. Describe and represent experiences with shape, space, time and motion, using all available senses.**

Mathematics enhances and helps to formalise the ability to grasp, visualise and represent the space in which we live. In the real world, space and shape do not exist in isolation from motion and time. Learners should be able to display an understanding of spatial sense and motion in time.

**8. Analyse natural forms, cultural products and processes as representations of shape, space, and time.**

The mathematics forms, relationships and processes embedded in the natural world and in aesthetic representations are often unrecognised or suppressed. Learners should have access to that mathematical knowledge which aims to unravel, critically analyse and make sense of these forms, relationships and processes.

**9. Use mathematical language to communicate mathematical ideas, concepts, generalisations and thought processes.**

Mathematics is a language that uses notations, symbols, terminology, conventions, models and expressions to process and communicate information. Algebra is the branch of mathematics where this language is mostly used. Learners' use of this language will be developed.

**10. Use various logical processes to formulate, test and justify conjectures.**

Reasoning is fundamental to mathematical activity. Active learners question, examine, conjecture and experiment. Mathematics programmes should provide opportunities for learners to develop and employ their reasoning skills. Learners need varied experiences to construct convincing arguments in problem settings and to evaluate the arguments of others.

## MATHEMATICAL LITERACY, MATHEMATICS AND MATHEMATICAL SCIENCES

**1. Demonstrate understanding about ways of working with numbers**

The development of number concept is an integral part of mathematics. All learners have an intuitive understanding of the number concept. This outcome intends to extend that understanding. Its aim is to enable students to know the history of the development of numbers and number systems and to use numbers as part of their tool kits when working with other outcomes. Solving problems, handling information, attitudes and awareness may depend crucially on a confident understanding and use of number.

**FOUNDATION PHASE**

Assessment Criteria	Range Statement
1. Evidence of use of heuristics to understand number concept	1.1 Use personal experiences to show the significance of number 1.2 Express numbers in words and symbols
2. Evidence of knowledge of number history	2.1 Understand counting as an historical activity 2.2 Show knowledge of the history of counting in their own communities, history of Roman numerals and the history of Arabic numerals 2.3 Understand importance of place value
3. Estimation as a skill	3.1 Estimate lengths, heights, volume, mass and time 3.2 Use calculators to check
4. Performance of basic operations	4.1 Add and subtract positive whole numbers 4.2 Multiply and divide positive whole numbers 4.3 Do simple mental calculations
5. Knowledge of fractions	5.1 Share and divide as an introduction to fractions 5.2 Use decimal fractions and place value 5.3 Do operations on money
6. Solving of real life and simulated problems	6.1 Solve real life or simulated problems

**INTERMEDIATE PHASE**

Assessment Criteria	Range Statement
1. Evidence of use of heuristics to understand number concept	1.1 Demonstrate the use of a personal set of referents for large and small numbers
2. Evidence of knowledge of number history	2.1 Understand counting as an historical activity 2.2 Show knowledge of the history of counting in their own communities, history of Roman numerals, history of Arabic numerals 2.3 Understand the importance of place value
3. Evidence of estimation approaches	3.1 Estimate simple multiplication 3.2 Estimate square roots of numbers up to a hundred
4. Performance of basic operations	4.1 Add, subtract, multiply and divide positive whole numbers 4.2 Add and subtract fractions 4.3 Perform operations on decimal fractions and money 4.4 Perform operations mentally 4.5 Use available technologies
5. Solving of real life and simulated problems	5.1 Solve real life or simulated problems

## MATHEMATICAL LITERACY, MATHEMATICS AND MATHEMATICAL SCIENCES

## SENIOR PHASE

Assessment Criteria	Range Statement
1. Evidence of some knowledge of rational and irrational numbers, including the properties of rational numbers	1.1 Demonstrate knowledge of the difference between rational and irrational numbers and the idea of recurring decimals 1.2 Commit to memory the decimal equivalents of commonly used fractions 1.3 Use and understand negative numbers in context 1.4 Commit to memory the approximate decimal equivalents of $\sqrt{2}$ and $\pi$ 1.5 Illustrate properties of rational numbers
2. Evidence of knowledge of number history	2.1 Show knowledge of the history of counting in their own communities, history of Roman numerals, history of Arabic numerals 2.2 Show knowledge of the activity of mathematics and mathematicians from Africa, Asia, Middle East and South America
3. Evidence of estimation approaches	3.1 Recognise the difference between exact and approximate values 3.2 Estimate multiplication of rational numbers 3.3 Estimate square and cube roots of numbers 3.4 Estimation of heights and distances using a variety of approaches and technologies 3.5 Use a variety of mental maths techniques and check the reasonableness of results
4. Performance of operations accurately	4.1 Use rules of order of operations 4.2 Recognise significant digits 4.3 Show understanding of standard index form 4.4 Work with exponents, developing laws of exponents from numerical cases 4.5 Use a calculator to perform a sequence of numerical operations 4.6 Substitute numbers into formulae
5. Evidence of knowledge of percent, rate and ratio	5.1 Use algebraic techniques to solve problems involving percent, rate, and ratio 5.2 Solve problems involving proportions
6. Solving of real life and simulated problems	6.1 Perform basic financial computations 6.2 Perform general tax and sales tax computations 6.3 Pick and analyse authentic problems from newspapers and journals 6.4 Critically analyse at least two investment scenarios 6.5 Pick and analyse at least one local developmental problem
7. Demonstration of skills of investigative approaches within mathematics	7.1 Investigate open-ended questions 7.2 Ask and respond to questions like "what would happen if ...?" 7.3 Apply approaches that demonstrate reflective capabilities



## MATHEMATICAL LITERACY, MATHEMATICS AND MATHEMATICAL SCIENCES

**2. Manipulate number patterns in different ways**

Mathematics involves observing, representing and investigating patterns in social and physical phenomena and within mathematical relationships. Learners have a natural interest in investigating relationships and making connections between phenomena. Mathematics offers ways of thinking, structuring, organising and making sense of the world.

**FOUNDATION PHASE**

Assessment Criteria	Range Statement
1. Identification of the use of numbers for various purposes	1.1 Give own understanding of number manipulation from personal experiences 1.2 Show link between patterning and repetition 1.3 Identify, repeat and continue patterns of sounds, body movements, body positions, art, music and stories
2. Evidence that number patterns and geometric patterns are recognised and identified using a variety of media	2.1 Identify and/or copy simple number patterns in rows, columns and diagonals 2.2 Show a knowledge of skip counting starting at any number 2.3 Identify and/or copy linear patterns using two and three dimensional shapes 2.4 Identify artistic patterns in South African cultures
3. Completion and generation of patterns	3.1 Arrange numbers in a logical sequence 3.2 Identify missing terms of number and geometric patterns 3.3 Extend or create linear patterns using 2D and/or 3D 3.4 Use concrete objects to extend, create and depict tiling or grid patterns 3.5 Generate step patterns
4. Exploration of patterns in abstract and natural contexts using mathematical processes	4.1 Explore tessellation 4.2 Use plane shapes and solid objects to investigate step patterns and symmetrically growing or shrinking patterns 4.4 Use available technology to generate patterns

**INTERMEDIATE PHASE**

Assessment Criteria	Range Statement
1. Identification of the use of numbers for various purposes	1.1 Demonstrate understanding and biases in manipulating numbers from personal experiences, media and other social groups. 1.2 Show an understanding of different beliefs about certain numbers
2. Evidence that number patterns and geometric patterns are recognised and identified using a variety of media	2.1 Identify common number patterns from experience, including skip counting 2.2 Recognise and work with arithmetic sequences 2.3 Recognise geometric patterns in 2D and 3D 2.4 Identify artistic patterns in South African cultures
3. Completion and generation of patterns	3.1 Arrange numbers in a logical sequence 3.2 Identify missing terms of number and geometric patterns 3.3 Create patterns growing concentrically or from a base 3.4 Show understanding of simple increase and decrease 3.5 Show understanding of and generate prime numbers
4. Exploration of patterns in abstract and natural contexts using mathematical processes	4.1 Explore tessellation and transformations 4.2 Express generalisations of patterns and develop formulae 4.3 Use inverses 4.4 Use available technologies to generate patterns

## MATHEMATICAL LITERACY, MATHEMATICS AND MATHEMATICAL SCIENCES

Assessment Criteria	Range Statement
	4.5 Identify patterns in nature
5. Evidence of the use of number patterns to address real and simulated problems	5.1 Use sequences and series to model real and simulated problems 5.2 Test consistency of solution 5.3 Identify equity issues of race, class and gender that arise from the manipulation of numbers in a social context

## SENIOR PHASE

Assessment Criteria	Range Statement
1. Identification of the use of numbers for various purposes	1.1 Demonstrate understanding of and biases in manipulating numbers from personal experiences, media and other social groups. 1.2 Show an understanding of different beliefs about certain numbers
2. Evidence that number patterns and geometric patterns are recognised and identified using a variety of media	2.1 Show common number patterns from experience 2.2 Work with arithmetic sequence 2.3 Work with geometric progression 2.4 Generate geometric patterns in 2D and 3D 2.5 Identify artistic patterns in various cultures, at least two South African, and two other
3. Completion and generation of patterns	3.1 Arrange numbers in a logical sequence 3.2 Complete number sequences and geometric patterns 3.3 Generate linear patterns, $y = mx + c$ 3.4 Show understanding of simple increase and decrease 3.5 Work with compound increase and decrease
4. Exploration of patterns in abstract and natural contexts using mathematical processes	4.1 Explore and understand tessellations and transformations 4.2 Derive processes for a general rule 4.3 Show understanding of inverses 4.4 Use available technologies 4.5 Identify patterns in nature
5. Representation of number patterns using mathematical symbols	5.1 Use terminology, formulae and graphics to represent patterns, tables and sequences
6. Evidence of the use of number patterns to address real and simulated problems	6.1 Use of sequences and series to model and interpret findings 6.2 Test consistency of solution 6.3 Identify equity issues of race, class and gender that arise from the manipulation of numbers in a social context

## MATHEMATICAL LITERACY, MATHEMATICS AND MATHEMATICAL SCIENCES

### 3. Demonstrate an understanding of the historical development of mathematics in various social and cultural contexts

Mathematics is a human activity. All peoples of the world have contributed to the development of mathematics. The view that mathematics is a European product must be challenged. Learners must be able to understand the historical background of their communities' use of mathematics.

#### FOUNDATION PHASE

Assessment Criteria	Range Statement
1. Evidence that mathematics is understood as a human activity	1.1 Demonstrate counting and measurement in everyday life 1.2 Illustrate at least two mathematical activities at home 1.3 Show the link between mathematics and technology

#### INTERMEDIATE PHASE

Assessment Criteria	Range Statement
1. Understanding of mathematics as a human activity	1.1 Show knowledge of counting styles in different cultures 1.2 Examine the history of measurement and the development of geometry 1.3 Show the link between mathematics and technology
2. Knowledge of contestations and Eurocentrism in the development of mathematics	2.1 Analyse racial issues and mathematics. 2.2 Demonstrate knowledge of ways of precolonial counting in Africa 2.3 Show development of mathematics in the middle east, Asia, Africa and South America
3. Knowledge of number bases	3.1 Work with other number bases besides base ten
4. Understanding of the use of technology	4.1 Show advantages and disadvantages of technology 4.2 Use available technologies

#### SENIOR PHASE

Assessment Criteria	Range Statement
1. Understanding of mathematics as a human activity	1.1 Show knowledge of counting styles in different cultures 1.2 Examine the history of measurement and the development of geometry 1.3 Show the link between mathematics and technology
2. Knowledge of contestations and Eurocentrism in the development of mathematics	2.1 Critically analyse the role of mathematics as a tool for differentiation 2.2 Critically analyse mathematics as a predominantly European activity 2.3 Analyse mathematical ideas from own culture 2.4 Show development of mathematics in the middle east, Asia, Africa and South America
3. Knowledge of number bases	3.1 Use number bases other than base ten
4. Understanding of the use of technology	4.1 Show advantages and disadvantages of technology 4.2 Use available technologies

## MATHEMATICAL LITERACY, MATHEMATICS AND MATHEMATICAL SCIENCES

**4. Critically analyse how mathematical relationships are used in social, political and economic relations**

Mathematics is used as an instrument to express ideas from a wide range of other fields. The use of mathematics in these fields often creates problems. This outcome aims to foster a critical outlook to enable learners to engage with issues that concern their lives individually, in their communities and beyond. A critical mathematics curriculum should develop critical thinking about how social inequalities, particularly concerning race, gender and class, are created and perpetuated.

**FOUNDATION PHASE**

Assessment Criteria	Range Statement
1. Evidence of knowledge of the use of mathematics in the economy	1.1 Demonstrate understanding of the use of mathematics in shopping 1.2 Show understanding of price increases
2. Evidence of the understanding of budget	2.1 Show understanding of family budgeting 2.2 Show understanding of saving.
3. Demonstrate knowledge of the use of mathematics in determining location	3.1 Mapping of immediate locality 3.2 Word descriptions of directions and local transport

**INTERMEDIATE PHASE**

Assessment Criteria	Range Statement
1. Evidence of knowledge of the use of mathematics in the economy	1.1 Demonstrate understanding of the use of mathematics in shopping 1.2 Show understanding of price increases
2. Evidence of the understanding of budget	2.1 Manage family budgeting 2.2 Show importance of budget control
3. Critical understanding of mathematics use in the media	3.1 Analyse graphical representations used in newspapers and magazines
4. Demonstrate knowledge of the use of mathematics in determining location	4.1 Draw a map of immediate locality 4.2 Read maps and street finders

**SENIOR PHASE**

Assessment Criteria	Range Statement
1. Evidence of knowledge of mathematical relationships in the workplace	1.1 Understand critical link between percentages and salary increases 1.2 Understand productivity as a ratio
2. Evidence of knowledge of mathematical relationships in the economy	2.1 Demonstrate knowledge of budgeting 2.2 Show understanding of taxes, rent and rates 2.3 Demonstrate the use and importance of finance charges and investments 2.4 Demonstrate importance of social service charges, pensions, medical aid, insurance
3. Evidence of the links and concepts used in mathematics and fiscal policy	3.1 Analyse income distribution in South Africa 3.2 Analyse fluctuations of the value of a rand and purchase power
4. Evidence of knowledge of the use of mathematics in politics	4.1 Compare the financing of education under apartheid and after 1994 4.2 Compare population census under apartheid and after

S = Senior Phase

I = Intermediate Phase

F = Foundation Phase

## MATHEMATICAL LITERACY, MATHEMATICS AND MATHEMATICAL SCIENCES

Assessment Criteria	Range Statement
	1994
5. Critical understanding of mathematics use in the media	5.1 Recognise types of graphs used in newspapers and journals 5.2 Critically analyse information from the media 5.3 Analyse the use and effect of advertisements in society
6. Demonstration of knowledge of the use of mathematics in determining location	6.1 Work with mapping scales 6.2 Read maps, from street finder to atlas maps



## MATHEMATICAL LITERACY, MATHEMATICS AND MATHEMATICAL SCIENCES

**5. Measure with competence and confidence in a variety of contexts**

Measurement in mathematics is a skill for universal communication. People measure physical attributes, and estimate and develop familiarity with time. The aim is to familiarise learners with appropriate skills of measurement, relevant units used, and issues of accuracy.

**FOUNDATION PHASE**

Assessment Criteria	Range Statement
1. Evidence of knowledge of the importance of measurements	1.1 Show knowledge of measurements from experience
2. Evidence of knowledge of standards	2.1 Show some knowledge of non-standard forms of measurement 2.2 Demonstrate understanding of reasons for standardisation 2.3 Demonstrate knowledge of SI Units
3. Evidence of knowledge of the concepts used in measurement	3.1 Understand concepts used in the measurement of space in 2D and 3D 3.2 Comparison of masses of objects. 3.3 Measure personal mass 3.4 Understand money as a unit of measurement
4. Evidence of knowledge of the concept of time	4.1 Use language to express times of the day 4.2 Show knowledge of how to read time
5. Evidence of the knowledge of the concept of temperature	5.1 Explain difference between hot and cold 5.2 Explain dangers of very high or very low temperatures 5.3 Give examples of temperature related equipment at home, their dangers and uses

**INTERMEDIATE PHASE**

Assessment Criteria	Range Statement
1. Evidence of knowledge of the importance of measurements	1.1 Demonstrate knowledge of measurements from experience 1.2 Measure lengths using simple instruments 1.3 Use measurements in various contexts, including sizes of clothes and shoes
2. Evidence of knowledge of standards	2.1 Understand and use of units of measurement 2.2 Define relationship between millimetres, centimetres, metres and kilometres 2.3 Convert between units of length
3. Evidence of knowledge of working with concepts and units of measurement	3.1 Estimate distances using scale diagrams and maps 3.2 Develop and use formulae in measurements in 2D and 3D
4. Evidence of knowledge of working with mass	4.1 Compare masses of objects. 4.2 Demonstrate that objects of same size can have different masses 4.3 Use standard units of measurement
5. Evidence of knowledge of working with time	5.1 Read and understand time to tenths of a second 5.2 Understand and use the twenty-four hour clock 5.3 Describe and convert between seconds, minutes, hours, days, weeks, months and years 5.4 Describe a leap year
6. Evidence of knowledge of working with temperature	6.1 Use different thermometers 6.2 Work with different units of measurement



## MATHEMATICAL LITERACY, MATHEMATICS AND MATHEMATICAL SCIENCES

## SENIOR PHASE

Assessment Criteria	Range Statement
1. Evidence of understanding of error	1.1 State at least two situations that result in error in measurement
2. Evidence of knowledge of working with concepts and units of measurement	2.1 Apply formulae use in measurements of regular polygons and polyhedra 2.2 Calculation of areas of regular and irregular figures using decomposition and estimation 2.3 Identification, measurement of and use of $\pi$ , including the circumference and area of circles. 2.4 Understanding and calculation of surface area 2.5 Calculation of volume and mass of an object 2.6 Express volumes in millilitres and litres 2.7 Comparison of masses of objects. 2.8 Explain the difference between mass and weight
3. Evidence of knowledge of working with time	3.1 Read and understand time zones
4. Evidence of knowledge of working with temperature	4.1 Use different thermometers 4.2 Convert between Celsius, Fahrenheit and Kelvin scales
5. Evidence of knowledge of relationships between various units used commonly in science	5.1 Understand difference between distance and displacement 5.2 Understand difference between speed and velocity 5.3 Understand relationship between volume and density

## MATHEMATICAL LITERACY, MATHEMATICS AND MATHEMATICAL SCIENCES

**6. Use data from various contexts to make informed judgements**

In this technological age of rapid information expansion, the ability to manage data and information is an indispensable skill for every citizen. There is an ever-increasing need to understand how information is processed and translated into usable knowledge. Learners should acquire these skills for critical encounter with information and to make informed decisions.

**FOUNDATION PHASE**

Assessment Criteria	Range Statement
1. Identification of situations for investigation	1.1 Identify situations for data collection
2. Collection of data	2.1 Choose methods of data collection 2.2 Use interviews and sampling 2.3 Use technology
3. Organisation of data	3.1 List and arrange data in a logical order 3.2 Sort relevant data 3.3 Group data
4. Application of statistical tools	4.1 Choose relevant method 4.2 Show understanding of averages, variance, frequency
5. Display of data	5.1 Draw summary 5.2 Represent data using graphs, charts, tables, text 5.3 Use available technologies
6. Communication of findings	6.1 Show understanding of use of simple and statistical language
7. Critical evaluation of findings	7.1 Explain meanings of information 7.2 Analyse validity 7.3 Analyse the impact of results 7.4 Make projections over time
8. Evidence of knowledge of ways of counting	8.1 Show strategies for choosing 8.2 Demonstrate knowledge of the idea of chance.
9. Understanding of the concept of probability	9.1 Make predictions 9.2 Use to address real or simulated problems

**INTERMEDIATE PHASE**

Assessment Criteria	Range Statement
1. Identification situations for investigation	1.1 Identify situations for data collection
2. Collection of data	2.1 Choose an appropriate method 2.2 Demonstrate various methods for interviewing and sampling 2.3 Use available technologies in collecting data
3. Organisation of data	3.1 Arrange in a logical order, listing 3.2 Sort, sequence and classify data
4. Application of statistical tools	4.1 Use and understand averages, variance and frequency
5. Display of data	5.1 Summarise and display data using graphs, charts, tables and text 5.2 Use available technologies to display data
6. Communication of findings	6.1 Use ordinary and statistical language

## MATHEMATICAL LITERACY, MATHEMATICS AND MATHEMATICAL SCIENCES

7. Critical evaluation	7.1 Explain meanings of information 7.2 Analyse validity of information 7.3 Analyse the impact of results 7.4 Give projections over time
8. Evidence of knowledge of ways of counting	8.1 Show strategies for choosing 8.2 Demonstrate knowledge of the idea of chance
9. Understanding of the concept of probability	9.1 Make predictions 9.2 Use probability to address real or simulated problems

## SENIOR PHASE

Assessment Criteria	Range Statement
1. Identification situations for investigation	1.1 Identify situations for data collection
2. Collection of data	2.1 Choose an appropriate method 2.2 Demonstrate various methods for interviewing and sampling 2.3 Use available technologies in collecting data
3. Organisation of data	3.1 Arrange in a logical order, listing 3.2 Sort, sequence and classify data
4. Application of statistical tools	4.1 Use and understand averages, variance and frequency
5. Display of data	5.1 Summarise and display data using graphs, charts, tables and text 5.2 Use available technologies to display data.
6. Communication of findings	6.1 Use ordinary and statistical language
7. Critical evaluation	7.1 Explain meanings of information 7.2 Analyse validity of information 7.3 Analyse the impact of results 7.4 Give projections over time
8. Evidence of knowledge of ways of counting	8.1 Show strategies for choosing 8.2 Demonstrate knowledge of the idea of chance
9. Understanding of the concept of probability	9.1 Make predictions 9.2 Use probability to address real or simulated problems

## MATHEMATICAL LITERACY, MATHEMATICS AND MATHEMATICAL SCIENCES

**7. Describe and represent experiences with shape, space, time and motion, using all available senses**

Mathematics enhances and helps to formalise the ability to grasp, visualise and represent the space in which we live. In the real world, space and shape do not exist in isolation from motion and time. Learners should be able to display an understanding of spatial sense and motion in time.

**FOUNDATION PHASE**

Assessment Criteria	Range Statement
1. Description of the position of an object in space	1.1 Represent objects in various forms of Geometry 1.2 Show links between Algebra and Geometry
2. Descriptions of changes in shape of an object	2.1 Demonstrate movement of points with time an irrelevant variable 2.2 Transform and tessellate shapes
3. Descriptions of orientation of an object	3.1 Show understanding of the concept of point of reference in 2D and 3D 3.2 Show understanding of perceptions by an observer from different reference points 3.3 Work with projections 3.4 Use available technologies in simulations
4. Demonstrate an understanding of the interconnectedness between shape, space and time.	4.1 Show the effect of movement and shape 4.2 Demonstrate an understanding of changes of perceptions of space and shape though different media. 4.3 Visualise and represent objects from various spatial orientations

**INTERMEDIATE PHASE**

Assessment Criteria	Range Statement
1. Description of the position of an object in space	1.1 Represent objects in various forms of Geometry 1.2 Show links between Algebra and Geometry
2. Descriptions of changes in shape of an object	2.1 Demonstrate movement of points with time an irrelevant variable 2.2 Transform and tessellate shapes
3. Descriptions of orientation of an object	3.1 Show understanding of the concept of point of reference in 2D and 3D 3.2 Show understanding of perceptions by an observer from different reference points 3.3 Work with projections 3.4 Use available technologies in simulations
4. Demonstrate an understanding of the interconnectedness between shape, space and time	4.1 Show the effect of movement and shape 4.2 Demonstrate an understanding of changes of perceptions of space and shape though different media 4.3 Visualise and represent objects from various spatial orientations

S = Senior Phase

I = Intermediate Phase

F = Foundation Phase

## MATHEMATICAL LITERACY, MATHEMATICS AND MATHEMATICAL SCIENCES

## SENIOR PHASE

Assessment Criteria	Range Statement
1. Description of the position of an object in space	1.1 Represent objects in various forms of Geometry 1.2 Show links between Algebra and Geometry
2. Descriptions of changes in shape of an object	2.1 Demonstrate movement of points with time an irrelevant variable 2.2 Transform and tessellate shapes
3. Descriptions of orientation of an object	3.1 Show understanding of the concept of point of reference in 2D and 3D 3.2 Show understanding of perceptions by an observer from different reference points 3.3 Work with projections 3.4 Use available technologies in simulations
4. Demonstrate an understanding of the interconnectedness between shape, space and time	4.1 Show the effect of movement and shape 4.2 Demonstrate an understanding of changes of perceptions of space and shape through different media 4.3 Visualise and represent objects from various spatial orientations

## MATHEMATICAL LITERACY, MATHEMATICS AND MATHEMATICAL SCIENCES

**8. Analyse natural forms, cultural products and processes as representations of shape, space, and time**

Mathematical forms, relationships and processes embedded in the natural world and in cultural representations are often unrecognised or suppressed. Learners should be able to unravel, critically analyse and make sense of these forms, relationships and processes.

**FOUNDATION PHASE**

Assessment Criteria	Range Statement
1. Recognition of natural forms, cultural products and processes and their value	1.1 Observe nature, cultural products and processes 1.2 Explain use and value of cultural products and processes 1.3 Analyse different cultural products and processes at different epochs
2. Representation of natural forms, cultural products and processes in a mathematical form	2.1 Represent cultural products and processes in various mathematical forms - 2D and 3D 2.2 Represent nature in mathematical form
3. Generation of ideas through natural forms, cultural products and processes	3.1 Use representations to generate new ideas
4. Extensions of natural forms, cultural products and processes in the economy	4.1 Critically analyse the misuse of nature and cultural products and processes

**INTERMEDIATE PHASE**

Assessment Criteria	Range Statement
1. Recognition of natural forms, cultural products and processes and their value	1.1 Observe nature, cultural products and processes 1.2 Explain use and value of cultural products and processes 1.3 Analyse different cultural products and processes at different epochs
2. Representation of natural forms, cultural products and processes in a mathematical form	2.1 Represent cultural products and processes in various mathematical forms - 2D and 3D 2.2 Represent nature in mathematical form
3. Generation of ideas through natural forms, cultural products and processes	3.1 Use representations to generate new ideas
4. Extensions of natural forms, cultural products and processes in the economy	4.1 Critically analyse the misuse of nature and cultural products and processes



## MATHEMATICAL LITERACY, MATHEMATICS AND MATHEMATICAL SCIENCES

## SENIOR PHASE

Assessment Criteria	Range Statement
1. Recognition of natural forms, cultural products and processes and their value	1.1 Observe nature, cultural products and processes 1.2 Explain use and value of cultural products and processes 1.3 Analyse different cultural products and processes at different epochs
2. Representation of natural forms, cultural products and processes in a mathematical form	2.1 Represent cultural products and processes in various mathematical forms - 2D and 3D 2.2 Represent nature in mathematical form
3. Generation of ideas through natural forms, cultural products and processes	3.1 Use representations to generate new ideas
4. Extensions of natural forms, cultural products and processes in the economy	4.1 Critically analyse the misuse of nature and cultural products and processes

## MATHEMATICAL LITERACY, MATHEMATICS AND MATHEMATICAL SCIENCES

**9. Use mathematical language to communicate mathematical ideas, concepts, generalisations, and thought processes**

Mathematics is a language that uses notations, symbols, terminology, conventions, models and expressions to process and communicate information. The branch of mathematics where this language is mostly used is Algebra. Learners' use of this language will be developed.

**FOUNDATION PHASE**

Assessment Criteria	Range Statement
1. Use of language to express mathematical observations	1.1 Share observations using all available forms of expression, verbal and non-verbal
2. Use of mathematical notation, symbols.	2.1 Represent ideas using mathematical symbols 2.2 Use mathematical notation
3. Use of mathematical conventions and terminology	3.1 Formulate expressions, relationships and sentences
4. Interpretation and analysis of models	4.1 Read and explain models 4.2 Analyse models and give meaning 4.3 Use models to solve problems
5. Representation of real life and simulated situations	5.1 Use abstraction to simulate word problems 5.2 Represent real life or simulated situations in a mathematical format 5.3 Use technology to represent and process observations

**INTERMEDIATE PHASE**

Assessment Criteria	Range Statement
1. Use of language to express mathematical observations	1.1 Share observations using all available forms of expression, verbal and non-verbal
2. Use of mathematical notation, symbols	2.1 Represent ideas using mathematical symbols 2.2 Use mathematical notation efficiently
3. Use of mathematical conventions and terminology	3.1 Combine notation logically 3.2 Formulate expressions, relationships and sentences 3.3 Use conventional mathematical language
4. Interpretation and analysis of models	4.1 Read and explain models 4.2 Analyse models and give meaning 4.3 Use models to solve problems
5. Construction of models	5.1 Use mathematical language to construct models
6. Representation of real life and simulated situations	6.1 Use abstraction to simulate word problems 6.2 Represent real life or simulated situations in a mathematical format 6.3 Use technology to represent and process observations

## MATHEMATICAL LITERACY, MATHEMATICS AND MATHEMATICAL SCIENCES

## SENIOR PHASE

Assessment Criteria	Range Statement
1. Use of language to express mathematical observations	1.1 Share observations using all available forms of expression, verbal and non-verbal
2. Use of mathematical notation, symbols	2.1 Represent ideas using mathematical symbols 2.2 Use mathematical notation efficiently
3. Use of mathematical conventions and terminology	3.1 Combine notation logically 3.2 Formulate expressions, relationships and sentences 3.3 Use conventional mathematical language
4. Interpretation and analysis of models	4.1 Read and explain models 4.2 Analyse models and give meaning 4.3 Use models to solve problems
5. Construction of models	5.1 Use mathematical language to construct models
6. Representation of real life and simulated situations	6.1 Use abstraction to simulate word problems 6.2 Represent real life or simulated situations in a mathematical format 6.3 Use technology to represent and process observations

## MATHEMATICAL LITERACY, MATHEMATICS AND MATHEMATICAL SCIENCES

**10. Use various logical processes to formulate, test and justify conjectures**

Reasoning is fundamental to mathematical activity. Active learners question, examine, conjecture and experiment. Mathematics programmes should provide opportunities for learners to develop and employ their reasoning skills. Learners need varied experiences to construct convincing arguments in problem settings and to evaluate the arguments of others.

**FOUNDATION PHASE**

Assessment Criteria	Range Statement
1. Evidence of logical reasoning in addressing problems	1.1 Demonstrate reasoning processes of association, comparison, classification and categorisation 1.2 Report mathematical reasoning processes verbally and visually
2. Ability to justify familiar and unfamiliar hypotheses	2.1 Recognise familiar or unfamiliar situations 2.2 Infer from known experiences 2.3 Demonstrate respect for different reasoning approaches
3. Evidence of use of empirical or theoretical rationale in justifying conjectures	3.1 Choose relevant data as a basis for prediction 3.2 Construct logical steps in an understandable order 3.3 Test validity of judgement

**INTERMEDIATE PHASE**

Assessment Criteria	Range Statement
1. Evidence of logical reasoning in the solution of problems	1.1 Use various reasoning approaches 1.2 Report mathematical reasoning processes clearly
2. Ability to justify familiar and unfamiliar hypotheses	2.1 Recognise familiar or unfamiliar situations 2.2 Infer from known paradigms 2.3 Demonstrate respect for different reasoning approaches
3. Evidence of use of empirical or theoretical rationale in justifying conjectures	3.1 Choose relevant data as a basis for prediction 3.2 Construct logical steps in an understandable order 3.3 Test validity of judgement

**SENIOR PHASE**

Assessment Criteria	Range Statement
1. Evidence of logical reasoning in the solution of problems	1.1 Use various reasoning approaches 1.2 Express reasoning processes clearly
2. Ability to prove familiar and unfamiliar hypotheses	2.1 Recognise familiar or unfamiliar situations 2.2 Design a sequence of inferences 2.3 Extract from known paradigms 2.4 Demonstrate respect for different reasoning approaches
3. Evidence of use of empirical or theoretical rationale in justifying conjectures	3.1 Choose relevant data as a basis for prediction 3.2 Construct logical steps in an understandable order 3.3 Test validity of judgement

# NATURAL SCIENCES

## NATURAL SCIENCES

**PREAMBLE**

**In order to make an effective contribution to education in South Africa, the Natural Sciences Learning Area is committed to:**

- **broaden access to material, resources, knowledge acquisition and conceptual development;**
- **redress past imbalances; and**
- **contribute towards socio-economic development and a better life for all.**



## NATURAL SCIENCES

**To the reader...**

This Natural Sciences document includes a number of information blocks, each of which plays a different and significant role in the framework for science education in South Africa. To develop an understanding of the Natural Sciences document, a brief explanation of each of these information blocks might be useful.

This document intends to set standards while allowing for maximum flexibility in the development of Learning Programmes.

*On The Rationale:*

The "Rationale" sets the scene for the kind of science education that is envisaged in outcomes-based education in South Africa. It describes the nature of science, the need for science education and the approach to science education. The Rationale also informs the set of Specific Outcomes.

*On The Specific Outcomes:*

The "Specific Outcomes" have been derived from the Critical Outcomes that were decided upon by the South African Qualifications Authority. Their aim is to define the essential competencies, attitudes and values which learners in the Natural Sciences should acquire and develop. They also set a national standard for education in the Natural Sciences. The provinces use the set of Specific Outcomes - and the Assessment Criteria and Range Statements - to develop Learning Programmes that are appropriate to their situations and contexts.

*On the Conceptualisation of the Natural Sciences:*

There are many fields and disciplines represented in the Natural Sciences. The "Conceptualisation of the Natural Sciences" helps in identifying essential elements of these fields and disciplines. Four themes have been identified, which serve as organising principles. Each of them provides contexts which can be used to assess learning.

*On the Assessment Criteria:*

The "Assessment Criteria" provide information about what learners should do in order to achieve each of the Specific Outcomes. The Assessment Criteria are identical for the different phases and this implies that all learners are able to develop these abilities and competencies, but at different levels of complexity and sophistication.

The Assessment Criteria need to be similar in all Learning Programmes so that a common standard for education can be determined. The Assessment Criteria for a Specific

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Outcome are not hierarchical. Additional Criteria may be added by Learning Programme developers but none of the Assessment Criteria may be ignored.

*On the Range Statements:*

The "Range Statements" have been developed from the Assessment Criteria. The Range Statements do not always link to one particular Assessment Criterion, but at times reflect a combination of Assessment Criteria. Range Statements provide an indication of the amount and complexity of the work expected from the learners as well as the context in which this work should take place. They are different for different phases. As Range Statements, together with Assessment Criteria, determine a common standard, they need to be similar in all Learning Programmes. Additional Range Statements may be added but none of the Range Statements may be ignored.

In the Range Statements which are provided for all the Specific Outcomes, exemplars drawn from the four Themes are provided for three different levels of complexity: Foundation Phase, Intermediate Phase and Senior Phase.

*On the "exemplars" within the Range Statements:*

The exemplars are neither rigid nor prescriptive and are only a limited range of possibilities amongst many others that could be identified by programme developers. The fact that some exemplars are the same for more than one phase suggest that these exemplars could be dealt with at different levels of complexity and sophistication. They leave room for cross-thematic issues and progression at various rates.

*Other Considerations:*

Experimental work is a defining characteristic of science and should feature prominently in science Learning Programmes. Wherever possible, practical work should involve active pupil participation. The urgent need for the provision of facilities and other resources, especially in rural areas, on a need-to-have, able-to-use basis linked with in-service education, is acknowledged.

Learning Programmes will also have to include Performance Indicators for each of the Assessment Criteria. This is not included in this document and should be developed in the provinces.

Learning Programme developers should take cognisance of the need to reduce content so that time will rather be used to develop the Specific Outcomes and their implied competencies, attitudes and values.

## NATURAL SCIENCES

## RATIONALE FOR THE LEARNING AREA

## THE NATURAL SCIENCES

The Natural Sciences, comprising the physical, life, and earth sciences, involve the systematic study of the material universe - including natural and human-made environments - as a set of related systems. A variety of methods, that have in common the collection, analysis and critical evaluation of data, are used to develop scientific knowledge. While some knowledge in the Natural Sciences has become accepted as unchanging, theories are acknowledged to be open to change because they are the result of human activity which is influenced by social, cultural and historical settings.

The development of appropriate skills, knowledge and attitudes and an understanding of the principles and processes of the Natural Sciences ...

- enable learners to make sense of their natural world;
- contribute to the development of responsible, sensitive and scientifically literate citizens who can critically debate scientific issues and participate in an informed way in democratic decision-making processes;
- are essential for conserving, managing, developing and utilising natural resources to ensure the survival of local and global environments; and
- contribute to the creation and shaping of work opportunities.

In view of its potential to improve the quality of life, learning in the Natural Sciences must be accessible to all South Africans.

The investigative character of knowledge acquisition in the Natural Sciences should be mirrored in education. Learners should be active participants in the learning process in order to build a meaningful understanding of concepts which they can apply in their lives.

## NATURAL SCIENCES

## THE SPECIFIC OUTCOMES

## FOR THE

## NATURAL SCIENCES

1. Use process skills to investigate phenomena related to the Natural Sciences.
2. Demonstrate an understanding of concepts and principles, and acquired knowledge in the Natural Sciences.
3. Apply scientific knowledge and skills to problems in innovative ways.
4. Demonstrate an understanding of how scientific knowledge and skills contribute to the management, development and utilisation of natural and other resources.
5. Use scientific knowledge and skills to support responsible decision-making.
6. Demonstrate knowledge and understanding of the relationship between science and culture.
7. Demonstrate an understanding of the changing and contested nature of knowledge in the Natural Sciences.
8. Demonstrate knowledge and understanding of ethical issues, bias and inequities related to the Natural Sciences.
9. Demonstrate an understanding of the interaction between the Natural Sciences and socio-economic development.

## NATURAL SCIENCES

**A CONCEPTUALISATION OF THE NATURAL SCIENCES**

The *conceptualisation* outlines the broad interests of the Natural Sciences. The Natural Sciences have been organised around four *Themes*. *Scope statements* for the respective Themes suggest more particular interests as well as contexts and concept areas; imply links to other learning areas; and imply cross - curricular issues. The conceptualisation is intended as a new perspective on Natural Sciences, high-lighting the integrated nature of the Learning Area. An integral part of this perspective is the need for practical activities and skills. Knowledge cannot be divorced from the practical skills involved in acquiring and using this knowledge. In the same way, attitudes and values of learners - developed and used when working in science contexts - are an important part in the conceptualisation of the Natural Sciences.

**THEME: The planet Earth and Beyond****SCOPE STATEMENT**

Earth's structure, dynamic features and components - from core to upper atmosphere - and the delicacy of the many environments associated with the Earth must be appreciated and understood at an appropriate level. A grasp of planet Earth's place in the universe can instil a sense of wonder and stimulate the imaginations of learners. Within this theme, learning contexts should be drawn from under the Earth's surface; on the Earth's surface; above the Earth's surface; and beyond the Earth.

**THEME: Life and Living****SCOPE STATEMENT**

Learners must appreciate the dynamic interdependence between organisms and their respective environments; the forms of the diversity that arises; and how that diversity can be explained as arising out of the interactions of organisms within their environments - which include other organisms. It is important for learners to understand, at an appropriate level, how life processes are sustained and how these processes are affected by human activities and other factors. Within this theme, learning contexts should be drawn from interactions within environments; diversity, change and continuity; and life processes and healthy living.

## NATURAL SCIENCES

**THEME: *Energy and Change*****SCOPE STATEMENT**

The concept of energy is fundamental to understanding both processes of change and life processes. Learners must understand, at an appropriate level, how energy is transferred in biological and physical systems; the resultant changes - including movement as change - in those systems; and that successive energy transfers make less energy available for useful work. Learners must appreciate human needs and aspirations that affect the choice of energy sources and the implications of those choices for the environment. Within this theme, learning contexts should be drawn from sources of energy; uses of energy; transfer of energy; and forces and movement as change.

**THEME: *Matter and materials*****SCOPE STATEMENT**

The nature of matter and its properties - both physical and chemical - are fundamental to the physical universe and phenomena that occur in it. Products of human enterprise such as agriculture and mining may be enhanced using technologies and may result in materials useful to and even essential for learners' daily lives. Procuring and processing natural materials and the manufacture of synthetics are commercially important activities whose potential to impact the environment must be appreciated. Within this theme, learning contexts should be drawn from the nature and properties of matter; change in matter and materials; production of natural and synthetic materials; and properties and uses of materials.



## NATURAL SCIENCES

<b>1.</b>	<b>USE PROCESS SKILLS TO INVESTIGATE PHENOMENA RELATED TO THE NATURAL SCIENCES</b>
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This specific outcome concerns the development of investigative process skills. In the Natural Sciences the "process of investigation" is central. Learners begin to develop investigative process skills at an early age and refine them through experience and use.

Broadly, processes of investigation can have two purposes. *Explorative* processes of investigation involve general observations; the collection of wide ranging data; and may lead to descriptive findings and possibly the identification of patterns. At times, these processes of investigations may lead to more focused investigations. *Focused* processes of investigation involve initial suspicions or even hypotheses against which evidence is purposefully collected in order to draw conclusions.

Processes of investigations encompass a number of different process skills such as questioning; observing; hypothesising; predicting; the collection, recording, analysis, evaluation and interpretation of data; and the communication of findings and/or conclusions. Planning and carrying out the investigation may be done individually or in groups. Data may be collected with the help of instruments and devices.

## SENIOR PHASE

Assessment Criteria	Range Statement:
<p><i>Learners conduct explorative investigations in which:</i></p> <ul style="list-style-type: none"> <li>◊ Phenomena are identified.</li> <li>◊ Investigative questions are formulated.</li> <li>◊ A plan of action is formulated.</li> <li>◊ Data are collected.</li> <li>◊ Data are analysed, evaluated and interpreted.</li> <li>◊ Findings are communicated.</li> </ul> <p><i>Learners conduct a focused investigation in which:</i></p> <ul style="list-style-type: none"> <li>◊ Phenomena are identified and questions are posed.</li> <li>◊ Situations are analysed and investigative questions are formulated.</li> <li>◊ Observations are made.</li> <li>◊ Hypotheses are formulated.</li> <li>◊ Predictions are made.</li> <li>◊ Investigative plans of action are formulated.</li> <li>◊ Evidence is collected and recorded.</li> <li>◊ Evidence is analysed, evaluated and interpreted.</li> </ul>	<p><i>In developing their work learners:</i></p> <ul style="list-style-type: none"> <li>• Access a wide variety of sources of information on phenomena, data-analysis etc.</li> <li>• Formulate investigative questions which are relevant to the phenomena and ensure a comprehensive investigative process.</li> <li>• Use a wide variety of instruments or devices to collect, measure, analyse and present data and findings.</li> <li>• Use individual and group work strategies to formulate detailed plans of action which outline responsibilities, identify priorities and specify methods for the collection and recording of data or evidence.</li> <li>• Evaluate and analyse data in terms of validity and appropriateness of methods and techniques used (fair testing).</li> <li>• Communicate their findings in a variety of ways, each of which show logic, coherence and consistency of methods and reasoning.</li> </ul>

## NATURAL SCIENCES

## ◊ Conclusions are communicated.

*Learners will conduct investigations in each of the four Themes - taking either separate Themes or a combination - and do at least one explorative and one focused investigation:*

- Phenomena selected should be relevant to learners and appropriate to their life experience. Investigations of the selected phenomena should lend themselves to the use of as many aspects of investigations as possible.
- ⇒ Earth & Beyond: phenomena such as planetary motion & time; geological time-scale; mining; weather ...
- ⇒ Life & living: phenomena such as ecosystems; the human body; plant and/or animal populations, plant physiology; relationships between structure and function ...
- ⇒ Energy & Change: phenomena such as force & movement; energy sources: renewability, availability and pollution ...
- ⇒ Matter & Material: phenomena such as solubility, density, magnetism; electrical properties ...

## NATURAL SCIENCES

## INTERMEDIATE PHASE

<b>Assessment Criteria</b>	<b>Range Statements:</b>
<p><i>Learners conduct explorative investigations in which:</i></p> <ul style="list-style-type: none"> <li>♦ Phenomena are identified.</li> <li>♦ Investigative questions are formulated.</li> <li>♦ A plan of action is formulated.</li> <li>♦ Data are collected.</li> <li>♦ Data are analysed, evaluated and interpreted.</li> <li>♦ Findings are communicated.</li> </ul> <p><i>Learners conduct a focused investigation in which:</i></p> <ul style="list-style-type: none"> <li>♦ Phenomena are identified and questions are posed.</li> <li>♦ Situations are analysed and investigative questions are formulated.</li> <li>♦ Observations are made.</li> <li>♦ Hypotheses are formulated.</li> <li>♦ Predictions are made.</li> <li>♦ Investigative plans of action are formulated.</li> <li>♦ Evidence is collected and recorded.</li> <li>♦ Evidence is analysed, evaluated and interpreted.</li> <li>♦ Conclusions are communicated.</li> </ul>	<p>In developing their work learners:</p> <ul style="list-style-type: none"> <li>• Access various sources of information on phenomena.</li> <li>• Use several simple devices for measuring, observing and analysis of data etc.</li> <li>• Work individually and in groups to brainstorm questions and methods for the collection and recording of data or evidence; design a step-wise plan of action; and assign roles to group members.</li> <li>• Evaluate their data and findings in terms of precision and appropriateness of methods (fair testing).</li> <li>• Communicate their findings in more than one way, each of which shows understanding of the design of the action plan, the methods used and the appropriateness of the data and findings.</li> </ul> <p><i>Learners will conduct investigations in each of the four Themes - taking either separate Themes or a combination - and do at least one explorative and one focused investigation:</i></p> <ul style="list-style-type: none"> <li>• Phenomena selected should be interesting to learners and appropriate to their life experience. investigations of the selected phenomena should lend themselves to the use of as many aspects of investigations as possible.</li> </ul> <p>⇒ Earth &amp; Beyond: phenomena such as motion of the earth, planets, rocks, landscapes, seasons and climate ...</p> <p>⇒ Life &amp; Living: phenomena such as animals and plants in direct or familiar environments, structure of living things, effect of environment ...</p> <p>⇒ Energy &amp; Change: phenomena such as patterns of energy consumption, energy options ...</p> <p>Matter &amp; Materials: phenomena such as mass, volume, amounts of various materials, strength, heat conduction and insulation ...</p>

## NATURAL SCIENCES

## FOUNDATION PHASE

<b>Assessment Criteria</b>	<b>Range Statements:</b>
<p><i>Learners conduct explorative investigations in which:</i></p> <ul style="list-style-type: none"> <li>◊ Phenomena are identified.</li> <li>◊ Investigative questions are formulated.</li> <li>◊ A plan of action is formulated.</li> <li>◊ Data are collected.</li> <li>◊ Data are analysed, evaluated and interpreted.</li> <li>◊ Findings are communicated.</li> </ul>	<p><i>In developing their work learners:</i></p> <ul style="list-style-type: none"> <li>• Access information on phenomena selected.</li> <li>• Work in small groups to decide on an action plan and to assign tasks to each group member.</li> <li>• Do some observations and descriptions, at times using simple instruments.</li> <li>• Discuss within and among groups to reflect on and evaluate their findings.</li> <li>• Present findings appropriately e.g. in writing, pictorially, orally ...</li> </ul>
<p><i>Learners conduct a focused investigation in which:</i></p> <ul style="list-style-type: none"> <li>◊ Phenomena are identified and questions are posed.</li> <li>◊ Situations are analysed and investigative questions are formulated.</li> <li>◊ Observations are made.</li> <li>◊ Hypotheses are formulated.</li> <li>◊ Predictions are made.</li> <li>◊ Investigative plans of action are formulated.</li> <li>◊ Evidence is collected and recorded.</li> <li>◊ Evidence is analysed, evaluated and interpreted.</li> <li>◊ Conclusions are communicated.</li> </ul>	<p><i>Learners will conduct investigations in each of the four Themes - taking either separate Themes or a combination - and do at least one explorative and one focused investigation:</i></p> <ul style="list-style-type: none"> <li>• Phenomena selected should be within the daily experience of the learners, whether this is their home environment or direct experience.</li> </ul> <p>⇒ Earth &amp; Beyond: phenomena such as stars, seasons, rivers, mountains, soil ...</p> <p>⇒ Life &amp; Living: phenomena such as well known (South African) plants and animals, trees, forests, domestic animals ...</p> <p>⇒ Energy &amp; Change: phenomena such as sources of energy, types of energy, movement ...</p> <p>⇒ Matter &amp; Materials: phenomena such as breakability, heaviness and uses of common materials ...</p>

## NATURAL SCIENCES

<b>2.</b>	<b>DEMONSTRATE AN UNDERSTANDING OF CONCEPTS AND PRINCIPLES, AND ACQUIRED KNOWLEDGE IN THE NATURAL SCIENCES</b>
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This specific outcome is central to the Learning Area of the Natural Sciences. Its concern is to make learners familiar with the developing array of knowledge, concepts and principles within the Natural Sciences. However, the demonstration of a learner's understanding of these concepts and principles should be seen as happening most meaningfully in those specific contexts which involve learners' activities. Theoretical knowledge is necessary but not sufficient. The ability to apply knowledge is essential. The range of learners' actions to attain this outcome is therefore related to the other specific outcomes. These other outcomes relate the Natural Sciences and its array of knowledge, concepts and principles to practical daily-life situations and issues. It is through the ability to use, extend and apply knowledge that a learner can be said to "understand" concepts and principles in the Natural Sciences.

## SENIOR PHASE

Assessment Criteria	Range Statement:
<p><i>Learners show work in which:</i></p> <ul style="list-style-type: none"> <li>◊ Acquired scientific knowledge, concepts and principles are used to inform actions.</li> </ul>	<p><i>In developing their work learners:</i></p> <ul style="list-style-type: none"> <li>• Acquire and develop knowledge and an understanding of scientific concepts and principles - including laws and formulae - (see also S.O. 1, 3, 4, 5, 6 and 8 which concern activities such as investigating, problem solving and decision making in everyday contexts).</li> </ul> <p><i>Learners will develop their understanding of concepts and principles in each of the four Themes, separately or in combination:</i></p> <ul style="list-style-type: none"> <li>• Key concepts and principles, laws and formulae within the four themes are understood applied in investigating, problem solving and decision making in contexts from either the learners' direct environment, or from environments not directly falling within the learners' day-to-day interests but which are of general importance to learners.</li> </ul> <p>⇒ Earth and Beyond: key concepts such as: land forms, galaxies, climate ....</p> <p>⇒ Life &amp; Living: key concepts such as ecosystems, heredity, effect of environment on life-processes, population dynamics ...</p> <p>⇒ Energy &amp; Change: key concepts such as: force, heat, electricity, velocity, homeostasis...</p> <p>⇒ Matter &amp; Materials: key concepts such as particulate nature of matter, chemical bonding, relationship between properties and uses of materials...</p>



## NATURAL SCIENCES

## INTERMEDIATE PHASE

**Assessment Criteria***Learners show work in which:*

- ◊ Acquired scientific knowledge, concepts and principles are used to inform actions.

**Range Statement:***In developing their work learners:*

- Use and develop their knowledge of science concepts and principles - including some basic laws and formulae - in practical situations related to their experience and interest and involving investigating, problem solving and decision making.

*Learners will develop their understanding of concepts and principles in each of the four Themes - separately, or in combination - related to the learners' local environments:*

- Key concepts and principles, basic laws and formulae within the four themes are applied in investigating, problem solving and decision making.
- ⇒ Earth and Beyond: key concepts such as: rivers, mountains, oceans, planets, rocks and minerals ...
- ⇒ Life & Living: key concepts such as: plants, animals, food-webs, ecosystems, life-processes ...
- ⇒ Energy & Change: key concepts such as force, electricity, movement, energy transformation ...
- ⇒ Matter & Materials: key concepts such as: density, conductivity, natural and synthetic fibres, solubility ...



## NATURAL SCIENCES

## FOUNDATION PHASE

<b>Assessment Criteria</b>	<b>Range Statement:</b>
<p><i>Learners show work in which:</i></p> <ul style="list-style-type: none"> <li>◊ Acquired scientific knowledge, concepts and principles are used to inform actions.</li> </ul>	<p><i>In developing their work learners:</i></p> <ul style="list-style-type: none"> <li>• Use and develop knowledge of science concepts and principles in practical situations related to their daily life and experience, involving simple investigating, problem solving and decision making.</li> </ul> <p><i>Learners will develop their understanding of concepts and principles in each of the four Themes - separately, or in combination - which are related to the learners' immediate environment:</i></p> <ul style="list-style-type: none"> <li>• Key concepts and principles within the four themes are applied in investigating, problem solving and decision making.</li> </ul> <ul style="list-style-type: none"> <li>⇒ Earth and Beyond: key concepts such as: oceans, mountains, sun, moon, forests ....</li> <li>⇒ Life &amp; Living: key concepts such as: plants, animals, food-webs, food-production ...</li> <li>⇒ Energy &amp; Change: key concepts such as force, movement, energy ...</li> <li>⇒ Matter &amp; Materials: key concepts such as: heaviness, strength, flexibility ...</li> </ul>

## NATURAL SCIENCES

<b>3.</b>	<b>APPLY SCIENTIFIC KNOWLEDGE AND SKILLS TO PROBLEMS IN INNOVATIVE WAYS.</b>
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This specific outcome concerns the development of the capacity of learners to work on problems using scientific knowledge and skills. The outcome is related to specific outcomes 1 and 5. The emphasis, however, in specific outcome 3 is the solving of problems. In the solving of problems, investigations have to be done and decisions also have to be made. It is therefore necessary to consider specific outcome 3 in connection with the assessment criteria and range statements of specific outcomes 1 and 5.

**SENIOR PHASE****Assessment Criteria:**

*Learners show work in which:*

- ◊ Problems are identified.
- ◊ Relevant information is gathered.
- ◊ Relevant scientific knowledge is selected.
- ◊ Relevant scientific skills are selected.
- ◊ The problem is re-evaluated.
- ◊ Innovative options are generated.
- ◊ Decisions are made.
- ◊ Possible plan of action is communicated.

**Range Statement:**

*In developing their work learners:*

- Access a wide variety of sources to gather information on problems, scientific knowledge and skills through activities such as practical investigations, using various media and interview-techniques.
- Use scientific skills for investigations (see also S.O. 1, Senior Phase).
- Use individual and group work strategies to make a detailed plan of action, outlining responsibilities, priorities and an ordered step-wise plan of work which could include experiments.
- Re-evaluate the problem through group or class presentations, discussions and debates, possibly developing a new perspective in view of all of the information gathered.
- Brainstorm to generate and debate innovative options and solutions to the problem.
- Decide on the best option, clearly justifying the choice on the basis of ordered and clearly presented scientific evidence.
- Communicate conclusions and recommendations in a variety of ways, each of which show a logical build-up, coherency and consistency in methods and reasoning.
- Design and build - where appropriate - a usable device or technology that addresses the problem, or propose a plan of action.

*Learners will be involved in problem solving activities in each of the four Themes, separately or in combination:*

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	<ul style="list-style-type: none"><li>• The problems identified could be of some general (e.g. provincial or national) importance, and its solution or way of addressing it could have an impact both within and outside the learners' direct environment.</li></ul> <p>⇒ Earth and Beyond: Effects over time of human activities on the earth's surface in South Africa, or elsewhere (such as mining, farming ...).</p> <p>⇒ Life and Living: Factors that affect life-processes (such as substance abuse, food preservation ...).</p> <p>⇒ Energy and Change: Energy conservation or environmentally friendly use and transformation of energy (such as alternative energy sources: water, solar ...)</p> <p>⇒ Matter and Materials: Environmental impact of production and processing (such as wool, synthetics, waste, recycling ...).</p>
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## NATURAL SCIENCES

## INTERMEDIATE PHASE

<b><u>Assessment Criteria:</u></b>	<b><u>Range Statement:</u></b>
<p><i>Learners show work in which:</i></p> <ul style="list-style-type: none"> <li>◊ Problems are identified.</li> <li>◊ Relevant information is gathered.</li> <li>◊ Relevant scientific knowledge is selected.</li> <li>◊ Relevant scientific skills are selected.</li> <li>◊ The problem is re-evaluated.</li> <li>◊ Innovative options are generated.</li> <li>◊ Decisions are made.</li> <li>◊ Possible plan of action is communicated.</li> </ul>	<p><i>In developing their work learners:</i></p> <ul style="list-style-type: none"> <li>• Access a variety of sources such as local newspapers, magazines, text-books, teachers, community members and centres to gather information on problems, on scientific knowledge and on skills.</li> <li>• Identify and decide - with help from the teacher - on necessary scientific skills for use in investigations.</li> <li>• Use individual and group work strategies to make a step-wise plan of action, assigning roles and tasks to group members.</li> <li>• Re-evaluate the problem and the plan of action through group or class presentations and discussions.</li> <li>• Decide collectively on the best option, giving some justification for the choice based on the evaluation and the information gathered.</li> <li>• Communicate findings in more than one form, such as a poster or essay.</li> <li>• Make - where appropriate - a device or technology that relates to the problem or propose a plan of action.</li> </ul> <p><i>Learners will be involved in problem solving activities in each of the four Themes, separately or in combination:</i></p> <ul style="list-style-type: none"> <li>• The problems identified and their solutions or ways of addressing them have some importance to the learners' daily life and environment.</li> <li>⇒ Earth and Beyond: Visible effects of human activities on the earth's surface in learners' close vicinity or South Africa (such as visible pollution, water supply and quality, land use ...).</li> <li>⇒ Life and Living: Problems affecting living things in the environment (such as food production, compost, deforestation, afforestation, cruelty to animals ...).</li> <li>⇒ Energy and Change: Energy sources used at home and the community (such as cost, consumption rates, availability ...).</li> <li>⇒ Matter and Materials: Materials used for building in the community (such as effectiveness, types: stone, concrete, wood, )</li> </ul>

## NATURAL SCIENCES

## FOUNDATION PHASE

**Assessment Criteria:***Learners show work in which:*

- ♦ Problems are identified.
- ♦ Relevant information is gathered.
- ♦ Relevant scientific knowledge is selected.
- ♦ Relevant scientific skills are selected.
- ♦ The problem is re-evaluated.
- ♦ Innovative options are generated.
- ♦ Decisions are made.
- ♦ Possible plan of action is communicated.

**Range Statement:***In developing their work learners:*

- Access information through reading materials made available in the classroom and discussions with peers, parents and teachers.
- Explore through practical activities.
- Discuss in small groups what they need to do to solve the problem.
- Present their plan of action to peers for evaluation.
- Decide collectively on the best option, and explain the choice.

*Learners will be involved in problem solving activities in each of the four Themes, separately or in combination:*

- The problems identified are visible and related to the learners' direct experience or environment.
- ⇒ Earth and Beyond: Visible effects of human activities on learners' environment (such as buildings, litter, water quality, erosion ...).
- ⇒ Life and Living: Living things in the learners' environment (such as malnutrition, lack of water, overgrazing, plant and animal care ...).
- ⇒ Energy and Change: Energy sources used at home (such as consumption pattern, availability, food as a source of energy ...).
- ⇒ Matter and Materials: Infrastructure in the community (such as availability and use of different building materials ...).

## NATURAL SCIENCES

<b>4.</b>	<b>DEMONSTRATE AN UNDERSTANDING HOW SCIENTIFIC KNOWLEDGE AND SKILLS CONTRIBUTE TO THE MANAGEMENT, DEVELOPMENT AND UTILISATION OF NATURAL AND OTHER RESOURCES.</b>
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Specific outcome 4 concern the development the awareness that resources are contested and that the view of them as limited depends on what one's purpose for the utilisation of the resource is. In the Natural Sciences the emphasis is on scientific considerations regarding this issue. However, the social, economic and political factors cannot be ignored. Particular attention is given to the idea of renewable and non-renewable resources, the need for recycling, resource management and how scientific input is of use here.

**SENIOR PHASE**

<b>Assessment Criteria:</b>	<b>Range Statement:</b>
<p><i>Learners show work in which:</i></p> <ul style="list-style-type: none"> <li>◊ The importance of sound management practices for resources is acknowledged.</li> <li>◊ Natural and other resources are identified.</li> <li>◊ Relevant scientific information is gathered.</li> <li>◊ Non-scientific information is acknowledged.</li> <li>◊ Management, development and utilisation practices are investigated.</li> <li>◊ Science aspects within contested areas of management, development and utilisation of resources are explored.</li> <li>◊ Alternative strategies and responsible decision making regarding renewable and non-renewable resources are explored.</li> <li>◊ Findings and conclusions are communicated.</li> </ul>	<p><i>In developing their work learners:</i></p> <ul style="list-style-type: none"> <li>• Access information from various sources and brainstorm to identify natural and other contested resources.</li> <li>• Access a wide variety of sources of information on the management, development and utilisation of those resources.</li> <li>• Identify and acknowledge relevant scientific and other factors such as human, social, economic and political.</li> <li>• Investigate and try to predict the consequences of decisions regarding the management, development and utilisation of renewable and non-renewable resources.</li> <li>• Communicate their findings, decisions and conclusions in a variety of ways, showing a grasp of the relation between various factors that are in contest with one another regarding the development, utilisation and management of resources considered.</li> </ul> <p><i>Learners consider different resources from each of the four Themes, separately or in combination:</i></p> <ul style="list-style-type: none"> <li>• Contested resources to be considered should be present locally, but be of general (national or global) importance and include living resources and physical resources.</li> </ul>



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	<p>⇒ Earth and Beyond: Resources in the earth, on the surface or beyond (such as minerals, soil, solar energy, water catchment ...).</p> <p>⇒ Life and Living: Living resources in South Africa but with wider relevance (such as forests, bio-diversity, food production, medicinal plants, wild life and domestic animals ...).</p> <p>⇒ Energy and Change: Energy sources used in South Africa and outside (such as coal, oil, hydro-electric, nuclear ...).</p> <p>⇒ Matter and Materials: Resources used in building, manufacturing and processing (such as synthetic products, metals, wood, natural fibres ...).</p>
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## INTERMEDIATE PHASE

<b>Assessment Criteria:</b>	<b>Range Statement:</b>
<p><i>Learners show work in which:</i></p> <ul style="list-style-type: none"> <li>◊ The importance of sound management practices for resources is acknowledged.</li> <li>◊ Natural and other resources are identified.</li> <li>◊ Relevant scientific information is gathered.</li> <li>◊ Non-scientific information is acknowledged.</li> <li>◊ Management, development and utilisation practices are investigated.</li> <li>◊ Science aspects within contested areas of management, development and utilisation of resources are explored.</li> <li>◊ Alternative strategies and responsible decision making regarding renewable and non-renewable resources are explored.</li> <li>◊ Findings and conclusions are communicated.</li> </ul>	<p><i>In developing their work learners:</i></p> <ul style="list-style-type: none"> <li>• Access information available at school, home or local community and brainstorm to identify natural and other contested resources.</li> <li>• Access sources of scientific information on the existing development and utilisation of those resources.</li> <li>• Identify relevant scientific and other factors such as human, social, economic and political.</li> <li>• Investigate the inter-relation of these resources and their development and utilisation particularly regarding aspects of renewability and non-renewability.</li> <li>• Communicate opinions in more than one way, showing awareness for the necessity of a balanced and responsible development and utilisation of resources.</li> </ul> <p><i>Learners consider different resources from each of the four Themes, separately or in combination:</i></p> <ul style="list-style-type: none"> <li>• Contested resources to be considered should be present locally and include at least one living resource and one physical resource.</li> </ul> <p>⇒ Earth and Beyond: Resources in the</p>

## NATURAL SCIENCES

	<p>earth, on the surface or beyond (such as soil, water, air ...).</p> <p>⇒ Life and Living: Living resources in learners' environment (such as wild or domesticated plants and animals and their uses for different groups of people ).</p> <p>⇒ Energy and Change: Energy sources used in South Africa (such as firewood, coal, oil, gas ... ).</p> <p>⇒ Matter and Materials: Resources used in building, manufacturing and processing (such as wood, concrete, metals, natural fibres ... ).</p>
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## FOUNDATION PHASE

<b>Assessment Criteria:</b>	<b>Range Statement:</b>
<p><i>Learners show work in which:</i></p> <ul style="list-style-type: none"> <li>◊ The importance of sound management practices for resources is acknowledged.</li> <li>◊ Natural and other resources are identified.</li> <li>◊ Relevant scientific information is gathered.</li> <li>◊ Non-scientific information is acknowledged.</li> <li>◊ Management, development and utilisation practices are investigated.</li> <li>◊ Science aspects within contested areas of management, development and utilisation of resources are explored.</li> <li>◊ Alternative strategies and responsible decision making regarding renewable and non-renewable resources are explored.</li> <li>◊ Findings and conclusions are communicated.</li> </ul>	<p><i>In developing their work learners:</i></p> <ul style="list-style-type: none"> <li>• Gather scientific information made available at school or from home with the help of the teacher.</li> <li>• Identify - with assistance from the teacher - non-scientific factors such as social and economic.</li> <li>• Explore ways in which the chosen resources affect their daily lives.</li> <li>• Communicate findings through group presentations or simple illustrated texts showing awareness of the need for recycling.</li> </ul> <p><i>Learners consider different resources from each of the four Themes, separately or in combination:</i></p> <ul style="list-style-type: none"> <li>• Resources to be considered should be relevant to the learners' lives.</li> </ul> <p>⇒ Earth and Beyond: Resources in the earth, on the surface or beyond (such as soil, water, air ...).</p> <p>⇒ Life and Living: Living resources in learners' environment (such as wild and domesticated plants and animals and their uses by different groups of people..)</p> <p>⇒ Energy and Change: Energy sources used in South Africa (such as firewood, coal, paraffin ... ).</p> <p>⇒ Matter and Materials: Resources used in building, manufacturing and processing (such as wood, minerals, natural fibres ).</p>

## NATURAL SCIENCES

<b>5.</b>	<b>USE SCIENTIFIC KNOWLEDGE AND SKILLS TO SUPPORT RESPONSIBLE DECISION MAKING.</b>
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This specific outcome concerns the development - in learners - of the capacity for making informed and responsible decisions, recognising the use of scientific knowledge in the process of making decisions, and seeing that making decisions has consequences. The outcome is related to other specific outcomes, most notably numbers. 1, 3 and 4. In these outcomes high-light aspects related to decision making - such as investigating and problem solving. Specific outcome 5 emphasises decision making as an important part of using scientific knowledge and skills in everyday life. Important is that learners develop an understanding of how decisions are reached; how information gathering is important; and that scientific knowledge and skills must play a role throughout the process.

**SENIOR PHASE**

<b>Assessment Criteria</b>	<b>Range Statement:</b>
<p><i>Learners show work in which:</i></p> <ul style="list-style-type: none"> <li>◊ Issues are identified.</li> <li>◊ Scientific information relevant to the issues is gathered.</li> <li>◊ Information is prepared for the decision making process.</li> <li>◊ Non-scientific issues are acknowledged.</li> <li>◊ Alternatives are considered.</li> <li>◊ Reasons for decisions are communicated.</li> </ul>	<p><i>In developing their work learners:</i></p> <ul style="list-style-type: none"> <li>• Brainstorm, discuss and debate - using a wide variety of information sources - to identify issues.</li> <li>• Access scientific information related to the issues from sources such as textbooks, libraries, television, interviews, pamphlets.</li> <li>• Work individually or in a group to identify the critical and essential viewpoints, attitudes and values related to the issue.</li> <li>• Reflect and argue how scientific input and other input generate action plans or alternatives.</li> <li>• Communicate - in a variety of ways - decisions and possible consequences, relating viewpoints and scientific input in a consistent way.</li> </ul> <p><i>Learners will be involved in decision making in each of the four Themes, separately or in combination:</i></p> <ul style="list-style-type: none"> <li>• Decision making will take place in a context that might relate to learners' direct experience or might relate to issues that also reflect a more general - but for the learners relevant - national or international concern.</li> </ul> <p>⇒ <b>Earth and Beyond:</b> Establish criteria for environmentally sensitive projects (such as dams, town, industry ...).</p> <p>⇒ <b>Life and Living:</b> Make judgements on actions affecting life and life-forms (such as</p>

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	<p>family planning, health, land-use for different types of farming purposes ...).</p> <p>⇒ Energy and Change: Decide on effective use and distribution of energy (such as appropriate means of transport; energy distribution, conservation of energy ...).</p> <p>⇒ Matter and Materials: Decide on most effective use of materials (such as enrichment or export of raw materials, purpose cost and choice of materials, recycling...).</p>
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## INTERMEDIATE PHASE

<b><u>Assessment Criteria</u></b>	<b><u>Range Statement:</u></b>
<p><i>Learners show work in which:</i></p> <ul style="list-style-type: none"> <li>◊ Issues are identified.</li> <li>◊ Scientific information relevant to the issues is gathered.</li> <li>◊ Information is prepared for the decision making process.</li> <li>◊ Non-scientific issues are acknowledged.</li> <li>◊ Alternatives are considered.</li> <li>◊ Reasons for decisions are communicated.</li> </ul>	<p><i>In developing their work learners:</i></p> <ul style="list-style-type: none"> <li>• Brainstorm and discuss - using a variety of information sources available at the place of learning or outside - to identify issues.</li> <li>• Access scientific information relating to the issues from sources such as textbooks, libraries, newspapers, pamphlets, magazines and the television.</li> <li>• Work individually or in a group to identify various viewpoints related to the issue.</li> <li>• Discuss what alternatives are generated through scientific and other input.</li> <li>• Communicate in more than one way, decisions and possible consequences, showing the relation between viewpoints, scientific input, and decisions made.</li> </ul> <p><i>Learners will be involved in decision making in each of the four Themes, separately or in combination:</i></p> <ul style="list-style-type: none"> <li>• Decision making will take place in a context that relates to learners' direct experience and environment, but might have wider implications.</li> </ul> <p>⇒ Earth and Beyond: Discuss environmentally sensitive projects (such as where to build your house, make a school or grow your food ...).</p> <p>⇒ Life and Living: Decide on benefit to people of different living things (such as what to eat, what "crops" to plant, what animals to keep, where to get water from ...).</p> <p>⇒ Energy and Change: Decide on most effective energy source for specific purpose</p>

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	<p>(such as for cooking, transport, heating, production processes ...).</p> <p>⇒ Matter and Materials: Choosing the most appropriate materials for a specific purpose (such as for a house, a car, a fence, clothes...).</p>
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## FOUNDATION PHASE

<b>Assessment Criteria</b>	<b>Range Statement:</b>
<p><i>Learners show work in which:</i></p> <ul style="list-style-type: none"> <li>♦ Issues are identified.</li> <li>♦ Scientific information relevant to the issues is gathered.</li> <li>♦ Information is prepared for the decision making process.</li> <li>♦ Non-scientific issues are acknowledged</li> <li>♦ Alternatives are considered.</li> <li>♦ Reasons for decisions are communicated.</li> </ul>	<p><i>In developing their work learners:</i></p> <ul style="list-style-type: none"> <li>• Brainstorm and discuss to identify issues.</li> <li>• Access scientific information relating to the issues from sources made available in the classroom.</li> <li>• Work in a small group to establish various viewpoints of group members.</li> <li>• Discuss alternatives.</li> <li>• Communicate their decision and its possible consequences, for instance orally or in a short text with pictures.</li> </ul> <p><i>Learners will be involved in decision making in each of the four Themes, separately or in combination:</i></p> <ul style="list-style-type: none"> <li>• Decision making will take place in a context that relates to learners' direct experience and environment.</li> </ul> <p>⇒ Earth and Beyond: Decide on changes in learners' direct environment: (such as where to make a path, what route to take from home to school, where to build toilets at school ...).</p> <p>⇒ Life and Living: Decide on life forms and their possible benefit to people (such as what to plant, where to plant, when to plant, what animals to keep ...).</p> <p>⇒ Energy and Change: Decide on what energy sources to use for specific purposes (such as cooking, heating the house, lighting ...).</p> <p>⇒ Matter and Materials: Decide on what materials are most appropriate for a specific purpose (such as school bag, clothes, table ...).</p>



## NATURAL SCIENCES

<b>6.</b>	<b>DEMONSTRATE KNOWLEDGE AND UNDERSTANDING OF THE RELATIONSHIP BETWEEN SCIENCE AND CULTURE.</b>
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Specific outcome 6 is concerned with the development of an understanding that science is not a neutral discipline, but that it is influenced by the culture in which it takes place. Furthermore, science cannot necessarily be seen as the only way of making sense of the world around us. Other cultural means of clarifying the world, such as through language, religion or art, should be seen as having a valid and benefit, just like science has.

**SENIOR PHASE**

<b>Assessment Criteria</b>	<b>Range Statement:</b>
<p><i>Learners show work in which:</i></p> <ul style="list-style-type: none"> <li>◊ Science is acknowledged as influenced by cultural factors.</li> <li>◊ Science is acknowledged as but one way of looking at and explaining phenomena.</li> </ul>	<p><i>In developing their work learners:</i></p> <ul style="list-style-type: none"> <li>• Access a wide variety of information on different kinds of methods, aims and uses of science in different cultures (such as African, Eastern, European ...).</li> <li>• Work individually or in groups to identify and discuss different ways of observing, describing and explaining phenomena (such as religious, scientific, artistic ...).</li> </ul> <p><i>Any two or three examples of scientific work and thinking in different cultures and relating to any Theme or Themes can be chosen:</i></p> <ul style="list-style-type: none"> <li>⇒ Earth and Beyond: scientific and cultural aspects of interests such as astronomy, geography, climate and weather ...</li> <li>⇒ Life and Living: scientific and cultural aspects of interests such as agriculture, health, medicinal plants and uses of animals ...</li> <li>⇒ Energy and Change: scientific and cultural aspects of interests such as solar energy, lightning ....</li> <li>⇒ Matter and Materials: scientific and cultural interests such as design of houses, clothes, furniture and tools ...</li> </ul>

**INTERMEDIATE PHASE**

<b>Assessment Criteria</b>	<b>Range Statement:</b>
<p><i>Learners show work in which:</i></p> <ul style="list-style-type: none"> <li>◊ Science is acknowledged as influenced by cultural factors.</li> <li>◊ Science is acknowledged as but one way of looking at and explaining phenomena.</li> </ul>	<p><i>In developing their work learners:</i></p> <ul style="list-style-type: none"> <li>• Access a variety of information on different examples of science products in different cultures (such as African, Eastern, European ...).</li> </ul>



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	<ul style="list-style-type: none"> <li>• Work in groups to discuss different ways of observing, describing and explaining phenomena (such as religious, scientific, artistic ...).</li> </ul> <p><i>Any two examples of scientific products - of interest to learners in Grade 4-6 - in different cultures and relating to any Theme or Themes can be chosen:</i></p> <ul style="list-style-type: none"> <li>⇒ Earth and Beyond: scientific and cultural aspects of interests such as astronomy, geography, climate, mining ... .</li> <li>⇒ Life and Living: scientific and cultural aspects of interests such as agriculture, health, uses of indigenous plants ... .</li> <li>⇒ Energy and Change: scientific and cultural aspects of interests such as sun, lightning .... .</li> <li>⇒ Matter and Materials: scientific and cultural interests such as design of houses, clothes, tools and utensils ... .</li> </ul>
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## FOUNDATION PHASE

<p><b>Assessment Criteria</b></p> <p><i>Learners show work in which:</i></p> <ul style="list-style-type: none"> <li>◇ Science is acknowledged as influenced by cultural factors.</li> <li>◇ Science is acknowledged as but one way of looking at and explaining phenomena.</li> </ul>	<p><b>Range Statement:</b></p> <p><i>In developing their work learners:</i></p> <ul style="list-style-type: none"> <li>• Use readily available information on different examples of science products in different cultures (such as African, Eastern, European ...).</li> <li>• Talk in groups about different ways of observing and describing phenomena (such as scientific, artistic ...).</li> </ul> <p><i>Any examples of scientific products - of interest to learners in Grade 1-3 - in different cultures and relating to any Theme or Themes can be chosen:</i></p> <ul style="list-style-type: none"> <li>⇒ Earth and Beyond: scientific and cultural aspects of interests such as sun and moon, map-making ... .</li> <li>⇒ Life and Living: scientific and cultural aspects of interests such as agriculture, health, uses of plants and animals ... .</li> <li>⇒ Energy and Change: scientific and cultural aspects of interests such as fire, lightning .... .</li> <li>⇒ Matter and Materials: scientific and cultural interests such as design of houses, clothes ... .</li> </ul>
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## NATURAL SCIENCES

<b>7.</b>	<b>DEMONSTRATE AN UNDERSTANDING OF THE CHANGING AND CONTESTED NATURE OF KNOWLEDGE IN THE NATURAL SCIENCES.</b>
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Specific Outcome 7 aims at developing an understanding of some essential features of science, its methods and products. Too easily science can be seen as a body of immutable truths and therefore as absolute and without change. Learners need to know that science is a human activity, dependent on assumptions which change over time and over different social settings. By realising the changing nature of scientific knowledge, both learner and teacher will be supported in their aim of linking everyday knowledge with scientific interpretations and so create a better understanding of the world.

**SENIOR PHASE**

<b>Assessment Criteria</b>	<b>Range Statement:</b>
<p><i>Learners show work in which:</i></p> <ul style="list-style-type: none"> <li>♦ Peoples' contributions to science through the ages are identified.</li> <li>♦ Scientific theories are seen in their context.</li> <li>♦ Contributions to a scientific theory by scientists from different backgrounds are acknowledged.</li> <li>♦ Scientific explanations of phenomena are acknowledged as open to change.</li> </ul>	<p><i>In developing their work learners:</i></p> <ul style="list-style-type: none"> <li>• Access a wide variety of sources of information available at school or anywhere outside on scientific theories and their changes and development.</li> <li>• Use individual and group work to discuss and organise their findings.</li> <li>• Communicate their findings in any suitable form (such as essay, presentation, poster, time-line ...) clearly showing various factors and contributions that have contributed to the change in a theory.</li> </ul> <p><i>Learners will look at a scientific theory in each of the four Themes:</i></p> <ul style="list-style-type: none"> <li>• The theory identified should be one that has developed and changed significantly over time as a result of contributions and the changed thinking of scientists from different ethnic-groups, cultures or gender.</li> </ul> <p>⇒ Earth and Beyond: Theories such as the expansion of the universe, continental drift, ozone depletion ...</p> <p>⇒ Life and Living: Theories about the origin of species, heredity, embryonic development ...</p> <p>⇒ Energy and Change: Theories such as atomic energy, relativity ...</p> <p>⇒ Matter and Materials: Theories such as on the particulate nature of matter, atom and molecule models ...</p>

## NATURAL SCIENCES

## INTERMEDIATE PHASE

**Assessment Criteria***Learners show work in which:*

- ◊ Peoples' contributions to science through the ages are identified.
- ◊ Scientific theories are seen in their social and historical context.
- ◊ Contributions to a scientific theory by scientists from different backgrounds are acknowledged.
- ◊ Scientific explanations of phenomena are acknowledged as open to change.

**Range Statement:***In developing their work learners:*

- Identify any two persons who have made contributions to the Natural Sciences.
- Access various sources of information available at school or outside to explore the historical and social contexts in which these people made their contributions.
- Use individual and group work to discuss how the contributions of these people has changed the thinking of scientists.

*Learners will look at persons from two of the four Themes::*

- The persons identified should have developed and changed some scientific thinking significantly over time as a result of their contributions; the people should be from different ethnic-groups, cultures or gender and not necessarily be known as a 'scientist' but as a contributor to scientific thinking.

⇒ Earth and Beyond: Someone who has contributed to fields such as geology, geography, astronomy ...

⇒ Life and Living: Someone who has contributed to fields such as medicine, micro-biology, bio-chemistry, bio-technology ...

⇒ Energy and Change: Someone who has contributed to fields such as physics, engineering ...

⇒ Matter and Materials: Someone who has contributed to fields such as chemistry, technology ...

## NATURAL SCIENCES

## FOUNDATION PHASE

**Assessment Criteria***Learners show work in which:*

- ◊ Peoples' contributions to science through the ages are identified.
- ◊ Scientific theories are seen in their social and historical context.
- ◊ Contributions to a scientific theory by scientists from different backgrounds are acknowledged.
- ◊ Scientific explanations of phenomena are acknowledged as open to change.

**Range Statement:***In developing their work learners:*

- Identify any one person who has made contributions to the Natural Sciences.
- Access information made available at school to explore the historical context in which the person made the contribution.
- Discuss how the contribution of this person has changed the thinking of scientists.

*Learners will look at a person who worked in one of the four Themes:*

- The person identified should have developed and changed some scientific thinking significantly over time as a result of the contribution made; the people should be from different ethnic-groups, cultures or gender and not necessarily be known as a 'scientist' but as a contributor to scientific thinking.
- ⇒ Earth and Beyond: Someone who has contributed to fields such as geology, geography, astronomy ...
- ⇒ Life and Living: Someone who has contributed to fields such as health science, botany, zoology ...
- ⇒ Energy and Change: Someone who has contributed to fields such as physics, engineering ...
- ⇒ Matter and Materials: Someone who has contributed to fields such as chemistry, technology, engineering ..

## NATURAL SCIENCES

8	<b>DEMONSTRATE KNOWLEDGE AND UNDERSTANDING OF ETHICAL ISSUES, BIAS AND INEQUITIES RELATED TO THE NATURAL SCIENCES</b>
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Specific outcome 8 concerns the development of an awareness that science is not value-free and can be misused or abused. On the one hand science can create inequities and show bias, on the other hand science can also help to redress such situations. Ethical issues often have a science component to them; learners need to develop the ability to use scientific perspectives among other perspectives to evaluate ethical issues. The outcome reflects a wish to create an awareness of various viewpoints and issues, rather than propagate any specific viewpoint.

**SENIOR PHASE**

Assessment Criteria	Range Statement:
<p><i>Learners show work in which:</i></p> <ul style="list-style-type: none"> <li>◊ A variety of viewpoints are acknowledged.</li> <li>◊ A variety of origins of bias and inequity are considered.</li> <li>◊ Scientific inputs are used.</li> <li>◊ Arguments are presented and evaluated.</li> </ul>	<p><i>In developing their work learners</i></p> <ul style="list-style-type: none"> <li>• Brainstorm, discuss or read to identify an ethical issue of interest.</li> <li>• Argue and reason about an issue with respect for different viewpoints.</li> <li>• Use a wide variety of sources of information to identify situations that reflect or highlight bias and inequity and possible origins for these.</li> <li>• Independently identify and use scientific inputs related to the issues being considered.</li> <li>• Communicate findings in a variety of ways, showing a clear grasp of the relationship between ethical and scientific considerations.</li> </ul> <p><i>Learners will be involved in considering issues from each of the four Themes, separately or in combination:</i></p> <ul style="list-style-type: none"> <li>• Issues considered are of global as well as local concern and of relevance to the lives, thinking and actions of learners.</li> </ul> <p>⇒ Earth &amp; Beyond: Issues such as space exploration and its cost, global differences in resource allocation and availability ...</p> <p>⇒ Life &amp; living: Issues such as genetic manipulation, abortion, cloning, bio-diversity, allocation of health-care services</p> <p>⇒ Energy &amp; Change: Issues such as nuclear energy, allocation of funds for identification of energy sources ...</p> <p>⇒ Matter &amp; Materials: Issues such as chemical warfare, priorities for research funding ...</p>

## NATURAL SCIENCES

## INTERMEDIATE PHASE

**Assessment Criteria***Learners show work in which:*

- ◊ A variety of viewpoints are acknowledged.
- ◊ A variety of origins of bias and inequity are considered.
- ◊ Scientific inputs are used.

**Range Statement:***In developing their work learners:*

- Brainstorm, discuss or read to identify an ethical issue of their interest.
- Discuss an issue with respect for different viewpoints.
- Use various sources of information to identify situations that reflect or highlight bias and inequity and possible origins for these.
- In groups collect and use - with assistance from the teacher - scientific inputs related to the issues being considered.
- Communicate findings in more than one way, showing relations between science, technology and society.

*Learners will be involved in considering issues from each of the four Themes, separately or in combination:*

- Issues considered are of global or local concern and of relevance to the lives, thinking and actions of learners.
- ⇒ Earth & Beyond: Issues such as industrial location, land allocation, location of dams and other large scale projects ...
- ⇒ Life & Living: Issues such as harmful drugs, organ donation, ecotourism and rural development ...
- ⇒ Energy & Change: Issues such as availability of funds, allocation of energy resources ...
- ⇒ Matter and Materials: Issues such as biodegradable house-hold materials, availability and costs of traditional & innovative building materials ...



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## FOUNDATION PHASE

<b>Assessment Criteria</b>	<b>Range Statement:</b>
<p><i>Learners show work in which:</i></p> <ul style="list-style-type: none"> <li>♦ A variety of viewpoints are acknowledged.</li> <li>♦ A variety of origins of bias and inequity are considered.</li> <li>♦ Scientific inputs are used.</li> </ul>	<p><i>In developing their work learners:</i></p> <ul style="list-style-type: none"> <li>• Talk with each other or read to identify an ethical issue of their interest.</li> <li>• Discuss an issue with respect for different viewpoints.</li> <li>• Use information made available or from home to identify situations that reflect or highlight bias and inequity and possible origins for these.</li> <li>• In groups discuss scientific inputs related to the issues being considered.</li> <li>• Communicate ideas and findings to class through presentations or simple, illustrated texts.</li> </ul> <p><i>Learners will be involved in considering issues from each of the four Themes, separately or in combination:</i></p> <ul style="list-style-type: none"> <li>• Issues considered are of direct concern and of relevance to the lives, thinking and actions of learners.</li> </ul> <p>⇒ Earth &amp; Beyond: Issues such as pollution, urban-rural divide ...</p> <p>⇒ Life &amp; Living: Issues such as health, availability and types of clothing ...</p> <p>⇒ Energy &amp; Change: Issues such as exhaust fumes, electrification of rural areas and townships ...</p> <p>⇒ Matter and Materials: Issues such as types of housing, road building ...</p>

## NATURAL SCIENCES

<b>9.</b>	<b>DEMONSTRATE AN UNDERSTANDING OF THE INTERACTION BETWEEN THE NATURAL SCIENCES AND SOCIO-ECONOMIC DEVELOPMENT.</b>
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Specific outcome 9 concerns the development of a holistic understanding that the Natural Sciences contribute towards socio-economic development and improvements to the lives of people. The contribution of science is through the activities of people and often through technological developments. Learners should understand how, in contributing to socio-economic development, the Natural Sciences are often linked to technologies. An important way in which education in the Natural Sciences can contribute to socio-economic development is through the development of a scientifically literate nation. Scientific literacy involves the ability to apply scientific concepts and principles to everyday life and being able to recognise their use or non-use in a variety of contexts. Further, an ability to communicate effectively is essential in the Natural Sciences and scientific literacy is enhanced when it is accessible to learners. Therefore language development is crucial for both science education and scientific literacy.

## SENIOR PHASE

Assessment Criteria	Range Statement
<p><i>Learners show work in which:</i></p> <ul style="list-style-type: none"> <li>◊ Evidence is provided of how science and technology are used in society.</li> <li>◊ The way in which scientific and technological developments have changed the lives of people is analysed.</li> <li>◊ The impact of technological innovations on scientific work is explored.</li> <li>◊ The link between scientific ideas and technological devices is explored.</li> <li>◊ Roles and consequences of science in society are communicated.</li> </ul>	<p><i>In developing their work learners:</i></p> <ul style="list-style-type: none"> <li>• Conduct a study in which they explore the scientific principles used in the development of a specific technological device or process; and analyse how this affects development (industrial, agricultural, small-business etc.), job opportunities and society.</li> <li>• Analyse how accessible - in terms of being familiar, understandable and usable - the technology and related scientific principles are to various groups of people.</li> <li>• Communicate their findings in reports and group presentations that show a clear grasp of the use of science and technology and their effect on society.</li> </ul> <p><i>Learners will perform at least two studies, each within a different Theme or combination of Themes:</i></p> <ul style="list-style-type: none"> <li>⇒ Earth and Beyond: devices such as satellites, mining, mineral extraction ...</li> <li>⇒ Life and Living: processes such as production of antibiotics, drugs and food additives; bio-genetic engineering; in vitro fertilisation ...</li> <li>⇒ Energy and Change: technological devices or appliances such as pulleys, gears, lifts, means of transport, generators, engines, hydro-electric generators, ...</li> <li>⇒ Matter and Materials: technological</li> </ul>

## NATURAL SCIENCES

	products such as time-pieces, photography, telecommunication, plastics, paints, paper ... .
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## INTERMEDIATE PHASE

<b>Assessment Criteria</b>	<b>Range Statement:</b>
<p><i>Learners show work in which:</i></p> <ul style="list-style-type: none"> <li>♦ Evidence is provided of how science and technology are used.</li> <li>♦ The way in which scientific and technological developments have changed the lives of people is analysed.</li> <li>♦ The impact of technological innovations on scientific work is explored.</li> <li>♦ The link between scientific ideas and technological devices is explored.</li> <li>♦ Scientific literacy is related to the accessibility, application and communication of science.</li> </ul>	<p><i>In developing their work learners:</i></p> <ul style="list-style-type: none"> <li>• Investigate examples of simple technological devices or bio-technological processes and link these with scientific ideas.</li> <li>• Explore and analyse the ways in which the knowledge and application of science are used in different ways, beneficial or otherwise.</li> <li>• Access various sources of information to find out about job opportunities related to science and technology.</li> <li>• Communicate about their various findings in writing, drawing and other presentations that show a basic awareness of science, technology and their accessibility, use in and impact on society.</li> </ul> <p><i>Learners will explore the relationship between a scientific principle and its application in one example of a device or process from each of the four Themes, separately or in combination:</i></p> <ul style="list-style-type: none"> <li>⇒ Earth and Beyond: technological devices such as barometer, compass, telescope, sonar equipment ... .</li> <li>⇒ Life and Living: technological processes such as sewage treatment, food preservation, micro-biological processes in textile industry, soaps ... .</li> <li>⇒ Energy and Change: technological devices or appliances used for cooling, electrical appliances, light-bulbs, batteries, cogs ... .</li> <li>⇒ Matter and Materials: technological products such as locks, spectacles, binoculars, spray-cans, ceramics, microscopes... .</li> </ul>

## NATURAL SCIENCES

## FOUNDATION PHASE

<b>Assessment Criteria</b>	<b>Range Statement:</b>
<p><i>Learners show work in which:</i></p> <ul style="list-style-type: none"> <li>◊ Evidence is provided of how science and technology are used.</li> <li>◊ The way in which scientific and technological developments have changed the lives of people is analysed.</li> <li>◊ The impact of technological innovations on scientific work is explored.</li> <li>◊ The link between scientific ideas and technological devices is explored.</li> <li>◊ Scientific literacy is related to the accessibility, application and communication of science.</li> </ul>	<p><i>In developing their work learners:</i></p> <ul style="list-style-type: none"> <li>• Make or dismantle a device and share ideas of how the different parts work.</li> <li>• Explore and suggest what simple items of technology can do.</li> <li>• Investigate the accessibility and uses of familiar technology in the home or school.</li> <li>• Gather information by talking to older people or a visit to a museum to find out how inventions have changed people's lives.</li> <li>• Explore and discuss the different technologies that benefit their community.</li> </ul> <p><i>Learners will explore scientific ideas that are used in processes or devices of at least one example in each of the four Themes, separately or in combination:</i></p> <ul style="list-style-type: none"> <li>⇒ Earth and Beyond: technological uses such as thermometer, weather vane, rain gauge, spirit level ...</li> <li>⇒ Life and Living: technological uses such as baking, brewing, compost ...</li> <li>⇒ Energy and Change: technological uses such as heating devices or appliances ...</li> <li>⇒ Matter and Materials: technological uses such as tools, utensils, pottery ...</li> </ul>

# ARTS AND CULTURE

## ARTS AND CULTURE

***"Arts and Culture are a crucial component of developing our human resources. This will help in unlocking the creativity of our people, allowing for cultural diversity within the process of developing a unifying national culture, rediscovering our historical heritage, and assuring that adequate resources are allocated." RDP 1994, p9***

**Principles of Arts and Culture Education and Training:**

Arts and Culture Education and Training is underpinned by the overarching principles of:

- non-racism, non-sexism
- democratic practice
- nurturing and protection of freedom of expression
- the affirmation of all cultural expressions
- equal access to resources and redress of imbalances
- quality provision relevant to the lives of learners and
- the promotion of inter-cultural exchange.

Arts and Culture Education and Training invests in creative growth and development related to the needs of learners and the communities in which they live. It prepares learners for the world of work, as well as for the social and political participation in a dynamic and rapidly changing global society.



## ARTS AND CULTURE

**Contextualising Arts and Culture Education and Training**

In South Africa, the historical domination of Western/European Arts and Culture has impacted decisively upon cultural development and the provision of Arts and Culture Education and Training. This institutionalised bias determined the value and acceptability of certain cultural practices over others. This in turn influenced which art forms and processes were acknowledged and promoted, and which were relegated to a lesser status.

Unequal resourcing and provision of Arts and Culture Education and Training contributed to entrenched social divisions, promoting access to knowledge and skills and career opportunities for a select minority. Presently the vast majority of South African learners remain deprived of the meaningful experiences and opportunities afforded by Arts and Culture Education and Training.

Despite these adverse conditions, indigenous arts and cultural practices have proved irrepressible. They must now be actively preserved, developed and promoted within the educational system and the broader society.

**Rationale**

Arts and Culture are an integral part of life, embracing the spiritual, material, intellectual and emotional aspects of human society. Culture embodies not only expression through the arts, but also modes of life, behaviour patterns, heritage, knowledge and belief systems. Arts and Culture are fundamental to all learning.

Arts and Culture Education and Training enables the learner to develop:

- the ability to make, recreate and invent meaning;
- the specific use of innovation, creativity and resourcefulness;
- effective expression, communication and interaction between individuals and groups;
- a healthy sense of self, exploring individual and collective identities;
- a sensitive understanding and acknowledgement of our rich and diverse culture;
- a deepened understanding of our social and physical environment, and our place within that environment;

## ARTS AND CULTURE

- practical skills and different modes of thinking, within the various forms of art and diverse cultures;
- career skills and income-generating opportunities that lead to enhanced social, economic and cultural life;
- respect for human value and dignity;
- insight into the aspirations and values of our nation, and effective participation in the construction of a democratic society.

**Preamble to Specific Outcomes for Arts and Culture**

The Arts and Culture Learning Area affirms the *integrity* and importance of *the various art forms* including Dance, Drama, Music, Visual Arts, Media and Communication, Arts Technology, Design and Literature. Each of these forms offers a unique way of learning in this area. **Culture** in this learning area refers to the broader framework of human endeavour, including behaviour patterns, heritage, language, knowledge and belief, as well as forms of societal organisation and power relations. Culture includes expression through the arts.

Embedded in all of the specific outcomes is the element of **redress** for past inequities in Arts and Culture Education and Training. This is seen as an integral part of the development of Arts and Culture in South Africa. One such example of redress is possible in Design Education. **Design Education** encompasses both professional activity (industrial, interior, textile, graphic, information and advertising design) and the practice of craft production for both local and international consumption. Recognition of the importance of innovative design in meeting practical developmental needs has largely been ignored in South Africa. Yet design holds a key to nurturing our cultural identity and economic growth.

Another example of the need for redress lies in the lack of recognition given to established **Oral Traditions**, e.g. Oral Literature, Praise Poems and Story-telling. These aspects are incorporated into our Learning Area.

The Arts are at all times concerned with expression and communication. **Communication** can take place in many forms. Multiple forms of communication, including the mass

## ARTS AND CULTURE

media, have been noted. In this document, communication is also referred to as literacy, e.g.

- visual literacy
- spatial literacy
- movement literacy
- aural literacy
- oral literacy
- kinaesthetic literacy.

Included in this arena is the study of **Literature** as a form of art and cultural expression. Literature is integral to the study of certain arts such as drama. The 'reading' of various texts such as film or visual art works forms part of this Learning Area.

The Arts offer a unique way of learning **across the curriculum**. Concepts can be learned vibrantly and experientially through the Arts. The link between the experience and the knowledge or understanding is constantly reinforced.

A balanced education and training programme in this learning area presents opportunities for learners to be engaged in an integrated arts approach as well as to become increasingly skilled in the various art forms and cultural processes. **Integration** can be interpreted in a number of ways. One form of integration is the integration of Education and Training, in other words consciously linking knowledge and understanding with skills. Another interpretation, as used in the Specific Outcomes, refers to interdisciplinary interaction in the various art forms. The integration of arts and culture across the various learning areas can lead to an enriched and invigorated curriculum. In the GETC band it is expected that an arts across the curriculum approach will be implemented, i.e. learning *in* the arts and learning *through* the arts. The Specific Outcomes in this Learning Area are, therefore, relevant for all levels of learning from ECD to ABET, in both formal and non-formal contexts.

**Assessment** in the arts is part of an on-going and continuous developmental process, particularly in the area of social skills and personal growth. The safe, supportive and non-judgmental environment which the Arts can offer encourages learners to grow in confidence and build a positive self image. This focus on the experience of the process

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means that often the evidence to be assessed in this learning area is actually a process, not a product.

Throughout this Learning Area, work takes place within a broad **context**, ranging from individual explorations to group experiences, and covering a range of Arts and Culture experiences from the local, regional and national to the global.

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## SPECIFIC OUTCOMES

Learners will be able to:

1. APPLY KNOWLEDGE, TECHNIQUES AND SKILLS TO CREATE AND BE CRITICALLY INVOLVED IN ARTS AND CULTURE PROCESSES AND PRODUCTS
2. USE THE CREATIVE PROCESSES OF ARTS AND CULTURE TO DEVELOP AND APPLY SOCIAL AND INTERACTIVE SKILLS
3. REFLECT ON AND ENGAGE CRITICALLY WITH ARTS EXPERIENCE AND WORKS
4. DEMONSTRATE AN UNDERSTANDING OF THE ORIGINS, FUNCTIONS AND DYNAMIC NATURE OF CULTURE
5. EXPERIENCE AND ANALYSE THE ROLE OF THE MASS MEDIA IN POPULAR CULTURE AND ITS IMPACT ON MULTIPLE FORMS OF COMMUNICATION AND EXPRESSION IN THE ARTS
6. USE ART SKILLS AND CULTURAL EXPRESSIONS TO MAKE AN ECONOMIC CONTRIBUTION TO SELF AND SOCIETY
7. DEMONSTRATE AN ABILITY TO ACCESS CREATIVE ARTS AND CULTURAL PROCESSES TO DEVELOP SELF ESTEEM AND PROMOTE HEALING
8. ACKNOWLEDGE, UNDERSTAND AND PROMOTE HISTORICALLY MARGINALISED ARTS AND CULTURAL FORMS AND PRACTICES

## ARTS AND CULTURE

**1. APPLY KNOWLEDGE, TECHNIQUES AND SKILLS TO CREATE AND BE CRITICALLY INVOLVED IN ARTS AND CULTURE PROCESSES AND PRODUCTS;**

In the GETC band an interdisciplinary approach is desirable, however the particular knowledge, skills and techniques of the various art forms such as

- dance
- drama
- music
- arts technology
- media and communication
- visual arts

could be experienced in their own right. These skills are also necessary to prepare learners for specialisation in the FETC band and to provide those leaving formal education as well as ABET graduates with the level of competence necessary to sustain themselves. In addition to the application of knowledge and skills, learners in PHASE 9 and beyond the GETC band should also be engaged in contributing to the development of various arts and culture expressions.

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
S	<p>Learners will be able to show evidence of:</p> <p>The application of appropriate knowledge and skills in the process and product</p> <p>Involvement, commitment, participation and enjoyment</p> <p>Exploration and development of art and cultural expression</p>	<p>At this level the learner will independently:</p> <ul style="list-style-type: none"> <li>• Present one or several arts and culture forms or processes</li> <li>• Use a wide range of skills including communication skills, cognitive and motor skills, conceptual design skills</li> <li>• Integrate various skills in application</li> <li>• Experiment with complex ideas showing innovation and creativity</li> <li>• Explore resources such as personal, human, spiritual, physical, technological and found and natural materials</li> <li>• Reflect critically on work created or presented</li> <li>• Practice, prepare and plan so as to present or perform in public</li> <li>• Develop or create new or emergent forms</li> <li>• Reinterpret existing forms from diverse cultures</li> </ul>



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PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
I	<p>Learners will be able to show evidence of:</p> <ul style="list-style-type: none"> <li>The application of appropriate knowledge and skills in the process and product</li> <li>Involvement, commitment, participation and enjoyment</li> </ul>	<p>At this level the learner will independently or with assistance:</p> <ul style="list-style-type: none"> <li>Present any art and culture form or process</li> <li>Draw from a developing repertoire of skills including communication, cognitive, motor and conceptual design skills</li> <li>Integration of various skills in application</li> <li>Explore ideas and elements showing innovation and creativity e.g. combining elements within a single art form</li> <li>Exploration of resources - personal, human, spiritual, physical, technological, found and natural materials</li> <li>Practice, prepare and plan so as to present or perform in public</li> </ul>

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PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
F	<p>Learners will be able to show evidence of:</p> <p>The application of appropriate knowledge and skills in the process and product</p> <p>Involvement, commitment, participation and enjoyment is demonstrated</p>	<p>At this level the learner will, independently or with assistance</p> <ul style="list-style-type: none"> <li>• Explore and practise a range of skills</li> <li>• Practice and present core foundational skills in a variety of art forms</li> <li>• Build on basic skills including communication, cognitive and motor skills (e.g. Educational Kinesiology)</li> <li>• Demonstrate memory of simple instructions and combinations as used in dance, drama, music, and oral traditions</li> <li>• Apply skills to themes</li> <li>• Practise and perform in a safe and supportive environment</li> <li>• Use resources - personal, human, spiritual, physical, technological found and natural materials</li> </ul>

## ARTS AND CULTURE

## 2. USE THE CREATIVE PROCESSES OF ARTS AND CULTURE TO DEVELOP AND APPLY SOCIAL AND INTERACTIVE SKILLS

The creative processes in this learning area provide a unique forum for the social development of learners. Working in the creative arts and participating in cultural processes enables learners to develop a deep sensitivity towards the needs, abilities and interests of others. In the collaborative creative process learners come to an understanding of their own strengths and weaknesses in relating to others. The context of the arts offers an environment which fosters non-judgmental recognition of individuality whilst it engenders mutual co-operation.

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
S	<p><b>Learners will be able to demonstrate:</b></p> <p>Social and affective skills such as acknowledgement, acceptance, appreciation and mutual responsibility</p> <p>Interactive skills such as facilitating, negotiating, communication and team building</p> <p>An understanding of the role of Culture in social interaction</p>	<p><b>At this level learners will investigate and understand:</b></p> <ul style="list-style-type: none"> <li>Multiple forms of communication including <ul style="list-style-type: none"> <li><i>movement literacy</i></li> <li><i>spatial literacy</i></li> <li><i>aural literacy</i></li> <li><i>oral literacy</i></li> <li><i>visual literacy</i></li> <li><i>or a combination</i></li> </ul> </li> <li>Interpersonal relations <ul style="list-style-type: none"> <li><i>e.g. leading, following, turn-taking, sharing of ideas and resources and aspects of empowerment</i></li> </ul> </li> <li>Exercises involving sensitivity and mutual dependence</li> <li>Group creative processes <ul style="list-style-type: none"> <li><i>murals, choral, etc.</i></li> </ul> </li> <li>Negotiation exercises <ul style="list-style-type: none"> <li><i>including role playing, improvisation and simulation</i></li> </ul> </li> <li>Co-operation and collaboration and joint decision-making</li> <li>Problem-based and experiential learning</li> <li>Perceptual skills <ul style="list-style-type: none"> <li><i>including listening, observing and interpreting</i></li> </ul> </li> <li>Effect of decision-making and control</li> <li>The role of conventions, customs and cultural sensitivity in communication</li> </ul>

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PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
I	<p>Learners will be able to demonstrate:</p> <p>Social and affective skills such as acknowledgement, acceptance and mutual responsibility</p> <p>Interactive skills such as communicating, listening and sharing</p> <p>An awareness of roles and behaviour patterns in social and cultural contexts</p>	<p>At this level learners will explore and understand:</p> <ul style="list-style-type: none"> <li>Group creative processes <i>e.g. creative playing, murals, choral work</i></li> <li>Sharing of space and other resources</li> <li>Verbal and Non-verbal negotiation skills <i>including role playing, improvisation and simulation</i></li> <li>Co-operation, collaboration and joint decision-making</li> <li>Development of perceptual skills <i>including listening, observing and interpreting</i></li> <li>Varying roles within a group <i>e.g. leading, following, sharing, taking turns</i></li> <li>the role of conventions, customs and cultural sensitivity in communication</li> <li>Exploration of commonality and diversity</li> </ul>

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PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
F	<p>Learners will be able to demonstrate:</p> <p>Social and affective skills: such as acknowledgement and acceptance of diversity and commonality</p> <p>Interactive skills such as communicating, listening and sharing</p> <p>An awareness of roles and behaviour patterns</p>	<p>At this level learners will explore and understand:</p> <ul style="list-style-type: none"> <li>Group creative processes <i>e.g. creative play, murals, choral work</i></li> <li>Sharing of space and other resources</li> <li>Co-operating and collaborating <i>including role playing, improvisation and simulation</i></li> <li>Development of perceptual skills <i>including listening, observing and interpreting</i></li> <li>Varying roles within a group <i>e.g. leading, following, sharing, taking turns</i></li> <li>Sharing different experiences of customs and culture <i>e.g. costume</i></li> </ul>

## ARTS AND CULTURE

### 3. REFLECT ON AND ENGAGE CRITICALLY WITH ARTS EXPERIENCE AND WORKS

Any examination and analysis of arts processes and products arises out of a larger cultural context. Response to and engagement in arts experiences and work involves values which inform choices and decisions. Therefore all art products need to be viewed as 'texts-in-contexts' informed by cultural values and visions.

Learning activities should also encourage reflecting in, on and for Arts and Cultural experiences

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
S	<p>Learners will be able to demonstrate:</p> <p>Understanding of audience / viewer involvement and interpretation;</p> <p>Ability to critically analyse and express opinions of own and others work</p> <p>Analysis of a work of art within its cultural context</p> <p>An understanding that choices are informed by personal and cultural values.</p>	<p>The learner recognises and critically reflects on</p> <ul style="list-style-type: none"> <li>• The effects of context, audience, and purpose on performance and presentation</li> <li>• The meaning and function of the work</li> <li>• The use of imagery and symbols</li> <li>• Aspects of innovation within a work</li> <li>• The joy of emotional satisfaction, accomplishment and personal insight in arts processes and products</li> <li>• Stereotyping <i>e.g. gender, race, class, cultural symbols, and images</i></li> <li>• Interpretations of performance and art works</li> <li>• A wide range of art and culture forms and processes</li> <li>• How the Arts reflect and shape society</li> <li>• Values reflected in the work</li> </ul>



## ARTS AND CULTURE

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
I	<p>The learner will be able to show evidence of:</p> <p>Understanding of audience / viewer involvement and interpretation;</p> <p>An ability to express opinions of own and others work</p> <p>An ability to place a work of art in its context</p> <p>An understanding that choices are informed by values</p>	<p>The learner identifies, describes and reflects on:</p> <ul style="list-style-type: none"> <li>• Ways in which people respond to and engage in processes, performance and presentation</li> <li>• A range of art and culture forms and processes</li> <li>• Different contexts in which arts take place <i>e.g. homes, arts institutions, lived experiences</i></li> <li>• The recognition of commonality and diversity</li> <li>• Styles and conventions</li> <li>• Own life experiences as these reflect the culture around them</li> </ul>

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
F	<p>The learner will be able to show evidence of:</p> <p>Use of appropriate vocabulary to respond to work of self and others</p>	<p>The learner identifies and describes:</p> <ul style="list-style-type: none"> <li>• Different art forms and different ways of making art</li> <li>• Aspects of composition and presentation</li> <li>• The use of materials, techniques, skills, individual resources (body, voice) and media to express feelings, ideas, thoughts</li> </ul>

## ARTS AND CULTURE

#### 4. DEMONSTRATE AN UNDERSTANDING OF THE ORIGINS, FUNCTIONS AND DYNAMIC NATURE OF CULTURE

"Culture" refers to the broader framework of human endeavour, including behaviour patterns, heritage, language, knowledge and belief, and forms of societal organisation and power relations; this includes expression through the arts. Cultural practices has similar intentions

but are expressed in unique and diverse forms.

This study of culture will extend from a knowledge of the culture of the learner's immediate community and environment, to the diverse cultures of Southern Africa and global cultural developments.

PHASE	Assessment Criteria	Range Statement
S	<p>The learner will be able to demonstrate</p> <p>Knowledge of diverse cultures</p> <p>An understanding of functions, origins and context of culture</p> <p>An ability to analyse individual and group cultural identity</p> <p>An understanding of processes of cultural change; the human construction of culture</p> <p>Knowledge of constitutional mechanisms to protect culture</p> <p>Understanding of heritage conservation and preservation</p> <p>Identification of forms of power relations and their implications</p>	<ul style="list-style-type: none"> <li>At this level the learner will investigate and explore</li> <li>Diverse cultures in the immediate community, in Southern Africa, Africa and globally</li> <li>Culture of own community through practical field studies</li> <li>Inter-cultural links and influences on own community</li> <li>The social construction of:             <ul style="list-style-type: none"> <li>the environmental and technological base of culture</li> <li>cultural traditions, customs, behaviour patterns and roles</li> <li>the role of language</li> <li>the role of belief, knowledge, perceptions and religion</li> </ul> </li> <li>Individual and group identity and changing identities</li> <li>including national identity, ethnic identity, gender identity, language groups etc.</li> <li>Forms of bias, prejudice, stereotyping and discrimination</li> <li>e.g. gender, race, class, ethnicity etc.</li> <li>Awareness of rights</li> <li>e.g. human and constitutional rights to own culture, constitutional measures against discrimination, language rights, freedom of speech</li> <li>Principles and context of heritage conservation and preservation             <ul style="list-style-type: none"> <li>research of own heritage</li> <li>production of artwork within disappearing/ previously suppressed cultural forms</li> <li>processes that build heritage conservation</li> </ul> </li> <li>Power relations             <ul style="list-style-type: none"> <li>cultural domination and</li> </ul> </li> </ul>

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		suppression <ul style="list-style-type: none"> <li>• control and resistance</li> <li>• ownership</li> </ul>
I	Awareness of diverse cultures  An awareness of functions and origins of culture  An understanding of individual, group and cultural identity          Awareness of heritage, conservation and preservation	<ul style="list-style-type: none"> <li>• Culture within their own community and the diverse cultures of Southern Africa, Africa and globally</li> <li>• Inter-cultural links and influences</li> <li>• Aspects of cultural studies such as:             <ul style="list-style-type: none"> <li>• the technological and environmental base of culture</li> <li>• traditions, customs, behaviour patterns and roles</li> <li>• the role of language</li> <li>• the role of belief, knowledge, religion</li> <li>• power relations</li> </ul> </li> <li>• Individual and group identity             <ul style="list-style-type: none"> <li>• changing identities</li> <li>• groups and sub-groups</li> <li>• mechanisms of establishing identity <i>e.g. language, custom, history, etc.</i></li> </ul> </li> <li>• Principles and context of heritage conservation</li> <li>• Exploration of heritage and culture of learners' community</li> </ul>

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PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
F	<p>The learner will demonstrate</p> <p>Awareness of diverse culture</p> <p>An understanding of functions and origins of culture</p> <p>An awareness of individual, group and cultural identity</p> <p>An awareness of heritage conservation and preservation</p>	<p>At this level learners will explore</p> <ul style="list-style-type: none"> <li>• Own experiences of culture</li> <li>• Source of own cultural experiences</li> <li>• Material base of culture <i>including physical materials, technology, environment</i></li> <li>• Power relations</li> <li>• Traditions, customs, behaviour patterns, roles</li> <li>• Inter-cultural influences</li> <li>• Individual and group identity <i>e.g. who am I? what am I?</i></li> <li>• Role of family, community, group association <i>e.g. religion, school, nation, etc.</i></li> <li>• The role of language</li> <li>• The role of belief, knowledge, religion</li> <li>• Heritage of family, community</li> </ul>

## ARTS AND CULTURE

<b>5. EXPERIENCE AND ANALYSE THE USE OF MULTIPLE FORMS OF COMMUNICATION AND EXPRESSION</b>
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This outcome focuses on the many forms of communication and expression. The learners need to explore and experience the range as part of their integrated and balanced approach to Arts Education. Another point of focus is Mass Media and Popular Culture because of the strong impact this form of communication has on Arts and Culture.

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
<b>S</b>	<b>The learner will demonstrate:</b>  Knowledge and use of various forms of communication including mass media  An ability to critically analyse forms of mass communication  An awareness of the control of information and forms of communication  An understanding of the impact of globalisation on Arts and Culture expression	<b>At this level the learner will investigate and analyse:</b>  <ul style="list-style-type: none"> <li>• The role and influence of technology in mass media and other forms of communication</li> <li>• The use of media and communication to promote social change</li> <li>• The mass media as it reflects and changes culture and arts</li> <li>• Forms of mass communication through the various processes of Arts and Culture</li> <li>• The use, ownership and control of the mass media and communication</li> <li>• The impact of globalisation through the mass media on Arts and Cultural domination and suppression</li> <li>• Documentation, research and use of multiple forms of communication to aid development change and reconstruction</li> </ul>

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
<b>I</b>	<b>The learner will demonstrate:</b>  Knowledge and use of various forms of communication including mass media  An ability to critically analyse forms of mass communication	<b>At this level the learner will explore:</b>  <ul style="list-style-type: none"> <li>• The role and influence of technology in mass media and other forms of communication</li> <li>• The use of media and communication to promote social change</li> <li>• The mass media as it reflects and changes culture and arts</li> <li>• Forms of mass communication through the various processes of Arts and Culture</li> </ul>

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
F	<p>The learner will demonstrate:</p> <p>Knowledge of various forms of communication</p> <p>An ability to identify various forms of communication</p> <p>A creative use of multiple forms of communication</p>	<p>At this level the learner will identify and explore and experiment with:</p> <ul style="list-style-type: none"> <li>• Various forms of communication and popular culture</li> <li>• The value and function of various communication forms, especially the role of the mass media</li> </ul>
	<p>An awareness of the control of information and forms of communication</p> <p>An understanding of the impact of globalisation on Arts and Culture expression</p>	<ul style="list-style-type: none"> <li>• The use, ownership and control of the mass media and communication</li> <li>• The impact of globalisation through the mass media on Arts and Cultural domination and suppression</li> <li>• Documentation, research and use multiple forms of communication to aid development change and reconstruction</li> </ul>

## ARTS AND CULTURE



## ARTS AND CULTURE

**6. USE ART SKILLS AND CULTURAL EXPRESSION TO MAKE AN ECONOMIC CONTRIBUTION TO SELF AND SOCIETY.**

Unequal resourcing and provision of Arts and Culture Education and Training contributed to entrenched social divisions, promoting access to knowledge and skills and career opportunities for a select minority. Presently the vast majority of South African learners remain deprived of the meaningful experiences and opportunities afforded by Arts and Culture Education and Training. This outcome seeks to redress the imbalance in this situation.

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
S	<p>The learner will demonstrate</p> <p>The ability to take initiative, to innovate and be productive</p> <p>Evidence of an investigation into career opportunities in Arts and Culture fields</p> <p>Entrepreneurial skills and relevant technical skills</p> <p>The ability to create designs and products which reflect our heritage and changing culture.</p>	<p>At this level work should be investigative with a view to innovation, productivity and marketability</p> <ul style="list-style-type: none"> <li>• Use resources - personal, human, physical, found and natural materials - with creativity and productivity</li> <li>• Transform waste materials, renewable and found objects into utilitarian and artistic artefacts in an environmentally sensitive fashion.</li> <li>• Refine techniques in various art and cultural forms, including media and communications, for production, performance and presentation.</li> <li>• Investigate Arts and Culture processes, products, industries, organisations and enterprises through field trips</li> <li>• Investigate career opportunities</li> <li>• Explore skills of design - utility, functionality and practicality</li> <li>• Undertake field work and market analysis.</li> <li>• Develop economically sustainable organisational and marketing strategies.</li> <li>• Explore traditional practice and contemporary culture in design</li> </ul>

## ARTS AND CULTURE

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
I	<p><b>The learner will demonstrate:</b></p> <p>An ability to take initiative, to innovate and be productive</p> <p>Evidence of exploration into career opportunities in arts and culture fields.</p> <p>Entrepreneurial skills and relevant technical skills</p> <p>The ability to create designs and products which reflect our heritage and changing culture.</p>	<p><b>Work should be exploratory and productive:</b></p> <ul style="list-style-type: none"> <li>• Make creative and productive use of resources</li> <li>• Transform waste material, renewable and found objects into utilitarian and artistic objects</li> <li>• Investigate and research arts and culture processes, products, industries, organisations and enterprises through field trips.</li> <li>• Identify career opportunities.</li> <li>• Undertake market analysis.</li> <li>• Develop techniques in various art and cultural forms including media and communication, for production, performance and presentation</li> <li>• Address environmental and heritage issues through arts processes.</li> </ul>

## ARTS AND CULTURE

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
F	<p>Learners will be able to demonstrate:</p> <p>The ability to take initiative and to be innovative</p> <p>An awareness of career opportunities in arts and culture fields</p> <p>Relevant technical skills</p>	<p>Work should be exploratory, descriptive and productive:</p> <ul style="list-style-type: none"> <li>• Make creative use of resources - personal, human, found and natural materials to produce artefacts</li> <li>• Explore arts and culture processes, products, industries, organisations and enterprises through field trips.</li> <li>• Explore career opportunities.</li> <li>• Explore techniques in various art and cultural forms including media and communication.</li> <li>• Undertake field trips.</li> </ul>

## ARTS AND CULTURE

**7. DEMONSTRATE AN ABILITY TO ACCESS CREATIVE ARTS AND CULTURAL PROCESSES TO DEVELOP SELF ESTEEM AND PROMOTE HEALING**

The creative arts seeks to provide all learners with an open and supportive environment. It provides therapy for healing of traumatised learners and learners with special needs. The cathartic effect of participation in the arts can have a restorative influence. On a wider scale participation and growth in the Arts can unite and bring individuals and communities closer together. This outcome also seeks to promote nation-building.

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
S	<p>The learner will be able to demonstrate evidence of</p> <p>Confidence and independence in arts and cultural processes</p> <p>Growth, healing and rehabilitation through creative activities</p> <p>Dignity and economic self reliance</p>	<p>At this level the learner will work towards spiritual, emotional and psychological self definition and self renewal</p> <ul style="list-style-type: none"> <li>Engage in opportunities for creative expression, interaction, introspection and reflection</li> <li>Collaborate and co-operate with others, expressing and communicating feeling and opinions</li> <li>Explore and develop enabling and affirming strategies, individually and within groups</li> </ul>

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
I	<p>The learner will be able to demonstrate evidence of</p> <p>Confidence and independence in arts and cultural processes</p> <p>Growth, healing and rehabilitation through creative activities</p> <p>Dignity and economic self reliance</p>	<p>At this level the learner will work towards development of self-esteem and self-expression</p> <ul style="list-style-type: none"> <li>Engage in opportunities for creative expression, interaction, introspection and reflection</li> <li>Collaborate and co-operate with others, expressing and communicating feeling and opinions</li> <li>Explore and develop enabling and affirming strategies, individually and within groups</li> </ul>

## ARTS AND CULTURE

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
F	<p>The learner will be able to demonstrate evidence of</p> <p>Confidence and independence in arts and cultural processes</p> <p>Growth, healing and rehabilitation through creative activities</p> <p>Dignity and self reliance</p>	<p>At this level the learner will work towards development of self-esteem and self-expression</p> <ul style="list-style-type: none"> <li>Engage in opportunities for creative expression, interaction, introspection and reflection</li> <li>Collaborate and co-operate with others, expressing and communicating feeling and opinions</li> <li>Explore and develop enabling and affirming strategies, individually and within groups</li> </ul>

## ARTS AND CULTURE

**8. ACKNOWLEDGE, UNDERSTAND AND PROMOTE HISTORICALLY MARGINALISED ARTS AND CULTURAL FORMS AND PRACTICES**

The historical domination of Western/European arts and culture has impacted adversely upon cultural development and provisioning. This institutionalised bias influenced which arts and culture forms and processes were acknowledged and promoted, and which were relegated to a lesser status. This outcome seeks to redress the problem.

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
S	<p><b>Learners will be able to demonstrate</b></p> <p>Evidence of Arts and Culture forms, processes and objects not usually seen and experienced</p> <p>Documented field studies around neglected/ marginalised/ disappearing Arts and Culture forms</p> <p>An understanding of how social and institutional structures control the access of marginalised sectors to Arts and Culture experiences</p> <p>An understanding of the contribution of resistance culture to developing democracy in South Africa</p>	<p><b>At this level the learner will :</b></p> <ul style="list-style-type: none"> <li>Investigate human rights issues as enshrined in the Constitution including <ul style="list-style-type: none"> <li>Cultural rights - culture fairness and anti-bias</li> <li>Freedom of expression</li> <li>Freedom of association</li> <li>Human dignity and equality</li> <li>Non-discriminatory practices e.g. against race, class, gender and disability</li> </ul> </li> <li>Identify various practices, meanings and symbols in neglected/marginalised Arts and Culture forms, used for similar purposes across a variety of cultures</li> <li>Engage with and analyse various examples of oral traditions and processes that represent and reflect previously neglected/marginalised cultures</li> <li>Identify common and diverse aspects of: <ul style="list-style-type: none"> <li>style</li> <li>conventions</li> <li>processes</li> <li>design</li> <li>materials, in works of Art and Culture practices from neglected/marginalised/vanishing cultures</li> </ul> </li> <li>Reflect on how various Art and Culture forms were used in certain contexts to articulate both cultural experiences and political resistance</li> <li>Identify and describe contributions made to South Africa's cultural heritage</li> <li>Affirm diverse arts and cultural practices through group activities drawing on the multiple forms of communication</li> <li>Explore and experience: <ul style="list-style-type: none"> <li>genres, characteristics, textual studies, socio-cultural factors</li> <li>Verbal art/ Spoken art/ Oral art</li> <li>folklore, folk art and other forms of 'orally transmitted tradition'</li> </ul> </li> </ul>



## ARTS AND CULTURE

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
I	<p><b>Learners will be able to demonstrate</b></p> <p>Evidence of Arts and Culture forms, processes and objects not usually seen and experienced</p> <p>Documented field studies around neglected/ marginalised/ disappearing Arts and Culture forms</p> <p>An understanding of how social and institutional structures control the access of marginalised sectors to Arts and Culture experiences</p> <p>An understanding of the contribution of resistance culture to developing democracy in South Africa</p>	<p><b>At this level the learner will:</b></p> <ul style="list-style-type: none"> <li>Investigate human rights issues as enshrined in the constitution including             <ul style="list-style-type: none"> <li>Cultural rights - culture fairness and anti-bias</li> <li>Freedom of expression</li> <li>Freedom of association</li> <li>Human dignity and equality</li> <li>Non-discriminatory practices e.g. against race, class, gender and disability</li> </ul> </li> <li>Identify various practices, meanings and symbols in neglected/marginalised Arts and Culture forms used for similar purposes across a variety of cultures</li> <li>Engage with and analyse various examples of oral traditions and processes that represent and reflect previously neglected/marginalised cultures</li> <li>Identify common and diverse aspects of:             <ul style="list-style-type: none"> <li>style</li> <li>conventions</li> <li>processes</li> <li>design</li> <li>materials, in works of Art and Culture practices from neglected/marginalised/vanishing cultures</li> </ul> </li> <li>Reflect on how various Art and Culture forms were used in certain contexts to articulate both cultural experiences and political resistance</li> <li>Identify and describe contributions made to South Africa's cultural heritage</li> <li>Affirm diverse arts and cultural practices through group activities drawing on the multiple forms of communication</li> <li>Explore and experience:             <ul style="list-style-type: none"> <li>genres, characteristics, textual studies socio-cultural factors</li> <li>Verbal art/ Spoken art/ Oral art</li> <li>Folklore, folk art and other forms of 'orally transmitted tradition'</li> </ul> </li> </ul>

## ARTS AND CULTURE

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
F	<p><b>Learners will be able to demonstrate:</b></p> <p>Arts and Culture forms, processes and objects not usually seen and experienced</p> <p>Documented field studies around neglected/marginalised/disappearing Arts and Culture forms</p>	<p><b>At this level the learner will:</b></p> <ul style="list-style-type: none"> <li>Investigate human rights issues as enshrined in the constitution including             <ul style="list-style-type: none"> <li>Cultural rights - culture fairness and anti-bias</li> <li>Freedom of expression</li> <li>Freedom of association</li> <li>Human dignity and equality</li> <li>Non-discriminatory practices e.g. against race, class, gender and disability</li> </ul> </li> <li>Identify various practices, meanings and symbols in neglected/marginalised Arts and Culture forms used for similar purposes across a variety of cultures</li> <li>Engage with and analyse various examples of oral traditions and processes that represent and reflect previously neglected/marginalised cultures</li> <li>Identify common and diverse aspects of:             <ul style="list-style-type: none"> <li>style</li> <li>conventions</li> <li>processes</li> <li>design</li> <li>materials, in works of Art and Culture practices from neglected/marginalised/vanishing cultures</li> </ul> </li> <li>Identify and describe contributions made to South Africa's cultural heritage</li> <li>Affirm diverse arts and cultural practices through group activities drawing on the multiple forms of communication</li> <li>Explore and experience:             <ul style="list-style-type: none"> <li>genres, characteristics, textual studies, socio-cultural factors</li> <li>Verbal art/ Spoken art/ Oral art</li> <li>folklore, folk art and other forms of 'orally transmitted tradition'</li> </ul> </li> </ul>

# **ECONOMIC AND MANAGEMENT SCIENCES**

## ECONOMIC AND MANAGEMENT SCIENCES

**RATIONALE**

This learning area is fundamental in preparing the citizens of South Africa to understand the critical importance of reconstruction, development and economic growth for a sustainable economic future. Through this learning area learners will be:

- \* equipped with the knowledge and comprehension of economic and management skills and competencies that will enable them to play a vital role in the process of transforming the country's economic, social, political, technological, physical and demographic environments;
- \* introduced to an understanding of the wealth creation process by equipping them with the necessary South African background and knowledge in the different terrain of the economy, such as basic economics, management, finance, administration and institutions.

The acquired knowledge, skills and attitudes will enable the learners to make a contribution towards the improvement of the standard of living, human development, justice, basic conditions of employment, fair labour practices, productivity, as well as opportunities for all to realise their full potential.

**SPECIFIC OUTCOMES**

1. Engage in entrepreneurial activities.
2. Demonstrate personal role in economic environment.
3. Demonstrate the principles of supply and demand and the practices of production.
4. Demonstrate managerial expertise and administrative proficiency.
5. Critically analyse economic and financial data to make decisions.
6. Evaluate different economic systems from various perspectives.
7. Demonstrate actions which advance sustained economic growth, reconstruction and development in South Africa.
8. Evaluate the interrelationships between economic and other environments.

## ECONOMIC AND MANAGEMENT SCIENCES

**Explanatory Notes****1. Differentiation between phases (refer to par. 3.1.1)****1.1 Context**

There is a minimal amount of differentiation shown in the Assessment Criteria and Range Statements of the Economic and Management Sciences. The differentiation will occur in the complexities and contexts of the tasks set at different ages and grades. Factors such as the level of teacher intervention, independent study and co-operative learning will vary according to the age and ability of the learners.

In many of the Range Statements, the context of the Assessment Criteria has been given as *international, national, regional, local, school/class and personal (home)*. This does not imply that the level of complexity or rigour required is linked, in an incremental way, to these statements. Rather, it suggests that the learner's main point of reference will be located in a spiral of widening context. Certainly it is not intended that the Range Statement should place limits on the context of learning. It is suggestive rather than exhaustive.

Local will refer to home, classroom, school and community. Therefore, in the Foundation Phase a learner will draw on direct experience to achieve the specific outcome via the Assessment Criteria.

Regional will refer to the wider economic region and does not necessarily correspond with political boundaries, e.g. provinces.

**1.2 Complexity**

The Range Statements have been formulated to give broad parameters to the Assessment Criteria. While technical terms are used in the Range Statements, these terms may have to be defined and described in the learning programme. In addition, the processes involved must be appropriate to the age and the ability of the learners. For example, it is not intended that formal accounting and economic theory and practice will be introduced before Grade 10.

**1.3 Foundation Phase**

The Assessment Criteria in all the Specific Outcomes for the Foundation Phase have been rated as *Optional, Recommended, Highly Recommended*. This is to serve as a guide to the Learning Programme developers. The danger of overloading the Learning Programmes is ever present and therefore the optional tag indicates that while it is

## ECONOMIC AND MANAGEMENT SCIENCES

possible or even desirable to expose the Foundation Phase learners to the content, process and context of a particular Assessment Criteria, it may not be possible in practice given the time constraints.

## **2. Use of examples**

From time to time examples have been included in the Range Statement up to a maximum of two. These are to be seen as suggestions only. The primary purpose is to guide and the examples are not to be viewed as prerequisites to be included in the learning programmes.

## **3. Sequence of Assessment Criteria**

These have been arranged in a sequence. This means that learners should, where possible, start with Assessment Criterion No. 1 and then proceed numerically.



## ECONOMIC AND MANAGEMENT SCIENCES

**ENGAGE IN ENTREPRENEURIAL ACTIVITIES**

This Specific Outcome should be at the heart of the learning programmes of the Economic and Management Sciences. It encapsulates all the elements of economic and financial activities and is admirably suited to be developed, from Grade 1 onwards, in a cyclical spiral of increasing depth and complexity. This Specific Outcome has a significant role to play in preparing the learner for the world of work.

PHASE	ASSESSMENT CRITERIA 1	RANGE STATEMENT
<b>S</b>	Needs in societies are identified	Research and data collection methods <i>e.g. observation and questionnaires</i> Means to satisfy needs <i>e.g. buying, producing</i> Local, regional, national, international
<b>I</b>		Research and data collection methods <i>e.g. observation and questionnaires</i> Means to satisfy needs <i>e.g. buying, producing</i> Local, regional
<b>F</b>		<b>HIGHLY RECOMMENDED IN FOUNDATION PHASE</b> Research and data collection methods <i>e.g. observation and questionnaires</i> Means to satisfy needs <i>e.g. buying, producing</i> Local

## ECONOMIC AND MANAGEMENT SCIENCES

PHASE	ASSESSMENT CRITERIA 2	RANGE STATEMENT
S	Essential characteristics/skills of successful entrepreneurs are identified and developed	Characteristics of an entrepreneur  Strategies to develop the essential skills and attitudes <i>e.g. human resource development</i>
I		Characteristics of an entrepreneur  Strategies to develop the essential skills and attitudes <i>e.g. human resource development</i>
F		<b><u>HIGHLY RECOMMENDED IN FOUNDATION PHASE</u></b>  Characteristics of an entrepreneur  Strategies to develop the essential skills and attitudes <i>e.g. human resource development</i>

PHASE	ASSESSMENT CRITERIA 3	RANGE STATEMENT
S	Entrepreneurial activities will be demonstrated	Starting a business (real or simulated) • situation analyses, business plan, implementation, evaluation
I		Starting a business (real or simulated) • situation analyses, business plan, implementation, evaluation
F		<b><u>HIGHLY RECOMMENDED IN FOUNDATION PHASE</u></b>  Starting a business (real or simulated) • situation analyses, business plan, implementation, evaluation

## ECONOMIC AND MANAGEMENT SCIENCES

PHASE	ASSESSMENT CRITERIA 4	RANGE STATEMENT
<b>S</b>	An understanding of the nature of and need for productivity is demonstrated	<p>Relationship between</p> <ul style="list-style-type: none"> <li>• input/output</li> <li>• quality/quantity</li> <li>• efficiency/effectiveness</li> </ul> <p>Consequences of productivity</p> <ul style="list-style-type: none"> <li>• Wealth/job creation, growth, employment and re-distribution</li> </ul>
<b>I</b>		<p>Relationship between</p> <ul style="list-style-type: none"> <li>• input/output</li> <li>• quality/quantity</li> <li>• efficiency/effectiveness</li> </ul> <p>Consequences of productivity</p> <ul style="list-style-type: none"> <li>• Wealth/job creation, growth, employment and re-distribution</li> </ul>
<b>F</b>		<p><b><u>HIGHLY RECOMMENDED IN FOUNDATION PHASE</u></b></p> <p>Relationship between</p> <ul style="list-style-type: none"> <li>• input/output</li> <li>• quality/quantity</li> <li>• efficiency/effectiveness</li> </ul> <p>Consequences of productivity</p> <ul style="list-style-type: none"> <li>• Wealth/job creation, growth, employment and re-distribution</li> </ul>

## ECONOMIC AND MANAGEMENT SCIENCES

**2. DEMONSTRATE PERSONAL ROLE IN ECONOMIC ENVIRONMENT**

The main purpose of this Specific Outcome is to engage the individual learner, at all levels, in an active understanding of their role in the economy. In addition, each individual in civil society should be aware of their rights and responsibilities. This will create a greater understanding of the importance of the diversity of role players in an economic system.

PHASE	ASSESSMENT CRITERIA 1	RANGE STATEMENT
<b>S</b>	Current economic environment in South Africa is described	Role and impact <ul style="list-style-type: none"> <li>• Government</li> <li>• Commerce and Industry</li> <li>• Organised labour</li> <li>• Consumer organisations</li> <li>• International</li> </ul>
<b>I</b>		Role and impact <ul style="list-style-type: none"> <li>• Government</li> <li>• Commerce and Industry</li> <li>• Organised labour</li> <li>• Consumer organisations</li> <li>• International</li> </ul>
<b>F</b>		<b>RECOMMENDED IN THE FOUNDATION PHASE</b>  Role and impact <ul style="list-style-type: none"> <li>• Government</li> <li>• Commerce and Industry</li> <li>• Organised labour</li> <li>• Consumer organisations</li> <li>• International</li> </ul>

## ECONOMIC AND MANAGEMENT SCIENCES

PHASE	ASSESSMENT CRITERIA 2	RANGE STATEMENT
S	An understanding of the role of the individual in the South African economic environment is demonstrated	Rights and responsibilities of: <ul style="list-style-type: none"> <li>• Consumer</li> <li>• Producer</li> <li>• Employer</li> <li>• Employee</li> <li>• Citizen/Individual</li> </ul>
I		Rights and responsibilities of: <ul style="list-style-type: none"> <li>• Consumer</li> <li>• Producer</li> <li>• Employer</li> <li>• Employee</li> <li>• Citizen/Individual</li> </ul>
F		<u>HIGHLY RECOMMENDED IN THE FOUNDATION PHASE</u>  Rights and responsibilities of: <ul style="list-style-type: none"> <li>• Consumer</li> <li>• Producer</li> <li>• Employer</li> <li>• Employee</li> <li>• Citizen/Individual</li> </ul>

## ECONOMIC AND MANAGEMENT SCIENCES

**3. DEMONSTRATE THE PRINCIPLES OF SUPPLY AND DEMAND AND THE PRACTICES OF PRODUCTION**

Producing goods and services to satisfy the needs of society is an important aspect of economic activities. This Specific Outcome prepares learners to be able to demonstrate their understanding of how products and services are created and marketed and how supply and demand effects production and price determination.

PHASE	ASSESSMENT CRITERIA 1	RANGE STATEMENT
S	An understanding of the need for resources to produce is demonstrated	Factors of production <ul style="list-style-type: none"> <li>• goods and services</li> <li>• remuneration from factors of production</li> </ul>
I		Factors of production <ul style="list-style-type: none"> <li>• goods and services</li> <li>• remuneration from factors of production</li> </ul>
F		OPTIONAL IN THE FOUNDATION PHASE Factors of production <ul style="list-style-type: none"> <li>• goods and services</li> <li>• remuneration from factors of production</li> </ul>

PHASE	ASSESSMENT CRITERIA 2	RANGE STATEMENT
S	Production activities are described	Types of industries are described <ul style="list-style-type: none"> <li>• primary, secondary, tertiary, personal services</li> </ul> Types of ownership
I		Types of industries are described <ul style="list-style-type: none"> <li>• primary, secondary, tertiary, personal services</li> </ul> Types of ownership
F		OPTIONAL IN THE FOUNDATION PHASE Types of industries are described <ul style="list-style-type: none"> <li>• primary, secondary, tertiary, personal services</li> </ul> Types of ownership

S = Senior Phase

I = Intermediate Phase

F = Foundation Phase



## ECONOMIC AND MANAGEMENT SCIENCES

PHASE	ASSESSMENT CRITERIA 3	RANGE STATEMENT
S	Determination of the costs of production is demonstrated	Production according to quality and specification Determination of total and unit costs
I		Production according to quality and specification Determination of total costs
F		<u>OPTIONAL IN THE FOUNDATION PHASE</u> Production according to quality and specification Determination of total costs

PHASE	ASSESSMENT CRITERIA 4	RANGE STATEMENT
S	The relationship between the supply and demand of resources, goods and services and managerial decisions in this respect are analysed	Price determination <ul style="list-style-type: none"> <li>• supply and demand equilibrium price</li> <li>• other factors <i>e.g. competition</i></li> <li>• Value of the Rand</li> </ul> Managerial decisions from above
I		Price determination <ul style="list-style-type: none"> <li>• supply and demand equilibrium price</li> <li>• other factors <i>e.g. competition</i></li> <li>• Value of the Rand</li> </ul> Managerial decisions from above
F		<u>OPTIONAL IN THE FOUNDATION PHASE</u> Price determination <ul style="list-style-type: none"> <li>• supply and demand equilibrium price</li> <li>• other factors <i>e.g. competition</i></li> <li>• Value of the Rand</li> </ul> Managerial decisions from above

## ECONOMIC AND MANAGEMENT SCIENCES

PHASE	ASSESSMENT CRITERIA 5	RANGE STATEMENT
<b>S</b>	Exchange of goods and services is explained	<p>Historical perspective</p> <p>Markets: local, national and international <i>e.g. product, factor and labour</i></p> <p>Marketing <i>e.g. principles and functions</i></p> <p>Contracts</p> <p>Means of payment <i>e.g. cash, foreign exchange</i></p> <p>Factors which influence the market <i>e.g. climatic conditions, labour disputes</i></p>
<b>I</b>		<p>Historical perspective</p> <p>Markets: local community <i>e.g. product, factor and labour</i></p> <p>Marketing <i>e.g. principles and functions</i></p> <p>Contracts</p> <p>Means of payment <i>e.g. cash, foreign exchange</i></p> <p>Factors which influence the market <i>e.g. climatic conditions, labour disputes</i></p>
<b>F</b>		<p><u>OPTIONAL IN THE FOUNDATION PHASE</u></p> <p>Historical perspective</p> <p>Markets: local community <i>e.g. product, factor and labour</i></p> <p>Marketing <i>e.g. principles and functions</i></p> <p>Contracts</p> <p>Means of payment <i>e.g. cash, foreign exchange</i></p> <p>Factors which influence the market <i>e.g. climatic conditions, labour disputes</i></p>

## ECONOMIC AND MANAGEMENT SCIENCES

**4. DEMONSTRATE MANAGERIAL EXPERTISE AND ADMINISTRATIVE PROFICIENCY**

Without effective managerial and administrative skills, at both individual and group level, much of human endeavour is wasted. In the economic sphere this concept of "doing the right things right" is of prime importance and is highly relevant to learners of all ages.

PHASE	ASSESSMENT CRITERIA 1	RANGE STATEMENT
<b>S</b>	Managerial expertise is demonstrated	<p>Management functions: Purchasing, production, marketing, administration, public and labour relations, human resource development and management, finance</p> <p>Management tasks: Planning, organising, leading, monitoring and evaluation</p> <ul style="list-style-type: none"> <li>• Individual and group skills</li> </ul> <p>Accountability</p> <p>Management styles</p> <p>Personal, institution, business, organisation</p>
<b>I</b>		<p>Management tasks: Planning, organising, leading, monitoring and evaluation</p> <ul style="list-style-type: none"> <li>• Individual and group skills</li> </ul> <p>Accountability</p> <p>Personal, institution</p>
<b>F</b>		<p>RECOMMENDED IN THE FOUNDATION PHASE</p> <p>Management tasks: Planning, organising, leading, control, review</p> <ul style="list-style-type: none"> <li>• Individual and group skills</li> </ul> <p>Personal, institution</p>

## ECONOMIC AND MANAGEMENT SCIENCES

PHASE	ASSESSMENT CRITERIA 2	RANGE STATEMENT
S	Administrative proficiency is demonstrated	<p>Activities involved:</p> <ul style="list-style-type: none"> <li>Information management: collection, recording, storage, retrieval, evaluation, and distribution of information</li> </ul> <p>Using available equipment <i>e.g. electronic/manual</i></p> <p>Personal, local, regional, business, organisation, institution</p>
I		<p>Activities involved:</p> <ul style="list-style-type: none"> <li>Information management: collection, recording, storage, retrieval, evaluation, and distribution of information</li> </ul> <p>Using available equipment <i>e.g. electronic/manual</i></p> <p>Personal, local, regional, business, organisation, institution</p>
F		<p><b><u>RECOMMENDED IN THE FOUNDATION PHASE</u></b></p> <p>Activities involved:</p> <ul style="list-style-type: none"> <li>Information management: collection, recording, storage, retrieval, evaluation, and distribution of information</li> </ul> <p>Using available equipment <i>e.g. electronic/manual</i></p> <p>Personal, local, regional, business, organisation, institution</p>

## ECONOMIC AND MANAGEMENT SCIENCES

### 5. USE AND COMMUNICATE ECONOMIC AND FINANCIAL DATA TO MAKE DECISIONS

At the centre of most economic and financial activities is the management of data. Learners of all ages should be made aware of the fact that inaccurate and/or insufficient data can be a major reason for poor decisions. The meaningful management of data has the consequence that informed decision making can take place. (Reference to Specific Outcome no. 6 of Mathematical Literacy, Mathematics and Mathematical Sciences)

PHASE	ASSESSMENT CRITERIA 1	RANGE STATEMENT
<b>S</b>	The management of economic and financial data is demonstrated.	<p>Data:</p> <ul style="list-style-type: none"> <li>Economic               <ul style="list-style-type: none"> <li>Identify sources, collect, organise, process, storage, retrieval, report, evaluate, distribute</li> </ul> </li> <li>Financial               <ul style="list-style-type: none"> <li>Identify sources, collect, organise, process, storage, retrieval, report, evaluate, distribute</li> </ul> </li> </ul> <p>Using available equipment <i>e.g. electronic/manual</i></p> <p>Local, regional, national</p>
<b>I</b>		<p>Data:</p> <ul style="list-style-type: none"> <li>Economic               <ul style="list-style-type: none"> <li>Identify sources, collect, organise, process, storage, retrieval, report, evaluate, distribute</li> </ul> </li> <li>Financial               <ul style="list-style-type: none"> <li>Identify sources, collect, organise, process, storage, retrieval, report, evaluate, distribute</li> </ul> </li> </ul> <p>Using available equipment <i>e.g. electronic/manual</i></p> <p>Local, regional</p>
<b>F</b>		<p>RECOMMENDED IN THE FOUNDATION PHASE</p> <p>Data:</p> <ul style="list-style-type: none"> <li>Economic               <ul style="list-style-type: none"> <li>Identify sources, collect, organise, process, storage, retrieval, report, evaluate, distribute</li> </ul> </li> <li>Financial               <ul style="list-style-type: none"> <li>Identify sources, collect, organise, process, storage, retrieval, report, evaluate, distribute</li> </ul> </li> </ul> <p>Using available equipment <i>e.g. electronic/manual</i></p> <p>Local</p>

S = Senior Phase

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## ECONOMIC AND MANAGEMENT SCIENCES

PHASE	ASSESSMENT CRITERIA 2	RANGE STATEMENT
<b>S</b>	Economic and financial data is communicated	<b>Methods:</b> <ul style="list-style-type: none"> <li>Financial Information (<i>e.g. informal reporting</i>)</li> <li>Economic Information (<i>e.g. informal reporting</i>)</li> </ul> Local, regional, national
<b>I</b>		<b>Methods:</b> <ul style="list-style-type: none"> <li>Financial Information (<i>e.g. informal reporting</i>)</li> <li>Economic Information (<i>e.g. informal reporting</i>)</li> </ul> Local, regional
<b>F</b>		<u><b>RECOMMENDED IN THE FOUNDATION PHASE</b></u> <b>Methods:</b> <ul style="list-style-type: none"> <li>Financial Information (<i>e.g. informal reporting</i>)</li> <li>Economic Information (<i>e.g. informal reporting</i>)</li> </ul> Local

PHASE	ASSESSMENT CRITERIA 3	RANGE STATEMENT
<b>S</b>	Economic and financial data is used for decision making	Analysis and Interpretation ( <i>e.g. planning and control</i> ) Action Plan Local, regional, national
<b>I</b>		Analysis and Interpretation ( <i>e.g. planning and control</i> ) Action Plan Local, regional
<b>F</b>		<u><b>RECOMMENDED IN THE FOUNDATION PHASE</b></u> Analysis and Interpretation ( <i>e.g. planning and control</i> ) Action Plan Local



## ECONOMIC AND MANAGEMENT SCIENCES

# 6. EVALUATE DIFFERENT ECONOMIC SYSTEMS FROM VARIOUS PERSPECTIVES

This Specific Outcome deals with the description of economic systems with special reference to South Africa and its position in the global economy. It is suggested that the focus of the Foundation Phase is on the South Africa economic system and its interaction with other states. Citizens should understand economic realities and the factors and activities which have an impact on the efforts of individuals and countries to satisfy their multiple needs.

PHASE	ASSESSMENT CRITERIA 1	RANGE STATEMENT
S	Different economic systems are evaluated	<p>Identify characteristics of systems</p> <ul style="list-style-type: none"> <li>• Elements <i>e.g. types of ownership and control</i></li> <li>• Method of addressing principles, problems and needs</li> <li>• State involvement <i>e.g. centralised or devolved</i></li> </ul> <p>Identify sources of conflict and continuity <i>e.g. labour relations</i></p> <p>From perspectives of:</p> <ul style="list-style-type: none"> <li>• Government <i>e.g. need for stability and growth</i></li> <li>• Employers <i>e.g. profit motive</i></li> <li>• Labour <i>e.g. rights of workers</i></li> <li>• Citizens/Individual <i>e.g. constitutional rights</i></li> </ul>
I		<p>Identify characteristics of systems</p> <ul style="list-style-type: none"> <li>• Elements <i>e.g. types of ownership and control</i></li> <li>• Method of addressing principles, problems and needs</li> <li>• State involvement <i>e.g. centralised or devolved</i></li> </ul> <p>Identify sources of conflict and continuity <i>e.g. labour relations</i></p> <p>From perspectives of:</p> <ul style="list-style-type: none"> <li>• Government <i>e.g. need for stability and growth</i></li> <li>• Employers <i>e.g. profit motive</i></li> <li>• Labour <i>e.g. rights of workers</i></li> <li>• Citizens/Individual <i>e.g. constitutional rights</i></li> </ul>

## ECONOMIC AND MANAGEMENT SCIENCES

<b>F</b>		<p><b><u>OPTIONAL IN FOUNDATION PHASE</u></b></p> <p>Identify characteristics of systems</p> <ul style="list-style-type: none"> <li>• Elements <i>e.g. types of ownership and control</i></li> <li>• Method of addressing principles, problems and needs</li> <li>• State involvement <i>e.g. centralised or devolved</i></li> </ul> <p>Identify sources of conflict and continuity <i>e.g. labour relations</i></p> <p>From perspectives of:</p> <ul style="list-style-type: none"> <li>• Government <i>e.g. need for stability and growth</i></li> <li>• Employers <i>e.g. profit motive</i></li> <li>• Labour <i>e.g. rights of workers</i></li> </ul> <p>Citizens/Individual <i>e.g. constitutional rights</i></p>
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PHASE	ASSESSMENT CRITERIA 2	RANGE STATEMENT
<b>S</b>	<p>An understanding of the South African economic system is demonstrated</p>	<p>Historical perspectives</p> <p>Characteristics of system</p> <ul style="list-style-type: none"> <li>• Elements <i>e.g. types of ownership and control</i></li> <li>• Method of addressing principles, problems and needs</li> <li>• State involvement <i>e.g. centralised or devolved</i></li> <li>• International interaction</li> <li>• Inequalities</li> </ul> <p>Current situation analysed</p> <p>From perspectives of:</p> <ul style="list-style-type: none"> <li>• Government <i>e.g. need for stability and growth</i></li> <li>• Employers <i>e.g. profit motive</i></li> <li>• Labour <i>e.g. rights of workers</i></li> <li>• Citizens/Individual <i>e.g. constitutional rights</i></li> </ul>

## ECONOMIC AND MANAGEMENT SCIENCES

I	<p>Historical perspectives</p> <p>Characteristics of system</p> <ul style="list-style-type: none"> <li>• Elements <i>e.g. types of ownership and control</i></li> <li>• Method of addressing principles, problems and needs</li> <li>• State involvement <i>e.g. centralised or devolved</i></li> <li>• International interaction</li> <li>• Inequalities</li> </ul> <p>Current situation analysed</p> <p>From perspectives of:</p> <ul style="list-style-type: none"> <li>• Government <i>e.g. need for stability and growth</i></li> <li>• Employers <i>e.g. profit motive</i></li> <li>• Labour <i>e.g. rights of workers</i></li> <li>• Citizens/Individual <i>e.g. constitutional rights</i></li> </ul>
F	<p><u>RECOMMENDED IN FOUNDATION PHASE</u></p> <p>Historical perspectives</p> <p>Characteristics of system</p> <ul style="list-style-type: none"> <li>• Elements <i>e.g. types of ownership and control</i></li> <li>• Method of addressing principles, problems and needs</li> <li>• State involvement <i>e.g. centralised or devolved</i></li> <li>• International interaction</li> <li>• Inequalities</li> </ul> <p>Current situation analysed</p> <p>From perspectives of:</p> <ul style="list-style-type: none"> <li>• Government <i>e.g. need for stability and growth</i></li> <li>• Employers <i>e.g. profit motive</i></li> <li>• Labour <i>e.g. rights of workers</i></li> <li>• Citizens/Individual <i>e.g. constitutional rights</i></li> </ul>

## ECONOMIC AND MANAGEMENT SCIENCES

PHASE	ASSESSMENT CRITERIA 3	RANGE STATEMENT
<b>S</b>	The range of economic activities in the world and its implications for South Africa are demonstrated	<p>Historical perspective <i>e.g. effect of sanctions and disinvestment</i></p> <p>Diversity of global economic activities <i>e.g. international trade</i></p> <p>Implications of global economic activities on South African economy</p> <p>Role of South African economy within a global economy</p>
<b>I</b>		<p>Historical perspective <i>e.g. effect of sanctions and disinvestment</i></p> <p>Diversity of global economic activities <i>e.g. international trade</i></p> <p>Implications of global economic activities on South African economy</p> <p>Role of South African economy within a global economy</p>
<b>F</b>		<p><u>OPTIONAL IN THE FOUNDATION PHASE</u></p> <p>Historical perspective <i>e.g. effect of sanctions and disinvestment</i></p> <p>Diversity of global economic activities <i>e.g. international trade</i></p> <p>Implications of global economic activities on South African economy</p> <p>Role of South African economy within a global economy</p>

S = Senior Phase

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## ECONOMIC AND MANAGEMENT SCIENCES

**7. ACTIONS WHICH ADVANCE SUSTAINED ECONOMIC GROWTH, RECONSTRUCTION AND DEVELOPMENT IN SOUTH AFRICA ARE DEMONSTRATED**

At this time in South African history, it is crucial that citizens and learners of all ages understand the need for growth, reconstruction and development in the South African economy. This Specific Outcome focuses on the essentials that will advance sustainable growth, reconstruction and development in the national economy. As a constructive and positive approach from individuals and organisations is needed, the values and attitudes which could hamper/help the achievement of these goals should be identified and critically analysed.

PHASE	ASSESSMENT CRITERIA 1	RANGE STATEMENT
<b>S</b>	An understanding for the need for economic growth is demonstrated	Reasons for economic growth <i>e.g. unemployment, poverty</i>  Consequences of economic growth <i>e.g. higher standard of living overall</i>  Local, regional, national, international ( <i>Southern Africa Developing Countries</i> )
<b>I</b>		Reasons for economic growth <i>e.g. unemployment, poverty</i>  Consequences of economic growth <i>e.g. higher standard of living overall</i>  Local, regional, national, international ( <i>Southern African Development Community</i> )
<b>F</b>		<b>RECOMMENDED IN THE FOUNDATION PHASE</b>  Reasons for economic growth <i>e.g. unemployment, poverty</i>  Consequences of economic growth <i>e.g. higher standard of living overall</i>  Local, regional, national, international ( <i>Southern African Development Community</i> )

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## ECONOMIC AND MANAGEMENT SCIENCES

PHASE	ASSESSMENT CRITERIA 2	RANGE STATEMENT
S	An understanding of the basic elements of economic growth is demonstrated	Factors enhancing or hindering economic growth <i>e.g. productivity, investment</i>  Values and attitudes enhancing or hindering economic growth <i>e.g. work ethic, corruption</i>
I		Factors enhancing or hindering economic growth <i>e.g. productivity, investment</i>  Values and attitudes enhancing or hindering economic growth <i>e.g. work ethic, corruption</i>
F		Factors enhancing or hindering economic growth <i>e.g. productivity, investment</i>  Values and attitudes enhancing or hindering economic growth <i>e.g. work ethic, corruption</i>

PHASE	ASSESSMENT CRITERIA 3	RANGE STATEMENTS
S	An understanding of the need for reconstruction and development is demonstrated	Reasons for reconstruction and development <i>e.g. imbalances of the past</i>  Consequences of reconstruction and development <i>e.g. overall improvement of standard of living</i>  Local, regional, national, international
I		Reasons for reconstruction and development <i>e.g. imbalances of the past</i>  Consequences of reconstruction and development <i>e.g. overall improvement of standard of living</i>  Local, regional, national, international
F		<b>RECOMMENDED IN THE FOUNDATION PHASE</b>  Reasons for reconstruction and development <i>e.g. imbalances of the past</i>  Consequences of reconstruction and development <i>e.g. overall improvement of standard of living</i>  Local, regional, national, international

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PHASE	ASSESSMENT CRITERIA 4	RANGE STATEMENTS
S	An understanding of the basic elements of reconstruction and development in South Africa is demonstrated	Reconstruction and development <ul style="list-style-type: none"> <li>• Elements <i>e.g. redress, capacity building</i></li> <li>• Attitudes and values enhancing/hindering <i>e.g. Ubuntu, prejudice.</i></li> </ul>
I		Reconstruction and development <ul style="list-style-type: none"> <li>• Elements <i>e.g. redress, capacity building</i></li> <li>• Attitudes and values enhancing/hindering <i>e.g. Ubuntu, prejudice</i></li> </ul>
F		<b><u>RECOMMENDED IN THE FOUNDATION PHASE</u></b> Reconstruction and development <ul style="list-style-type: none"> <li>• Elements <i>e.g. redress, capacity building</i></li> <li>• Attitudes and values enhancing/hindering <i>e.g. Ubuntu, prejudice</i></li> </ul>

PHASE	ASSESSMENT CRITERIA 5	RANGE STATEMENTS
S	Plans for sustained economic growth, reconstruction and development are evaluated	Intervention and nation building Reconstruction and Development Programme <ul style="list-style-type: none"> <li>• Government <i>e.g. Growth, Employment and Reconstruction</i></li> <li>• Business <i>e.g. Human resource development</i></li> <li>• NGO's <i>e.g. Human resource development</i></li> <li>• Individual <i>e.g. commitment</i></li> </ul> Local/regional/national/international (e.g. Southern African Development Community)

## ECONOMIC AND MANAGEMENT SCIENCES

I		<p>Intervention and nation building</p> <p>Reconstruction and Development Programme</p> <ul style="list-style-type: none"> <li>• Government <i>e.g. Growth, Employment and Reconstruction</i></li> <li>• Business <i>e.g. Human resource development</i></li> <li>• NGO's <i>e.g. Human resource development</i></li> <li>• Individual <i>e.g. commitment</i></li> </ul> <p>Local/regional/national/international (e.g. Southern African Development Community)</p>
F		<p><b><u>RECOMMENDED IN THE FOUNDATION PHASE</u></b></p> <p>Intervention and nation building</p> <p>Reconstruction and Development Programme</p> <ul style="list-style-type: none"> <li>• Government <i>e.g. Growth, Employment and Reconstruction</i></li> <li>• Business <i>e.g. Human resource development</i></li> <li>• NGO's <i>e.g. Human resource development</i></li> <li>• Individual <i>e.g. commitment</i></li> </ul> <p>Local/regional/national/international (e.g. Southern African Development Community)</p>

## ECONOMIC AND MANAGEMENT SCIENCES

**8. EVALUATE THE INTERRELATIONSHIPS BETWEEN THE ECONOMIC AND OTHER ENVIRONMENTS**

The interdependence of any economic activity with the other environments is emphasised in this Specific Outcome. No economic decision can be made in isolation without taking into account the impact on the environment as a whole. This Specific Outcome is of vital importance to citizens/learners of all ages in order to sustain a harmonious and productive society.

PHASE	ASSESSMENT CRITERIA 1	RANGE STATEMENT
<b>S</b>	Major elements of the economic environment are described	Elements: <ul style="list-style-type: none"> <li>• Government <i>e.g. policy, national budget, taxation</i></li> <li>• Industry <i>e.g. mining</i></li> <li>• Commerce <i>e.g. commercial banks</i></li> <li>• Organised labour</li> <li>• International impact</li> </ul> Related legislation Local, regional, national, international
<b>I</b>		Elements: <ul style="list-style-type: none"> <li>• Government <i>e.g. policy, national budget, taxation</i></li> <li>• Industry <i>e.g. mining</i></li> <li>• Commerce <i>e.g. commercial banks</i></li> <li>• Organised labour</li> <li>• International impact</li> </ul> Related legislation Local, regional, national
<b>F</b>		<b>RECOMMENDED IN THE FOUNDATION PHASE</b> Elements: <ul style="list-style-type: none"> <li>• Government <i>e.g. policy, national budget, taxation</i></li> <li>• Industry <i>e.g. mining</i></li> <li>• Commerce <i>e.g. commercial banks</i></li> <li>• Organised labour</li> <li>• International impact</li> </ul> Related legislation Local, regional, national

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## ECONOMIC AND MANAGEMENT SCIENCES

PHASE	ASSESSMENT CRITERIA 2	RANGE STATEMENT
S	The interrelationships between the economic and other environments are identified and critically analysed.	<p>Economic environment related to other environments</p> <ul style="list-style-type: none"> <li>• physical and natural <i>e.g. water</i></li> <li>• technological <i>e.g. mechanisation</i></li> <li>• social <i>e.g. unemployed, cultural</i></li> <li>• political <i>e.g. pressure groups</i></li> </ul> <p>Action plans to address some issues: develop, implement and evaluate</p>
I		<p>Economic environment related to other environments</p> <ul style="list-style-type: none"> <li>• physical and natural <i>e.g. water</i></li> <li>• technological <i>e.g. mechanisation</i></li> <li>• social <i>e.g. unemployed, cultural</i></li> <li>• political <i>e.g. pressure groups</i></li> </ul> <p>Action plans to address some issues: develop, implement and evaluate</p>
F		<p><u>RECOMMENDED IN THE FOUNDATION PHASE</u></p> <p>Economic environment related to other environments</p> <ul style="list-style-type: none"> <li>• physical and natural <i>e.g. water</i></li> <li>• technological <i>e.g. mechanisation</i></li> <li>• social <i>e.g. unemployed, cultural</i></li> <li>• political <i>e.g. pressure groups</i></li> </ul> <p>Action plans to address some issues: develop, implement and evaluate</p>

# LIFE ORIENTATION

## LIFE ORIENTATION

**RATIONALE**

Life orientation is fundamental in empowering learners to live meaningful lives in a society that demands rapid transformation.

- It is an integral part of education, training and development.
- It is central to the holistic unfolding of the learners, caring for their intellectual, physical, personal, social, spiritual and emotional growth, and for the way these facets work together.
- It locates its vision of individual growth within the quest for a free, democratic and stable society, for quality of life in the community and for a productive economy.

Life orientation therefore:

- Enhances the practice of positive values, attitudes, behaviour and skills in the individual and the community;
- Works for a transformation of society in the interests of promoting a human rights culture, underpinned by:
  - the striving for a fully inclusive, egalitarian society free of all unjust discrimination, as underpinned by the Constitution;
  - a unified, co-operative society in which diversity is cherished;
  - individuals' appreciation of their own beliefs, values and practices, and, at the same time, respect for the rights of others to do likewise.
- Promotes the achievement of individual learners' potential by strengthening and integrating their
  - self-concept;
  - capacity to develop healthy relationships;
  - ability to make informed and responsible decisions;
  - independent, critical and creative thinking;
  - survival and coping skills;
  - commitment to life-long learning;
  - pleasure in the expression and co-ordination of their intellectual, physical, spiritual, emotional and moral powers.



## LIFE ORIENTATION

- Encourages a healthy lifestyle, characterised by specific and contextualised application of the actions and values expressed in this rationale; celebration of, care for and responsibility towards the self and the social, natural and material environments.

**NOTE ON RELIGIOUS EDUCATION**

Please see the reference to religious education on page 18.

## LIFE ORIENTATION

**SPECIFIC OUTCOMES**

1. Understand and accept themselves as unique and worthwhile human beings
2. Use skills and display attitudes and values that improve relationships in family, group and community
3. Respect the rights of people to hold personal beliefs and values
4. Demonstrate value and respect for human rights as reflected in *Ubuntu* and other similar philosophies
5. Practise acquired life and decision making skills
6. Assess career and other opportunities and set goals that will enable them to make the best use of their potential and talents
7. Demonstrate the values and attitudes necessary for a healthy and balanced lifestyle
8. Evaluate and participate in activities that demonstrate effective human movement and development

## LIFE ORIENTATION

## MOTIVATION FOR THE SELECTION OF THE SPECIFIC OUTCOMES

- **Understand and accept themselves as unique and worthwhile human beings (Specific Outcome 1)**

Life Orientation is instrumental in promoting a meaningful lifestyle for each learner. This specific outcome aims to develop respect for self which includes (a) a positive self-concept and (b) self actualisation. This will be attained by:

- promoting the individual's own worth, dignity and rights as a unique individual;
- examining how the physical and social environment affects personal development and growth;
- exploring the role of social, cultural and national perspectives in shaping personal attitudes and values; and
- understanding the integrated nature of the whole person.

- **Use skills and display attitudes and values that improve relationships in family, group and community (Specific Outcome 2)**
- **Respect the rights of people to hold personal beliefs and values (Specific Outcome 3)**
- **Demonstrate value and respect for human rights as reflected in *Ubuntu* and other similar philosophies (Specific Outcome 4)**

These specific outcomes are based on the conviction that a strong human rights culture should form the basis of South African society in general and the educational environment in particular. Thus these specific outcomes seek to develop an understanding of the principles of a respect for human rights and their relevance to life. They aim to develop in learners the values, consciousness and competencies that are required for effective participation as responsible citizens of a democratic society.

- **Practise acquired life and decision making skills (Specific Outcome 5)**

The development and acquisition of life skills form the essence of life orientation. Learners have to be equipped with, understand and be able to apply life skills. The development of information-gathering strategies should form part of this facet. Life skills *per se* are taught and learned, although it is expected from the learner that he/she will apply on a wider basis, especially in coping with real-life situations. The acquisition of knowledge and skills that can

## LIFE ORIENTATION

balance risk and safety in the individual's experiences, environment and social relationships is crucial to this facet.

- **Assess career and other opportunities and set goals that will enable them to make the best use of their potential and talents (Specific Outcome 6)**

It has become imperative for education and the world of work to forge close co-operation in order to adequately prepare the learners for their future working lives and life-long learning prospects. The world of work changes from time to time. Our economy needs to grow and change in order to meet the needs of all in the country and to be able to compete internationally. We need to develop our human resources to meet these demands. This specific outcome intends to play a crucial role in linking the needs of the country with the aspirations, abilities and skills of our learners. The development of an effective career guidance programme is therefore essential.

- **Demonstrate the values and attitudes necessary for a healthy and balanced lifestyle (Specific Outcome 7)**
- **Evaluate and participate in activities that demonstrate effective human movement and development (Specific Outcome 8)**

There can be no doubt that South Africa's prosperity is dependent upon the health and welfare of its population. There is, however, ample evidence to indicate that significant social and health-related problems exist among our people. Many of these problems can be associated with the lifestyles adopted by individuals, particularly with respect to diet, physical activity, alcohol and substance abuse, sexual activity and a number of other high risk behaviours. All learners should be provided with a sound knowledge of the benefits of healthy living and a safe way of living. As education is a life-long process, sound health and human movement practices can contribute to the prevention of health-related problems and can improve the quality of life of learners.

**EXPLANATORY NOTE:**

Range Statements and Assessment Criteria correspond horizontally. However, in some cases Assessment Criteria do not have Range Statements as they are considered to be self-explanatory.

## LIFE ORIENTATION

**1. UNDERSTAND AND ACCEPT THEMSELVES AS UNIQUE AND WORTHWHILE HUMAN BEINGS**

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
<b>S</b>	<ul style="list-style-type: none"> <li>An understanding of the ways in which their own cultural traditions have shaped them is demonstrated</li> <li>A appreciation of their own uniqueness and that of others is demonstrated</li> <li>Objective assessments of their abilities and attitudes are displayed</li> <li>Analysis of the integrated nature of the whole person is demonstrated</li> </ul>	<ul style="list-style-type: none"> <li>Cultural background related to personal growth</li> <li>Characteristics of individual human worth</li> </ul> <div>EXAMPLE: independent thinking; initiative</div> <ul style="list-style-type: none"> <li>Critical appreciation of the self</li> <li>Mental, social, emotional, spiritual and physical</li> <li>Inter-relatedness of these facets in the development of balanced individuals</li> </ul>
<b>I</b>	<ul style="list-style-type: none"> <li>Attributes and values that make unique individuals are identified</li> <li>A positive self concept is reflected</li> <li>Confidence in facing unfamiliar situations and challenges is expressed</li> <li>An understanding of the integrated nature of the whole person is demonstrated</li> </ul>	<ul style="list-style-type: none"> <li>Values, strengths and limitations in the context of society and cultural background</li> <li>In family, groups, school and community</li> <li>Mental, social emotional, spiritual and physical</li> <li>Inter-relatedness of these facets in the development of balanced individuals</li> </ul>

## LIFE ORIENTATION

<b>F</b>	<ul style="list-style-type: none"> <li>• Knowledge of appropriate vocabulary for expressing feelings is demonstrated</li> <li>• Knowledge of themselves as unique individuals is demonstrated</li> <li>• Positive thoughts about themselves and their abilities are expressed</li> <li>• Recognition and acceptance of their own abilities is demonstrated</li> <li>• An awareness of the integrated nature of the whole person is demonstrated</li> </ul>	<ul style="list-style-type: none"> <li>• Self esteem, confidence, own uniqueness</li> <li>• Mental, social emotional, spiritual and physical</li> <li>• Inter-relatedness of these facets in the development of balanced individuals</li> </ul>
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## LIFE ORIENTATION

**2. USE SKILLS AND DISPLAY ATTITUDES AND VALUES THAT IMPROVE RELATIONSHIPS IN FAMILY, GROUP AND COMMUNITY**

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
<b>S</b>	<ul style="list-style-type: none"> <li>A critical analysis of various relationships in families, friends and groups is demonstrated</li> <li>Qualities of relationships and communication are evaluated</li> </ul>	<ul style="list-style-type: none"> <li>A number of roles and responsibilities to develop and maintain positive relationships and sound communication.</li> </ul> <p><b>EXAMPLE:</b> strengthening networks, mutual dependence, rights and responsibilities</p>
<b>I</b>	<ul style="list-style-type: none"> <li>Knowledge of changes in relationships, families, friends and groups is demonstrated</li> <li>Skills in assessing qualities of relationships and effective communication are demonstrated</li> </ul>	<ul style="list-style-type: none"> <li>A range of skills required to develop and maintain changes in relationships</li> </ul> <p><b>EXAMPLE:</b> making and breaking friendships, family changes (adolescence, death, divorce, etc.)</p>
<b>F</b>	<ul style="list-style-type: none"> <li>The nature of various relationships, families, friends, groups, qualities of relationships and communication is expressed</li> </ul>	<ul style="list-style-type: none"> <li>Care for and co-operate with others in family, group and community.</li> </ul> <p><b>EXAMPLE:</b> making and valuing friends, caring and sharing</p>

## LIFE ORIENTATION

**3. RESPECT THE RIGHTS OF PEOPLE TO HOLD PERSONAL BELIEFS AND VALUES**

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
<b>S</b>	<ul style="list-style-type: none"> <li>Knowledge of and respect for people's rights to hold different beliefs and values is demonstrated</li> <li>The interaction of how different value and belief systems interact is illustrated</li> <li>A comprehension of the relationship between national unity and cultural diversity in South Africa is demonstrated</li> <li>The role of values and beliefs in socialisation is evaluated</li> </ul>	<ul style="list-style-type: none"> <li>Different beliefs and values</li> <li>Issues in diverse societies and efforts for unity</li> <li>Ways in which values and beliefs influence societies</li> </ul>
<b>I</b>	<ul style="list-style-type: none"> <li>An understanding that people believe differently is explained</li> <li>A comprehension of value and belief systems is demonstrated</li> <li>An understanding of the coexistence of different value and belief systems is demonstrated</li> <li>The development of value and belief systems is appreciated</li> <li>Understanding of the cause and effect of a range of important events in their belief system is demonstrated</li> </ul>	<ul style="list-style-type: none"> <li>Differentiate how people see and think about things/issues  <div>EXAMPLE: classroom, playground, sports field</div> </li> <li>Gathering and interpreting relevant data</li> <li>Different belief systems and value systems</li> <li>Historical background</li> <li>Selected important events which impacted significantly on its followers</li> </ul>
<b>F</b>	<ul style="list-style-type: none"> <li>An understanding of the nature of values and beliefs is displayed</li> <li>An understanding of the existence of different value and belief systems is displayed</li> <li>Knowledge of a range of events in their belief system is demonstrated</li> </ul>	<ul style="list-style-type: none"> <li>Description of values and beliefs</li> <li>Evidence of comprehension of different value and belief systems  <div>EXAMPLE: family, community</div> </li> <li>Selected events that had an impact on their belief system</li> </ul>

## LIFE ORIENTATION

**4. DEMONSTRATE VALUE AND RESPECT FOR HUMAN RIGHTS AS REFLECTED IN UBUNTU AND OTHER SIMILAR PHILOSOPHIES**

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
<b>S</b>	<ul style="list-style-type: none"> <li>Evidence of human rights values and practices is displayed</li> <li>The history and struggle for human rights is analysed</li> <li>An understanding of the relationships between rights and responsibilities is displayed and practised</li> <li>The practice of Ubuntu, within the South African diversity, is analysed</li> <li>Work of individuals, groups, private and public institutions with regard to human rights is appraised</li> </ul>	<ul style="list-style-type: none"> <li>Universal Human Rights Code</li> <li>South Africa and other countries</li> <li>Different human rights issues</li> <li>A range of political and social responsibilities</li> <li>A range of aspects of Ubuntu</li> </ul> <div style="border: 1px solid black; padding: 2px;">EXAMPLE: respect, social justice</div> <ul style="list-style-type: none"> <li>Practical information gathering and interpretation</li> <li>A range of Child Protection Agencies</li> </ul>
<b>I</b>	<ul style="list-style-type: none"> <li>An understanding of the South African Constitution and the Bill of Rights is demonstrated</li> <li>An understanding of children's rights and their knowledge of Child Protection Agencies is demonstrated</li> <li>An awareness of the relationship between human rights and responsibilities is demonstrated</li> <li>An understanding of and the advancement of a human rights culture is demonstrated</li> </ul>	<ul style="list-style-type: none"> <li>The nature of the South African Constitution and Bill of Rights against the background of the South African history</li> <li>Requirements for optimal childhood</li> <li>A range of Child Protection Agencies</li> <li>Relationship between human rights and responsibilities</li> <li>Anti-discriminatory behaviour and communication</li> </ul>

## LIFE ORIENTATION

<b>F</b>	<ul style="list-style-type: none"> <li>• An awareness of own humanity and self worth is displayed</li> <li>• An understanding of basic human rights concepts is displayed</li> <li>• An understanding of what is meant by Ubuntu is demonstrated</li> <li>• Issues and problems are identified</li> <li>• An awareness of differences and relationships between rights, needs and wants is expressed</li> <li>• Their rights and responsibilities as members of a family, a school and a community are identified and explained</li> <li>• Knowledge of Child Protection Agencies and how to access them is displayed</li> </ul>	<ul style="list-style-type: none"> <li>• Discovery and expression of own strengths, weaknesses and needs</li> <li>• Anti-discriminatory behaviour and empathy</li> <li>• Comprehension of values and behaviour related to Ubuntu</li> <li>• Human Rights issues and problems</li> </ul> <div style="border: 1px solid black; padding: 2px;"> <b>EXAMPLE:</b> equality, poverty, harm, discrimination, justice         </div> <ul style="list-style-type: none"> <li>• Acquaintance with children's rights and Child Protection Agencies</li> <li>• Children's rights and responsibilities</li> <li>• A range of Child Protection Agencies</li> </ul>
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## LIFE ORIENTATION

**5. PRACTISE ACQUIRED LIFE AND DECISION MAKING SKILLS**

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
<b>S</b>	<ul style="list-style-type: none"> <li>The ability to take responsibility for oneself and others is demonstrated</li> <li>Acceptance of responsibility for own choices in terms of personal and community well-being is demonstrated</li> <li>The responsibility to promote safety awareness, the management of life changes, stress management and conflict resolution is demonstrated</li> <li>The effective accessing and use of resources is displayed</li> </ul>	<ul style="list-style-type: none"> <li>A variety of problem solving methods</li> <li>Safety issues and practises</li> <li>Strategies to cope with change and stress</li> <li>Various forms, sources and consequences of conflict</li> <li>Information from various sources</li> <li>Base decisions on gathered data</li> </ul>
<b>I</b>	<ul style="list-style-type: none"> <li>The ability to make independent decisions for which the learners are accountable, is demonstrated</li> <li>The application of safety procedures as the combined responsibility of individuals and the community</li> <li>The prevention of stress from becoming detrimental to effective functioning</li> <li>Assertiveness with regard to sexual issues and general life situations is demonstrated</li> <li>The use of a variety of techniques to gather information is demonstrated</li> </ul>	<ul style="list-style-type: none"> <li>Influences on decision making</li> <li>Take responsibility for own decisions</li> <li>Identify different kinds of decisions</li> <li>Analyse problems</li> <li>Home school and community</li> <li>Stress and conflict management techniques</li> <li>Behavioural aspects of life and sexuality that are relevant, including those that effect self esteem and relationships with others</li> <li>Gather, analyse, interpret, evaluate and display data</li> </ul>

## LIFE ORIENTATION

F	<ul style="list-style-type: none"> <li>• Skills in decision making, problem solving and planning is displayed</li> <li>• Knowledge of safety, how to handle stressful situations and be assertive is expressed</li> <li>• The use of a variety of information methods is displayed</li> </ul>	<ul style="list-style-type: none"> <li>• Influences on and reasons for choices</li> <li>• How to plan</li> <li>• Ability to identify problems</li> <li>• Differentiate between safe and unsafe situations</li> <li>• Cope with hazards inside and outside the home, at school and the environment in general</li> <li>• Ways of preventing personal, physical safety related to sexuality</li> <li>• Handle conflict with friends</li> <li>• Gather, organise and display data</li> </ul>
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## LIFE ORIENTATION

**6. ASSESS CAREER AND OTHER OPPORTUNITIES AND SET GOALS THAT WILL ENABLE THEM TO MAKE BEST USE OF THEIR POTENTIAL AND TALENTS**

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
<b>S</b>	<ul style="list-style-type: none"> <li>Research of resources regarding career opportunities is demonstrated</li> <li>Requirements for careers are analysed</li> <li>Immediate career opportunities are analysed</li> <li>First hand experience in the work place is evaluated</li> <li>Career planning and pathing processes and procedures are demonstrated</li> <li>The ability to present themselves is demonstrated</li> <li>An understanding that career choices are informed by personal and cultural values is demonstrated</li> <li>Role models are identified</li> <li>Knowledge of own skills, abilities, interests and personality is demonstrated</li> <li>Job seeking skills are displayed</li> </ul>	<ul style="list-style-type: none"> <li>A variety of resources</li> <li>A range of unit standards in the Further Education and Training (FET) phase</li> <li>A range of work/study fields of South African Qualifications Authority (SAQA)</li> <li>Individual and group field trips</li> <li>Comparison of careers and other opportunities</li> <li>Different occupational fields and career specific requirements</li> <li>Curriculum Vitae, interview, bursary</li> <li>Forms of bias, prejudice and stereotyping in choosing a career, e.g. gender, ethnicity, age etc.</li> <li>In a variety of careers</li> <li>Own personality, interests, strengths, weaknesses</li> <li>Media, employment agencies, work place</li> </ul>
<b>I</b>	<ul style="list-style-type: none"> <li>Career opportunities and occupational roles are identified</li> <li>Knowledge of the self is expressed</li> <li>Different occupations are observed</li> <li>Knowledge that career choices are informed by personal and cultural values</li> </ul>	<ul style="list-style-type: none"> <li>A range of career opportunities and occupational roles</li> <li>General knowledge of self</li> <li>A range of occupations</li> <li>Forms of bias, prejudice and stereotyping in career choices, e.g. gender, ethnicity, age, etc.</li> </ul>

## LIFE ORIENTATION

<b>F</b>	<ul style="list-style-type: none"><li>• Likes and dislikes are described</li><li>• Occupations are identified</li><li>• The nature and value of work are expressed</li><li>• The use of talents and abilities is expressed</li></ul>	<ul style="list-style-type: none"><li>• Activity-related likes and dislikes</li><li>• Local community</li><li>• As expressed by a variety of people</li><li>• Family, school and community members</li></ul>
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## LIFE ORIENTATION

**7. DEMONSTRATE THE VALUES AND ATTITUDES NECESSARY FOR A HEALTHY AND BALANCED LIFESTYLE**

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
<b>S</b>	<ul style="list-style-type: none"> <li>• Various lifestyles in terms of a healthy and balance approach are appraised</li> <li>• Knowledge and prevention of sexually transmitted diseases and AIDS is demonstrated</li> <li>• Goal-setting for a healthy and balanced lifestyle is demonstrated</li> </ul>	<ul style="list-style-type: none"> <li>• Various lifestyles</li> <li>• Various sexually transmitted diseases and AIDS</li> <li>• Choices related to balanced and healthy lifestyles</li> </ul>
<b>I</b>	<ul style="list-style-type: none"> <li>• The physical, emotional and social changes associated with puberty are demonstrated</li> <li>• Knowledge of the physical, mental and social effects as well as the consequences of substance abuse on themselves, their family, others and community is demonstrated</li> <li>• An understanding of the influences of social dynamics on their attitudes and values regarding healthy living is demonstrated</li> <li>• Participation in environment protection and rehabilitation is demonstrated</li> <li>• Knowledge of the nature of available health services is expressed</li> <li>• Acquisition of basic first aid skills is demonstrated</li> <li>• The relationship between nutrition and stages of growth and development and the food practices associated with the different stages of life is examined</li> </ul>	<ul style="list-style-type: none"> <li>• Changes associated with puberty</li> <li>• A range of substances</li> <li>• Their impact/effect on people</li> <li>• In family, media, peers, community and culture</li> <li>• Local and global environmentally related health issues</li> <li>• Primary and secondary health services</li> <li>• First aid procedures</li> <li>• Patterns of food consumption</li> </ul>

## LIFE ORIENTATION

F	<ul style="list-style-type: none"> <li>• Practices of personal hygiene are demonstrated</li> <li>• Sound nutritional values are identified</li> <li>• The reasons for caring and maintaining the environment to promote own health, are explained</li> <li>• Knowledge of and participation in various leisure activities are demonstrated</li> <li>• Patterns that influence their daily life are identified</li> <li>• The influence of media on values and attitudes regarding healthy living is identified</li> <li>• The distinction between safe and unsafe substances is expressed</li> </ul>	<ul style="list-style-type: none"> <li>• Care of the body</li> <li>• Food groups</li> <li>• Pollution of water, land and air</li> <li>• A range of individual and group activities</li> <li>• Time management</li> <li>• Printed and electronic media</li> <li>• Substances that go into the body and how some can endanger health</li> </ul>
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## LIFE ORIENTATION

**8. EVALUATE AND PARTICIPATE IN ACTIVITIES THAT DEMONSTRATE EFFECTIVE HUMAN MOVEMENT AND DEVELOPMENT**

**NOTE:** In all cases movement for learners with special education needs should be interpreted within their range of capabilities

PHASE	ASSESSMENT CRITERIA	RANGE STATEMENT
<b>S</b>	<ul style="list-style-type: none"> <li>Appraisal of movement concepts and movement skills is demonstrated</li> <li>Possession of a repertoire of movements that involve manipulation and object control is demonstrated</li> <li>The formation of movement compositions to communicate ideas is demonstrated</li> <li>The recognition of strengths and development needs is demonstrated</li> </ul>	<ul style="list-style-type: none"> <li>The benefits of exercise on fitness over a period of time</li> <li>Key points when executing particular movement skills</li> <li>The performance of self and peers</li> <li>Skill and control in performing movement activities using objects</li> <li>Skills and elements to choreograph and perform sequences, using the body as an instrument of expression</li> <li>Personal performance against given criteria</li> </ul>
<b>I</b>	<ul style="list-style-type: none"> <li>The benefits of regular human movement activities are demonstrated</li> <li>Competence in specialised movement skills is demonstrated</li> <li>Body awareness and control in movement performance is demonstrated</li> <li>Factors that contribute to positive and negative feelings towards physical activity are expressed</li> <li>Skills and accuracy in performance are displayed</li> <li>Movement work that has been produced in conjunction with others is demonstrated</li> </ul>	<ul style="list-style-type: none"> <li>A range of benefits</li> <li>Mastery over body and environment</li> <li>Movement sense, body awareness and control in varied situations</li> <li>Experiences of physical activity</li> <li>Manipulation and control of objects/implements for participation in various movement forms</li> <li>Participation in group activity, confidence and responsibility</li> </ul>

## LIFE ORIENTATION

F	<ul style="list-style-type: none"> <li>• Knowledge of the benefits of regular human movement activities is expressed</li> <li>• Different ways of moving to gain confidence in simple movement patterns are demonstrated</li> <li>• Knowledge of relevant movement terminology is expressed</li> <li>• Ability to work individually and in groups to perform movements and handle objects is demonstrated</li> <li>• Creative and confident movement response to various stimuli is expressed</li> <li>• The ability to work with a partner/group in competitions, games and dances is demonstrated</li> </ul>	<ul style="list-style-type: none"> <li>• A range of benefits  <div>EXAMPLE: Improved health</div> </li> <li>• A wide range of creative and challenging activities</li> <li>• Correct application</li> <li>• Movements and movement variations, individually and in groups</li> <li>• Use of movement to interpret various stimuli  <div>EXAMPLE: ideas, words, sounds, music</div> </li> <li>• Co-operate with partner/group</li> <li>• Effect group decisions</li> <li>• Accept authority of leader</li> </ul>
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THE WEATHER BUREAU: DEPARTMENT OF ENVIRONMENTAL AFFAIRS & TOURISM  
DIE WEERBURU: DEPARTEMENT VAN OMGEWINGSAKE EN TOERISME

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