



education

Department:
Education
REPUBLIC OF SOUTH AFRICA

DRAFT GUIDELINES FOR INCLUSIVE LEARNING PROGRAMMES

2005

**EDUCATION WHITE PAPER 6
SPECIAL NEEDS EDUCATION
BUILDING AN INCLUSIVE EDUCATION AND TRAINING SYSTEM**

YOUR CONSTRUCTIVE INPUTS WILL BE APPRECIATED

GUIDELINES FOR INCLUSIVE LEARNING PROGRAMMES

2005

Directorate Inclusive Education
Sol Plaatje House
Schoeman Street, Pretoria
(012) 312 5349
Fax (012) 312 5029
www.education.pwv.gov.za

TABLE OF CONTENTS

INTRODUCTION

SECTION ONE.....9

1.1	The National Curriculum Statement (NCS)	9
1.2	An introduction to barriers to learning and development.....	11
1.2.1	Disability as a barrier	11
1.2.2	Language and communication	12
1.2.3	Lack of parental recognition and involvement	13
1.2.4	Socio-economic barriers.....	15
1.2.5	Negative attitudes	16
1.2.6	Inadequate Programme-to-Work Linkages.....	18

SECTION 2.....20

DIFFERENTIATION OF LEARNING PROGRAMMES, WORK SCHEDULES AND LESSON PLANS TO ACCOMMODATE ALL LEARNERS IN AN INCLUSIVE EDUCATION SYSTEM.....20

2.1	Introduction.....	20
2.2	Learner Needs.....	21
2.2.1	The learner profile of a school	21
2.2.2	Influence of the learner profile of a special school, special school as resource centre or full service school	22
2.3	Implications for adapting learning programmes, work schedules and lesson plans at special schools, special schools as resource centres and/or full service schools.....	23
2.4	Differentiation and design of Learning Programmes.....	24
2.4.1	The straddling of Grades and Phases	24
2.4.2	The number of learning programmes	25
2.4.3	The weighting of Learning Programmes.....	26
2.4.4	The duration of Learning Programmes.....	26
2.4.5	The use of programmes-to-work linkages to facilitate access to the curriculum.....	27
2.4.6	Measures for portability	27
2.4.7	Decision-making criteria around progression and certification.....	28
2.4.8	Conclusion of learning programme Differentiation and design.....	28
2.5	Differentiation and planning of Work Schedules	29
2.6	Differentiation and planning of Lesson Plans.....	32
2.7	Components of the curriculum differentiation process	33
2.8	Some ideas for applying any of the components above	34
	Differentiating the content	34
	Adapting the materials or differentiating method of presentation	34
2.9	The Curriculum Ladder as a strategy for differentiation or Differentiation	36
2.10	Specific tips for interaction with learners who experience language barriers:	38
2.11	Specific tips for interaction with the learner who experience memory and concentration barriers	39
2.12	Conclusion.....	41

SECTION 3.....	49
DIFFERENTIATION OF THE LEARNING AREA STATEMENTS OF THE NCS TO ACCOMMODATE ALL LEARNERS IN AN INCLUSIVE EDUCATION SYSTEM	49
3.1 Introduction.....	49
3.2 How do I adapt the Learning Areas?.....	49
3.3 General recommendations on resources and terminology used in the Learning Area Statements	50
3.4 Differentiation of Learning Areas.....	51
3.4.1 Learning Area: Languages	51
3.4.2 Learning Area: Mathematics.....	60
3.4.3 Learning Area: Social Sciences.....	67
3.4.4 Learning Area: Economic and Management Sciences	70
3.4.5 Learning Area: Natural Sciences.....	72
3.4.6 Learning Area: Technology.....	75
3.4.7 Learning Area: Arts and Culture.....	78
3.4.8 Learning Area: Life Orientation.....	83
SECTION 4.....	89
IMPLICATIONS OF INCLUSION FOR TEACHING METHODOLOGIES	89
4.1 Introduction.....	89
4.2 Framework for Teaching Methodologies.....	89
4.3 Teaching Methodologies	90
4.4 Multi-Level Teaching	91
4.4.1 What is multi-level teaching?.....	91
4.4.2 The three-step process in developing a lesson to accommodate diversity.....	91
4.5 Co-operative Learning as a Teaching Strategy.....	94
4.5.1 What is co-operative learning?	94
4.5.2 Grouping	94
4.5.2 Characteristics of effective Co-operative Learning Activities	96
SECTION 5.....	98
INCLUSIVE STRATEGIES FOR LEARNING, TEACHING AND ASSESSMENT	98
5.1 Introduction.....	98
5.2 What are Inclusive Strategies for Learning, Teaching and Assessment?.....	99
5.3 What are the Logistic Arrangements Necessary for Successful Implementation of Inclusive Learning, Teaching and Assessment Strategies?	100
5.4 How will learners be Assessed to Determine the Nature and Extent of their Needs in terms of Inclusive Learning, Teaching and Assessment Strategies?	101
5.5 What is the Role of the Teacher in the Inclusive Learning, Teaching and Assessment Strategies?	101
5.6 Which Barriers Need to be Addressed by Inclusive Learning, Teaching and Assessment Strategies?	102
5.7 Inclusive Learning, Teaching and Assessment Strategies and the Learning Outcomes.....	102
5.8 How can the 'Listening' Outcome of the NCS be Attained Through Inclusive Learning, Teaching and Assessment Strategies?.....	103
5.9 How can the 'Speaking' Outcome of the NCS be Attained Through Inclusive Learning Teaching and Assessment Strategies?.....	103
5.10 How can the 'Reading and Viewing' Learning Outcome of the NCS be Attained Through Inclusive Learning Teaching and Assessment Strategies?	104

5.11	How can the 'Writing' Learning Outcome of the NCS be Attained Through Inclusive Learning Teaching and Assessment Strategies?	105
5.12	How can the 'Critical Thinking and Reasoning' Learning Outcomes of the NCS be Attained Through Inclusive Learning, Teaching and Assessment Strategies?.....	105
5.13	How can the 'Language Structure and Use' Learning Outcome of the NCS be Attained Through Inclusive Learning Teaching and Assessment Strategies?.....	106
5.14	How can the Mathematics Learning Outcomes of the NCS be Attained Through Inclusive Learning Teaching and Assessment Strategies?	106
5.15	Formal Assessment Tasks: Venues and Specific Interventions	106
SECTION 6.....		112
LEARNING STYLES AND MULTIPLE INTELLIGENCES.....		112
6.1	Introduction.....	112
6.2	How do we Recognise the Way in which Different Intelligences Process Information, and How do we Link this to Different Learning Styles?.....	113

Terminology

Barriers to learning	The notion refers to difficulties that arise within the education system as a whole, the learning site and/or within the learner him/herself which prevent both the system and the learner needs from being met. When, based on objective evaluation made by an educational authority, it is ascertained that teaching and learning are hampered where such needs are not met, educationally sound measures must be applied.
District Based Support Teams (DBST)	Groups of departmental employees whose job it is to promote inclusive education through training, curriculum delivery, distribution of resources, identifying and addressing barriers to learning, leadership and general management.
Ordinary local schools	In terms of the South African Schools Act (1996) a public school may be an ordinary public school or a public school for learners with special education needs (Section 12(3)). The local ordinary school would be the school closest to where the learner lives.
Full-Service Schools (FSS)	Ordinary schools which are specially equipped to address a full range of barriers to learning in an inclusive education setting. In addition to their ordinary learner population they will become accessible to most learners in an area who experience barriers to learning and provide the necessary support. In the initial implementation stages these full service schools will be models of institutional change which reflect effective inclusive cultures, policies and practices.
Special Schools (SSs)	Schools equipped to deliver education to learners requiring high-intensive educational and other support either on a full-time or a part-time basis.
Special Schools/Resource Centres (SpS/RCs)	These would be special schools which are transformed to fulfil a wider function of accommodating learners who have high intensity support needs, as well as providing a range of support services to ordinary schools, full-service schools as part of the District-based Support System.
Support programmes	Support programmes refer to structured interventions delivered at schools and in classrooms within specific time frames. The support programmes would mainly consist of curriculum support but could also be support for educators and managers. Support programmes could provide for staff time and expertise (consultation, training, mentoring, therapeutic intervention) as well as physical and material resources (transport, assistive devices, teaching and learning materials, ramps and accessibility features)
Category of disability	The main organiser for schools, funding and post provisioning in the current special education system. The weighted categories are: Multiply disabled, deaf, hard of hearing, blind, partially sighted, deaf/blind, cerebral palsy, specific learning disability, behavioural disorder, mild or moderate intellectual disability, severe intellectual disability, physical disability, autistic spectrum disorders, epilepsy, attention deficit disorder, with/without hyperactivity.
Level of support needs	A range of factors will be taken into account to determine the level of intensity of support needed by individual learners. These factors could be intrinsic to the learner him/herself or factors within the learning and living environment of the learner.
Institution Level Support Teams (ILSTs)	Teams established by institutions in general, further and higher education, as institution-level support mechanism whose primary function is to put in place co-ordinated learner and educator support services. The teams have different names in different provinces such as Site Based Support Teams, Teacher Support Teams, etc.
Individual Support Plan	This plan will be designed for learners who need additional support or expanded opportunities. The plan to support a learner will be developed in collaboration with the parents, the teachers and the Institution-level Support Team. This should not be fixed but should be reviewed on a regular basis in terms of its applicability and effectiveness. It should be applied to enhance the learner's participation in all classroom activities, taking into account all factors that may hamper his/her progress at an academic, social or emotional level. The plan should be captured in the Learner Profile and used to inform the kind of ongoing support that is given to him/her by teachers in the classroom as well as by other support providers. Such a plan should never become a stand-alone programme that functions outside the scope of the curriculum planning which teachers do for all learners.

INTRODUCTION

In 1996 the government of South Africa amalgamated 17 Departments of Education, which had been designated along racial lines, to one Department of Education with one curriculum (Interim Syllabus) for all South African learners. Prior to 1996, learners experiencing barriers to learning and development were catered for in Special Schools, which were designated along categories of disability. Where learners who experienced barriers to learning did attend ordinary schools, it was largely by default, and very little was done by these schools to adapt teaching methods, the learning environment and assessment procedures to accommodate them. Learners were expected to adapt to the school. The majority of learners experiencing barriers to learning and development were unable to access education.

In July 2001 the Ministry of Education launched the Education White Paper 6 Special Needs Education: Building an Inclusive Education and Training System. White Paper 6 reminds us that our constitution challenges us to ensure that **all learners** pursue their learning potential to the fullest. (EWP6 p.11). It commits the state to the achievement of equality and non-discrimination. The policy framework outlined in White Paper 6 outlines the ministry's commitment to "the provision of educational opportunities, in particular for those learners who experience or have experienced barriers to learning and development or who have dropped out of learning because of the inability of the education and training system to accommodate the diversity of learning needs, and those learners who continue to be excluded from it". (EWP6 p 11)

Education White Paper 6 on Inclusive Education sets out to address the needs of all learners in one undivided education system. It moves from the categorisation of learners according to disability (medical model) to assessing the needs and levels of support required by individual learners to facilitate their maximum participation in the education system as a whole. The focus is on ensuring that there is sufficient differentiation in curriculum delivery to accommodate learner needs and making the support systems available for learners and schools. It departs from the previous notion of referring learners with particular disabilities to specific special schools, but permits all schools to offer the same curriculum to learners while simultaneously ensuring variations in mode of delivery and assessment processes to accommodate all learners.

The guidelines to inclusive learning, teaching and assessment offered here take into consideration that flexibility has already been built into the National Curriculum Statement

The rationale for curriculum differentiation is based largely on Education White Paper 6 on Special Education Needs: Building an Inclusive Education and Training System. The following statements emphasise the fact that inclusion is centrally a curriculum issue:

- The policy outlines how the education and training system must change to accommodate the full range of learning needs with particular attention to strategies for instructional and curriculum transformation. [Education White Paper 6, p. 11, 12 par 1.1.6 – 1.1.7]
- Inclusive education and training are about acknowledging that all children and youth can learn provided they receive support. [Education White Paper 6 p.16 par. 1.4.1]
- Inclusive education and training are about enabling teaching and learning methodologies and curricula and the maximising of the participation of all learners in the culture and curricula of educational institutions. [Education White Paper 6 p.16 par. 1.4.1]
- Inclusive education and training are about uncovering and minimising barriers to learning. [Education White Paper 6 p.16 par. 1.4.1]
- One of the most significant barriers to learning is the curriculum. Barriers to learning arise from the different aspects of the curriculum such as the content, the language, classroom organisation, teaching methodologies, pace of teaching and time available to complete the curriculum, teaching and learning support materials and assessment. [Education White Paper 6 p.19]
- Central to the accommodation of diversity in our schools and all other education institutions, is a flexible curriculum and assessment policy that is accessible to all learners, irrespective of the nature of their learning needs and whether they are in 'special' schools or in 'ordinary' schools. [Education White Paper 6 p. 31 par. 2.2.6.1]
- Participation in special and full-service schools will be expanded by promoting the opportunity for specific life skills training and programme-to-work linkages. [Education White Paper 6 p. 32 par. 2.2.6.3]

In the light of what has been said, these guidelines for developing inclusive learning programmes, provides guidance to teachers, administrators and other personnel on how to deal with diversity in the classrooms and schools of our country. The guidelines are divided into six sections. Section 1 deals the flexible features of the National Curriculum Statement (NCS) and barriers to learning. Section two discusses Differentiation of learning programmes, work schedules and lesson plans. Section 3 provides guidance on how to go about adapting lesson plans within each of the Learning Areas of the NCS. Section 4 deals extensively with teaching methodologies to accommodate diverse learner needs. Section 5 outlines inclusive strategies for learning, teaching and assessment. Section 6 provides information on learning styles and multiple intelligences.

SECTION ONE

1.1 The National Curriculum Statement (NCS)

The National Curriculum Statement adopts an inclusive approach by specifying minimum requirements for all learners. The special educational, social, emotional and physical needs of learners will be addressed in the design and development of appropriate learning programmes (DOE, 2002: Overview of National Curriculum Statement, p10.)

Differentiation in the NCS should not be viewed as creating a new or alternative curriculum to the NCS. It is intended to supplement the Teacher's Guides for the Development of Learning Programmes for the Foundation Phase and those for the different Learning Areas (Intermediate Phase and Senior Phase) of the General Education and Training Band. The purpose of this guide with the guidelines that follow is to provide guidance to teachers on how they could adapt the National Curriculum Statement so all learners who experience barriers to learning can access the curriculum. Learning programmes, work schedules and lesson plans can be adapted to cater for the individual needs of learners.

Curriculum differentiation refers to modifications that relate specifically to instruction or content of a curriculum. Curriculum differentiation deals with adaptation, modification and any adjustment to: (i) learning, teaching and assessment environment, (ii) learning, teaching and assessment techniques, (iii) learning, teaching and assessment support material that enhances a learner's performance or allows at least partial participation in a learning activity (iv) structure and number of learning programmes and (v) assessment. The NCS has several components that are flexible enough to allow for differentiation. Examples of these flexible features include:

- “The outcomes and assessment standards emphasise participatory, learner-centred and activity-based education. They leave considerable room for creativity and innovation on the part of teachers in interpreting what and how to teach.” (DOE, 2002: Overview of National Curriculum Statement, p14.)
- Learning outcomes do not prescribe content or method. Therefore, content and methodology could be appropriate for a learner's needs. (DOE, 2002: Overview of National Curriculum Statement, p14.)
- Activities can be flexible. (DOE, 2003: Teacher's Guide for the development of Learning Programmes, p.10)

- The context can be made relevant to the learners' needs. (DOE, 2003: Teacher's Guide for the development of learning Programmes, p.10)
- More time can be provided for assessment and execution of a task. (DOE, 2003: Teacher's Guide for the development of Learning Programmes, p.11)
- Assessment strategies are flexible. (DOE, 2003: Teacher's Guide for the development of Learning Programmes, p.1)
- The learning programme can be structured to meet the needs of the specific learners. (DOE, 2003: Teacher's Guide for the development of Learning Programmes, p.2)
- Learners can communicate using SA sign language, Braille, assistive devices or any other communication method. (DOE, 2003: Teacher's Guide for the development of Learning Programmes, p1)
- Expectations can be adapted to the abilities of the learner within the framework of high expectations. (DOE, 2002: Overview of National Curriculum Statement, p12.)
- The curriculum emphasizes the principles of social justice, healthy environment, human rights and inclusivity. (DOE, 2003: Teacher's Guide for the development of Learning Programmes, p.5)
- Teachers are encouraged to consider any particular barriers to learning and/or assessment that exist in different Learning Areas and make provision for these when developing learning programmes. (DOE, 2003: Teacher's Guide for the development of Learning Programmes, p.7)
- assessment standards can be broken into finer components. (DOE, 2003: Teacher's Guide for the development of Learning Programmes, p.1)
- A lesson plan time allocation can range from a single activity up to a term's teaching or more time if necessary, depending on the needs of the learner. (DOE, 2003: Teacher's Guide for the development of Learning Programmes, p.1)
- Time allocation and weightings regarding learning outcomes and learning programmes should vary according to the learner's needs. (DOE, 2003: Teacher's Guide for the development of Learning Programmes, p.6)
- The number and nature of learning programmes at a special school, special school as resource centre or full service school can vary depending on the availability of staff, resources and the needs of learners.
- Flexibility in the selection of appropriate assessment standards according to the individual needs of a learner is possible on the recommendation of the assessment team in the case of a learner not capable of achieving a GETC.
- Work Schedules are not limited to a grade/year. Differently gifted learners may require acceleration or slowing down of the process.

The scale and scope [extent] of curriculum differentiation will only be determined after a thorough assessment of individual learners. Learning programmes, work schedules and lesson plans have to be designed on the basis of the needs and strengths (profile) of the majority of learners at a school or in a phase or grade. Lesson plans have to provide differentiated learning, teaching and assessment activities to ensure effective multi-level teaching. However, differentiation of learning, teaching and assessment activities will be required at lesson plan level for learners in a class who need **specific additional support** because of individualised barriers to learning. Those involved in this process of differentiation must include the teachers, parents, school based and district based support teams (where they exist). Other relevant professionals from the community can also be consulted.

1.2 An introduction to barriers to learning and development

All barriers to learning and development should be addressed in our classrooms and schools. Amongst the more frequent causes of barriers are:

- Disability as a barrier
- Language and Communication
- Lack of Parental Recognition and Involvement
- Socio-economic Barriers
- Attitudes
- Inadequate opportunity for programme-to-work linkages (White Paper 6, p.21 and 32 par. 2.2.6.3)

1.2.1 Disability as a barrier

Understanding disability as a barrier to learning and development

Most understandings of disability relate to individual deficit. Therefore, disability has always been regarded as a barrier to learning. These barriers include:

- Visual barriers
- Auditory barriers
- Oral barriers
- Cognitive barriers
- Physical barriers
- Medical barriers
- Psychological barriers

Policy implications and guidelines for addressing disability as a barrier

Learners who experience barriers to learning as a result of disability should be welcomed in ordinary school environments provided that the necessary support is in place for learners to achieve their full potential. Teams that include parents, teachers and other relevant professionals should establish the nature and extent of support needed by the learner. Below are a few examples of how the system could be modified or changed to meet different kinds of support that individual learners may require:

- Modified access to buildings e.g. ramps, adapted toilets and speaker systems in where applicable.
- Brailled signage on doorframes, passages and outbuildings.
- Enlarged print.
- Appropriate assistive devices e.g. Brailers, hearing aids, tape recorders, splints, adapted computers, wheelchairs, walkers, modified tricycles and standing frames.
- Therapeutic intervention.
- Learner based and learner paced teaching.

1.2.2 Language and communication

What are the common barriers associated with language and communication?

There are normally three main barriers related to language. Firstly, learners are often forced to communicate and learn in a language which they do not usually use at home and are not competent to learn effectively.

Secondly, learners who use South African Sign Language as a language for teaching and learning and as a (language) subject did not have access to the language.

Thirdly, learners experience difficulties with communication. Learners who are non-speaking due to the severity of their disability experience enormous barriers to learning and development. These barriers arise from the general unavailability of augmentative and alternative communication (AAC) strategies to enable them to engage in the learning process, and more often than not find themselves totally excluded from learning and

development experiences. AAC systems could consist of alternative communications systems, supplements to vocal communication and communication through facilitators.

Policy implications and guidelines to address language and communication barriers

- All learners are to learn their home language and at least one additional official language which include South African Sign Language. Braille as a code can be used as a medium of teaching and learning.
- When learners enter a school where the language of learning and teaching is not their home language, the teachers of all the learning areas/programmes and the school should provide support and supplementary learning in the language of learning and teaching until such time that learners are able to learn effectively through the medium of that particular language. It is the responsibility of each individual teacher to ensure that the language of learning and teaching does not become a barrier to learning in such instances. Ideally, parents should be encouraged to participate in interventions regarding language.
- Learners should receive extra support in the language ('subject') which is also the language of learning and teaching. The learner should work towards and be assessed against the assessment standards of the appropriate language level (Home Language, First Additional Language or Second Additional Language).

1.2.3 Lack of parental recognition and involvement

Barriers and difficulties which arise as a result of a lack of parental recognition and involvement

- Parents whose children do not utilise oral communication experience communication barriers with their children.
- Difficulties around parental support of learners may arise due to a range of situations e.g. a parent who cannot read Braille would not be able to support a grade one learner with his or her Braille homework.
- Parents are not always adequately informed of their children's problems or progress, and therefore are often deprived of the opportunity to participate in their children's development.

- Parents who are unable to understand the emotional and/or behavioural problems of their children may aggravate their barriers
- Non-involvement and non-recognition of parents by the system creates a lack of respect for parents as, informed role players in the assessment and future development of their children.
- A lack of communication and support around HIV/Aids infected or affected families creates barriers for learners from such families.
- Some parents abdicate all responsibility for all their children.

Policy implications and guidelines for addressing lack of parental recognition and involvement

- At school level, partnerships should be established with parents in order to equip them with skills and knowledge to participate effectively in their children's learning and school life.
- Parents should also be fully involved and informed regarding the identification, screening and assessment and placement of their children.
- Parents should be encouraged to take an active interest in the teaching, learning and assessment of their children.
- In order to facilitate early intervention for children with disabilities parents may consult community based clinics and/or other professional practitioners including teachers to conduct an initial assessment and to plan a suitable course of action for the learner.
- Schools which use South African Sign Language are encouraged to run accredited SA Sign Language courses for parents and teachers.
- Braille courses should be run to enable parents to communicate with their children and assist them with homework, reading and writing in Braille.
- General newsletters can assist in keeping parents informed of developments and programmes at the school. This is particularly important for boarding schools where distance separates parents from the school.
- Schools can run information sessions and workshops to enable parents to better understand their children and their emotional and behavioural problems. Staff from district based support teams, including psychologists and social workers, could assist at such workshops.
- Where appropriate, school-based support teams should be strengthened with expertise from the local community, district-support teams and higher education.
- It is essential that schools maintain open channels of communication with families infected and/or affected by HIV/Aids, and render support to parents and

learners wherever possible. This could be facilitated by openly displaying a clear HIV/Aids policy for the school. Shared HIV and Aids status could also help destigmatise the disease

1.2.4 Socio-economic barriers

Barriers created as a result of socio-economic factors

- Poor reading and print background (learners have not had pre-school exposure to literacy and print in general). Parents of such learners have often had limited education opportunities.
- Lack of exposure to numerical concepts.
- Sensory deprivation, resulting from a lack of opportunities during early childhood to explore the environment and wider world.
- Poor oral language development as a result of a lack of communication, interaction and learning opportunities.
- Poor self-image.
- Latch key children often experience social isolation and developmental deprivation.
- Impact of alcoholism and violence.
- Dysfunctional and anti-social behaviour patterns e.g. minor stealing and lying.
- Depression and hopelessness in both adults and learners.
- Substance abuse by learners, most commonly dagga and thinners.
- Teenage pregnancy.
- Learner headed households and poor homes require additional responsibilities from learners.
- Mobility of families creates lack of continuity in learning as a result of school hopping.
- Learners move from nuclear family to extended family.
- Late enrolment at school.
- Learners with offending behaviour including theft, housebreaking, assault and sexual misconduct.

How do we overcome the socio-economic barriers?

This is not a welfarist approach to poverty but rather a serious concern about the pedagogical implications of poverty.

- Teachers need to be sympathetic towards learners by creating a welcoming and supporting environment.
- Experiences that involve stimulation, enrichment and play must be created to compensate for the previous deprivation regarding reading, mathematics, spatial development and sensory experiences. These could often be enrichment programmes that involve first hand experiences (actual experience), play with concrete objects and reading to learners so they understand that print is meaningful.
- At social level, an environment should be created that is comforting, that listens to the voice of learners, that is able to detect distress and depression. Appropriate referral to professionals should be made for formal assessment of depression.
- The school needs to reach out to poor communities, and should be a secure haven for learners.
- School nutrition programmes should act as incentives for poor and hungry learners to attend school.
- Schools should establish meaningful relationships with the courts, police, relevant NGO's [e.g. child welfare and SANCA] and the Department of Social Services. Joint procedures to discourage any form of abuse should be developed. When learners become the perpetrators of abuse and crime the above contacts are essential.
- Where district based support teams have been established they should be called upon to assist in matters of abuse and other learner related issues. Where such support teams do not exist, institution level support teams must be established.
- Use of accelerated academic bridging programmes and programmes-to-work linkages are vital for learners who enter the system late or who have experienced severe interruption in their schooling as a result of socio-economic factors.
- Baseline assessment should be used to establish current academic level and facilitate placement in the appropriate grade and/or set of learning programmes.
- Fast tracking to acquire basic literacy, numeracy and life skills through accelerated programs with a view to assisting the learner to catch up with his /her age cohort.

1.2.5 Negative attitudes

Understanding negative attitudes as barriers to learning

Negative and harmful attitudes towards *difference* in our society remain critical barriers to learning and development. Discriminatory attitudes resulting from prejudice against people on the basis of race, class, gender, culture, disability, religion, ability, sexual preference and other characteristics manifest themselves as barriers to learning when such attitudes are directed towards learners in the education system.

How do we overcome negative attitudes towards learners who experience barriers and their inclusion in ordinary education?

- Labelling of learners should be discouraged since it makes it difficult for learners to grow beyond the limitations of the label. It is important for teachers, parents and peer groups to adopt positive attitudes towards learners who experience barriers. Even learners who were once regarded as ineducable benefit from appropriate intervention.
- Learners should not be categorized since they often are placed in a particular learning environment merely because of the category and not because of the particular learning needs of the individual learner. In many cases, the categorisation was convenient for the system and not in the best interests of the learner.
- Do not discriminate against learners who are HIV positive or who have AIDS since a lack of knowledge about this issue has led to negative assumptions associated with the disease. All learners and staff should be treated equally. When it comes to blood all cases are treated as universally HIV positive.
- All learners should be viewed in a positive light and there should be a determined effort to establish what their real strengths are for the purpose of further development.
- Do not create conditions for fear of learners with disabilities to develop, since negative attitudes often result from beliefs that are illogical and encourage discrimination.
- Schools must be welcoming environments for all learners, since any negative attitude by adults in a school environment influences learners.
- Schools should embark on positive awareness campaigns about difference and the value of celebrating diversity based on new South African policy and principles.
- Acknowledge and respect differences in learners, whether due to age, gender, ethnicity, language, class, disability or HIV status, sexual preference, etc.

1.2.6 Inadequate Programme-to-Work Linkages

(White Paper 6, p. 21 and p.32 par. 2.2.6.3)

How do we understand the barriers created by inadequate programme-to-work linkages?

- Learners with cognitive barriers who are unlikely to achieve a full GETC as well as learners who, due to age constraints and social barriers, need specific programme-to-work linkages.
- Appropriate accreditation and certification for the level of skills achieved need recognition to facilitate life long learning.
- A lack of partnerships between education and industry which would facilitate job accessibility could be a stumbling block to learners.

How do we overcome the inadequate programme-to-work linkages?

- Weighting of learning areas and time allocation can be adjusted to allow for chosen learning areas or learning programmes to become the major tool or vehicle for learning, thus fulfilling the vision of Education White Paper 6 of providing more options for learners as ways to learn and to provide programme-to-work linkages.
 - Linkages across learning areas will allow for assessment standards from various learning areas and from different grades to be achieved within the skills learning programmes allowing for work related linkages.
 - Collaboration between teachers within and across a phase or grade would be essential in the planning of learning programmes for specific learners or groups of learners to ensure effective programme-to-work linkages.
 - At local school level partnerships with industry should be established to assess the educational requirements of future employers and to facilitate hands-on work experience for learners.
 - Schools may issue a certificate of competency that includes specific reference to Learning Programmes that reflect programme-to-work linkages to learners who do not achieve a GETC.
- Learners should not be expected to show competence in all the learning areas for the end of the GETC band at the same time, but should be allowed to show their competence in the different learning areas/programmes over a period of time in order to be eventually awarded a GETC or Grade 9 promotion.

PROPOSED RECOMMENDATIONS FOR CHANGES TO LEGISLATION

- The schools section within the Department of Education should establish partnerships with SAQA, Umalusi and other relevant stakeholders.
- Qualifications should be developed and assessed for appropriate accreditation leading to life long learning for those learners who cannot achieve the GETC.

SECTION 2

DIFFERENTIATION OF LEARNING PROGRAMMES, WORK SCHEDULES AND LESSON PLANS TO ACCOMMODATE ALL LEARNERS IN AN INCLUSIVE EDUCATION SYSTEM

2.1 Introduction

Presently learners in the GET-band who experience barriers to learning can attend ordinary schools, full service schools, special schools or special schools as resource centres. Some of these schools already have a range of human and physical resources which can be utilised to expand opportunities for learners who experience barriers to learning. These can include teachers with specialised competencies, adapted or modified classrooms, workshops, computer rooms etc. for addressing all barriers to learning and the teaching of work related skills where applicable. Programmes-to work linkages and other learning programmes should become the vehicles or tools through which learners demonstrate their performance as required by the Learning Areas Statements of the NCS Grade R – 9 (Schools) (2002).

Differentiation of existing learning programmes, work schedules and lesson plans as well as newly designed learning programmes, work schedules and lesson plans that provide life-skills training and programme-to-work linkages to meet the needs of learners must by no means compromise the standard of the curriculum as prescribed by the NCS Grade R-9 (Schools) (2002). An attempt is made here to provide principals, school management teams, institution level support teams, district based support teams and all teachers with guidelines that will assist them with differentiation, modification, adaptation, planning and management of the curriculum to address diversity.

In conceptualising the framework for differentiation of the curriculum, a wide range of factors that have direct impact on the learner, the school and its resources, the parents and the community were considered. The effects of these factors as well as strategies to address them are discussed briefly in this document.

Before the above mentioned issues are addressed it is imperative to emphasise that readers are familiar with the National Curriculum Statement (Overview) as well as Section 1 (a generic section) of the Teacher's Guides for the Development of Learning Programmes (Foundation Phase and all Learning Areas e.g. Languages, Mathematics for the Intermediate and Senior Phase, 2003).

2.2 Learner Needs

The developmental needs of learners should not prevent them from progressing with their age cohort as the value of peer interaction is essential for social development, self-esteem, etc. The 1998 policy on Assessment allows for learners to spend a maximum of one extra year per phase. An additional year over and above what the policy currently states may be granted by the head of education of the province. This would mean that learners experiencing barriers to learning may be older than their peers.

2.2.1 The learner profile of a school

In any school whether it be an ordinary school, a full service school, a special school or a special schools as a resource centre, there will be learners with diverse needs. Within the majority group there will be different needs which can be dealt with in a classroom at the lesson plan level through differentiated tasks/activities and alternative assessment.

Within the variety of learner needs there will be a minority or an individual learner or two that need more or different support than the others, whether it is in a ordinary school or class or any other type of school, centre or class. This minority group or individual learner may not be able to work towards the assessment standard(s) selected for the rest of the group. However, it is important that the learning opportunities for these learners be planned against assessment standards within the same learning outcome(s) and that their learning opportunities also show conceptual progression. In order to plan their learning more than differentiated tasks may be needed. Teachers may have to adapt the assessment standards (attainment targets) to suit their level of development within the same context and/or content and learning outcomes so that they can still be working within the same class or group. All learners must therefore experience their learning meaningfully and they must be working towards the same type of activity. The availability of the type of support plays a major role in accommodating these learners in an education system.

For the minority learners individual support plans must be used to outline how the specific needs of that particular learner must be addressed. Such individual support plans should include a learning pathway that will describe the details of how the work schedule or year plan and the specific lesson plans will be differentiated. Such specialised planning should be done in collaboration with the Institution Level Support

Team (ILST) based on appropriate available resources, skills and knowledge, values and attitudes.

Further guidelines on the planning of individual support plans will be discussed in the next section.

2.2.2 Influence of the learner profile of a special school, special school as resource centre or full service school

The needs of the majority of learners in a special school, special school as resource centre or full service school will be different to the needs of the majority of learners in an ordinary school. Therefore special schools, full service schools and special schools as resource centres need to take their learner profile into account when designing learning programmes, work schedules and lesson plans. The level and type of resources and activities in the full service schools, special schools and special schools as resource centres must be true to the profile of the majority of the learners in those schools. The availability of resources, whether human, physical or material is a further determining factor.

The learners who experience barriers because of intellectual disability will require a curriculum which straddles two or more grades or phases. This has implications for planning learning programmes, work schedules and lesson plans.

In the case where learners learn in a language which is not their home language it could create a barrier to learning. This may require intensive differentiation within the existing Language Learning Programmes or even the planning of new Language Learning Programmes to support the learners. This includes learners whose home language is South African Sign Language (SASL).

Some learners may need South African Sign Language (SASL) support, others may need tactile communication support, and yet others may need reinforced spoken language support as well as assistive devices.

It is important that teachers understand that the majority of learners who need SASL support have parents who are not proficient in SASL and therefore cannot give their children the required support at home. This also means that these learners have limited language acquisition prior to entering school. Optimal exposure to mature users of SASL

is essential for proficient language acquisition for learners for whom SASL will be the language of learning, teaching and assessment.

The structure of sign language is very different to that of spoken and written language. It is therefore not desirable to sign and speak simultaneously.

Learners who experience auditory, oral, visual and physical barriers to learning will require specialised and specific differentiation of existing learning programmes, work schedules and lesson plans in order to access the curriculum.

Learners for whom the language of learning and teaching is not their home language will require support in acquiring the language of learning and teaching. All learning programmes and Learning Area teachers should be language teachers because learners experiencing barriers need continuous focus on language acquisition.

Planning learning programmes, work schedules and lesson plans for multi-grade classes presents an exciting challenge to teachers teaching several grades in one classroom.

Home tasks are critical in the learning and development of a learner who experiences barriers to learning. Caution must be taken not to overload the learner with homework. Where more than one teacher teaches a particular class it is essential that a homework timetable be in place. The homework tasks should be clearly explained in the classroom, and written down by the learners. When learners encounter barriers to reading and/or writing, alternative methods of recording homework tasks should be utilised. Peer support for learners experiencing barriers to learning is of great value and can be enhanced through a “buddy” system.

2.3 Implications for differentiating learning programmes, work schedules and lesson plans at special schools, special schools as resource centres and/or full service schools

Learning, teaching and assessment strategies must be differentiated or adapted to meet the individual needs of all learners. Adequate and timeous planning and modification of existing phase long learning programmes, year long work schedules and lesson plans can ensure that all learners will learn effectively and achieve their full potential.

Designing down is one of the important principles of Outcomes Based Education and the National Curriculum Statement. In some learning areas Designing down involves breaking down the assessment standard in order to build it up in a logical progressive way. Simply put, designing down involves looking at an assessment standard and dividing this minimum expected set standard for the year end into smaller, achievable components which are spread across the duration of the year. In other learning areas the content must be identified and the learning outcomes that are process learning outcomes should be applied to the content. This allows time for each component to be achieved in a step by step way, thus working gradually towards achieving the assessment standard by the end of the year.

The assessment standards of all learning outcomes are the minimum requirements per grade to be demonstrated at the end of a year. For learners experiencing barriers to learning, the strategy of “designing down”, “breaking down” or “scaffolding” (these terms are interchangeable) of assessment standards into manageable units is highly recommended. This process should include the practical demonstration of skills, knowledge and values.

2.4 Differentiation and design of Learning Programmes

The differentiation of the design of learning programmes in special schools, special schools as resource centres and full service schools to suit the needs, strengths and interests of learners experiencing barriers to learning could influence:

- The straddling of Grades and Phases
- The number of learning programmes
- The weighting of learning programmes
- The duration of learning programmes
- The use of programmes-to-work linkages to facilitate access to the curriculum
- Measures for portability
- Decision-making criteria around progression and certification.

2.4.1 The straddling of Grades and Phases

The GETC band of education ranges from Grade R - 9. This band is divided into three phases: Foundation (Gr R – 3), Intermediate (Gr 4 – 6) and Senior Phase (Gr 7 – 9). Learners who experience one or more of a range of barriers to learning may not fit comfortably within a particular phase or grade. In such cases straddling must be implemented. Straddling is when a learner or group of learners at a specific grade or

level work towards attaining assessment standards from more than one grade within learning areas or learning programmes.

Learning programmes for such learners, which will be designed to fit the individual needs of a learner, may straddle both grades and phases e.g. Harry who experiences cognitive barriers to learning is extremely gifted at pottery and gardening and can achieve at Grade 7 level in assessment standards which relate directly to skills which are achieved within Technology and Arts and Culture and Natural Sciences and Economic and Management Sciences, while he achieves at Grade 4 level in Languages and at Grade 3 level in Mathematics. Learning programmes for learners such as Harry must therefore accommodate Harry's diverse needs, strengths and interests and will draw learning outcomes and assessment standards from a number of grades and phases across all the Learning Areas.

When the needs of the majority of learners in a special school, special school as resource centre or full service school require straddling of grades and phases it should be reflected in the learning programmes designed for such groups of learners. The recording and reporting of learner performance have to reflect this.

2.4.2 The number of learning programmes

The number of learning programmes within the Intermediate and Senior Phases at special schools, special schools as resource centres and full service schools could vary according to the needs, strengths and interests of the learners and available human and physical resources of the individual schools.

It is essential that the learning outcomes and assessment standards as stated in the eight Learning Areas be addressed by the various learning programmes at a school, irrespective of the final number of learning programmes offered.

Learners should be in a position to select a set of learning programmes from a variety of learning programmes depending on the resources. These learning programmes may be academically or practically based using specific programme-to-work linkages as tools to achieve the learning outcomes and assessment standards. The knowledge, skills and values learned in the practical components of learning programmes should be transferable to the cognitive component of the learning programme for the achievement of learning outcomes and assessment standards.

In special circumstances extended learning programmes could be implemented to address the needs of learners e.g. blind learners may have a learning programme which focuses on mobility and orientation or Reading Braille.

In the case where learners are given the option to select learning programmes from an available set of learning programmes the schools should ensure that all the learning outcomes (LOs) and assessment standards (ASs) are covered in the set.

2.4.3 The weighting of Learning Programmes

The weighting of learning programmes refers to the percentage of time allocated to a specific learning programme. The Mathematics and Languages Learning Areas would be distinct learning programmes and will form the basis from which all other learning will take place. Other learning programmes could also address some of the learning outcomes and assessment standards required in the Mathematics and Language Learning Areas, thus facilitating total integration of the learning process across the eight Learning Areas.

Purposes for weighting is to:

- Give learners optimal opportunity to show their competence in achieving the learning outcomes, and
- Provide groups of learners who need intervention of a temporary nature the opportunity to engage with certain aspects of the curriculum.

The weighting of learning programmes in ordinary schools will mainly be according to the time allocations in the Overview document of the NCS (Grades R-9) (Schools).

2.4.4 The duration of Learning Programmes

The duration of the learning programmes in ordinary schools is either 4 years in the Foundation Phase or 3 years in the Intermediate or Senior Phases. The duration of a learning programme in other types of schools or learning institutions can be longer or shorter based on the range of needs of the learners.

The duration of the learning programmes will be linked to the age of learners on admission and to the duration of the learners' stay within the GETC band.

Siphokazi enters school Z at 14 years of age. She has cognitive and language barriers resulting in a 4 year academic backlog in comparison with her age cohort. When exposed to Panel beating it is discovered that she is naturally gifted and can immediately be integrated into the grade 7 Panel beating programme whereas she needs further support at Grade 4 level in Languages and Mathematics. Her learning programmes thus straddle 2 Phases.

The duration and complexity of a learning programme should depend on the level of support required by the learner and the number of years that the learner may remain in the GET band, keeping in mind that the average exit age from the GETC is 15 and learners may take one year longer to complete each of the three phases. Should a learner require special dispensation beyond the age of 18 the school should apply for such permission from the head of education of the province. Criteria for the HOD to approve the decision see under progression below:

2.4.5 The use of programmes-to-work linkages to facilitate access to the curriculum

The variety of learning programmes that is presented for learners must ensure that all learning outcomes and assessment standards of the eight Learning Areas are effectively and comprehensively pursued. The learning outcomes and assessment standards achieved within the range of learning programmes must be recorded against the appropriate Learning Areas and according to the grades in which they were achieved. For example the performance of learning outcomes shown in practical learning programmes such as manicure, woodwork and panel beating should be recorded against the appropriate Learning Areas e.g. Life Skills, Technology, Economic and Management Sciences.

2.4.6 Measures for portability

Learners have the freedom to move between different types of schools. Learning outcomes and assessment standards acquired in one type of school are transferable to another type of school (e.g. from a special school, special school as resource centre or full service school to an ordinary school or from a special school as a resource centre to a full service school) and will contribute to the eventual achievement of the GETC. This type of movement is called portability of learning and achievements. The District Based Support Team (DBST) could be involved in the decision process.

Report back in Learning Areas according to the grade against which the performance is shown is important should a learner need to return to a ordinary school. When returning to a ordinary school or ordinary class such learners can then be accommodated by individualised lesson plans, work schedules and learning programmes.

2.4.7 Decision-making criteria around progression and certification.

The minimum requirements for achieving the General Education and Training Certificate (GETC) as spelt out in the NCS may not be compromised. However, within this flexible learner-based and learner-paced approach to the curriculum all learners will be enabled to achieve their full potential irrespective of whether the end result will be a formal GETC or not. Learners with intellectual disability may not necessarily achieve a GETC or Grade 9.

The contexts, content and selection of learning outcomes and assessment standards for a learning programme should be decided upon for the duration of that Learning Programme. In planning a 4 year long learning programme at a specialised learning site e.g. for Mathematics, the learning outcomes and assessment standards drawn from a range of Learning Areas should be used to guide the activities of this Mathematics Learning Programme. The assessment standards chosen should reflect progression and integration within and across grades/years.

2.4.8 Conclusion of learning programme differentiation and design

The interlinking at the end of one year and the beginning of the next in such a 4 year long learning programme must be ensured. In other words the years cannot stand in isolation, continuity in the learning must be ensured.

Work schedules for each of the years of this programme are derived from e.g. the 4 year long Learning Programme for Mathematics. Detailed lesson plans which may vary from 1 lesson to several weeks or even a terms' lessons are derived from the work schedules. The number of learning outcomes and assessment standards to be addressed in a lesson plan will vary according to the duration of the lesson plan and the intensity of material handled.

For further detail refer to the Teacher's Guides for the development of Learning Programmes (2003).

In summary all schools will offer the distinct Learning Programmes of Mathematics and Language and a choice of other learning programmes based on the specific needs, strengths and interests of their learners and the physical and human resources of the school.

2.5 Differentiation and planning of Work Schedules

Work schedules (for each of the years of the duration of the learning programme) are derived from learning programmes. To compile a work schedule more aspects and more detail are added to the aspects derived from the learning programme. Work schedules need not be applied rigidly to a calendar year. If learners do not achieve all the learning outcomes and assessment standards of a work schedule within a calendar year, the lesson plans of that work schedule should be completed the following year before starting the new work schedule e.g. the teaching of prepositions forms part of the lesson plan for the last week of November. However, due to the extra time required the following grade will first cover this lesson plan the next year.

When working with learners who have severe cognitive barriers it may not be possible to complete the assessment standards of a Grade within one or two calendar years. This does not however alter the methodology of designing down and progression. In some instances it may be necessary to spend more than a year on work which has been designed down from the assessment standards of Grade R. All assessment standards may not be achievable and so it would be necessary to select appropriate assessment standards to design a meaningful learning programme, taking into account the learners' needs, strengths and interests within the principle of high expectations.

Teachers must take the level of the learners at the beginning of a year and what the assessment standards selected expect as a minimum at the end of a year into consideration when they plan. Teachers must therefore “design down” (refer to designing down example of Mathematics) to ensure progression during a year so that the learners can master assessment standards by the end of the year.

A learning programme consists of a number of work schedules which can straddle the phases or grades e.g.

- Foundation, Intermediate and Senior Phases
- Foundation and Intermediate
- Intermediate and Senior Phases
- Multi-grade and multi-level classes

Planning for adapted/alternative strategies of assessment should be included in the work schedule. Refer to section 5 with detailed explanation and examples.

The availability and appropriateness of learning and teaching support material would have a major impact on the learning, teaching and assessment of learners experiencing barriers to learning.

An Assessment Standard is the minimum to be obtained by the end of a year.

Example of “Designing Down” or “Breaking Down” some Mathematics Assessment Standards

January

December

Grade 2	1 st Context	2 nd Context	3 rd context	4	5	6	7	8	9	10	11	12	13	14
LO 1: NUMBERS, OPERATIONS AND RELATIONSHIPS														
Counts to at least 100 everyday objects reliably.		Count up to at least 34				Count up to at least 60			Count up to at least 80			Count up to at least 100		
Counts forwards and backwards in:														
ones from any number between 0 and 200;		count forward and backward in ones between 0 - 100			count forward and backward in ones between 0 - 130			count forward and backward in ones between 0 - 170			count forward and backward in ones between 0 - 200			
tens from any multiple of 10 between 0 and 200;		count forward and backward in tens between 0 - 100			count forward and backward in tens between 0 - 130			count forward and backward in tens between 0 - 170			count forward and backward in tens between 0 - 200			
fives from any multiple of 5 between 0 and 200;		Count forwards and backward in fives 0-100				Count forwards and backward in fives 0-140			Count forwards and backward in fives 0-180			Count forwards and backward in fives 0-200		

2.6 Differentiation and planning of Lesson Plans

Lesson plans are derived from work schedules. Activities must be differentiated and sometimes also adapted to accommodate the varied levels of development of the learners' skills and knowledge in relation to the selected outcomes and assessment standards.

Differentiated teaching and assessment (Multi-level) is necessary to meet the diverse needs of all the learners in the class. The example of a "Curriculum Ladder" (later in this section) indicating how to differentiate or adapt a task to meet the needs of individual learners provides greater clarification as how to modify the work the teacher wants the learner to experience according to the individual strengths, needs, interests and concentration span of the individual learner.

Time allocation to tasks and activities should be flexible and adapted to the needs of the individual learner.

Baseline assessment tasks must be set at the beginning of a year in order to establish the nature and extent of barriers to learning. This will enable teachers also to establish the current level of performance of all learners. Learners with barriers to learning may experience a loss of learning over the extended period of the December holiday.

Initial as well as ongoing diagnostic assessment should be done by the teacher to determine how each lesson can be differentiated and adapted if needed to accommodate all learners in the class, specifically those who experience barriers to learning. This will also inform all support planning and developmental assessment.

Questions that can help us focus on assessing learners' performance and characteristics could include:

Progress with the curriculum

- are learners learning what they were taught?
- are they at the right entry point to 'grasp' the content worked on in the classroom?
- are they practicing and performing as expected?
- are they applying the facts, concepts and/or skills being learned?

Interests

- are learners engaged in the lessons and activities?
- are they showing interest in a new topic or area of study?
- are they sharing their interests with others?

Characteristics

- what are their preferred learning styles (e.g., whole class teaching or pair work)?
- what are their responses to the materials?
- what are their responses to the difficulty level of instruction?
- what are their responses to the pacing of instruction?
- what are their responses to the environment?

(Changing Teaching Practices: using curriculum differentiation to respond to students' diversity, UNESCO, 2004)

2.7 Components of the curriculum differentiation process

The following questions must be asked by the teacher when planning to differentiate a lesson plan or activity to accommodate all learners:

First question:

How can I differentiate the **content and/or context** and scaffold the **assessment standards** so that it will be relevant to the life experience and level of competence of individual learners?

(Reflect on learning outcomes and assessment standards in which the skills, knowledge and values that need to be assessed are embedded. Remember that some learners coming from different backgrounds may respond differently to a specific text. While some of them may not have fully mastered English as the language of teaching and learning, they may still understand the key concepts. Also, the text may not be of interest to them and this may affect their behaviour during the activity. Finally, certain learners have the skill of communicating without necessarily having mastered the language)

Second question:

What differentiations and/or adaptations need to be made to the **learning and teaching support material** (LTSM) and how can the method of presentation be differentiated and/or adapted?

Third question:

What needs to be taken into consideration to **assess** a learner's performance?
(Consider the purpose, the context, strategies for collecting, evaluating, recording, reporting and using the evidence to design a support programme. Allow for a range of ways in which the learner can perform, respond, explain or demonstrate achievement of the outcome)

2.8 Some ideas for applying any of the components above

Differentiating the content

- Remember that some learners coming from different backgrounds may respond differently to a specific text.
- Even if some of them have not fully mastered English as the language of learning and teaching, they may still understand the key concepts.
- The text may not be of interest to them and this may affect their behaviour during the activity.
- Certain learners can have the skill of communicating without necessarily having mastered the language.
- The level of abstract content can be reduced
- Setting a substitute task of similar scope and demand
- Replacing one task with a task of a different kind
- A more challenging or complex text can be selected for learners who need expanded opportunities
- Shorten the tasks
- Select texts and books that are culture sensitive
- Provide reading material that will interest learners and that is not too linguistically difficult to read.
- Using another planned task to assess more outcomes or aspects of outcomes than originally intended

Adapting the materials or differentiating method of presentation

- Allowing the learner to undertake the task at a later date
- Use study guides
- Graphic organisers and guided writing
- Demonstrate, model and prompt the expected response
- When doing reading, choose texts that have illustrations and that are easier to reinforce a concept, but let them attempt to demonstrate the same outcomes
- Use a variety of types of tasks and texts that link and expand concepts
- Reteach the content if necessary
- Use supplementary materials
- Provide for wordlists
- Create a more positive learning environment in which learners feel valued and encouraged to take risks
- Create a classroom atmosphere in which the learners' backgrounds and cultures are valued and recognized
- Adapt the teaching methodology to the needs of specific learners.
- Read material orally
- Highlight essentials in a listening or speaking text
- Provide individual assistance
- Considering the format in which the task is presented, e.g. the complexity of graphs, diagrams, tables, illustrations, cartoons, etc. A range of strategies can be followed to make these accessible to learners who experience barriers to learning of whatever nature, such as:
 - Picture or diagram simplified or shown differently without compromising complexity of question
 - Picture or diagram replaced by written description
 - Picture or diagram supplemented by written explanation
 - Picture or diagram replaced with a real item or model
 - Unnecessary picture or diagram removed
 - Amount of information reduced
 - Measurements altered
 - Inherently visual material replaced with equivalent non-visual material

Allowing for a variety of assessment strategies to evaluate performance

- Design activities which would allow space for different learning styles or intelligences
- Encourage learners to read for meaning as well as for personal satisfaction.

- Provide opportunities for shared learning to encourage speaking and listening. Allow for knowledge to be constructed through group discussions.
- Pace or scaffold the activities
- Allowing the learner extra time to complete the task
- Use technology, aids or other special arrangements to undertake assessment tasks
- Use an estimate based on other assessments or work completed by the learner (in circumstances where the above provisions are not feasible or reasonable)
- Keep observation portfolios for certain learners who need additional support
- Record the material
- Read tests or assignments orally
- Give multiple-choice options
- Provide tasks which require short answers
- Test key concepts only
- Oral reports versus written reports
- Focus on the positive aspects or talents of the learners. Get to know which Intelligence is their strongest, and work on them. (Multiple Intelligences)

(See also Inclusion Guidelines for Assessment, 2002)

2.9 The Curriculum Ladder as a strategy for differentiation or adaptation

The example below of a “Curriculum Ladder” indicating how to differentiate or adapt a task to meet the needs of individual learners supplies greater clarification as how to adapt the work the teacher wants the learner to experience according to the individual strengths, needs, interests and concentration span of the individual learner.

Time allocation to tasks and activities should be flexible and adapted to the needs of the individual learner.

Curriculum Differentiation Ladder

	Ask.....	Example
	1. Can the learner do the same as peers?	Spelling
If not can....	2. The learner do the same activity but with adapted expectations?	Fewer words
If not can....	3. The learner do the same activity but with adapted expectations and materials?	Matching the words to pictures
If not can....	4. The learner do a similar activity but with	Words that are functional and

	adapted expectations?	in the learner's daily environment
If not can....	5. The learner do a similar activity but with adapted materials?	Computer Spelling program?
If not can....	6. The learner does a different, parallel activity?	Learn a computer-typing program, learn word processing with a spell checker, write or put pictures in a journal.
If not can....	7. The learner does a practical and functional activity with assistance?	Play/work with a word puzzle, game, flash cards etc. assisted by a buddy or class aid.

This ladder suggests that the amount of work, the level of difficulty of the work, the level of support needed and the participation of the learner in the task must be adjusted to meet the needs of individual learners.

Participatory and collaborative learning allows for learners experiencing barriers to learning to contribute to tasks and activities at a level appropriate to their level of development. Highly gifted learners will contribute differently according to their strengths and interests. Joint planning, discussion and reflection will stretch other learners and add value to the learning of all participants.

A range of tasks and activities should be designed or simplified to meet the range of needs within a particular class. These can include worksheets, large print and constructions. Adaptations usually require little extra equipment but plenty of creative thinking on the part of the teacher.

The principle of high expectation for learners with barriers to learning should always be at the forefront of the teachers mind in order to empower learners and assist them to reach their full potential. Challenges should be carefully graded so as not to discourage learners.

In ordinary classes it would be important for the teacher not to expend a disproportionate amount of time meeting the needs of learners to barriers to learning. Use of the buddy system and peer learning and teaching can help prevent this from occurring.

Ongoing record keeping and note taking by the teacher is not only a valuable part of CASS but assists the teacher to continually review the progress of learners. This enables the teacher to make appropriate individual adjustment of the lesson plans for the learners for the coming week.

Teachers will find it helpful to constantly review their teaching methods. Note taking on successes and failures will enable the teacher to develop effective teaching methodologies.

It is essential that teachers when doing their planning should not forget the gifted learner. The curriculum ladder could be extended upwards to plan more challenging tasks within the same learning outcomes and assessment standards.

2.10 Specific tips for interaction with learners who experience language barriers:

- Parental involvement is critical to establish the background behind the learner's language barrier. Details such as home language, age at which additional languages were introduced, learner's exposure to these languages including television and radio, etc.
- Share ideas with parents regarding language stimulation. Emphasis should be placed on the importance of home language acquisition as a basis for the further development of additional languages.
- **Place** the learner in a position that will minimise distractions.
- Assumptions should not be made about the level of understanding of a learner with language barriers. The teacher through discussion and questioning should regularly check this.
- Facial expressions (don't overdo it), actions, pictures and objects can be used to ensure understanding of vocabulary and concepts.
- **Do not discourage translations** by other learners the learner should be allowed to utilise any resource necessary to ensure that comprehension takes place. This ultimately leads to language development and can be an important part of peer learning.
- Introduce new **vocabulary** at the beginning of a new context, keeping in mind that all curricular activities are language based. Pay special attention to abstract concepts, e.g. measure, higher, bigger than, summarise, etc.
- When explaining concepts or giving instruction, **shorter sentences** with pauses between sentences will facilitate understanding.
- **When repeating a concept it is helpful to rephrase what is being said.**
- Use of the **present tense** will simplify sentences.

- Learner with language barriers often experience more difficulty with **adjectives, pronouns and prepositions. It is advisable to start with** the concrete (demonstrating using objects and actions), moving to semi-abstract (pictures) and then to abstract (writing).
- Gently provide learners with the **correct language when errors are made**, for example:
Learner: 'I eated meat at home'
Teacher: 'Yes, you ate meat at home'
This strategy should be used with care and caution and should not lead earners to feel failure or that the content of what they are saying is not important to the teacher.
- Gently provide **expansion** of learners' language:
Learner: 'My Mommy is wearing a dress.'
Teacher: Yes. Mommy is wearing a pretty dress today
- **Reading**: Provide the class with a pre-reading activity to introduce new vocabulary and to place the story in context e.g. use a poster and flash cards.
- Use **paired reading** to encourage fluency in reading.
- Focus on **what** the learner is telling you (the message) and **not always** on **how** the language is used (or the pronunciation).
- Provide learners with plenty of **opportunity to speak** the language in which the barrier is being experienced.
- While it is essential to encourage learners with barriers to learning to communicate and speak in additional languages it is also very important that these learners be allowed to communicate in the school environment in their home language. This is especially important for younger learners.
- **The value of Language games** in the classroom should not be underestimated. Such games enable learners to absorb language in a stress free environment. Refer to the accompanying Resource Book – Language Games in the Classroom, for practical language activities. ISBN number _____

2.11 Specific tips for interaction with the learner who experiences memory and concentration barriers

- Reduce distractions – keep the learner's desk clear.
- Keep learners who are easily distracted busy with as many positive activities as possible e.g. choose them to hand out papers – this will help keep them out of trouble!
- Demonstrate to learners what is required of them rather than simply telling them what to do.

- Making eye contact and lowering and getting down to the learner's level will also calm the learner.

- Complete one activity at a time. Be sure that it is clear to learners when one activity has ended and a new activity is about to begin.

Break the task down into small steps. Allow the learner to move from what is familiar to the unfamiliar. Assign activities which the learner can do before moving on to more difficult activities. Go back to lower levels of work if the learner encounters problems. E.g. In learning how to draw a circle, the learner can first handle round discs of different sizes or circles cut out from cardboard or paper describing them while they feel their shape, colour circles, then draw around templates, then join dots to complete a circle, then copy shapes before finally being able to draw a circle on instruction.

- Praise and encouragement are of vital importance, even when only slow progress is being made.
- Allow the learner extra practice at doing the activity, this ensures that the learner has mastered the skill and increases confidence. (This is sometimes called 'over learning') The teacher must, at the same time, be careful not to hold the learner back at the same level for too long. Some concepts may never be mastered and the learner must be given opportunity to move on to the next level or activity.

Some learners will need to practice the concept with a range of materials. E.g. Writing can be practised in the sand, with finger paint, with crayons as well as with pencil and pen. This is called generalising the learner's learning.

- Revision of each day's work at home is very important. Parents should be actively involved in this.
- In order to keep such learners constructively busy, and to prevent them from disturbing and distracting other learners during individual activities, the teacher should have a number of activities planned for learners with short concentration spans.
- Learning can be assisted by the use of a tape recorder and earphones. The teacher or parents could record reading and learning texts which learners could listen to while following in their own books. This would be particularly helpful before tests. This method can also be successfully used with phonics and spelling skills.
- It is essential that all staff at a school who inter-act with learners with short concentration spans should agree on a common approach to responding to an individual learner's behaviour. This is particularly important in the use of rewards and punishments. Planned and consistent responses are the keys to success. E.g. the school bus driver and the rugby coach should follow the same strategies as the class teacher. This will require team planning.

- These learners need a lot of structure and routine built into their activities and daily programme. They are easily upset by sudden changes to the programme. Routine and structure allow the learners to feel secure, and builds the learners' confidence, allowing them to try out new learning experiences in the classroom.

2.12 Conclusion

The National Curriculum Statement is the curriculum for ALL learners. The assessment standards of all learning outcomes are the minimum requirements per grade to be demonstrated at the end of the year. For learners experiencing barriers to learning, the strategy of “designing down”, “breaking down” or “scaffolding” the assessment standards into manageable steps, allowing enough time for learners experiencing barriers to learning to demonstrate their attainment of the skills, knowledge, values and attitudes practically, is essential and recommended. All learners may not attain a GETC but they will all achieve to their full potential which will be acknowledged through certification.

Teachers are encouraged to use the principle of ‘designing down’, ‘breaking down’ or ‘scaffolding’ in planning or adapting learning programmes, work schedules and lesson plans. In order to meet the needs of individual learners the following process is essential:

- First determine the learners' operational level in the Learning Area.
- Design Baseline Assessments using the assessment standards of the previous grade.
- Administer the Baseline Assessments
- Analyse the responses of the Baseline Assessments
- Use the results of the Baseline Assessments to plan or adapt the learning programmes, work schedules and lesson plans.
- Ensure that the necessary adapted learning and teaching support material and assistive devices are available.
- Support learners through clear accessible, attainable tasks or activities, allowing enough time and multiple opportunities for the learner to master the task or activity and to experience success thus building their confidence.

Ordinary Schools	Special Schools, Special Schools as Resource Centres and Full Service Schools
<p>The Grade structure of the GET band</p> <p>The GET band of education ranges from Grade R - 9. This band is divided into three phases: Foundation (Gr R – 3), Intermediate (Gr 4 – 6) and Senior Phase (Gr 7 – 9).</p>	<p>The Grade structure of the GET band</p> <p>Currently many special schools are not organised strictly according to grades, as most of the learners (although they are more or less of the same age) are at very different levels of development. This is especially true in schools for severe and mild intellectual disability.</p> <p>Learners of compulsory school going age who attend special schools are mainly admitted because of their need for additional or specialised support which is being made available through a range of support strategies including smaller class sizes, interventions by specially trained staff, the availability of specific resources and in many cases a focus on more vocational and skills orientated learning programmes. The level and nature of the support needed should be based on individual learner needs, strengths, barriers (of both an intrinsic and extrinsic nature), learning style and learning tempo. Most of the learners who are admitted to special schools, have fallen behind with the work or have experienced learning breakdown, because their needs were not adequately addressed in the ordinary school setting. Within the first stage of implementation of Education White Paper 6, some additional support sites will be developed, such as full service schools and special schools as resource centres. In all of these sites the emphasis will be on developing learning programmes which will answer to the individual needs of learners and contribute to the development of the necessary and relevant skills, knowledge, values and attitudes which would be necessary for them to enter the world of work.</p>
<p>The 1998 policy on Assessment allows for learners to spend a maximum of one extra year per phase. An additional year over and above what the policy currently states, may be granted by the head of education of the province. This would mean that learners experiencing barriers to learning</p>	<p>The 1998 policy on Assessment allows for learners to spend a maximum of one extra year per phase. An additional year over and above what the policy currently states may be granted by the head of education of the province. This would mean that learners experiencing barriers to learning may be older than their peers. The criteria</p>

<p>may be older than their peers.</p>	<p>used for making the decision whether they should be retained longer in a certain phase have to be clearly outlined and must be based on a support programme which will be addressing their needs. Clear developmental and incremental curriculum outcomes must be outlined so as to ensure that they will not simply be left without the relevant support, doing more of the same work.</p>
<p>Majority of learners</p> <p>The needs and strengths of the majority of learners in ordinary schools are more or less the same. The diversity among these learners can be dealt with through scaffolding assessment standards and planning differentiated activities. In a truly inclusive education system you could also have learners that will not be able to work towards the same assessment standards, but towards the same learning outcomes. The related assessment standards of different grades and phases will indicate the level of performance of these learners.</p>	<p>Majority of learners</p> <p>The needs of the majority of learners in a special school, special school as a resource centre or full service school will be different to the needs of the majority of learners in an ordinary school. Therefore special schools, special schools as resource centres and full service schools need to take their learner profile into account when designing learning programmes, work schedules and lesson plans, also acknowledging that learners have individual strengths, interests, and barriers. The level and type of resources and activities in the full service schools, special schools and special schools as resource centres must be true to the profile of the majority of the learners in those schools. The availability of resources, whether human, physical or material is a further determining factor.</p>
<p>Differentiation</p> <p>All teaching should be differentiated to cater for different learning styles, learning tempos and intelligences. Differentiation is applied to the Learning Programme, Work Schedules and Lesson Plans of the few individual learners who will experience difficulties in working strictly according to the planned learning programmes, work schedules and lesson plans (that already make provision for differentiated tasks) of the majority group of learners. The extent and nature of the differentiation will differ from learning area to learning area in accordance with the individual learner's strengths</p>	<p>Differentiation</p> <p>Differentiation is applied to the design of Learning Programmes.</p> <p>The differentiation of the design of Learning Programmes in special schools, special schools as resource centres and full service schools to suit the needs, strengths and interests of learners experiencing barriers to learning could influence:</p> <ul style="list-style-type: none"> • The straddling of Grades and Phases • The number of Learning Programmes • The weighting of Learning Programmes

<p>and limitations.</p> <p>Differentiation is applied to the Learning Programme (phase plan) and Work Schedules (year plan) of learners by developing Individual Support Plans for the phase and more detailed plans for a year.</p> <p>The Lesson Plans of the majority group is the basis for differentiation to meet the needs, strengths and interests of the minority group or individual learner(s). When differentiating the Lesson Plans the learner's detailed Individual Support Plan for the year should be used as a guide to "scaffold" or "break down" the selected assessment standards and adapt the activities, learning and teaching support material, teaching and learning strategy and the assessment. It is important that all the learners in a class should work at the same type of activity with related Learning Outcomes and Assessment Standards but at different levels in order to cater for the diverse needs in a class. In such activities co-operative learning is still a possibility.</p>	<ul style="list-style-type: none"> • The duration of Learning Programmes • The use of programmes-to-work linkages to facilitate access to the curriculum • Measures for portability • Decision-making criteria around progression and certification.
<p>Learning Programme Design</p> <p>"Learning Programmes are structured and systematic arrangements of activities that promote the attainment of learning outcomes and assessment standards for the phase.</p> <p>Learning Programmes specify the scope of learning and assessment activities per phase. Learning Programmes also contain work schedules that provide the pace and the sequencing of these activities each year as well as exemplars of lesson plans to be implemented in any given period. The underlying principles and values of the National Curriculum Statement also underpin the Learning Programmes.</p> <p>Learning Programmes must ensure that all learning outcomes and</p>	<p>Learning Programme Design</p> <p>"Learning Programmes are structured and systematic arrangements of activities that promote the attainment of learning outcomes and assessment standards (for the phase) that can straddle grades and phases.</p> <p>Learning Programmes specify the scope of learning and assessment activities per phase. Learning Programmes also contain work schedules that provide the pace and the sequencing of these activities each year as well as exemplars of lesson plans to be implemented in any given period. The underlying principles and values of the National Curriculum Statement also underpin the Learning Programmes.</p> <p>Learning Programmes must ensure that all learning outcomes and assessment standards are effectively pursued (and that each learning area is allocated its</p>

<p>assessment standards are effectively pursued and that each learning area is allocated its prescribed time and emphasis. Learning Programmes will be based on relationships amongst learning outcomes and assessment standards, without compromising the integrity of Learning Areas.” (Overview, p.15)</p> <p>The special educational, social, emotional and physical needs of learners will be addressed in the design and development of appropriate Learning Programmes. (Overview, p.10)</p>	<p>prescribed time and emphasis) in and amongst the number/set of Learning Programmes developed. Learning Programmes will be based on relationships amongst learning outcomes and assessment standards, without compromising the (integrity) origin, of Learning Areas, of the learning outcomes and assessment standards.” (Overview, p.15)</p> <p>“The special educational, social, emotional and physical needs of learners will be addressed in the design and development of appropriate Learning Programmes.” (Overview, p.10)</p>
<p>Selecting Learning Outcomes and Assessment Standards</p> <p>The learning outcomes describe what learners should know and be able to do. Assessment standards describe the minimum level, depth and breadth of what is to be learnt. In practical terms this means that learning outcomes can and will, in most cases, remain the same from grade to grade while assessment standards change from grade to grade. (Overview, p.14)</p> <p>Assessment standards describe the level at which learners should demonstrate their achievement of the learning outcome(s) and the ways (depth and breadth) of demonstrating their achievement. They are grade specific and show how conceptual progression will occur in a Learning Area. They embody the knowledge, skills and values required to achieve learning outcomes. They do not prescribe method.(Overview, p.14)</p> <p>The learning outcomes describe what learners should know and be able to do. Assessment standards describe the minimum level, depth and breadth of what is to be learnt. In practical terms this means that learning outcomes can and will, in most cases, remain the same from grade to grade while</p>	<p>Selecting Learning Outcomes and Assessment Standards</p> <p>Straddling is when a learner or group of learners at a specific grade or level work towards attaining assessment standards from more than one grade or phase within learning areas/programmes. Learners who experience one or more of a range of barriers to learning may not fit comfortably within a particular phase or grade. In such cases straddling must be implemented.</p> <p>When the needs of the majority of learners in a special school, special school as resource centre or full service school require straddling of grades and phases it should be reflected in the learning programmes designed for such groups of learners. The recording and reporting of learner performance have to reflect this.</p> <p>In the case where learners are given the option to select Learning Programmes from an available set of Learning Programmes the schools should ensure that all the Learning Outcomes (LOs) and Assessment Standards (ASs) are covered in the set.</p>

<p>assessment standards change from grade to grade.</p> <p>The learning outcomes and assessment standards should be seen as minimum or essential knowledge, values and skills to be covered but should not be all that is taught. (Overview. P.13)</p> <p>... learners should not deal with assessment standards in isolation. Links must be made within and across learning outcomes and Learning Areas. (Overview, p.13)</p> <p>A set of learning outcomes should ensure integration and progression in the development of concepts, skills and values through the assessment standards. Learning outcomes do not prescribe content or method. (Overview, p.14)</p>	
---	--

<p>The number of learning programmes</p> <p>Foundation Phase: Three learning programmes (Literacy, Numeracy, Life Skills)</p> <p>Intermediate Phase: Languages and Maths as distinct Learning Programmes. Schools may decide on the number and nature of other Learning Programmes based on the organisational imperatives of the school, provided that the national priorities and developmental needs of learners in a phase are taken into account.</p> <p>Senior Phase: Eight Learning Programmes based on the Learning Area Statements.</p>	<p>The number of learning programmes</p> <p>The number of Learning Programmes for the Intermediate and Senior Phases at special schools, special school as resource centres and full service schools could vary according to the needs and interests of the learners and available human and physical resources of the individual schools.</p> <p>Languages and Maths should be distinct learning programmes.</p> <p>In special circumstances extended Learning Programmes could be implemented to address the needs of learners e.g. blind learners may have a learning programme which focuses on mobility and orientation or Reading Braille.</p> <p>It is essential that the Learning Outcomes and Assessment Standards as stated in the</p>
---	---

	<p>eight Learning Areas be addressed by the various Learning Programmes at a school, irrespective of the final number of Learning Programmes offered.</p>
<p>The weighting of learning areas/programmes</p> <p>The weighting of Learning Programmes in ordinary schools will mainly be according to the time allocations for the different learning areas as in the Overview document of the NCS (Grades R-9) Schools.</p>	<p>The weighting of learning areas/programmes</p> <p>The weighting of learning programmes refers to the percentage of time allocated to a specific Learning Programme. The Mathematics and Languages Learning Areas would be distinct Learning Programmes and will form the basis from which all other learning will take place. Other Learning Programmes could also address some of the LOs and ASs required in the Mathematics and Language Learning Areas, thus facilitating total integration of the learning process across the eight Learning Areas.</p>
<p>Duration</p> <p>The duration of the Learning Programmes in the ordinary is either 3 or 4 years in the Foundation Phase or 3 years in the Intermediate or Senior Phases.</p>	<p>Duration</p> <p>The duration of a Learning Programme in other types of schools or learning institutions can be longer or shorter based on the range of needs of the learners.</p> <p>The duration of the Learning Programmes will be linked to the age of learners on admission and to the duration of the learners' stay within the GETC band.</p> <p>The duration and complexity of a Learning Programme should depend on the level of support required by the learner and the number of years that the learner may remain in the GET band, keeping in mind that the average exit age from the GETC is 15 and learners may take one year longer to complete each of the three phases. Should a learner require special dispensation beyond the age of 18 the school should apply for such permission from the head of education of the province.</p>
	<p>Measures of portability:</p>

	<p>The variety of Learning Programmes that is presented for learners must ensure that all Learning Outcomes and Assessment Standards of the eight Learning Areas are effectively and comprehensively pursued.</p> <p>The Learning Outcomes and Assessment Standards achieved within the range of Learning Programmes must be recorded against the appropriate Learning Areas and according to the grades in which they were achieved. For example the performance of Learning Outcomes shown in practical Learning Programmes such as manicure, woodwork and panel beating should be recorded against the appropriate Learning Areas e.g. Life Skills, Technology, Economic and Management Sciences.</p>
<p>The assessment standards also contribute towards the qualification. In the case of the General Education and Training band, this will mean the General Education and Training Certificate.</p>	<p>Some learners may not be able to attempt doing/writing the CTA for gr 9. Some learners will be able to participate in the CTA but only in some Learning Areas. All learners must be afforded the opportunity to work towards the CTA so that there isn't an undue lowering of expectations. It must be remembered that the CTA must also be adapted.</p>

SECTION 3

DIFFERENTIATION OF THE LEARNING AREA STATEMENTS OF THE NCS TO ACCOMMODATE ALL LEARNERS IN AN INCLUSIVE EDUCATION SYSTEM

3.1 Introduction

The National Curriculum Statement (NCS) of 2002 is a curriculum for all learners; this implies that, it includes also learners experiencing barriers to learning. Suggestions on 'how to' adapt this curriculum without changing the NCS are given. It is through application of the principle of flexibility that the needs of the learner can be addressed.

3.2 How do I adapt the Learning Areas?

The eight Learning Areas each have a prescribed number of learning outcomes. A learning outcome is a description of what (knowledge, skills and values) learners should know, demonstrate and be able to do at the end of the General Education and Training band. Assessment standards describe the level at which learners should demonstrate their achievement of the learning outcome(s) and the ways (depth and breadth) of demonstrating their achievement. They are grade specific and show how conceptual progression will occur in a Learning Area.

The learning outcomes describe what learners should know and be able to do. Assessment standards describe the minimum level, depth and breadth of what is to be learnt. In practical terms this means that learning outcomes can and will, in most cases, remain the same from grade to grade while assessment standards change from grade to grade. (Overview, p. 14)

Each learning outcome has a number of related assessment standards through which the competencies of learners can be demonstrated. The way in which the competencies are demonstrated should NOT be a barrier to learning. Competencies can therefore be demonstrated in a variety of ways, using different modes of response, both, verbally or non-verbally.

Another important fact, which would help with differentiation of the assessment standards of all learning outcomes are the minimum requirements per grade to be demonstrated at the end of the year. For learners experiencing barriers to learning, the strategy of "winding

down”, “designing down” or “scaffolding” the assessment standards into manageable steps are essential and recommended. This process should include the practical demonstration of skills, knowledge, values and attitudes.

3.3 General recommendations on resources and terminology used in the Learning Area Statements

- 3.3.1 Depending upon the barrier to learning, different modes of response could be used by learners in the demonstration of assessment standards. Example: Signing, Braille, using an assistive device, gestures, body language, etc.
- 3.3.2 Analysing issues could be supported by visual or auditory cues depending on the learning barriers experienced by learners. These issues should be represented in a mode accommodating all learners experiencing barriers to learning e.g. visual and/or auditory.
- 3.3.3 Enlarged text, worksheets, etc. are recommended for some learners with visual and physical barriers or limited fine motor skills. The amount of text on a page should also be considered.
- 3.3.4 Measuring tools such as clocks, tapes etc. and other learning support material that accommodate learners that experience visual barriers should be made available where and when applicable in order to access the different learning areas.
- 3.3.5 If learners have to collect objects, pictures, etc. ensure that they are in a position to do so or else provide a variety for them to select and collect.
- 3.3.6 Communication could include inclusive modes such as: write, sign, using Braille, auditory tapes, body language, gestures etc.
- 3.3.7 More time should be allowed for learners when using a Scribe or Reader in completing tasks, projects or even their assessment activities.
- 3.3.8 Learners experiencing barriers may avoid tasks rather than asking for help. They are unable to realise the need for help. Rehearse and reinforce modelled asking for help.
- 3.3.9 When a verb in an assessment standard requires a verbal response, different non-verbal modes of response such as signing, etc. could also be used to accommodate learners experiencing barriers to learning. [See table 1]

TABLE 1

WHEN AN ASSESSMENT STANDARD REQUIRES THE LEARNERS TO:	
ask	Learners MAY respond in different modes. "Ask" should be replaced with "communicating" questions.
answer / discuss / talk	Learners could communicate using verbal and non-verbal responses such as visual representations, concrete objects, etc.

explains / give an explanation	Does not only refer to verbal explanations but also non-verbal modes such as signing, drawing and writing.
recognise	This could include verbal and non-verbal responses such as signing and writing.
name / speak / say	Could also include non-verbal modes such as writing, signing or even pointing to an object or written word.
observes	Refers to visual, auditory as well as tactile observations.
suggests/ proposes	Should include verbal and non-verbal modes.
investigate	Should make provision for the learner to use different verbal and non-verbal modes such as oral, written and electronic (web). Could be adapted to allow learners to <i>interview / question</i> others to arrive at responses.
write	Could include communicate, draw a picture or respond in Braille.
handles / draws / observes	Should be treated as “handles and/or draws and/or observes” to be more inclusive.

3.4 Differentiation of Learning Areas

3.4.1 Learning Area: Languages

Learning Outcomes and Assessment Standards

Learning outcomes 1 (Listening), 2 (Speaking), 3 (Reading and Viewing), 4 (Writing), 5 (Thinking and Reasoning) and 6 (Language Structure and Use) all need differentiation to accommodate all learners irrespective of their barriers.

- It is important to obtain background information regarding language development. An interview with the learner’s parents will reveal information about Home language, at what ages were new languages introduced, who speaks what language to whom, exposure to television and radio, etc.
- Parent guidance is very important regarding stimulation, i.e. home languages should not be discouraged but rather supplemented by additional interaction in the language of teaching and learning. (television and radio programmes, reading books, discussing the schoolwork, etc.)
- For individual tasks the teacher may have a number of activities that the learner enjoys and can manage on his own so that he does not distract the other learners. A tape recorder with earphones can be made very useful for the learner if his parents or teacher record reading lessons or learning texts (before tests). The learner can then listen and follow in his reader or study his brain maps (reduced study material) while he is listening to the tape recorder. The tape recorder can also be used with phonics and spelling skills.

BARRIERS EXPERIENCED BY LEARNERS	IMPLICATIONS:	STRATEGIES:
<p>Listening as a Barrier to Learning</p> <p>Auditory perception (listening skills) is an integral part of the language learning process. To successfully interpret what learners hear they should be able to:</p> <ul style="list-style-type: none"> • Discriminate what is said • Remember what is said (memory) • Form associations between concepts • Divide the message into parts (sentences, words), combine or complete it (analysis, synthesis, closure) 	<p>Learners may</p> <ul style="list-style-type: none"> • elicit only parts of what has been said. • show frustration associated with the inability to communicate. • experience difficulty in retrieving the appropriate words from memory. • not have a language as sophisticated as that of his /her peers. • have difficulty in understanding the general level of language. 	<ul style="list-style-type: none"> • Place the learner near the front of the class to minimise distractions. • Background noise should be eliminated. Keep the learner's desk clear. • Position of the teacher or another learner speaking and the learner experiencing a barrier is very important. • Position and source of light needs attention. • Visual distraction (pollution) e.g. classes that are too full, should be eliminated. • Assistance can be given by a person or by using a technological device e.g. Hearing aid and FM system. • Listening can be supported with non verbal cues e.g. gestures, signing, lip reading, facial expressions (don't overdo it) and pictures to assist with comprehension of vocabulary / concepts. Never assume that the learner understood what you said, rather check by asking questions. • Ask the learner to repeat the instruction back to you. • Rephrase questions and sentences rather than merely repeating. • Do not discourage translations by other learners. • Learners, who use SASL as a first language, receive visual messages (visually perceive) and not auditory (listening) messages. • When giving instructions the tempo and clarity of the speech, is important, shorter sentences, less information per sentence (not too wordy), increase the length of pauses between sentences. Gain eye contact and lowering of body to learner's eye level will also help. • Verbal instructions may be broken down in two or more steps at a time. • Show the learner what you want him to do, rather than simply telling. • One learner at a time speaking no overlapping of speaking turns. • Encourage learners to ask questions for clarity and meaning. • In some cases you may have to use extended sentences for learners. • Frequently used non-verbal signs could be placed on the walls of the classroom.
<p>Speaking as a Barrier to Learning:</p> <p>The learner needs to express himself meaningfully.</p>	<p>Learners may</p> <ul style="list-style-type: none"> • show frustration associated with the inability to communicate. 	<ul style="list-style-type: none"> • The use of alternative/augmentative communication modes, e.g. signing, miming, gestures, facial expressions, writing, using pictures, graphics and any technological devices can be employed. • The learner may need time to organise their thoughts prior to giving a response. Give sufficient time for the learner to respond (wait for the learner to recall the words from memory). Don't try to hurry him along. If there is no response wait again before modelling the response.

BARRIERS EXPERIENCED BY LEARNERS	IMPLICATIONS:	STRATEGIES:
	<ul style="list-style-type: none"> • experience difficulty in retrieving the appropriate words from memory. • have language usage that is not as sophisticated as that of their peers. • have difficulty in understanding the general level of language. • have difficulty describing pictures or experiences. • have little variety in language usage. • seem excessively shy and non-verbal. • point to things rather than asks for them. • speak in isolated words or sentence fragments. 	<ul style="list-style-type: none"> • Simple questions can be used as a key to promote speech. • Provide the correct model of speech without highlighting the error. E.g. Question learner asks: 'I bathroom?' Teacher responds by saying: 'Yes, you may go to the bathroom.' • Expand the learner's language by providing more advanced vocabulary: E.g. Learner: 'I hate that book.' Teacher: 'You think that book is boring, do you?' • Use present tense to simplify your sentences. • Introduce new vocabulary at the beginning of a new 'theme'. Pay special attention to abstract concepts, e.g. summarise, measure, etc. Teaching categories also develops vocabulary. • Provide the learner with enough opportunity to communicate and discourage peers from talking for the learner. • Concrete resources will assist the learner in talking on a given topic and will provide visual cues to assist in the understanding and feedback to the learner. • Teachers and peers need to have an expectation of what the learner will contribute to conversations and group discussions. • Provide the learner with enough opportunity to communicate and discourage peers from talking for the learner. • Focus on what the learner is telling you and not always on how the language is used. • If the learner is not being understood, say to the learner 'show me, can you tell me about it?' The following may help to interpret the learner: Repeat, slow down, tell me another way, show me or ask peers to translate. • Encourage social interaction during break times.
<p>Reading and Viewing as a Barrier to Learning:</p>	<p>Learners may</p> <ul style="list-style-type: none"> • display behaviours such as tilting the head back or bringing his head too close to a book. • display co-ordination difficulties. • have difficulty managing the • routine of wearing glasses. 	<ul style="list-style-type: none"> • Visual cues, e.g. pictures should be explained in a descriptive way. • A reader could read the text for the learner. • The learner could listen to a tape with the reading lesson on. • The reading material must be placed on a flat surface. • Enlarge print. • Print on a contrasting background. (e.g. yellow) • Ensure appropriate sitting and lighting. E.g. Feet flat on ground, chair and knees at 90°, hips right to the back of chair, shoulders and upper back must be in the correct position, eye hand distance, hands in correct position (straight not hooked). Place a paper and pencil at the child's midline (centre of his body). • Implement a co-ordination programme. e.g. cross lateral march, ball play, sport

BARRIERS EXPERIENCED BY LEARNERS	IMPLICATIONS:	STRATEGIES:
	<ul style="list-style-type: none"> • be doing random visual scanning. • find it difficult to keep up with the 'pace and place' while reading and viewing. • have difficulty in selecting relevant key information. • have difficulties with articulation, rhythm, timing and intonation. 	<ul style="list-style-type: none"> • Encourage a routine for wearing, cleaning, and storing glasses and other aids. • Movement of eyes (left to right; top to bottom) will need to be taught, generalised and maintained. • Provide the class with a pre-reading activity to introduce new vocabulary and to place the story in context. E.g. <ul style="list-style-type: none"> ○ Focussing the learner's attention on a reading page. It allows children to skim the pages, focus visually on words, and become familiar with material on the pages before they read. ○ Discuss the picture: <ul style="list-style-type: none"> What is happening? What time of the day is it? What will happen next? How do they feel? How many people do you see? ○ Asking the children to quickly find: <ul style="list-style-type: none"> A specific word. (May use sight words) A question mark. A period. The first word on the page. The last word on the page. ○ Asking the children to quickly point to a word that: <ul style="list-style-type: none"> Begins with the sound of ____ Ends with the sound of ____ Means _____ Means the opposite of _____ Is the name of a girl, boy, animal, etc. Is a colour word. Tells what time of day it is. Tells how the ____ feel. • Highlight relevant key information. • If the learner struggle with the volume of text (novels) make use of videos or audiotapes. • Talk through a passage with the learner to ensure comprehension. • Utilise group or peer discussion of text. • Paired reading to encourage fluency in reading. • The reading assignment can be shortened, e.g. <ul style="list-style-type: none"> ○ Photocopy a small portion.

BARRIERS EXPERIENCED BY LEARNERS	IMPLICATIONS:	STRATEGIES:
		<ul style="list-style-type: none"> ○ Highlight only the important words or sentences. ○ Summarise the story's main points ○ Rewriting the story in shorter sentences and simpler language ● Differentiation of comprehension: <ul style="list-style-type: none"> ○ The learner may highlight the answers in the text. ○ Learner may draw a picture of the answer. ○ Multiple-choice answers could be ticked.
<p>Writing as a Barrier to Learning:</p> <p>A learner cannot write until he has mastered the other language skills of speaking and reading. The most complex of all writing activities is creative writing: the writing of a story, a composition of a letter.</p>	<p>Learners may:</p> <ul style="list-style-type: none"> ● experience difficulty with the mechanics of writing, which may reduce the speed, and volume of writing. ● have difficulty in organising the presentation of their work. ● lack creativity. ● experience difficulty in sequencing ideas in a logical order. 	<ul style="list-style-type: none"> ● Brailers, computers, typewriters and other assistive devices should be made available. ● When the learner needs to write, describe or compile etc. the learners should be allowed to make use of a scribe. ● Reduce written work. ● Use worksheets where learners could tick or cross. ● The skill of writing needs to be broken down into small steps, and teach each step systematically. Have the learner start with what he can do before moving to more difficult activities. Go back to lower levels of work if the learner encounters problems. ● Wide lined books, graph papers and A3 size worksheets will assist learners with handwriting. ● Generalising of the learners learning: The learner will sometimes need to practice the concept with different materials. For example: Writing can be practised in the sand, with finger paint, with crayons and pencil and pen. ● Sequences may need to be supported with visual and describing representation of the steps required completing the task. ● Allow more time for the learner to complete their task. ● Provide them with formats or examples of required layout. ● Brainstorm words, develop sentences of words, order sentences and then write out final copy. ● Peer and cross-age tutors are useful as scribes. ● Allow the learner to copy notes form a peer or from a photocopy on the desk next to him. ● Provide the learner with a copy of the notes to paste into their book. ● Oral discussions should always precede any writing activity. Start with oral discussion of experiences, thoughts, feelings and events. Follow the following procedure: <ul style="list-style-type: none"> ○ Experience (Do it)

BARRIERS EXPERIENCED BY LEARNERS	IMPLICATIONS:	STRATEGIES:
		<ul style="list-style-type: none"> ○ Auditory language (Talk about it) ○ Written language (Write about it) ● From the concrete to the abstract: <ul style="list-style-type: none"> ○ Concrete descriptive: Learner writes a simple description of the things he can perceive, such as names of objects, colours and shape. The sentences can gradually become longer. ○ Concrete imaginative: Use imagination, e.g. Picture of a boy walking. The learner writes about where he thinks the boy is walking etc. ○ Abstract descriptive: Descriptions become more detailed. More particulars are added and attention is paid to the sequence of events. Comic strips work well for this exercise. ○ Abstract imaginative: Now the story consists of a plot, an imaginative setting, occasional figures of speech and connotations of moral values. Discuss keywords, place names, names of persons and sequence orally.
<p>Thinking and Reasoning as a Barrier to Learning:</p>	<ul style="list-style-type: none"> ● Learners may ● experience barriers which are often the result of delayed language and speech development. ● experience barriers with abstract concepts. ● have difficulty in solving problems. ● receive fewer opportunities to engage in language conversation due to poor language skills ● experience greater difficulty in asking for help. 	<ul style="list-style-type: none"> ● Teach/demonstrate new skills using a variety of approaches/contexts. ● Reinforce abstract concepts with a variety of concrete examples. E.g. Visual cues (pictures, concrete objects) give the learner memory 'hooks' to grasp the understanding abstract concepts in order to help the learner with thinking and reasoning skills. ● Encourage and teach problem solving skills. ● Encourage learners to verbalise how they have solved the problem. ● Provide time and opportunity for repetition and reinforcement of new skills. ● Teach new skills, but check back that the older skills have not been lost. ● Strategies to assist the learner's language development. ● Provide games that stimulate thinking and reasoning. E.g. Chess ● Where possible use visual cues to reinforce thinking and reasoning. ● Break the task down into small steps or learning objectives. Have the learner start with what he or she can do before moving to more difficult activities.

BARRIERS EXPERIENCED BY LEARNERS	IMPLICATIONS:	STRATEGIES:
<p>Language Structure and Use as a Barrier to Learning:</p> <p>Spelling:</p>	<p>Barriers with spelling: Learners may</p> <ul style="list-style-type: none"> • not hear the differences between language sounds and different vowels. • confuse letters and their sounds. • find it difficult to put sounds together in the right order to make up words while spelling. • struggle to sound out words. • be unsure of the sounds of the language and make many spelling mistakes. • be slow to learn to spell new words. 	<p>Teach spelling by doing sounds, blends, etc.</p> <ul style="list-style-type: none"> • Begin teaching consonant sounds before moving to vowels. • Use word families to teach phonics. E.g. mat, sat, hat, fat • Teach learners a specific method to learn spelling words. E.g. 'Look, say, cover, write, check' • Have a few simple, multilingual dictionaries in class. Encourage the learners to look up words for themselves. • Encourage the learner to use all their senses to learn spelling words, but to use them one at a time and to start with vision e.g. <ul style="list-style-type: none"> ○ What can you discover by just looking at the word? (E.g. size, number of letters, configuration, small words, familiar sounds?) ○ Trace the word. (With their fingers on the table) What does it feel like? ○ Read the word aloud and listen to it while you read it. ○ Close your eyes and visualise the object the word names. What does it look like? What does it feel like? ○ Hear the word inside your head. What does it sound like? Does the object the word names, make any sound? <p>Teaching syllables: Words can be divided into parts. Using body movements to emphasise the concept may help. Say a compound two-syllable word and ask the learners to say it with you. Tell the learners to imagine two body movements to go with the word. It is important that they find their own movements with ease. Explain that they have just divided the words into syllables. Write the words on the board, showing the divisions by colour coding each part.</p> <p>Vertical writing: Vertical writing organises the letters of the word so that the learners can deal with them comfortably. Write the sight words on the chalkboard, sequencing from top to bottom. The learners say the sound of each letter of the word and name the word. When you have repeated this several times, have the learners write the words vertically and horizontally on their papers.</p>

BARRIERS EXPERIENCED BY LEARNERS	IMPLICATIONS:	STRATEGIES:
		<p>Flashlight tracking: Use the flashlight to write shapes, letters, or words on the ceiling or chalkboard. Have the learner track the light with their eyes and the pointing finger of their writing hand while they are repeating the number, word or letter. The learners will be forced to visualise the symbol you are drawing and will activate the haptic system with the arm movement. To reinforce their spelling words, write the words with the flashlight on the chalkboard and have the children tell you the word. Use the flashlight to speed up the learners' reading. Write a story on the chalkboard or chart and move the light along the line at the speed you want the learners to learn. This method can be used to pace reading, teach phrasing, or to reinforce left-to-right progression.</p> <p>• Magazine Tracking: Once learners have learned to focus on individual words while reading, it often is difficult for them to progress to reading across a line smoothly. Magazine tracking not only will correct word-by-word reading but also will help eliminate problems with directionality, reversals, omissions, and fixations. Tear a page from a magazine, the larger the print the better. Ads are good to start with. Have the children loop each vowel in each word. Be sure they do not lift their pencils except at the end of each line. Limit the activity to no more than ten minutes. This activity may be used to reinforce any concept. Try the following activities:</p> <ul style="list-style-type: none"> • Loop the alphabet in order. • Loop punctuation marks. • Loop 'b's' or 'd's'. • Loop nouns, verbs or adjectives. • Loop word families. • Loop all the words you know. • Loop the letters in your name. • Loop the first letter of each word.
<p>Grammar Grammar underpins the ability to understand a sentence and process it accurately.</p>	<p>Learners may have particular difficulties with:</p> <ul style="list-style-type: none"> • Prepositions • Use of past tense • Agreement of the pronoun and verb (e.g. he plays, we play) • Active versus passive construction 	<ul style="list-style-type: none"> • Teach grammar specifically through meaningful context and in practical situations. • Teach grammar visually – use pictures, concrete objects, Rebus symbols, Makaton signs or gestures and the written word.

BARRIERS EXPERIENCED BY LEARNERS	IMPLICATIONS:	STRATEGIES:
	(e.g. The boy kicked the ball – The ball is kicked by the boy) • Use of personal pronouns (e.g. he, she, himself, his, hers)	

3.4.2 Learning Area: Mathematics

Learning Outcomes and Assessment Standards

Learning outcomes 1 (Numbers, Operations and Relationships), 2 (Patterns, Functions and algebra), 3 (Space and Shape [Geometry]), 4 (Measurement) and 5 (Data Handling) all need differentiation to accommodate all learners irrespective of their barriers.

- Activity based learning is essential. Practical experience and practical examples are therefore very important. Learners experiencing barriers may need to use real objects, pictures, graphic, concrete objects etc. for a longer period in order to grasp Mathematical concepts. Moving into the abstract too soon may hinder the understanding of concepts.
- Practice of memory training techniques, especially for number is very important.
- The use of resources such as balances, counters, different tools are needed in order to assist learners to master concepts in the assessment standards meaningfully. These visual supports will help the learners to see the relationships between numbers.
- Learners experiencing barriers to learning may require more time for mastering of concepts understanding the terminology (vocabulary and grammar), executing tasks, acquiring mathematical thinking and for assessment activities. The number of examples and activities to be completed should be adapted to accommodate learners experiencing barriers to learning. However, the thinking process that you use to do the calculation or to solve the problem should not be compromised. The quality of the skill to solve problems should not be compromised for the quantity (number) of problems solved.
- The use of a calculator should be allowed once a learner has understood the basic concepts of addition, subtraction, multiplication and division. It could also be used to verify calculations.
- Solving problems involving money could involve using real money and real objects (or empty containers)
- Learners struggling to understand the number system should still try all other areas of the Learning Area Mathematics (learning outcomes and assessment standards). E.g. simple fractions, measurement, plots and graphs.
- Follow the step by step formal approach: First teach count sequence, then cardinality (how many), then teach count on, then addition, before the learner will understand commutativity and place value.

LEARNING AREA: MATHEMATICS

BARRIERS EXPERIENCED BY LEARNERS	IMPLICATIONS:	STRATEGIES:
<p>Numbers, Operations and Relationships:</p>	<p>Learners may:</p> <ul style="list-style-type: none"> • rote count with no understanding of one on one correspondence. • not recognise number symbols or number names. • not count and say the numbers in a one-to-one correspondence • not understand quantity. • not remember/be able to visualise and remember how many they have counted. (Cardinality) When the learner is asked 'how many' they invariably recount the objects as their response. 	<ul style="list-style-type: none"> • Pair off: Give the learner any amount of shapes. The learner must place the shapes on the number line e.g. from number 1 to 5. Do a few of these exercises. • Body exercises for pairing off: Beat the tin with the wooden spoon. Learner has to walk rhythmical on the beat of the drum. One step for each number. • Constant exposure by drawing attention to numbers through everyday experiences, e.g. age, house numbers, clocks, money. Learners must make the connection that the spoken number is represented in a visual form. • Matching number cards, pointing to number on number line, matching number cards to their position on the number line. <ul style="list-style-type: none"> ○ Touch counts each sequenced number. ○ Move the object into a line as the number is spoken • When counting objects on paper cross out the object with a pen as the number is spoken. • Draw a number line on the floor. Learner stands on the naught. Bounce the ball once on each number. No bounce on naught because it is an empty group! • Count real objects often. Allow learners to touch or point to the objects while counting. One word goes with one item. Encourage learner to slow down when counting. Use shapes that are not too large or small and do not roll. • Pairing off together with estimation: Use the number line from 1 to 10. Ask the following questions: In my hand I have 8 shapes / blocks. Are there enough shapes for all the blocks? Yes / No. The learner can now put the blocks on the different numbers on the number line. Do the same with other numbers. • Matching number with shapes/pictures, e.g. 3 = ◆◆◆ • The learner needs to be taught that 'how many' means to retain and recall the last number counted rather than recounting the number sequence. Teach the cue 'put the number in your head' e.g. 'How many?' Response should be 5 and NOT 1,2,3,4,5

BARRIERS EXPERIENCED BY LEARNERS	IMPLICATIONS:	STRATEGIES:
		<ul style="list-style-type: none"> • Play counting games, which end before the whole set has been counted, also to encourage understanding of cardinality.
	<p>Learners may</p> <ul style="list-style-type: none"> • Confuse Next number / One more / One less and equal <ul style="list-style-type: none"> • Experience problems with number concept • not understand ordinal numbers: 1st, 2nd, 3rd 	<ul style="list-style-type: none"> • Play counting games that start at numbers other the one. • Repeated modelling and practice is needed to teach the learner to count from the given number. 'Count to 10. Start at 5 Initially use a number line / number grid as a visual prompt. The learner can now visually check which is more or less • Quantity – Use everyday experiences (particularly food) to estimate which is more / less <ul style="list-style-type: none"> ○ Check by pairing objects for each group. The learner then selects which group is preferred more. ○ Using numbers with the same 'ten' e.g., which is more, 25 or 21? ○ Using multiples of 10 e.g., which is more, 30 or 20? ○ Using any two numerals e.g., which is more, 27 or 31? • Games <ul style="list-style-type: none"> Walk to number 3. Give 1 step forward. Where are you now? 4, therefore 4 steps are more than 3 steps. Learner goes back to number 3. Walk 2 steps forward. Where are you now? 5, therefore 5 steps are more than 3 steps. Learner goes back to number 3. Walk 1 step backwards. Where are you now? 2 therefore 2 steps are less than 3 steps. Learner goes back to number 3. Walk 2 steps backwards. Where are you now? 1 therefore 1step is less than 3 steps. Do a lot of these exercises. • Work with each number in isolation until mastered. • These numbers must relate to real life experiences e.g. lining up at the door and sports day. Support auditory memory with a card (visual cue) e.g. visually and verbally identify 1st, 2nd, 3rd
	<p>Learners may</p> <ul style="list-style-type: none"> • not be able to count in 2's, 3's (Skip or interval counting) 	<ul style="list-style-type: none"> • Learners group real objects e.g. in twos and then count in twos moving two objects at a time as they count. • Initially the learner will need to be shown how to miss alternate

BARRIERS EXPERIENCED BY LEARNERS	IMPLICATIONS:	STRATEGIES:
	<ul style="list-style-type: none"> • not understand addition: • not be able to do subtraction • not understand borrowing • not understanding commutativity 	<p>numerals e.g. jumping / stepping over cards on the floor, 'jumping' over numbers on a number line.</p> <ul style="list-style-type: none"> • To prepare for addition, play counting games that start at numbers other than one. • Being able to add, it is very important for understanding place value. • Introduce the vocabulary/symbol to be used while showing the process of adding objects together. Record the number sentence underneath the concrete process. • Pairing off with classification: Take different coloured shapes (two colours, e.g. red and yellow). Place 3 yellow blocks left and 7 red blocks right on the number line. $3 + 7 = 10$ • Number charts: Learner has to match the number on the number charts with the matching number on the number line. • The open number line: Walk up to number 5. Ask the following questions: How many steps must you take before you reach number 9? $5 + \square = 9$ Walk up to number 6. Place a shape or block on the number 6. Now the learner has to bounce a ball on each number up to number 10. <ul style="list-style-type: none"> • How many times did the ball bounce up to number 10? 4 times. • Therefore $6 + \square = 10$ Do more examples. • Introduce visually using the game of ten-pin-bowling. Verbalise the process i.e. ten empty bottles, five knocked down, five left'. Record the number sentence. Use a variety of other concrete materials to support the process. • When learning subtraction, some learners do well until they are asked to regroup or borrow. It seems that no matter how many times you say, 'Take the bottom number from the top number they will subtract the smaller number from the larger number.' Colour code numbers, making the top number red and the bottom number green. Say, 'Take the green number from the red number.' By using colour to organise the thinking, the learner seems able to grasp the concept. $\begin{array}{r} 34 \text{ (red)} \\ -27 \text{ (green)} \end{array}$ • Commutative: (Train game) Put 4 red shapes / blocks on number line (numbers 1 to 4). Put 5 blue

BARRIERS EXPERIENCED BY LEARNERS	IMPLICATIONS:	STRATEGIES:
	<ul style="list-style-type: none"> experience difficulty with place value 	<p>shapes / blocks on the following numbers of the number line. Now put the two colours together on the right hand side of the number line. Teacher writes the calculation on the black board. $4 + 5 = 9$ Repeat the calculation but now the learner uses 5 red blocks and 4 blue blocks. Now put all the blocks together on the left hand side of the number line. Teacher writes the calculation on the black board. The learners are now allowed to compare the 2 rows of blocks</p> <ul style="list-style-type: none"> Writing numbers helps the learner to understand place value in terms of how we write large numbers but addition helps the child to understand $10 = 10$ units, $5=5$ units, $2=2$ units and then $12 = 10 + 2$ Until the learner understands tens and units, he has no basis to cope with the decimal system for money or for weights and measure.
Patterns, Functions and Algebra:	<p>Learners may</p> <ul style="list-style-type: none"> not be able to follow or design simple patterns 	<ul style="list-style-type: none"> Start by copying simple sequences using colour or objects e.g. red, blue, red blue, ..., or objects e.g. crayon, block, crayon, block, ... Make the sequences more complex using 3 and later 4 colours, shapes etc. Learners should understand that a pattern is a repetition of e.g. a sequence or actions Sequence numbered unifix blocks horizontally or vertically. Give verbal and visual cues. Let them repeatedly add the same number e.g. $1 (+2) = 3 (+2) = 5 (+2) = 7 (+2) = 9 (+2) = 11 (+2) =$
Shape and Space (Geometry)	<p>Learners may</p> <ul style="list-style-type: none"> have difficulty with the following concepts of shape and space: naming shapes identifying shapes sorting according to shape 	<ul style="list-style-type: none"> Identifying and describing shapes The learner feels the outside of the shape while naming the shape and the characteristics. Multiple choice: Practice identifying the shape from a selection of two/more e.g. 'Give me the circle'. Repeat these steps until mastered. Practice and Generalisation: Sorting shapes of varying size, texture, colour and thickness <ul style="list-style-type: none"> finding the shape in the environment drawing the shape tracing around the shape making the drawn shape into a picture select the shape – by touch alone – from a small selection 'feely bag'

BARRIERS EXPERIENCED BY LEARNERS	IMPLICATIONS:	STRATEGIES:
	<p>over/under through by in/out on/off inside/outside behind/in front top/bottom near/next to forward/backward back/front across high/low middle side/corner/edge toward/away from around left/right</p> <ul style="list-style-type: none"> • left/right: 	<ul style="list-style-type: none"> • The following procedure for concept development is recommended: <ul style="list-style-type: none"> ○ Model of concept: ○ The concept is modelled to the learner using verbal cues. E.g. adult or peer shows the concept, moves <i>behind</i> the chair/ places a plastic object <i>behind</i> the chair. ○ Experience the concept: ○ The learner repeatedly experience the concept while hearing and using the language e.g. playground equipment, classroom situations e.g. hiding <i>behind</i> the chair. ○ Practice with 3-Dimensional Objects: ○ The learner uses 3 dimensional socio-dramatic play equipment to practice the skill. E.g. Duplo doll's house, Fisher Price garage, tea sets. ○ Practice with 2-Dimensional Objects: ○ The learner identifies / uses the concepts in books/worksheets. • The following activities give practice at developing spatial skills in each step in the procedure: <ul style="list-style-type: none"> ○ barrier games: A simple game based on giving and receiving instructions. Set it up by providing each learner with an identical set of materials. The instructor arranges his materials and instructs the listeners on how to reproduce this arrangement. The listener uses questions to clarify information, which is incomplete or unclear. When the instructions are completed the players compare their placement of materials. Prevent left-right confusions by seating the learners next to each other, facing the same way. Turn all the pieces face up before starting the game. ○ listening skill games (using peers/audio tapes) ○ drama and dance using positional concepts ○ use everyday routines to practice spatial concepts Peer/cross age tutors can be utilised to give instructions in the above activities in order to practice these concepts. • Initially teach left/right in relation to the learner's own hands and feet. 'Hokey Pokey' is a very good game for reinforcing these concepts. Use practical activities to reinforce the concept. Visual scanning left to right on the keyboard, number line and games, all need to be specifically taught and practised.
Measurement:	<p>Learners may</p> <ul style="list-style-type: none"> • experience difficulty with time: 	<ul style="list-style-type: none"> • constant use of a clock, pictures real events and or calendar is very important Introducing a new time concept:

BARRIERS EXPERIENCED BY LEARNERS	IMPLICATIONS:	STRATEGIES:
	<p>night/day morning/afternoon today age before/after date on written work birthday: day and month 7 days in one week order of days of the week weekdays/weekend yesterday/today/tomorrow O'clock related to daily activities day/month/year am/pm seasons special days/events calendar</p> <ul style="list-style-type: none"> • struggle to understand measuring: length capacity/mass <p>temperature</p>	<ul style="list-style-type: none"> ○ discuss and describe vocabulary e.g. morning is before lunch, afternoon is after lunch. ○ relate to learners events for that time using pictures/individual learner photos etc. e.g. Photo/picture of learner in bed at night, walking to school etc. ○ use individual timetables (displayed in visual form) showing the sequence of events ○ teach recording of date e.g. 12 January 2004 ○ memorise date and month of birthday and know how to plot it on a calendar. ○ introduce concepts of weekdays/weekends i.e. weekdays go to school; weekends no school ○ learner places flashcard with word yesterday and tomorrow on blank calendar. <ul style="list-style-type: none"> • Introduce the learner to units of measurement Learner needs to be given the opportunity to measure many items using a ruler, string and other resources. Select a range of everyday containers to compare volumes. Generalise the skill to cooking. A similar process is used for mass. Compare learners' heights and weights. • Weather – Relate to the maximum and minimum temperatures from the TV/radio or newspapers. Record in a graph.

3.4.3 Learning Area: Social Sciences

Learning Outcomes and Assessment Standards

History: Learning outcomes 1 (Historical Enquiry), 2 (Historical Knowledge and Understanding) and 3 (Historical Interpretation)

Geography: Learning outcomes 1 (Geographical Enquiry), 2 (Geographical Knowledge and Understanding) and 3 (Exploring Issues) all need differentiation to accommodate all learners irrespective of their barriers.

Recommendations

- When an assessment standard requires of learners to show their understanding of chronology and time visual and tactile timelines could be used to further demonstrate understanding.
- If learners have to compare two versions of e.g. a historical event he/she should be allowed to use visual, written or auditory sources.
- ensure that learners have the vocabulary and understand the explanations, story, discussions

BARRIERS EXPERIENCED BY LEARNERS	IMPLICATIONS:	STRATEGIES:
History & Geography Enquiry	<ul style="list-style-type: none"> • The learner may experience difficulty in reading the typical texts used in this Learning area. • Slower readers will experience barriers to read the required volume. • The learner may struggle to find relevant information in the library or in a book or page. • They will experience problems with extracting specific information out of a text. 	<ul style="list-style-type: none"> • Give students an overview of information before beginning the lesson. • Relevant key information could be photocopied and the volume could be handled by the learner through highlighting and/or underlining key words. • A reader could read the texts to the learner or texts could be listened to on an audiotape. • Provide texts on a lower reading level. • Provide demonstrations and sample items. • Visual aids: Videos, films, role-plays, models, real life examples and excursions could assist the learner to understand text better. • Step by step strategies for research needs to be taught. Allow the learner to repeat in his own words what he is to do. A sequence map can be used to map the sequence which the learner needs to follow. This map may be cued with pictures. E.g. scan the text. Read headings and subheadings and look at pictures, graphs etc. Read text. Highlight keywords. Answer questions. Write conclusion. • Encourage group work with peers to complete an assignment. The participation of the learner in the group could be adapted to address his needs. • Reduce the amount of work on the worksheet or/and divide the worksheet in segments. Learner may complete part one, part two is group work and part three is homework.
Historical & Geographical Knowledge and Understanding	<ul style="list-style-type: none"> • Abstract concepts may not be relevant to their life experiences that will also be problematic with comprehension skills. • Lack in exposure to, understanding and experience of the topic discussed. 	<ul style="list-style-type: none"> • Teach the specific meaning of all terminology and talk through the concepts and ideas with them. Be aware of the different meanings a specific word may have in different contexts, e.g. the word 'stage' can be used as: a period of time, a platform, a performance/robbery etc. Terminology research could be dealt with in the following way: <ul style="list-style-type: none"> ○ Word: continent ○ Word with similar meaning: land mass ○ Opposite meaning: Ocean ○ Part/Whole: A continent is part of the world. ○ Larger category: The world ○ Smaller category: A country/island ○ Function: Divide land and sea ○ When does it occur: Always ○ Where does it occur: The world ○ Rhyming word: Government

BARRIERS EXPERIENCED BY LEARNERS	IMPLICATIONS:	STRATEGIES:
		<ul style="list-style-type: none"> • Parents could help to revise concepts and information at home. • The presentation of an assignment could be adapted in a variety of ways, e.g. cut and paste, pictorial representation, a display, a tape recorded report, a model etc. • Complicated drawings and sketches could be done by the learner tracing the drawing or photocopying a drawing. • Provide copy of notes in order to help the learner who struggles to copy from blackboard. • Once a topic has been taught and learned, a game show formats such as "Who wants to be a Millionaire" could be used to practice and remember information.
Exploring Issues	<ul style="list-style-type: none"> • The learner may struggle to make informed decisions about problems. 	<ul style="list-style-type: none"> • Encourage participation in groups and class discussions. Don't assume that the learner has the same understanding of concepts as his peers. Guide the learner by giving him more than one possible answer to choose from. • Use visual organisers such as timelines and flowcharts.
Historical Interpretation	<ul style="list-style-type: none"> • Due to the lack of life experience, the learner may experience difficulties interpreting abstract concepts. • The learner may not automatically transfer knowledge and skills learnt in one setting to another. 	<ul style="list-style-type: none"> • It will be necessary to talk through concepts/ideas with them. Ask relevant questions to guide them to interpret this information. • Be prepared to teach the skill in all new settings.

3.4.4 Learning Area: Economic and Management Sciences

Learning Outcomes and Assessment Standards

Learning Outcomes 1 (Economic Cycle), 2 (Sustainable Growth and Development), 3 (Managerial, Consumer and Financial Knowledge and Skills) and 4 (Entrepreneurial Knowledge and Skills) all need differentiation to accommodate all learners irrespective of their barriers.

Recommendations

- ❑ In this learning area learners experiencing barriers to learning often have difficulty in understanding abstract concepts. This should become a very practical learning area right from Grade R. Learners should use real examples of till slips, money, cheques, etc.

- ❑ Concepts such as profit and loss; tax, economic cycle, economic growth is abstract and difficult to master. It is of utmost importance that learners have enough time to construct meaning through the sharing of their understanding and by using practical examples.

BARRIERS EXPERIENCED BY LEARNERS	IMPLICATIONS:	STRATEGIES:
<p>Economic Cycle:</p> <p>Managerial, consumer and financial knowledge and skills:</p> <p>Sustainable growth and development:</p> <p>Entrepreneurial knowledge and skills</p>	<ul style="list-style-type: none"> • Abstract concepts may not be relevant to their life experiences that will also be problematic with entrepreneurial skills. • Lack in exposure to, understanding and experience of the abstract concepts on Economic cycle. • Due to the lack of life experience, the learner may experience difficulties interpreting abstract concepts. • The learner may not automatically transfer knowledge and skills learnt in one setting to another. 	<ul style="list-style-type: none"> • Teach the specific meaning of all terminology and talk through the concepts and ideas with them. This should become a very practical learning area. Learners should use real examples of till slips, money, cheques, etc. Use the correct terminology at all times and make sure that learners have a clear concept of the meaning of these words. • Refer to terminology research in Social Science. • Give enough time to practice entrepreneurial skills in the classroom and school. • The presentation of an assignment could be demonstrated practically using real money, bank and business slips in the classroom by role-playing 'shop'/'bank'. • It will be necessary to talk through concepts/ideas with them. Ask relevant questions to guide them to interpret this information. • Videos, films, role-plays, models, real life examples and excursions could assist the learner to understand text more. • Be prepared to teach the skill in all new settings.

3.4.5 Learning Area: Natural Sciences

Learning Outcomes and Assessment Standards

Learning Outcomes 1 (Scientific Investigations), 2 (Constructing Science Knowledge) and 3 (Science, Society and the Environment) all need differentiation to accommodate all learners irrespective of their barriers.

Recommendations

- Learning and teaching support material should accommodate different communication needs.

- The use of real objects or representations of such objects would facilitate learning example e.g. having real flowers instead of pictures or using a globe instead of just explaining certain aspects of earth and beyond. Should the learners be unable to have access to real objects or natural phenomena it should be made available to them.

BARRIERS EXPERIENCED BY LEARNERS	IMPLICATIONS:	STRATEGIES:
Scientific investigations	<ul style="list-style-type: none"> • Safety: Due to limited motor control / lack of understanding / lack of memory for the correct procedure the student may be at risk of injury. • The learner may have difficulty understanding some terminology that is specific to the Learning Area. E.g. Habitat, Botanist, radical root etc. • The learner may experience difficulty in reading the typical texts used in this Learning area. • Slower readers will experience barriers to read the required volume. • The learner may struggle to find relevant information in the library or in a book or page. • They will experience problems with extracting specific information out of a text. 	<ul style="list-style-type: none"> • Use peer/adult support. • Use pictures to enhance safety procedures. • Allow the student more time to complete experiments. • Relevant key information could be photocopied and the volume could be handled by the learner through highlighting and/or underlining key words. • A reader could read the texts to the learner or texts could be listened to on an audiotape. • Provide texts on a lower reading level. • Visual aids: Videos, films, role-plays, models, real life examples and excursions could assist the learner to understand text more. • Step by step strategies for research needs to be taught. Allow the learner to repeat in his own words what he is to do. A sequence map can be used to map the sequence of which the learner needs to follow. This map may be cued with pictures. E.g. scan the text. Read headings and subheadings and look at pictures, graphs etc. Read text. Highlight keywords. Answer questions. Write conclusion. • Encourage group work with peers to complete an assignment. The participation of the learner in the group could be adapted to address his needs. • Reduce the amount of work on the worksheet or/and divide the worksheet in segments. Learner may complete part one, part two is group work and part three is homework.
Constructing science knowledge	<ul style="list-style-type: none"> • Abstract concepts may not be relevant to their life experiences that will also be problematic with comprehension skills. • Lack in exposure to, understanding and experience of the topic discussed. 	<ul style="list-style-type: none"> • Teach the specific meaning of all terminology and talk through the concepts and ideas with them. Be aware of specific words with different meanings in different contexts, e.g. the word 'base' can be used as: a platform, or the bottom of an object etc. • Refer to terminology research Social Science. • Parents could help to revise concepts and information at home. • The presentation of a assignment could be adapted in a variety of ways, e.g. cut and paste, pictorial representation, a display, a tape recorded report, a model etc. • Complicated drawings and sketches could be done by the learner tracing the drawing or photocopying a drawing.

BARRIERS EXPERIENCED BY LEARNERS	IMPLICATIONS:	STRATEGIES:
	<ul style="list-style-type: none"> • The learner may experience barriers with types of question because they may struggle to interpret what information is required. Learners may have problems with the 'how, why and when type of questions. • The learner may experience problems with the planning of a task, 	<ul style="list-style-type: none"> • Use simpler language and shorter questions. • Ask fewer questions. • Ask multiple-choice questions. • Reduce page turning. Try to put answers and questions on same page. • Give good guidelines in order to sequence the task in a structured way. Talk the assignment through and make use of visual cues. Make sure the learner understand the steps of conducting and experiment. E.g. Aim, Method, Observation and Conclusion. A sequence map with picture cues can be used to map the sequence of which the learner needs to follow.
Science, society and the environment	<ul style="list-style-type: none"> • Due to the lack of life experience, the learner may experience difficulties interpreting the integration between science, society and environment. • The learner may not automatically transfer knowledge and skills learnt from one setting to another. 	<ul style="list-style-type: none"> • It will be necessary to talk through concepts/ideas with them. Ask relevant questions to guide them to interpret this information. Use visual organisers such as timelines and flowcharts to help the learner it interpret the texts. • Be prepared to teach the skill in all new settings.

3.4.6 Learning Area: Technology

Learning Outcomes and Assessment Standards

Learning Outcomes 1 (Technological Processes and Skills), 2 (Technological Knowledge and Understanding) and 3 (Technology, Society and the Environment) all need differentiation to accommodate all learners irrespective of their barriers.

Recommendations

- In Learning Outcome 1 (Technological Processes and Skills), the assessment standards could be demonstrated using the strategy of peer groups / buddy system / pairs. One learner can describe while the other learner designs and/or makes an artefact or manipulates the tools according to the description given by the other learner. (The one becomes the “hands” of the one giving instruction).

BARRIERS EXPERIENCED BY LEARNERS	IMPLICATIONS:	STRATEGIES:
Technological Processes and Skills	<ul style="list-style-type: none"> • The learner may experience problems with fine motor skills by: <ul style="list-style-type: none"> ○ Unlikely to have dexterity skills ○ Struggle to use both hands in a co-ordinated way ○ May not use the non-dominant hand to naturally stabilise their work. • Projects that include numerous steps, which must be followed in a sequential way, may cause barriers. • Learners may not understand the importance of following sequential steps in order to have a successful result. • The learner who lacks creativity may struggle with the designing of the project. • Insufficient control of motor skills may occur. E.g. too much or uneven pressure while using electric tools. • Learners may be tactile defensive. • In Technology the project results are visual. The learner may experience loss of self-esteem when he compare and evaluate his project to those of others. • Sensitivity to different sounds. • Safety: Due to limited motor control / lack of understanding / lack of memory for the correct procedure the learner may be at 	<ul style="list-style-type: none"> • The teacher may adapt the project in such a way that the learner works in a larger scale. • Simplify the project by requiring fewer steps and more time to complete. • The teacher may begin the project for the learner and then allow the learner to complete the project. • Encourage the learner to use both hands. • Group tasks and peer support may help the learner with the constructing of the project. • Visual cues (pictures/concrete/written) to guide the learner through the sequential steps, where an example of the completed project is shown, will be of great value. • Make use of the help of a peer to guide the learner through the steps. • Relate the project to real life experiences. E.g. make an object from wire, which you can use to hang objects from. Make a box from cardboard in which you can store birthday cards. • Allow the learner to work with less accuracy. • Make use of buddy assistance. • The learner may use gloves, brushes. • Peers may help the learner to complete tasks that are uncomfortable for the learner experiencing barriers. • The emphasis must be on the process and not on the result. • Praise the learner on the positive aspect of his work. • Wear earmuffs • Use peer and adult support. • Use pictures to enhance safety procedures. • Allow the learner more time to complete experiments.

BARRIERS EXPERIENCED BY LEARNERS	IMPLICATIONS:	STRATEGIES:
Technological Knowledge and Understanding	<p>risk of injury.</p> <ul style="list-style-type: none"> • Abstract concepts may not be relevant to their life experiences that will also be problematic with comprehension skills. • Lack in exposure to, understanding and experience of the topic discussed. • The learner may experience problems with the planning of a task. • The learner may have difficulty to read instruction related to computers. 	<ul style="list-style-type: none"> • Teach the specific meaning of all terminology and talk through the concepts and ideas with them. Be aware of specific words with different meaning in different contexts, e.g. the word 'stage' can be used as: a period of time, a platform, a performance/robbery etc. • Parents could help to revise concepts and information at home. • Give good guidelines in order to sequence the project in a structured way. Talk the assignment through and make use of visual cues. Make sure the learner understand the steps of planning a project • Flashcards with pictures that explain the computer commands clearly could be used.
Technology, Society and the Environment	<ul style="list-style-type: none"> • Due to the lack of life experience, the learner may experience difficulties interpreting the interrelationships between science, technology and environment. • The learner may not automatically transfer knowledge and skills learnt from one setting to another. 	<ul style="list-style-type: none"> • It will be necessary to talk through concepts/ideas with them. Ask relevant questions to guide them to interpret this information. • Be prepared to teach the skill in all new settings.

3.4.7 Learning Area: Arts and Culture

Learning Outcomes and Assessment Standards

Learning Outcomes 1 (Creating, Interpreting and Presenting), 2 (Reflecting), 3 (Participating and Collaborating) and 4 (Expressing and Communicating) all need differentiation to accommodate all learners irrespective of their barriers.

Recommendations

- Scaffold tasks to allow for gradual learning of skills / techniques in developmental steps.
- Allow a variety of modes of response on the part of the learners to cater for different paces of learning where assessment standards require of learners to talk, share, tell and express.
- When wanting assess a learner's participation a process, focus on the role that learner is to play in the process according to the specific barrier experienced by the learner. Do not expect of all learners to display the same level of participation or roles in a process.
- Provide appropriate learning, teaching and support material in a variety of media forms to allow learners to access materials for the creation of products.
- Provide instructions in a variety of media and in varying detail to cater for all barriers. The instruction must match what you expect from the learner, taking into account that your expectations will differ to accommodate the different barriers of learning manifested in your classroom.
- The Music assessment standards need to be adapted to allow all learners to participate in this art form.

BARRIERS EXPERIENCED BY LEARNERS	IMPLICATIONS:	STRATEGIES:
<p>Creating, interpreting and presenting</p> <p>Visual Arts:</p> <p>Drama:</p> <p>Music:</p>	<ul style="list-style-type: none"> • The learner may experience problems with fine motor skills: <ul style="list-style-type: none"> ○ Unlikely to have dexterity Skills ○ Struggle to use both hands in a co-ordinated way ○ May not use the non-dominant hand to naturally stabilise their work. • Lack of creativity • Struggle to represent 3 dimensional objects. • Sensitive to touch textures, e.g. glue, clay and paint. • Projects that include numerous steps, which must be followed in a sequential way, may cause barriers. • Lack of confidence to participate. • Reluctant to share their own ideas with peers. • Needs more time to respond • Responding time may be slower. • Experience difficulty in remembering action sequences. • Experience difficulty in independent finger movement, which results as a problem in 	<ul style="list-style-type: none"> • The teacher may adapt the project in such a way that the learner work in a larger scale. • Simplify the project by requiring fewer steps and more time to complete. • The teacher may begin the project for the learner and then allow the learner to complete the project. • Encourage the learner to use both hands. • Group tasks and peer support may help the learner with the constructing of the project. • Art activities need to be based on real life experiences. • Be specific with instructions. E.g. Design a pattern, use curved lines and only two colours. • The learner may trace the object. • Simplify the task. The learner doesn't have to paint a flower, he may paint an apple or ball. • The learner may wash or wipe his hands frequently. Give him gloves, brushes and glue sticks. • Visual cues (pictures/concrete/written) to guide the learner through the sequential steps, where an example of the completed project is shown, will be of great value. • Make use of the help of a peer to guide the learner through the steps. • Choose groups carefully, group peers need to be supportive. • Encourage participation. • Allow enough observation time, until they feel confident to participate. • Talk through the activity. Make sure everybody understands what is expected from him or her. • Use visual or verbal cues to prepare the learner for response on a given time. Peers may help with cues. • Lots of practice to ensure automatic response. Give appropriate models. • Help him with visual aids to help him to read the dialogue. • Choose music instrument that will be more suited to the learners needs e.g. drums and keyboards will be easier to play than a guitar.

BARRIERS EXPERIENCED BY LEARNERS	IMPLICATIONS:	STRATEGIES:
Dance:	<p>playing of musical instruments. Experience pincer grips and general fine motor control problems.</p> <ul style="list-style-type: none"> • Responding time may be slower. • The learner may experience problems with gross motor skills by: <ul style="list-style-type: none"> • Balance • Co-ordination • May be struggling to remember steps of sequence. 	<ul style="list-style-type: none"> • Remove unnecessary keys of colour coding the notes may be useful. • Visual and verbal cues. Divide the dance group in two separate groups. The first group dance first and the second group echoes the first group. This will prepare the learner to respond on the correct time. • Simplify the sequence of steps, e.g. leap twice with full pirouettes in between, and allow the learner just to do the two leaps without the turns. • Practice each step individually before putting the different steps in sequence. • Sequences should be built up slowly. Add only one new step at a time to a known sequence. • Separate leg and arm movements before the two movements are combined. • Learner could be placed in the middle of the group. In this position the learner can always model from another student. • Enough rehearsal time. • Visual cues to indicate the sequence of the different steps.
Participating and Collaborating: Expressing and communicating: Visual Arts: Drama;	<ul style="list-style-type: none"> • The learner may experience problems with listening, speaking, and reading skills. • Experience problems to create visual images. • Experience problems to perform in a group 	<ul style="list-style-type: none"> • See the section on Languages where adaptive strategies for listening, speaking and reading are dealt with comprehensively. • Allow them to respond in other forms, which accommodate their barriers. • The use of gestures, body language, sign language, and mime actions must be encouraged. • Each learner must be accommodated in a drama group by allowing them to contribute to the product in a manner that accommodates their barrier. • Allow learners to work with assistants, i.e. peers, to record their product or allow learners to describe what, how and why of the process • Allow learners to work with a medium that suit their abilities. • Work with different materials that differ in texture so that they can use their tactile sense to create a visual product. • Learners can make a contribution to the creative process by making input into the words and actions of the “actors”, and can contribute to the product by assisting with the refinement thereof during the development process.

BARRIERS EXPERIENCED BY LEARNERS	IMPLICATIONS:	STRATEGIES:
		<ul style="list-style-type: none"> • They can also be used to assess final products according to given criteria. • A role player such as a choreographer also has a role to play in the process and product. • Individual strengths may lie in different roles in the process. • Perform movements on the spot or in tandem with other peers who lead the learner on the pathway or by holding hands
<p>Reflecting:</p> <p>Visual Arts: Drama: Music: Dance:</p>	<ul style="list-style-type: none"> • Abstract concepts may not be relevant to their life experiences that will also be problematic with comprehension skills. • Lack in exposure to, understanding and experience of the topic discussed. • The learner may experience problems with the planning of a task. • The learner may have difficulty to read instruction related to projects • Due to the lack of life experience, the learner may experience difficulties interpreting the interrelationships between artistic and cultural processes, products and styles in past and present contexts. • The learner may not automatically transfer knowledge and skills learnt from one setting to another. 	<ul style="list-style-type: none"> • Teach the specific meaning of all terminology and talk through the concepts and ideas with them. Be specifically aware of homonyms in different contexts, e.g. the word 'stage' can be used as: a period of time, a platform, a performance/robbery etc. • Parents could help to revise concepts and information at home. • Give good guidelines in order to sequence the project in a structured way. Talk the assignment through and make use of visual cues. Make sure the learner understand the steps of planning a project • Flashcards with pictures that explain the steps of designing plays, artwork, etc clearly, could be used. • It will be necessary to talk through concepts/ideas with them. Ask relevant questions to guide them to interpret this information. • Be prepared to re teach the skill in all new settings.

3.4.8 Learning Area: Life Orientation

Learning Outcomes and Assessment Standards

Learning Outcomes 1 (Healthy Promotion), 2 (Social Development), 3 (Personal Development) and 5 (Orientation to the World of Work) with their corresponding assessment standards accommodate all learners irrespective of their barriers.

Learning Outcome 4 (Physical Development and Movement) provides unique challenges, for learners needing a high level of support in the classroom.

NOTE: Assessment of Life Orientation activities will require the teacher to *observe* the learners to determine how they behave / handle situations.

Recommendations

The following recommendations are made with respect to LO# 1, 2, 3 & 5:

- Activities may need to be scaffolded to guide learners to achieve assessment standards.
- Some instructions and responses will need to occur in a one-on-one situation, whether it is between learner and teacher or learner and peer.
- The teacher cannot expect all of the learners to respond in exactly the same mode. A variety of modes of response must be allowed on the part of the learners to cater for different barriers and paces of learning. For example where a learner is expected to investigate an issue and *cannot write* a response, allow this learner to *speak* about the findings as a response. The teacher must be flexible and allow the learner to communicate in the mode(s) which are most suited to his level of development and/or learning barrier. This is applicable to assessment standards where the learners are required to describe, explain, suggest, discuss, express, demonstrate knowledge, know, name, identify, draw up information, list, tell, reflect, debate, comment, propose, report, respond
- Assessment standards that require the learner to *demonstrate certain behaviour* can be assessed by observing learners and how they react in certain situations in the classroom. Such assessments should not be once off, but should be made regularly and continuously while the learner is in the classroom.

- Where certain behaviours are difficult for a child to demonstrate the actual behaviour, case studies or role play could be used to determine how a learner would react / behave by getting them to respond in another mode to the situation.

Assessment standards that require the learner to *draw and colour* could be adapted to allow the learner to *describe* the product which is to be drawn, e.g. SA flag, and /or work with a peer as an assistant who follows verbal instructions to draw the product on behalf of the learner who experiences the barrier. Alternately the pieces of the flag could be provided in the form of a jigsaw puzzle of sorts where the different pieces / colours require correct placement.

- When working with assessment standards that require identification of visual signs:

Example: Road signs

- The teacher needs to adapt classroom methodology to allow all learners to engage in the activity by providing some learners with actual visuals while explaining the shape and colours of the signs and their features to other learners.
- In other words the teacher must involve all learners in the same assessment standard, but the mode in which an instruction and information is given to the learners will differ according to their learning barrier
- This is applicable for assessment standards where learners are required to identify, distinguish, recognise, sequence pictures, interpret, consider, select, apply information, implement a method, evaluate, plan, analyse, examine, match and compare.
- Provision of learning, teaching and assessment in a variety of media (e.g. print, visual, audio, etc.) to allow all learners to access information.

Objects provided must be age and developmentally appropriate for each learner, so a variety of one type of object may be necessary in the classroom, e.g. one learner may require a larger size of the object than other learners or a brighter colour to make handling of the object accessible.

- The learning context must be the same for all learners, with variances in activity/ies to cater for diversity – this is important so that learners all feel they belong to the same class.
- Learners should be grouped according to the focus of the activity. Group learners according to ability / barrier for the *learning of skills*. Group learners in mixed groups when applying skills. They can participate in any mixed group activity/ies where they can apply a particular skill as main focus of the activity.

Example: Hitting a target activity.

1. Descriptors for each criteria for the activity must be differentiated to accommodate the specific

barrier – where the sighted child may be required to throw a ball at a hoop, the blind child may be required to throw a ball in the direction of an auditory stimulus.

2. The learners need to display accuracy.
3. The “target” for which they are aiming will differ

- Scaffold the learning of a skill from basic parts to the complete skill.
- Practise skills as isolated units, not in a sequence, with isolated body parts, not whole body action where learners experience barriers. Allow such learners to first imitate the technique, adding objects later.
- Engage in group / class activity/ies and games where they fulfil a specific role with the skill the learner is able to perform.

Example: Game of rounders

1. A learner can catch a ball, at the end of the field
2. The learner could also record the team’s goals
3. Games need to be adapted to accommodate isolated skills.

- Provision of appropriate learning and teaching support material:
 - Different size objects, e.g. range of different size balls
 - Brightly coloured objects
 - Objects which emit sounds when they move
 - Tees for striking and kicking
 - Safety of playing area imperative, especially where blind learners are present
- Make use of a buddy system:
 - Especially relevant for blind learners where they require a partner to guide them around the playing area (use “wrist” leash) or in a particular direction or provide verbal cues
 - Cooperative work
 - Peer teaching
- Adapt skills, rules and equipment or use thereof to cater for all learners.
- Methodology:
 - Verbal instructions accompanied by visual – pictures, demonstration, cue words
 - Physical guidance of a learner through a skill where allowed to kinaesthetically experience the skill by another learner or the teacher actually guiding the body parts through the skill

BARRIERS EXPERIENCED BY LEARNERS	IMPLICATIONS:	STRATEGIES:
Health promotion:	<ul style="list-style-type: none"> The learner may experience problems with listening, speaking, and reading skills. Experience problems to participate in a group 	<ul style="list-style-type: none"> See the section on Languages where adaptive strategies for listening, speaking and reading are dealt with comprehensively. Allow them to respond in other forms, which accommodate their barriers. The use of gestures, body language, sign language, and mime actions must be encouraged. Each learner must be accommodated in an activity group, by allowing them to contribute to the product in a manner that accommodates their barrier. Learners can make a contribution to the process by making input into the words and actions of the peers, and can contribute to the product by assisting with the refinement thereof during the development process. They can also be used to assess final products according to given criteria. It needs to be emphasised that it is not only the one learner who develops the product, but all role players in the group. Individual strength may lie in different roles in the process.
Social Development:	<ul style="list-style-type: none"> Due to the lack of life experience, the learner may experience difficulties interpreting the interrelationships between diverse cultures and religions The learner may not automatically transfer knowledge and skills learnt from one setting to another. 	<ul style="list-style-type: none"> It will be necessary to talk through concepts/ideas with them. Ask relevant questions to guide them to interpret this information. Be prepared to re teach the skill in all new settings.
Personal Development:	<ul style="list-style-type: none"> Certain behaviours are difficult for learners to demonstrate. 	<ul style="list-style-type: none"> AS's that require the learner to <i>demonstrate certain behaviour</i>, can be assessed by observing learners and how they react in certain situations in the classroom. Such assessments should not be once off, but should be made regularly and continuously while the learner is in the classroom. Where certain behaviours are difficult for a learner to demonstrate the actual behaviour, case studies or role play could be used to determine how a learner would react / behave by getting them to respond in another mode to the situation.
Physical Development and Movement:	<ul style="list-style-type: none"> The learner may experience problems with gross motor skills: They will have difficulty with activities such as: kicking, catching, throwing, hitting, running and dodging. 	<ul style="list-style-type: none"> The learner can spend a lot more time on practising skills before they join competitive games. First start with stationary objects before using moving objects. Equipment must be adapted to include learners with barriers. Slow down the pace of the activity. Activities could be adapted in such a way that the peers may for example only use one hand or their non-dominant hand.

BARRIERS EXPERIENCED BY LEARNERS	IMPLICATIONS:	STRATEGIES:
	<ul style="list-style-type: none"> • Reduced stamina due to low muscle tone and other medical defects. • The lack of strength. • The student may appear slower than peers. • The learners may experience barriers with the estimation of depth, heights and distances. • The planning of sequential moves may be problematic. • The listening to instruction may be problematic. • Medical conditions may be a barrier. E.g. heart conditions and neck instability. • Sensitive eyes may become a barrier when the learner takes part in outdoor sport activities. • Learners may lack motivation to participate in competitive sport. • Peers may discriminate against these learners. • The learner will have difficulty to transfer information and skills to different situations. • The learner will experience barriers to change clothes in a set time. • The learners may experience problems to adapt to new environments when they go out on sport excursions. e.g. sports days 	<ul style="list-style-type: none"> • Be aware of medical conditions. Frequent rests and adequate fluid intake is important. • E.g. lighter shot put or hitting a tennis ball instead of a cricket ball. • Shorter distance to run or hit the ball, etc. • Encourage learners to take their time. • Give them clear verbal / non-verbal instructions. E.g. get ready/run/ stop at line, etc. • Verbal and visual prompting will be important. E.g. Teacher physically takes the learner and show him where the borders of the soccer field is. • Break the movement up in smaller steps and put them in the correct order and demonstrate this movement frequently. • Refer to the listening strategies in the Language section. Make use of peer and visual support when long distances become problematic. • When these mentioned medical conditions occur it is important to know that horse riding, gymnastics and contact sport is not allowed for these learners. • Protective measures should be taken in consideration, e.g. wear hat, sunglasses and sunscreen, even on days when the sun does not seem to be all that strong. • The teacher needs to be aware of the different nature of his/her learners with regard to participation in competitive sports. Tutor and peer encouragement is important. • Offer the learner an alternative role such as timekeeper or judge if they find it difficult to deal with peers' competitive spirits. • Encourage the peers to take this learner's feelings into consideration. Reward the team choosing the learner experiencing barriers. The other team may only start later. • Be prepared to re-teach skills in new situations. • The learner may be given extra time to dress and undress himself. Allow them to change in privacy. • Matters to discuss with the learner and or parents beforehand: <ul style="list-style-type: none"> ○ Distance and mode of transport. ○ The departure and arrival times.

BARRIERS EXPERIENCED BY LEARNERS	IMPLICATIONS:	STRATEGIES:
		<ul style="list-style-type: none"> ○ What do they need to bring along with them. ○ Where the bathrooms are. ○ Discuss a particular landmark with the learner in case they get lost. ● Matters to take in consideration beforehand: <ul style="list-style-type: none"> ○ Inform the other people involved about the learner's barriers and special needs. ○ Make use of peer/buddy help to ensure that the learner does not become lost in the crowd.

SECTION 4

IMPLICATIONS OF INCLUSION FOR TEACHING METHODOLOGIES

4.1 Introduction

Education White Paper 6 on Inclusive Education provides a very clear direction regarding the importance of curriculum flexibility in meeting the full range of learning needs. The policy states that: ***Central to the accommodation of diversity in our schools, colleges, and adult and early childhood learning centres and higher education institutions, is a flexible curriculum and assessment policy that is accessible to all learners, irrespective of the nature of their needs.*** In addressing the diverse needs of the learners, the curriculum needs to be understood in its entirety. This includes:

- The content (i.e. what is taught)
- The language or medium of instruction
- How the classroom is organised and managed.
- The methods and processes in teaching
- The pace of teaching and the time available to complete the curriculum
- The learning materials and equipment that is used
- How learning is assessed.

The aforementioned issues need to be seriously considered in making curriculum accessible to all learners.

This section will pay particular attention to the teaching methodology component, however it should be noted that in the discussion of the teaching methodologies other factors such as classroom management, the content of teaching and learning, the pace of teaching and learning, learning and teaching support material, will also come into play.

4.2 Framework for Teaching Methodologies

All teaching methodologies should be underpinned by the following principles:

- The learner is the focal point of all teaching, learning and assessment.
- All learners are equally valuable.
- Lessons encourage the participation of all learners (full or partial)

- Learner differences are an important resource for teaching, learning and assessment,
- All teaching learning and assessment should be adapted to suit the needs of learners, and not the other way round.
- Appreciation of people who are from different backgrounds, be it cultural/language/ religion etc.
- Give learners the opportunity to record their work in different ways.
- High expectations for all learners
- Clear expectations (clarity of focus)
- The interests of the learners are considered.
- Levels at which the learners are.
- How learners learn best
- The pace at which learners learn.

The implications of the above principles for the delivery of teaching methodologies are of vital importance to this section. Effective teaching methodologies will have the principles as their point of departure.

4.3 Teaching Methodologies

It should be noted that there are several methodologies, but only one methodology has been selected to illustrate how the different needs of learners could be catered for in one lesson, and that is co-operative learning.

In applying teaching methodologies, teachers should bear in mind that there is no single classroom where all learners will be exactly the same, or learn in the same way, and at the same pace. As a result, teachers are required to be creative in the use of a variety of teaching methodologies to reach learners who are at different levels. Multi-level teaching is of vital importance in addressing the different needs of the learners. It should be noted that multi-level teaching is not a methodology as such, but a golden thread that should run through the implementation of all methodologies to reach learners at different levels.

4.4 Multi-Level Teaching

4.4.1 What is multi-level teaching?

It is an approach that assumes the principles of individualisation, flexibility and inclusion for all learners regardless of their personal level of skills. Teachers should unconditionally accept the learners who experience barriers and involve all learners in all classroom activities.

In contrast to preparing different lessons for different learners, multi-level teaching advocates for one lesson with varying methods of learning, teaching and assessment. The lesson must include a variety of teacher techniques aimed at reaching learners at all levels. This means:

- Considering learners' learning style when planning presentation methods.
- Involving them in the lesson through questioning that is aimed at different levels of thinking (Bloom's Taxonomy)
- Acknowledging that some learners will need adjusted expectations
- Allowing learners to choose a method of their preference/or competence in demonstrating knowledge, skills and values.
- Accepting that these different methods are equal value
- Assessing learners in terms of their differences.

4.4.2 The three-step process in developing a lesson to accommodate diversity

See also above under Section 2: Differentiated Lesson Planning

For teachers to develop lessons that accommodate the different levels of learners, the following steps are important:

Step 1: Identify assessment standard(s) with the underlying Skills, Knowledge and Values (SKVs)

Identify the assessment standard(s) you are working towards and the SKVs that you want to achieve. Then clearly communicate to learners what they are expected to achieve at the end of the lesson.

Example: Life Skills

<p>Learning Area: Life Orientation: Grade 2</p> <p>Learning Outcome 3: Social Development:</p> <p>Assessment Standard 2: Identifies, draws. and colour the South African flag.</p> <p>The SKV from AS2:</p> <p>Identifying</p> <p>Drawing</p> <p>Colouring</p> <p>Knowledge of the South African flag</p>

Step 2: Determine the teacher’s methods of presentation

The lesson cannot be presented in one way to all learners who are able to benefit in varying degrees of SKVs. The teacher’s methods of presentation should consider the learners’ learning styles, levels of thinking and levels of participation.

Bloom’s Taxonomy

Bloom’s taxonomy is one of the useful tools for reaching learners who are at various levels. All learners are involved in the lesson.

The teacher asks questions that are suitable for the different levels to allow maximum participation of all learners. The following table gives examples of how to apply the tool, to enhance participation:

This example on ‘recycling’ could be applied to the lesson on ‘The South African Flag’.

Areas	Definition	Examples of questions	Key verbs	Classroom products
Knowledge	Knowing and remembering facts	What does ‘recycling’ mean?	Match, recognise, list, describe, name, define, show, record, select, identify.	Report, Map, worksheet chart.
Compre-hension	understanding	Explain ‘recycling’ in your own words.	Explain, locate, inquire, demonstrate, discover	Diagram, model, game, picture, teach a lesson, time line.
Application	Doing, making use of what is known	How can you ‘recycle’?	Model, apply, code, collect, organise, construct, report, report, experiment, sketch, paint, draw, group.	Survey, diary, code, scrap book, photographs, cartoons, model, illustration, sculpture, learning

				centre, construction
Analysis	Explaining what is known	Give reasons why recycling is important in South Africa.	Categorise, take part, analyse, separate, dissect, compare, and contrast.	Graph, survey, report, time line, family tree, commercial, fact, file, questionnaires.
Synthesis	Putting together the known into something new.	Design a programme on improving recycling at school and at home.	Add to, create, imagine, combine, suppose, predict, role-play, change, hypothesise, What if? Design, invent, infer, , improve, adapt, compose	Story, poem, play, song, news article, invention, radio, show, dance, comic strip.
Evaluation	Judging the outcome	Evaluate the benefits of the recycling programme at school and at home.	Justify, debate, solve, recommend, judge, criticise, prove, dispute.	Survey, panels, self-evaluation, Conclusion, recommendation.

The teacher does not need to use all the levels in all lessons – but there should always be possibilities for several levels of cognitive skills. The next example combines some of the levels:

The teacher may choose to use the research method. Learners are given a list of questions to guide the research projects. The levels of questions are varied from simple to complex e.g.

1. How many colours does the flag have?
2. Identify shapes on the flag?
3. Which colours are there?
4. Draw the flag
5. Compare the S.A flag with the American Flag.
6. What are the differences?
7. What are the similarities?
8. Why is it important for every country to have a flag?

The different levels of questions will allow participation by all learners.

Learning styles: Make the flag available for the visual learners to see, explanation of the flag will be necessary for the learners with visual barriers, allow the oral presentations to accommodate the auditory learners, this should be accompanied by sign language to accommodate learners with auditory barriers.

Step 3: Determine the assessment standards which will determine the learners' method of practice

The teacher should allow and encourage learners to demonstrate their attainment of SKVs in terms of their own abilities.

Example

Learners who have a strong linguistical intelligence, do literature review on flags and explain to the other learners what they have learnt about flags in the literature. Learners with a strong logical mathematical intelligence will analyse patterns of the flags and their relationships, learners with a strong musical / rhythmical intelligence may compose a song about the South African Flag.

Use different strategies to assess the evidence of a learner's performance. Equal value should be attached to all strategies of assessment. Evidence can be collected of oral, written, and/or art work and the one is not more valuable than the other. (See section on alternative assessment.)

4.5 Co-operative Learning as a Teaching Strategy

4.5.1 What is co-operative learning?

Co-operative learning is a way of teaching in which learners work together to ensure that all members in their groups have learnt the same content. In co-operative learning groups are organised and tasks are structured so that learners must work together to reach a goal, solve a problem, make a decision, or produce a product.

4.5.2 Grouping

Flexibility and variety in groupings should be encouraged. Although heterogeneous groups are recommended, there are times when it is appropriate to group learners in homogeneous groups

GROUPING OF LEARNERS

Type of Grouping	Possible uses	Points to consider
Whole class – large group	<p>Promotes belonging, reduces isolation</p> <ul style="list-style-type: none"> ○ Discussions and sharing information and experiences ○ Introducing new topics, themes, units ○ Developing new concepts, skills and understandings ○ Developing and refining classroom expectations, rules and procedures 	Physical inclusion does not guarantee instructional inclusion!
Small group instruction	<p>Can be facilitated by the teacher, a learner or the group itself</p> <ul style="list-style-type: none"> ○ Same ability/skill group can help the teacher to focus on developing a particular skill; learners with specific disability could also work around certain skills in a ‘same disability’ group (e.g. Braille, sign language, mobility, life skills instruction) ○ Mixed ability/skill group useful for project work, learning a new skill or practicing one recently learned, discussing an assignment, problem solving – different objectives and sub-tasks can be assigned to different learners; it promotes co-operation, peer-support and valuing individual contributions 	Same ability/skill groups should not become permanent and they should not be composed of same learners all the time in order to avoid labelling and isolation. They should only be used to learn a particular skill.
Paired groups	<p>Two learners work together: offers opportunities to enhance social and communication skills and friendships; can provide direct instruction and build self-esteem</p> <ul style="list-style-type: none"> ○ Can be formed on the basis of same/mixed skill/ability, interest, etc. Could also pair a disabled and non-disabled learner ○ Can be same Grade mates or cross-Grade mates ○ One learner is assigned as a ‘tutor’ based on the skill, ability or experience. 	This way of working needs some practice so that ‘tutors’ will not just pass on ‘correct answers’. Pairing needs to be grounded on learning for both, and the tutor should not always be non-disabled learner.
Interest group	<p>Paired or small group where learners share the same interest.</p> <ul style="list-style-type: none"> ○ Interest can be a topic, a learning area, a specific skill. ○ Encourage learners to learn more about their specific interest – at their own level 	<ul style="list-style-type: none"> ○ Usually highly motivational ○ Learning outcome should be shared with other learners to increase learning of all learners
Co-operative expert groups (jigsaw)	<p>All groups are given the same topic but each learner in the group is given one part of the topic to learn (according to his level, interest, etc.)</p> <ul style="list-style-type: none"> ○ It is the responsibility of each member to learn his/ her part, thus becoming ‘expert’ ○ After studying individual parts, the group comes together and each learner presents his part to complement to the whole. ○ Another possibility: A topic and its sub-topics are identified. In each group, each member is assigned with a sub-topic. New groups get together according to sub-topics. These groups are now ‘experts’. In the expert groups learners study about the sub-topic. Then they get back to their original group and share what they have learned in the ‘expert’ group. 	<ul style="list-style-type: none"> ○ It is important to ensure that each member gets to his/ her work done – support might be needed here ○ Allows for individual and group activity ○ Feedback – sharing in the groups is essential. This might require support.
Cluster groups	<p>Cluster groups are grouping of all learners within a class for small instructional groups, based on one or more learner characteristics.</p> <ul style="list-style-type: none"> ○ Usually learners stay in the cluster group for a longer period for a specific instructional reason (e.g. accelerated 	<ul style="list-style-type: none"> ○ Cluster group should not be used for anything else than for an instructional purpose.

Type of Grouping	Possible uses	Points to consider
	maths, community project, second/ third language tuition)	<ul style="list-style-type: none"> ○ Grouping should not encourage negative labelling. ○ Learners can belong to several clusters in different learning areas

4.5.2 Characteristics of effective Co-operative Learning Activities

Characteristics	Explanation	How to achieve	Examples
Face-to-face interaction	<p>Learners should interact directly with one another when carrying out collaborative activities.</p> <p>Interaction needs to take place among learners, not between learners and learning materials.</p>	<p>The seating arrangement should allow face-to face interaction, e.g a circle.</p> <p>Various modes of communication should be provided to facilitate proper interaction.</p>	<p>Auditory barriers: Learners who lip-read will benefit from the 'circle' seating arrangement.</p> <p>Visual barriers: Excessive/inadequate light should guide the sitting arrangement in the classroom.</p> <p>The modes may include and not limited to: SASL, AAC, spoken, computers with voice recognition software etc, gestures and symbols.</p>
Equal opportunity for success	All learners should have a chance to contribute to the success of the group.	For learners who experience barriers to learning the teacher should adapt the criteria for success and expectations according to the needs.	Learners who are to perform specific tasks should be provided with the necessary support and resources e.g. Those learners who experience communication barriers (specifically auditory) the telephone may not be an appropriate means of making appointments. Therefore writing and faxing/posting/ hand delivery could be a viable option.
Individual accountability	All learners should be held individually responsible for learning the material and contributing to the group.	Learners are allocated various tasks, such as conducting interviews, consulting literature visiting polluted sites, and visiting municipality offices to investigate costs of cleaning up.	Teacher looks at the ability of the tasks in task allocation. Learners experiencing visual barriers may need audio-tapes, Braille, computers with voice synthesisers when allocated the task of recording information when conducting interviews to enhance participation.
Interpersonal skills	To ensure that members learn a range of interpersonal and social skills for	Learners should be encouraged to value each others' contribution.	When visiting dumping sites, learners who experience mobility barriers may be assisted by others, e.g. pushing the wheel chair.

Characteristics	Explanation	How to achieve	Examples
	example communication skills, leadership skills, decision-making skills, trust building, time management and conflict management.	Learn to listen to each other and not to outsmart each other. Learn to take turns in discussions and not dominate.	Where shelves are too high, they may help with bringing the books nearer. At the dumping site, learners with visual barriers; may be offered sighted guidance
Learner reflection	At the end of the activity learners evaluate how well their group functioned and whether their goals were achieved.	Learners raise problems experienced, what they learnt from the exercise. Write about the challenges, how they overcame the obstacles.	Communication barrier: e.g. learners entitled to SASL were not accommodated. Physical Barrier: Appropriate transport was not provided. Visual barrier: At the dumping site there was no person to explain to learners. Social barriers: Lack of co-operation among learners.
Positive inter-dependence	The accomplishment of the group goal should depend on all group members working together and co-ordinating their actions.	Each learner should be encouraged to participate fully or partially in group activities.	Identify strengths of learners within the group (logical-mathematical, linguistic, spatial, intra-personal, interpersonal, musical, bodily-kinesthetic and visual intelligences). E.g. The information gathered from interviews or field work in Braille, tape-recorder and computer (were possible). They may also conduct interviews learner with strong linguistic intelligence will do report writing, and the one with a strong mathematical intelligence will interpret graphs, loads of trucks and their cost. and the with musical intelligence can compose a song about pollution. In be responsible for recording A learner with very little written language might be expected to do an oral presentation that is shorter than that of others. (Communication barrier)

SECTION 5

INCLUSIVE STRATEGIES FOR LEARNING, TEACHING AND ASSESSMENT

5.1 Introduction

Inclusive strategies for learning, teaching and assessment allow learners to demonstrate a level of competence and to achieve an outcome in a way which suit their needs. All assessment practices should be in line with the NCS guidelines. Assessment should be adapted according to the level of support that each learner needs. The curriculum emphasizes the principles of social justice, healthy environment, human rights and inclusivity (DOE, 2003: Teacher's Guide for the development of Learning Programmes, p.5). Thus, regarding assessment, (i) More time can be provided for assessment (DOE, 2003: Teacher's Guide for the development of Learning Programmes, p.11) and (ii) Methods of assessment are flexible (DOE, 2003: Teacher's Guide for the development of Learning Programmes, p.1). There are many practical ways in which teachers can adapt the way in which activities and assessment are planned, structured and conducted.

- Teachers should be aware that some learners might experience more than one barrier. In order to determine the nature and extent of support in terms of assessment, each learner will have to be assessed individually. Some learners may need to be monitored regularly and encouraged to complete activities.
- It is important to keep in mind that inclusive assessment strategies cannot be separated from learning and teaching, and that these strategies together form part of a continuous process. Inclusive assessment strategies thus are not to be limited to formal assessment situations but are also to be included in everyday learning and teaching.
- The following questions will be dealt with:
 - What are inclusive strategies for learning, teaching and assessment?
 - What are the logistic arrangements necessary for implementing these inclusive strategies?
 - How will learners be assessed to determine the nature and level of support they need?
 - What is the role of the teacher?
 - Which barriers need to be addressed through inclusive learning, teaching and assessment strategies?

- How can inclusive learning, teaching and assessment strategies be applied in the six main learning outcomes?
- Formal assessment tasks: venues and specific interventions
- Terminology for clarification

5.2 What are Inclusive Strategies for Learning, Teaching and Assessment?

- Inclusive strategies of learning, teaching and assessment allow learners to demonstrate a level of competence and to achieve an outcome in a way that suit their needs. All assessment strategies should be in line with the NCS guidelines. Assessment, including CASS, should be adapted according to the level of support that each learner needs. Different types of barriers will have to be addressed through different inclusive methods of assessment. A specific barrier might require differentiation in more than one way. Strategies to be applied will vary according to whether the barrier is long-standing, recently acquired, fluctuating, intermittent or temporary.
- Some general strategies, applying to all learning outcomes:
 - Some learners may need to write in a separate venue so that a teacher or trained person assists them to become settled, and to structure the task and time allocation. This could be a temporary arrangement.
 - Long assessment tasks could be broken down into smaller chunks, on separate blocks of paper. Provide clear deadlines and checkpoints to measure progress.
 - Some learners may need minimised visual distractions in the environment.
 - Some learners may need to work in short units of time with controlled breaks.
 - Demonstrate tasks / activities to learners and provide them with a checklist.
 - Emphasise detail / important information through colour coding or isolation.
 - For some learners drawings should be embossed or made in such a way that learners can feel them in order to respond.
 - Provide visual auditory reminders indicating the amount of time left for activities.
- Inclusive learning, teaching and assessment strategies may be dictated by factors such as time, mode and necessity for substitution.
- Inclusive learning, teaching and assessment strategies will be indicated in terms of the six language learning outcomes identified in the NCS. With the exception of language structure and use, all the outcomes can be applied to all learning areas.
 - Listening

- Speaking
- Reading and viewing
- Writing
- Thinking and reasoning
- Language structure and use
- Mathematics Learning Outcomes

5.3 What are the Logistic Arrangements Necessary for Successful Implementation of Inclusive Learning, Teaching and Assessment Strategies?

The learning site where the inclusive learning, teaching and assessment strategies are implemented must ensure that the following are in place:

Audio equipment:	<ul style="list-style-type: none"> • Audio-tape recorders; cassettes; batteries; microphones; Dictaphones • Headphones are permissible in order not to create a disturbance.
Video equipment:	<ul style="list-style-type: none"> • Video-recorders, televisions, video cameras, cassettes; batteries; closed-circuit television
Assistive devices:	<ul style="list-style-type: none"> • <u>FM system</u>¹; batteries for assistive listening devices
Computers:	<ul style="list-style-type: none"> • Voice <u>synthesiser programmes</u>; Braille printers; <u>Braille programmes</u>; back-up systems; headsets / pointers
Electrical equipment:	<ul style="list-style-type: none"> • Cables, power points, extension cables, adaptors,
Accessible and appropriate venues:	<ul style="list-style-type: none"> • Ensure that the inclusive learning, teaching and assessment strategies venue is accessible to all learners and staff (e.g. ramps and wide enough doors). • Ensure that bathrooms are close and accessible to all learners while still allowing privacy. • Ensure that equipment is accessible to all learners (e.g. pay attention to height of laboratory tables, etc.). • Adequate space for equipment and / or extra support staff (e.g. <u>South African Sign Language interpreters</u>, <u>scribes</u> and <u>readers</u>). • Separate assessment / task completion venue for learners who use equipment which may distract other learners or for learners who need to complete tasks orally. • Appropriate lighting for different needs (e.g. some learners may need dim light, others bright light).
Addressing time constraints:	<ul style="list-style-type: none"> • Material should be taped well in advance (audio and video). • Material should be <u>converted into Braille well in advance</u>. • Equipment should be checked on a regular basis to ensure equal access to inclusive learning, teaching and assessment strategies. • Teachers should make provision for learners who need extra time to complete tasks. • Extra time should also be allocated for learners who may need to rest during activities / tasks.
Access to support services:	<ul style="list-style-type: none"> • <u>Braille printing services</u>
Support staff for equipment:	<ul style="list-style-type: none"> • Staff members who are capable of solving problems with equipment should be immediately available. • Alternatively, all teachers should be trained to deal with equipment.

¹ Please note that explanations of all underlined terms are provided at the end of this section.

Scribes	<ul style="list-style-type: none"> • Learning sites need to employ a number of full-time scribes, depending on the need of the learners at the learning site. • Scribes should be trained for educational purposes.
SASL interpreters	<ul style="list-style-type: none"> • If there is a need for SASL interpreters, it means that two interpreters per class should be employed on a full-time basis. • SASL Interpreters should be trained for educational interpreting • Learners, who need SASL, will need it not only for assessment purposes, but also throughout the inclusive learning, teaching and assessment process. • <u>Information on available SASL interpreters should be obtained from the DST.</u> • Teachers and learners should be informed of the role of the interpreter.
Tactile interpreters	<ul style="list-style-type: none"> • Some learners need to access communication through <u>tactile means</u>, which can only take place by means of one-to one communication. • Two such interpreters need to be employed for an individual learner.
Readers	<ul style="list-style-type: none"> • Some learners may need a reader to be able to access written texts.

5.4 How will learners be Assessed to Determine the Nature and Extent of their Needs in terms of Inclusive Learning, Teaching and Assessment Strategies?

Assessment and support teams

Each school must have an assessment team with representation from the different phases, which will be responsible for determining the policy and procedures as early as possible in the year. This team will take decisions on:

- Which learners must have access to inclusive strategies of learning, teaching and assessment
- Please take note that some learners may experience more than one barrier.
- The materials needed and practical arrangements to be made
- The monitoring and reporting of the process

Staff from special schools, special schools as resource centres, full service schools, university professionals and district officials could train, monitor and support the school teams in the process. All decisions made by the school team regarding inclusive strategies of learning, teaching and assessment will be included in the learner profile, which accompanies him/her to the end of his/her school career. Teachers and school assessment teams should have clarity on the process-taking place between the District Support Team and the school assessment team. (See District Support Team Concept Document.)

5.5 What is the Role of the Teacher in the Inclusive Learning, Teaching and Assessment Strategies?

- Learners should be assisted by the teacher to settle down and to understand the structure of the task and the time allocation per activity for continuous assessment. (CASS).
- Before and during the learning, teaching and assessment process the teacher must ensure that equipment is in working order (See section on logistics).
- At the end of a 'formal assessment session', the teacher must make sure that all assessment sheets/papers are collected and the number of pages written verified.
- Please take note that when an SASL interpreter is used for learning, teaching and assessment tasks, the interpreting process should not be interrupted under any circumstances because it will be disruptive and distractive for the learner.

5.6 Which Barriers Need to be Addressed by Inclusive Learning, Teaching and Assessment Strategies?

- Visual barriers
- Communication barriers
- Physical barriers
- Cognitive barriers
- Social and environmental barriers
- Auditory barriers

5.7 Inclusive Learning, Teaching and Assessment Strategies and the Learning Outcomes

The six language learning outcomes of the NCS will be used to illustrate implementation of inclusive learning, teaching and assessment strategies. (Mathematics is included as well.) Teachers should keep in mind that these outcomes apply to all learning areas.

- Listening
- Speaking
- Reading and Viewing
- Writing
- Thinking and Reasoning
- Language structure and use
- **Mathematics**

5.8 How can the ‘Listening’ Outcome of the NCS be Attained Through Inclusive Learning, Teaching and Assessment Strategies?

ACTIVITY / LEARNING MATERIALS	INCLUSIVE STRATEGIES
Multimedia texts such as videos, DVDs; radio broadcasts	<ul style="list-style-type: none"> • Repeat information verbally or in writing. • Explain visual information contained in multimedia texts to those learners who need it. • Learners who need SASL use an SASL interpreter. Information is presented with subtitles or in SASL format. If necessary, learners can rewind the video to clarify information. Subtitles are also necessary to improve learners’ reading skills. • Use tactile forms of communication / language to convey information to learners. • Provide simplified, written text based on the multimedia texts for learners whose home language is not the LOLT. Make provision for extra time for completion of activities or assessment tasks, based on the needs of learners. • Learners who experience auditory barriers should be seated in such a way that they can optimise the use of their residual hearing (they should not be seated far away from the person leading information / learning sessions). • Make use of <u>lip-reading</u> (lip movements should be clear, but not exaggerated) • The teacher should clarify with learners whether or not access to information is problematic • Acquire or develop visually orientated materials to augment orally presented tasks. Use an overhead projector. • Make sure background noises are minimized when learners are in the process of accessing information relating to activities. • Some learners may need to listen to information repeatedly. Audiotapes could be used for this purpose. Allow opportunities for replaying the tape if there is a need to do so. • Provide tactile diagrams.

5.9 How can the ‘Speaking’ Outcome of the NCS be Attained Through Inclusive Learning Teaching and Assessment Strategies?

ACTIVITY / LEARNING MATERIALS	INCLUSIVE STRATEGY
All learning activities, learning materials; CASS Tasks	<ul style="list-style-type: none"> • SASL interpreter will voice-over for learners who use SASL. • The voice-over will then be recorded on an audiotape for assessment purposes if the assessment task requires this. • Please take note that an SASL interpreter cannot interpret and act as a scribe at the same time. • Learners, whose home language is not the LOLT, should be assessed for communicative content and not for grammatical correctness. Give learners pictures and flashcards. Provide extra time for these learners while others are engaged in group work. • Encourage learners to share their home languages with each other and provide opportunities for this interaction. • Allow learners who are not comfortable with using the LOLT to write and encourage them to start using the LOLT. • Learners use gestures to point at pictures or objects to indicate what they

ACTIVITY / LEARNING MATERIALS	INCLUSIVE STRATEGY
	<p>want to say.</p> <ul style="list-style-type: none"> • A practical activity can be arranged for learners experiencing language barriers to enable them to demonstrate competence • Intervention in terms of pronunciation may be required. • 'Describe', 'tell', 'speak', 'explain' and similar verbs are to be read as 'sign', meaning that learners will participate by using SASL.

5.10 How can the 'Reading and Viewing' Learning Outcome of the NCS be Attained Through Inclusive Learning Teaching and Assessment Strategies?

ACTIVITY / LEARNING MATERIALS	INCLUSIVE STRATEGY
All learning, teaching and assessment tasks	<ul style="list-style-type: none"> • Ensure that all learners are familiar with their surroundings. When visiting places, e.g. museums, provide learners with visual information about their surroundings and assist them in orientating themselves in their new environment. • Provide opportunities for learners to work in groups, especially when the assignment has a visual component (e.g. conducting an experiment in a science class.) • Include tactile components in all tasks where possible. • Do not change the content of tasks. • Rather ensure that sentences are not too complex and give synonyms for words, e.g. 'Provide (give)'. • Present written material in video / audio format. Include sub-titles / SASL format.
Illustrations and diagrams	<ul style="list-style-type: none"> • Avoid using illustrations only, especially diagrams with fine details. • Tactile diagrams could be used. • Drawings / diagrams could be described. • This type of question may be substituted with alternative questions, depending on different needs of learners.
Dictionaries:	<ul style="list-style-type: none"> • Learners should be given dictionaries if they need that. Ensure that an adequate number of dictionaries are available. • Teachers should be aware that not all learners are able to use a dictionary independently. • Intervention through SASL may still be required.

5.11 How can the ‘Writing’ Learning Outcome of the NCS be Attained Through Inclusive Learning Teaching and Assessment Strategies?

ACTIVITY / LEARNING MATERIALS	INCLUSIVE STRATEGY
All materials, activities and CASS tasks	<ul style="list-style-type: none"> • Learners can respond in Braille, by typing, SASL or orally. • Allow learners to circle or underline responses or point to the desired choices for specific activities. • The use of a computer (including voice-synthesiser programmes) / typewriter during the learning, teaching and assessment process may be used for the purpose of a) providing activities / tasks in a format that is accessible to the learner or, and b) to formulate and produce answers. The learner should be familiar with the specific software/typewriter. • When a learner who uses SASL presents a written task, it is essential that the assessor understand the structure of SASL in order to verify the content and to assess the task fairly. • In order to enable learners to improve their writing skills, the teacher should be able to explain the difference in structure between SASL and the LOLT of the learning site. • Provide dictionaries. • Learners may use personal computers with spelling and grammar checkers. Teachers should first try other means of developing writing skills. • Additional time for learners with different needs, e.g. where the learner types by means of a head pointer or toe, educational interpreting, audiotapes etc. • Allow drawing or oral explanations instead of writing. • Provide written copies of work that need to be copied from the chalkboard or overhead projector. Alternatively, a viable solution might be to provide the learner with a copy of the assessment task produced by the teacher or the peer. • Provide worksheets with larger space for writing.

5.12 How can the ‘Critical Thinking and Reasoning’ Learning Outcomes of the NCS be Attained Through Inclusive Learning, Teaching and Assessment Strategies?

ACTIVITY / LEARNING MATERIALS	INCLUSIVE STRATEGY
Arguments, debates, analysis of phenomena, evaluation	<ul style="list-style-type: none"> • For inclusive strategies refer to speaking, listening, reading / viewing and writing

5.13 How can the ‘Language Structure and Use’ Learning Outcome of the NCS be Attained Through Inclusive Learning Teaching and Assessment Strategies?

ACTIVITY / LEARNING MATERIALS	INCLUSIVE STRATEGY
	Learners whose home languages is different from the LOLT, should be allowed to take their home language as a subject (languages learning area – 11 official languages, including SASL – NCS)

5.14 How can the Mathematics Learning Outcomes of the NCS be Attained Through Inclusive Learning Teaching and Assessment Strategies?

ACTIVITY / LEARNING MATERIALS	INCLUSIVE STRATEGY
	<ul style="list-style-type: none"> • Use of calculator, matrixes, computer programmes and concrete objects • Use of reader / scribe • Multiple choice and short answer questions instead of word-problems • A graph paper could be used to assist learners to align numbers. • Have learners use a picture or sequence of pictures to demonstrate understanding of a concept or a process.

5.15 Formal Assessment Tasks: Venues and Specific Interventions

Some learners may prevent others from giving a true account of their knowledge and skills when assessed/examined, and might require assessment and assessment concessionary measures. There need to be some documentary proof to substantiate the following barriers. School teams can discuss decisions in this area with the institution based support teams, personnel from special schools, special schools as resource centres, full service schools or necessary district-officials.

Ad-hoc arrangements

- This applies in cases of pregnancy or in cases of injury, trauma, hospitalisation and imprisonment or problems due to medical conditions just before or during assessment. Should it become necessary for a learner to apply for alternative assessment procedure due to one or more of the above reasons, an ad-hoc decision should be taken at that time, in consultation with the Provincial Assessment Concessions Committee.

CLARIFICATION OF TERMINOLOGY

- **FM system:**
A device which is used by teachers and learners to amplify the teacher's voice and reduce background noise.
- **Lip-reading**
Many learners who are deaf or experience hearing loss have acquired the skill to read lips. Teachers must in all cases of hearing loss take the necessary measures to ensure that they face learners when speaking and facilitate lip reading.
- **Voice synthesiser programmes:**
Computer devices that convert text into audible language for learners who experience vision barriers.
- **Braille programmes**
Programmes that convert ordinary text into Brailled text
- **South African Sign Language (SASL)**
SASL is the primary means of learning and communicating for a number of pupils. It is a visual-gestural language, which is acquired naturally by young children, provided they are exposed to it. The minority of learners who need SASL acquires it at home, and the majority acquires it at schools where SASL is used as the medium of instruction. Therefore, any spoken /written language must be considered as a second language. Oral language acquisition is very slow and in most cases inadequate. A learner who needs SASL support does not necessarily access spoken language fully by means of lip-reading.

Recommendation: It is recommended that legislation be passed according to which SASL will be recognised as an official language and be offered as such to learners who need it as a LOLT, and also to other learners who may learn it as a First or Second Additional Language. This recommendation is linked to the recommendation by PanSALB as stated in the NCS.

- **SASL interpreter:** A person who converts spoken language to SASL or visa-versa.
- **Scribe**

A person (scribe) reads questions / tasks / activities to the learner and writes down the learner's spoken words verbatim. A scribe could be an teacher or a departmental official, but does not have to be a member of staff of the centre concerned. Training of scribes is highly recommended. When transcribing takes place for assessment purposes, it is recommended that a separate, venue be provided for each scribe. The scribe and the learner must each receive a copy of the question paper. In the case of writing an external assessment, a continuous cassette recording of the assessment must be made. The recorder may only be switched off to turn or replace a cassette. These recordings must be kept until the results are known. An application for additional time should accompany the application aманuensis It is recommended that, in the case of an assessment in subjects where Mathematical skills are being tested, a scribe should not be used.

- **Readers Reading to a learner/group of learners**

The reader can read the paper to one or more learners simultaneously. Both the reader and the learner(s) should have assessment tasks. The reader should preferably be a qualified teacher, but not necessarily from the same centre. The reader remains neutral and impartial when reading the assessment task. The learner has to finish the assessment within the allocated time. In subjects where speed is required, for example, in the speed accuracy test in Typing, and when the reading of the question paper by the learner is too time-consuming, the question paper may be read to the learner. This will require the reader to sit beside the learner throughout the learning, teaching and assessment process.

Assistive Devices for Writing:

Computers can be used to enhance the writing abilities of students by offering alternative strategies to production and learning.

As students begin the writing process, they associate sounds with the shapes of words and letters. They look to see if the words make sense and are spelled correctly. They read what they have written to themselves or out loud. When composing or revising, they look to previous sections and insert, erase, reorganize or make notes. Pens and pencils are their writing tools; legibility in written work is important.

The Writing Continuum

Students with disabilities frequently require alternative ways of creating written text. There is a continuum of writing tools and strategies that includes pencils to computers to input by voice.

Although low-tech options should be considered, computers offer a variety of features that can support the writing process.

By using a keyboard to write, legibility issues are often eliminated. Students are able to see and hear as they write with special software programs. Computers can also provide assistance with visual organization, outlining, and step-by-step direction following - - all of which support the writing process.

How Computers Change the Writing Process

Electronic editing changes the writing process by separating the composition of ideas from printing the ideas on paper with ink. With a computer as a writing tool...

- Handwriting problems disappear
- Proofreading is easier because text is more legible
- Students experience less frustration with the tool's limitations
- Complete re-writes are unnecessary
- Students produce less cramped vocabulary (and thinking) based on fear of making mistakes
- Spelling and mechanics can be de-emphasized and moved to the end of the writing process
- Organization can be dealt with easily by cutting and pasting and/or using outlining programs

Switches

Purpose of Switch Use

Switches offer access to anything electronic for persons with disabilities and are a great way to begin experiencing independent control. Through a variety of interfaces, switches are connected to electronic devices. They work to turn things on and off or indicate choices when used with scanning software or interfaces. For children with physical disabilities, a single, reliable movement can cause a toy to move or turn a radio on. Those with sensory impairments learn that they can be the controlling source of sound, light and vibration; and those with cognitive impairments are able to interact with toys and computers with a single "button", limiting the need for more complex directions. Switches provide new opportunities to learn and participate.

For example, a simple battery interface can assist a student in creating a 'Spin Art' picture with friends.

Children often begin by using switches with toys. This develops skills that can include: turning them on and off, moving them for social and communicative purposes and making choices to indicate preferences. These skills provide a foundation for learning and also for more complex technology use such as multiple switch use, computer interactions and more extensive environmental control.

Types of Switch Use

- Young girl using a blender controlled by a switch. Environmental Control of appliances such as radios, fans, blenders, televisions, etc., found in homes and schools.
- Play & Exploration are expanded through using switches to independently participate in games and other recreation activities. Battery-operated toys or games such as Light Brite and Spin Art can be easily adapted for switch use.
- Movement can be experienced with motorized mobility items such as powered wheelchairs and motorized cars (Jeeps, Big Foot cars) that are driven with single and multiple switches.
- Young boy in powered wheelchair.
- Computer Access is achieved through single and multiple switch access. Switches can be used in combination with other input devices such as head pointers and voice dictation software. Scanning systems can be employed, giving a single switch user full access to any commercial software program.
- Young girl pressing switch on computer monitor
- Communication is encouraged through early switch use. Single switch devices with recorded messages provide a way to relate language to the activity at hand and to initiate and participate in a variety of activities. More complex systems use multiple switches or internal scanning methods to access multi-layered designs.

Compact Keyboards

These keyboards have smaller keys, fewer key choices or a more "compact" layout. Some compact keyboards include a built-in track ball and/or wrist rest and may be a better choice for smaller hands or for older students with a limited range of motion. These keyboards typically feature a total of 65-90 keys with 15mm key spacing. Rather than a separate numeric pad, the numeric keys are embedded within the alpha-numeric keys; a toggle key turns them on and off.

Keyboard Layouts

The physical layout or organization of the keys is another important area to consider when selecting alternate keyboards. The standard keyboard is designed with a "QWERTY" layout,

modeled after the typewriter. This layout however may not be ideal for use by non-typists or young users and may not be the most efficient design for students with single side use.

Some keyboards are available with an alphabetical layout design. These may be preferred by students just beginning to use the computer for writing. Often keyboards with an "ABC Layout" also have larger keys. This design reinforces and builds on the student's experience with the alphabet while making the keys easier to find. The emphasis is on letter location and not on efficiency. (The first two examples were also describes under Enlarged Keyboards; they contain both features.)

There are also flexible keyboards coming with six standard overlays. The alphabet overlay is designed with larger key areas that are spaced farther apart for more controlled access. It is often used for early writing activities.

Another keyboard layout is designed for students who are able to write but who need a more efficient typing system. The keyboard design places most frequently used keys closer to the stronger fingers. It also is available in right and left-hand only layouts, making the keyboard more accessible to persons with a single functional hand.

Software utilities are available which provide the means to redesign the standard keyboard into a different layout.

In all cases, the keyboard would need new key labels to identify the new key functions.

SECTION 6

LEARNING STYLES AND MULTIPLE INTELLIGENCES

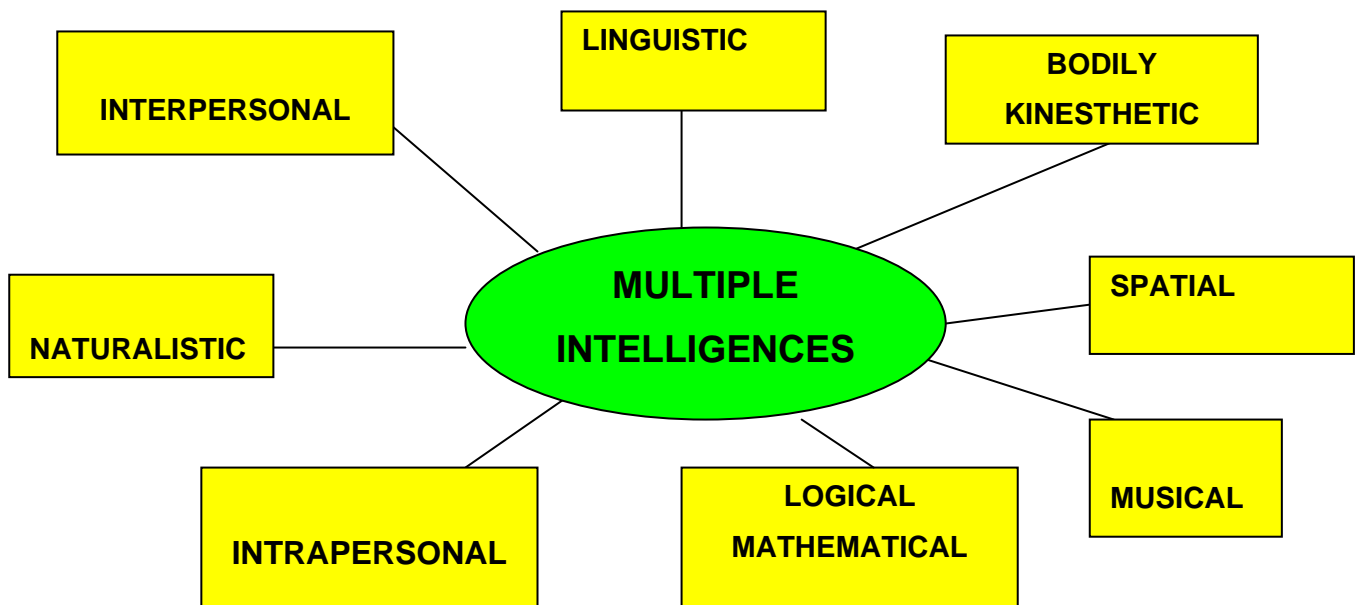
6.1 Introduction

The diversity of learners dictates the manner of implementing the curriculum. Recognition of the fact that learners possess different or multiple intelligences is crucial for the inclusive classroom. The learners' intelligence and accompanying learning styles, therefore, should be taken as a starting point in determining the teaching methodologies and assessment procedures to be applied.

LEARNING STYLES

What are the multiple intelligences?

There are at least 8 different types of intelligences²:



All learners seem to possess these intelligences to a greater and / or lesser degree.³ Teachers should be aware of the different multiple intelligences of learners and be able to identify them. These intelligences are of utmost importance in guiding the choice of appropriate teaching and learning strategies.

² Gardner

³ Armstrong 2003

6.2 How do we Recognise the Way in which Different Intelligences Process Information, and How do we Link this to Different Learning Styles?

Intelligence	Recognize by	Learning Style	Ways to reach all learners
Logical-Mathematical	<p>Strong at math & problem-solving skills</p> <p>Ability to discern logical or numerical patterns</p> <p>Ability to pursue extended lines of logic and reasoning</p> <p>Asks 'why' & 'how' questions, wants to reason things out, wants to know 'what's coming up next' - sequential thinking</p>	<p>The highly logical mathematical learners will be interested in problem solving and hypothesis – testing strategies.</p>	<p>SOLVING MATHEMATICAL PROBLEMS</p> <ul style="list-style-type: none"> - Problems should relate to social and environmental situations - Ensure that problems presented are varied in terms of complexity to address difference in abilities. - All barriers to learning should be addressed - Tactile shapes could be used for some learners, word-problems for others etc. - Special attention should be paid to the language competence of the highly mathematical learners - Ensure that learners are adequately involved in reading and writing activities, and discussions - Provide opportunities for learners to read stories involving mathematics word problems - Provide learners with the opportunities for solving word problems <p>-</p> <p>Examples:</p> <p><i>Jane has three bags of oranges. In each bag there are six oranges. How many oranges does she have?</i></p> <p>Some learners may have to see / feel the oranges, others will cope with the wording, yet others may have to draw it for themselves visually. It may be useful to re-word the problem in a different context for some learners, or make it more complex, e.g. <i>My father has lost six of his cattle and now has six at his place and another six are at his brother's place. How many cattle did my father have at the beginning?</i></p> <p>COMPUTER TIME</p> <ul style="list-style-type: none"> - Where possible, all learners need to have the opportunity to spend independent time with computers. - Provide Braille keyboards and printers - Ensure that voice synthesizer programmes are available. -Teacher moves around to assist learners with different needs - Ensure that computer tables are of appropriate height for wheelchair-users <p>OTHER WAYS TO REACH:</p> <p>objects to sort, classifying, writing applications, gadgets to take apart or fix, magnets, exploring, solving mysteries, word problems, museum trips, riddles, analysing information, outlining, grouping and calculation activities</p>

Intelligence	Recognize by	Learning Style	Ways to reach all learners
Spatial	<p>Strong visual imagination and other spatial abilities Likes to design, draw, read graphics, posters Needs pictures to understand, likes puzzles, mazes, organizing space, objects and areas Has ability to mentally manipulate forms, objects or people in space or transfer them to other locations or into other elements It's the capacity to recognize forms, shapes and how they relate and interact with another It is also sensitivity to the balance and composition of shapes</p>	<p>Learners who are visually-spatially strong learn best from information that they see or read. They have strong visual imaginations and are inclined to be involved in spatial activities.</p>	<ul style="list-style-type: none"> - Provide learners with opportunities to visualize, and sketch as they read. - Integrate painting or any other visual art form with learning experiences. - Unfamiliar words maybe explained by drawing pictures or by finding relevant images on the Internet or in SASL and Braille. - Allow use of colored pencils and supply paper in a range of shapes and sizes. - Learners should be allowed to illustrate their writing by drawings. - Use pictures out of magazines. - Introduce the drawing of cartoons with captions. - Use television shows or video programs that allow one to see the action, hear the words, and at the same time, read the text of the dialogue at the bottom of the screen; SASL interpreter if learners with SASL needs in class - Allow learners to use colored background (on computers) and / or to highlight any component of the reading texts. <p>OTHER ACTIVITIES Art, changing locations, stacking objects, putting pieces together, sports, large pieces of paper, trying things from a different angle, movement, likes mind-mapping, video, films, map making, charts, theater, wind-surfing, sculpture, roller blading, drawing and painting</p>
Interpersonal	<p>Strong people skills Ability to make distinctions among others in their moods, feelings, biases, thoughts and values It's the ability to act appropriately using knowledge of others Loves to talk & influence, usually a group leader, an organizer Communicates well Good at conflict resolution, listening, negotiating & persuasion</p>	<p>Highly interpersonal learners enjoy engaging in learning experiences in a social setting.</p>	<ul style="list-style-type: none"> - Provide opportunities to read out loud / sign and think out loud / sign about the text learners would be reading. (Take note that some readers may need SASL intervention in order to engage with written texts). - Allow group discussions (SASL interpreter for learners with SASL needs). Ensure that topic for discussion doesn't disadvantage learners on the basis of their social economic background - It is essential for some learners to talk out loud or fingerspell words as they write. -Encourage learners to create text directly from their spoken language / SASL. <p>OTHER ACTIVITIES : Promote friendships, interactive games, teams, pair up with partner, one-on-one discussion, peer teaching, group work, collaboration & empathy</p>

Intelligence	Recognize by	Learning Style	Ways to reach all learners
Bodily-Kinesthetic	<p>Ability to handle objects skilfully, either fine or gross motor movements Also the ability to control your own movements for function or expression Desire to move! Constant movement or commitment to comfort Wants to get up, move around, tap, touch, fiddle with things & do things</p>	<p>Learners who are highly bodily-kinesthetic enjoy learning whilst moving about freely and touching. They also learn best from handling materials, writing and drawing</p>	<ul style="list-style-type: none"> - Allow learners to read standing up, lying down or in some any other posture so long as it is comfortable for the learner. - Provide learners with opportunity to read and move at the same time .An older learner can read while on an exercise bike, for example. Learners should be allowed to use their hands and fingers while they read. Touching the words that they read increases their kinesthetic connection to the material - Learners whenever possible should be allowed to write in the books (not workbooks) they are reading from. It is believed this improves the real sense of kinesthetic involvement with a book. - The use of pens and pencils, as well as the use of paper that has interesting textures and surfaces provide tactile stimulation. - Physical exercise designed for relaxation may precede or follow reading and writing exercises. <p>OTHER ACTIVITIES Stretching, role play, Simon Says games, new games, building models, demonstrations, changing seating, drama, exercise, body sculpture, crafts & hobbies, dancing, games & sporting events (Ensure that the chosen activities do not exclude some learners; use parallel activities for this purpose)</p>
Verbal-linguistic	<p>Use of core operations of language Sensitivity to the meaning, sound, inflection and order of words Loves language - reads and loves to talk Constant talking, a good memory for dates & names Likes to tell and listen to stories Likes a variety of voices and remember jokes Enjoys reading</p>	<p>Learners with strong oral / SASL language abilities like to read and think out loud/ sign</p>	<p>Provide opportunities for presentations, speeches, role-play, dialogue, interactive games, writing, group work, doing reports, discussion, listening to tapes and reading - especially books with dialogue. Ensure that topics /activities do not exclude some learners on the basis of barriers identified in White Paper 6.</p>

Intelligence	Recognize by	Learning Style	Ways to reach all learners
<p>Intrapersonal (Emotional)</p>	<ul style="list-style-type: none"> • Has a good understanding of own strengths and weaknesses • Able to exercise self-control • Good at goal-setting & is comfortable being alone • Make choices in favour of long term benefit • The ability to develop successful working models of oneself <p>A way to learn and develop new behaviours based on self-knowledge</p>	<p>Learners who are highly emotionally sensitive enjoy solitude, like thinking and are happy to work alone.</p>	<ul style="list-style-type: none"> - Encourage learners to correspond with pen pals to improve personal relationships. Teacher should be available to learners who request assistance. - Promote writing contexts and other events where the learners' writing will be read in a public setting. - Learners should be given the freedom to choose their books or texts, they should where possible own these books so as to make it possible for them to write on them whenever they want, talk back to them or in some cases throw them down on the ground if they happen to disagree with what is written. - They should be provided with opportunities for unstructured writing in their diaries or anywhere where they can record their dreams, poems, and reflections of their inner lives. Such entries should not be evaluated, or even read by the teacher. - The teacher should further help learners discover whatever it takes to get them in the mood of work (reading or writing). - Learners experiencing emotional barriers (e.g. those whose self-worth is threatened by continual failure) should be assisted to regain their self-worth. Provide opportunities for learners to taste success, to master new skills and experience a feeling of competence. Keep failure to a minimum. Learners should be given credits for going about a task in the correct manner even though the final answer may not be correct. - Use art, dance, and music to promote the emotional involvement of learners. <p>OTHER ACTIVITIES</p> <p>Activities promoting thinking and imagination, journal writing, relaxation, learning about one's self, focusing and concentration exercises, self-assessment, reflection and time to be alone and process</p>