basic education
Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

CURRICULUM AND ASSESSMENT POLICY STATEMENT GRADE R-5 FOR LEARNERS WITH SEVERE INTELLECTUAL DISABILITY

WELDING

GRADE 4-5

Curriculum and Assessment Policy Statement Grade R-5 for learners with Severe Intellectual Disability

Contents

1 SECTION 1: INTRODUCTION TO THE CURRICULUM AND ASSESSMENT POLICY STATEMENT GRADES R TO 5 FOR LEARNERS WITH SEVERE INTELLECTUAL DISABILITY

1.1 Background

The South African Constitution, Act 108 of 1996, enshrines the right of every child to access quality basic education without there being any form of discrimination. The Convention on the Rights of Persons with Disabilities, ratified by the Parliament of South Africa in 2007 (Article 24) requires Government to ensure that children with disabilities are able to access an inclusive, quality primary, compulsory education and secondary education on an equal basis with others in the communities in which they live and that persons with disabilities are not excluded from the general education.

There are learners participating in the General Education and Training Band who have an aptitude and interest in applied knowledge and vocational skills for whom the National Curriculum Statement, Grades R to 12 (NCS) needs to be differentiated to make it fully accessible. This would include learners with moderate to severe intellectual disability and learning difficulties. Knowledge and skills should be presented at a more functional level and at reduced depth and breadth, whilst a number of occupational subjects are also made available. They should be given an opportunity to receive an endorsed statement of achievement that is related to learning within their interest and aptitude.

This Learning Programme has been developed to respond more effectively to the needs of these learners who have been identified and assessed through the protocols outlined in the Policy on Screening, Identification, Assessment and Support of 2014. They will benefit from curriculum content that is aligned to the Foundation and Intermediate Phase of the National Curriculum Statement at a more applied and functional level in accordance with their age, interest and aptitude.

It is critical, that through flexibility and differentiated methodologies, learners enrolled for these differentiated subjects will be able to progress with regard to applied competencies, even where they might not be able to attain the minimum requirements set for the different grades. There should always be high expectations for all learners and the necessary scaffolding and learning support to master foundational competencies relevant to the specific subject. They should be in a position to demonstrate the values and practical competencies that they have mastered which will make it possible for them to progress to either the Technical Occupational pathway or the world of work.

The learning programme is structured in such a way that it makes provision for a wide spectrum of learners with moderate to severe intellectual disability and learning difficulties across the age span. It is aimed at the full development of their human potential and sense of dignity and self-worth. It also allows for the development of their personality, talents and creativity, as well as their mental and physical abilities, cultural, social, environmental and economic competencies to their fullest potential with a view to enabling them to participate effectively and independently in a free society as adults (Convention on the Rights of Persons with Disabilities, 2006 and the White Paper on the Rights of Persons with Disabilities, 2015).

The learning programme for CSPID should be consulted in cases where a learner enters the CAPS Grades R – 5 for learners with Severe Intellectual Disability (SID) programme at a level where they require bridging to join the appropriate grade. The CSPID learning programme will provide a framework for educators to design down to ensure that there is a smooth transition into the SID learning programme.

The introduction of this Learning Programme within the National Curriculum Statement is aimed at strengthening of respect for human rights, fundamental freedoms and human diversity. It will provide learners in ordinary and in special schools across the range of competencies and aptitudes with conditions that ensure dignity, promote self-reliance and facilitate active participation in the school and in the community and offer the opportunity to obtain a recognised and accredited statement of achievement.

1.2 Overview

Through the policy document the Minister of Basic Education will be able to prescribe the minimum norms and standards for differentiated education in the General Education and Training band.

The following legal framework will be adhered to:

(i) The United Nations Convention on the Rights of People with Disabilities adopted by the United Nation general Assembly on 13 December 2006 and ratified by the South African parliament on 5 June 2007;
(ii) The White Paper on the Rights of Persons with Disabilities (2015);
(iii) The National Education Policy Act (Act 27 of 1996);
(iv) The South African Schools Act (Act 84 of 1996);
(v) The National Curriculum Statement, Grades R to 12 (2011);
(vi) The South African National Curriculum Framework for Children from Birth to Four (2015);
(vii) National Early Learning and Development Standards for Children Birth to Four Years (NELDS) (2009);
(viii) Section 11 of the Children's Act (Act 31 of 2005);
(ix) Chapter 5, section 76 of the Children's Act as amended (2007);
(x) Education White Paper 6 on Special Needs Education: Building an Inclusive Education and Training System (2001);
(xi) Continuing Education and Training Act (2006 as amended by Act No 3 of 2012 and Act No 1 of 2013);
(xii) Standards and Quality Assurance for General and Further Education and Training (June 2008, Revised April 2013);
(xiii) Umalusi's Quality Assurance of Assessment: Directives, Guidelines and Requirements;
(xiv) Guidelines to Ensure Quality Education and Support in Special Schools and Special School Resource Centres (2014);
(xv) Policy on Screening, Identification, Assessment and Support (SIAS) (2014);
(xvi) Guidelines for Responding to Diversity in the Classroom (2012);
(xvii) National Protocol on Assessment (2011), specifically Chapter 9;
(xviii) National Policy Pertaining to Promotion and Progression Requirements (2011);
(xix) Learning Programme for Children with Severe to Profound Intellectual Disability.

1.3 General aims of the Curriculum and Assessment Policy Statement Grades R to 5 for learners with Severe Intellectual Disability

(a) The National Curriculum Statement Grades R to 9 gives expression to the knowledge, skills, values and attitudes worth learning in South African schools. This curriculum aims at removing the barriers that make it difficult for learners with moderate to severe intellectual disability and learning difficulties to access the curriculum. It will enable them to acquire and apply knowledge and skills in ways that are meaningful to their own lives. In this regard, the curriculum promotes knowledge in local contexts, while being sensitive to global imperatives.

(b) The Curriculum and Assessment Policy Statement (CAPS) Grades R to 5 for learners with Severe Intellectual Disability serves the purpose of:

- Equipping learners, irrespective of their socio-economic background, race, gender, physical ability or intellectual ability, with the knowledge, skills and values necessary for self-fulfilment, and meaningful participation in society as citizens of a free country;
- Facilitating the transition of learners from education institutions to either protective or open employment;
- Providing employers with a sufficient profile of a learner's competences;
- Being sensitive to issues of diversity such as poverty, inequality, race, gender, language, age, and other factors;
- Valuing indigenous knowledge systems: acknowledging the rich history and heritage of this country as important contributors to nurturing the values contained in the Constitution; and
- Credibility, quality and efficiency: providing an education that is comparable in quality, breadth and depth to those of other countries.

(c) The curriculum is based on the following principles:

- Social transformation: ensuring that the educational imbalances of the past are redressed, and that equal educational opportunities are provided for all sections of the population;
- Active learning: encouraging an active approach to multi-sensory learning;

- Attainment of realistic, but high knowledge and skills levels: the minimum standards of knowledge and skills to be achieved at each grade are specified and set high, achievable standards in all subjects;
- Progression: content and context of each grade shows progression from simple to complex;
- Human rights, inclusivity, environmental and social justice: infusing the principles and practices of social and environmental justice and human rights as defined in the Constitution of the Republic of South Africa.

(d) Inclusivity should become a central part of the organisation's planning and teaching at each school. All teachers should have a sound understanding of how to recognise and address severe intellectual barriers to learning, and how to plan for diversity. The key to managing inclusivity is ensuring that barriers are identified and addressed by all the relevant support structures within the school community, including teachers, District-Based Support Teams, School-based Support Teams, parents and Special Schools as Resource Centres. To address barriers in the classroom, teachers should use various curriculum differentiation strategies such as those included in the Department of Basic Education's Guidelines for Responding to Learner Diversity in the Classroom (2011).

1.3.1 The aims of the Curriculum and Assessment Policy Statement Grades R to 5 for learners with severe intellectual disability

The specific aims of the CAPS Grades R to 5 for learners with Severe Intellectual Disability are to:

- Give recognition to learners who would follow the curriculum, irrespective if they meet the requirements and achieve the competencies as specified in the learning programmes;
- Provide a foundation of quality, standardised general education which will suit the needs of these learners and help prepare them to be more independent and better equipped for life after school. It may also enable the learners to enter a Technical Occupational curriculum;
- Promote Lifelong learning to enable learners to continue with further learning and skills development in sheltered or open employment;
- Prepare learners to function better in a fully inclusive society and employment; and
- Provide employers with a profile of the learner's competence.

1.3.1.1 Learners successfully completing the curriculum will be able to:

- Identify, select, understand and apply knowledge to the intended purpose and identify solutions to problems in the field of study;
- Demonstrate the necessary applied knowledge and skills identified for competence in a subject, as specified in the curriculum;
- Demonstrate knowledge and skills gained for purpose of formal communication and basic numerical operations;
- Use technology effectively and
- Demonstrate entrepreneurial skills that will enable them to create their own work in the contexts in which they live.

1.4 Subjects and time allocation

Instructional time for the Learning Programmes is 27½ hours in a five day cycle;

Subjects **General Education**		**Time**
Languages Home Language		5 – 14 years = 10 hours 14 – 18 years = 6 hours
First additional language		14 – 18 year = 2 hours
Mathematics		5 – 14 years = 5 hours 14 – 18 years = 3 hours
Life Skills	Life Skills – Personal and Social Wellbeing	5 – 14 years = 8 hours 14 – 18 years = 5 hours
	Physical Education	1 hour
	Creative Arts	5 – 14 years = 3½ hours 14 – 18 years = 1 hour
	Natural Sciences	1½ hours
Skills subjects		14 – 18 years = 8 hours

Subjects **CAPS Grades R to 5 for learners with severe intellectual disability: Electives**	**Time**
Agricultural Studies Art and Crafts Civil Technology: Bricklaying and Plastering Civil Technology: Plumbing Civil Technology: Woodworking and Timber Consumer Studies: Food Production Consumer Studies: Needlework Hospitality Studies Mechanical Technology: Body Works: Panel Beating and or Spray Painting Mechanical Technology: Motor Mechanics Mechanical Technology: Welding Office Administration Personal Care: Ancillary Health Care Personal Care: Beauty and Nail Technology Personal Care: Hairdressing and Beauty Care Service Technology: Maintenance	8 hours
Total: General and Skills subjects	27½

The following table proposes the learner progression across the years in the curriculum.

Grades R – 3	Grades 4 – 5
General Education Home Language Mathematics Life Skills - Personal and Social wellbeing - Physical education - Creative arts	General Education Home Language First Additional Language Mathematics Life Skills - Personal and Social wellbeing - Physical education - Creative arts - Natural Sciences Skills subjects A minimum of 3 skills and maximum of 4 skills

2 SECTION 2: INTRODUCTION TO WELDING

2.1 What is Welding

Welding is a creative sculptural process that joins metal pieces together by heating the edges until they begin to melt, causing fusion. Welding differs from other metal joining techniques as the temperature is higher and the metal is melted to cause permanent joining. The subject includes metalworking to enable learners to create a spectrum of individual parts, large articles and even-delicate jewelry. It therefore includes a correspondingly wide range of skills, processes, and tools.

Welding is introduced to the learners at an elementary level like the handling of hand tools which will enable the learners and teachers to produce a wide variety of articles. The subject welding lends itself to produce a variety of metal products, from small utensils, furniture and even the construction of trailers. Entrepreneurial skills are developed to produce a learner that can earn an income under supervision of an artisan.

Welding skills and the content embedded in the skills are taught over two years in Grade 4 and 3 years in Grade 5. The teacher is allowed to adapt the difficulty level of the skills to the ability of the learner.

2.2 Topics in Welding

- General safety and good housekeeping which includes
    - General safety of clothing, tools, electricity and a tidy workshop.
- Tools and safety and uses which includes
    - Measuring and marking tools.
    - Hand tools.
    - Machine tools.
    - Sheet metal tools.
    - Bending tools.
- Materials, namely
    - Different metals, with their properties.
    - Recyclable materials

- Processes, which consist of
    - Wire work
    - Raising
    - Sheet metalwork
    - Joining of material
    - Jewellery making
    - Welding
    - Finishing
- Project costing, namely
    - The economic use of material and how to work out a price for the product.

2.3 Specific aim of Welding

- To produce a learner with safe and adequate welding skills that can be applied successfully under supervision

Sub-aims are to teach a learner the following skills, namely:

- To apply general safety and good housekeeping practises in the welding workshop
- To know welding tools and how to use these safely
- To know different materials suitable to use to produce welded articles
- To know the processes to follow in producing an article
- Economic use of material and resources
- Use the correct terminology
- Small scale entrepreneurship
- Utilise recycled material

2.4 Requirements for Welding and Metalwork.

2.4.1 Time Allocation

The compulsory instructional time for the Vocational Learning Programme for learners experiencing severe intellectual disabilities amounts to 8 hours per 5-day cycle. Schools may offer

either three (3) or four (4) vocational subjects, depending on the number of learners in the school and the resources available. The compulsory instructional time for **Welding** is either:

- 2 hours per 5-day cycle plus three (3) other vocational subjects or
- 2,5 hours per 5-day cycle plus two (2) other vocational subjects.

Twenty percent (20%) of the above mentioned time is utilized to teach subject content which should be embedded in teaching the learners to execute the skills. This implies that theoretical lessons should not be instructed in isolation, but during the teacher's demonstration that takes place before the learners practise the skills. The learners are required to utilize eighty percent (80%) of the time to practise the various skills in the classroom.

2.5 Infrastructure, equipment and finances required to offer Welding and Metalwork.

2.5.1 Human resources:

An appropriately qualified teacher registered with SACE in line with National Education Policy Act 27 of 1998 section 7.4.

2.5.2 Infrastructure:

The subject may not be offered without the necessary infrastructure, tools and equipment.

Infrastructure:

- Buildings to ensure a safe working environment.
- Electricity supply and enough plugs.
- Cupboards to store equipment and be able to lock.
- Storeroom for storage of material and it must be locked at all times, to ensure that there is not misuse of material.

2.5.3 Safety equipment:

- Overalls – one per learner
- Safety goggles - one per learner
- Ear muffs - one per learner
- Leather apron - 2
- Leather gloves - 4
- Welding mask - 2

- Fire extinguishers - 4

- 2.4.4. Equipment: 1 x teachers table and chair
- 4 x lockable cupboards
- 2 x 4/5 shelf open shelving
- 2 x workbenches with 4 bench vices each

Hand tools	Electrical tools	Machine tools
Measuring tape 4 Hammer 4 Pliers 4 Hacksaw 4 File 4 Jig 1 Shears 4 Punch 4 Pop rivet 2 Bench vice 8 Square 4 G – clamp 4 Spanners	Electrical hand drill 1 Welder & accessories 2 Angle grinder 1 Nibbler 1	Cut-off machine 1 Drill press 1 Bench grinder 1 3 in 1 Bending machine 1

2.5.4 Finances:

The subject may not be offered without the necessary finances provided by the school. An annual budget should be available to purchase consumables for weekly practical tasks. Maintenance and purchasing of new tools/equipment should be added to the budget.

2.5.5 Stock control:

- The teacher is responsible for the stock and will keep the workshop and tools and equipment locked at all times when not present.

- Annual stock control is essential, a stock control book must be kept in the workshop and a summary stock sheet must be kept in the office.
- Tools and equipment must be checked daily.

2.6 Career opportunities

Learners can:

- Be employed as assistants to an artisan or semi skilled artisan.
- Be employed and work under supervision.
- Run a small business from home under supervision.
- Be employed under the 5 % disability job clause.
- Be a sub contractors.

3 SECTION 3: OVERVIEW OF TOPICS PER TERM AND ANNUAL TEACHING PLANS

Each week has a has a compulsory contact time of 2 to 2,5 hours (depending on the number of vocational subjects offered at school) for the subject Welding.

3.1 Content overview of theoretical topics

The content is embedded in the skills and the learners should execute the skills in a simulated working environment recreated in the classroom/centre. The table below indicates the topics and content in the **Welding** learning programme in grade 4 and 5.

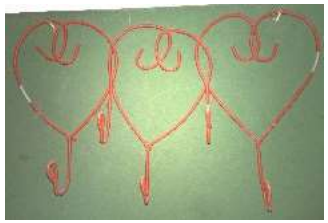
TOPIC	Grade 4	Grade 5
1. General safety and good housekeeping practises	Know the basic safety measures and housekeeping practises.	Know the basic safety measures and advanced housekeeping practises
2. Tools and safety	Use measuring tools, hand tools and some electrical hand tools safely	Use measuring tools, hand tools, electrical hand tools, sheet metal tools, bending tools and machine tools
3. Materials.	Use different sizes wire, sheet metal, recyclable material, flat bar and round bar.	Use different sizes wire, sheet metal, recyclable material, flat bars, round bars, steel and tubing Identify the different metals e.g. copper and steel
4. Processes.	Execute wire work, raising, sheet metal work, jewellery making and finishing thereof	Execute advanced wire work, raising, sheet metal, jewellery making, finishing and welding thereof
Project Costing	Know material prices	Know material prices as well as the economical use of material

3.2 Content overview of practical lessons / tasks

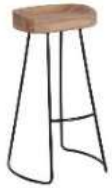
The theory is embedded in the articles produced in **Welding.** Omitting one or more of the articles imply that learners are deprived of the full learning programme. The learners are two years in Grade 4 and three years in Grade 5. Learners should practise more advanced skills during the second year in Grade 4, thus not repeat the articles completed during the first year in Grade 4. This principle also applies to Grade 5. More advanced articles should be completed during the second and third years in Grade 5. Depending on the size of the school, this may result in learners being in Grade 4 for the first as well as the second year in one class. The teacher should ensure that these learners prepare different articles as indicated in the table with **suggested articles** below. Teachers may choose similar or more advanced articles.

Pages 8 – 11 provide an image overview of the **suggested articles/projects** to be instructed in Grade 4 and 5.

Term 1 These are images of suggested projects the learners may produce					
Week	Grade 4 First year	Grade 4 Second year	Grade 5 First year	Grade 5 Second year	Grade 5 Third year
1 - 3	  Christmas decorations	  Wors braai utensil, Glass & Lantern holder	  Tripod for pot & Cole scraper	 Fire wood stand	 Fire irons
4 - 6	  Punched decoration & lantern	  Garden ornament & sheet metal wire roses	 Wall candlestick	 Candlestick	 Welded ball candlestick
7 - 9	  Punched leather bangle & copper bangle	 Braai utensil	  “Potjiekos” lid holder & iid lifter	  Braai utensil stand	  Folding braai grid or small portable braai

Term 2: These are images of suggested projects the learners may produce					
Week	Grade 4 First year	Grade 4 Second year	Grade 5 First year	Grade 5 Second year	Grade 5 Third year
1 - 3	 Lantern made of sheet metal and gauze	Welding orientation	 Toilet paper holder	 Towel rails	 Toilet roll holder
4 - 6	 Wire cloth rail	Welding orientation	 Poolside towel rail	 Clothes stand	  Hall stand
7 - 9	  Wire fork & olive spoon	  Braai hook & Bottle opener	 Wine rack	 Bathroom/Kitchen shelf	 Towel shelf

Term 3: These are images of suggested projects the learners may produce					
Week	Grade 4 First year	Grade 4 Second year	Grade 5 First year	Grade 5 Second year	Grade 5 Third year
1 - 3	 Lantern covered in chicken mesh an spoon	 Lantern stand	 Lantern	  Lamp	 Portable garden light
4 - 6	 Heartshaped pot plantholder & wire words	 Hosepipe holder	 Rain meter stand	 Pot plant stand	 Pot plant shelve
7 - 9	 Wire & mesh garden ranker	 Hanger for hanging baskets and pots	 Trellis for ranking plants	 Decorative wall pot plant holder	 Trellis for pot plant

Term 4: These are images of suggested projects the learners may produce.					
Week	Grade 4 First year	Grade 4 Second year	Grade 5 First year	Grade 5 Second year	Grade 5 Third year
1 - 3	 Galvanise sheet tray	 Broom and mop stand	  Stool	 Simple bench	 Bench
4 - 6	 Galvanise sheet table	 Side table	 Side table	 Trolley	 Coffee table
7 - 9	 Braai broodjie grill	 Foldable braai grid	 Burglar bars	 Bed headboard	 Security door

3.3 Teaching plans

Each term comprises of ten (10) weeks and a minimum of nine (9) **practical sessions** are compulsory. The sequence within the term is not compulsory and the teacher may cover the learning content and skills in any appropriate sequence. Learners spend two years in Grade 4, and therefore different activities are included for the first and second year in grade 4.

The Occupational Health and Safety (OHS) Act 85 of 1993 requires the teacher to comply with the safety regulations when issuing equipment and tools to the learners and the teacher may not leave learners unattended during Metalwork and welding instructional time. A group discussion on the safety precautions that must be followed during all the instructional time is compulsory. Learners with a severe intellectual disability are not always able to make abstract judgements, and they are often not able to apply learned knowledge from one topic to the next. Impulsive behavior as well as the inability to make fast decisions can easily lead to learners finding themselves in, or being exposed to dangerous situations.

3.3.1 Grade 4: 1st and 2nd year Term 1

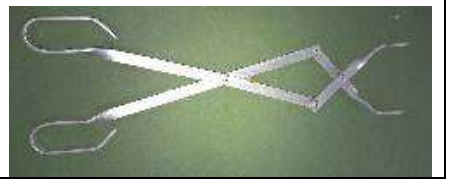
Grade 4 Term 1			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks and teaching tips, techniques, activities and resources**
1-3	General safety and good housekeeping practises Tools and safety Materials Processes Project costing	Grade 4: 1st year • Measure the lengths of wire • Cut the wire • Straighten the wire • Bend the wire • Tie the wire • Thread beads Identify and/or name the following tools: • Measuring tape • Pliers	Grade 4: 1st year The suggested project is wirework decorations to teach the learner skills to: • Measure the lengths of wire • Cut the wire • Straighten the wire • Bend the wire • Tie the wire • Thread beads Identify and/or name, select and apply the following tools

Grade 4 Term 1			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks and teaching tips, techniques, activities and resources**
		• Hammer Identify and/or name: • Different wire thicknesses. Discuss how to store the wire in the store on a shelf or a hook on the wall. Follow safety precautions with the: • Pliers e.g. ensure it is in working order • Oil pliers regularly • Hammer e.g. ensure a good grip • Measuring tape e.g. it is a relative safe tool. Ensure that you care for it, to make accurate measurements. • Protective safety gear like overalls, safety goggles, earmuffs, leather gloves and safety boots • Stools: stow tools and material correctly • Tools: Use a tool/machine only after it was demonstrated • Electricity: Switch off electricity after use	and materials safely to complete the suggested projects • Measuring tape, pliers, hammer • Wire The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session. 
		Grade 4: 2nd year • Measure the lengths of round bar • Cut the round bar • Bend the round bar Identify and/or name the following tools: • Hacksaw	Grade 4: 2nd year The suggested project is a sausage grill and lantern holder to teach the learner skills to: • Measure the lengths of round bar • Cut the round bar • Bend the round bar

Grade 4 Term 1			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks and teaching tips, techniques, activities and resources**
		• File Identify and/or name: • Different round bar thicknesses. Follow safety precautions with the: • Hacksaw e.g. not to cut yourself, others and property Ensure the blade has the correct tension Inspect the blade to see that it is in a good condition and that the teeth is in the correct direction Ensure a proper grip when you use the hacksaw • File e.g. Do not use as any other tool Inspect the file ensure all the parts is in a proper condition	Identify and/or name, select and apply the following tools and materials safely to complete the suggested projects. • Hacksaw, file The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session.  
4-6	General safety and good housekeeping practises Tools and safety Materials Processes Project costing	Grade 4: 1st year • Use jig to draw forms • Cut sheet metal with shears • Use hammer and punch/pin • Flatten sheet metal Identify and/or name the following tools: • Jig • Shears • Punch/pin Identify and/or name: • Different sheet metal thicknesses. Follow safety precautions with the:	Grade 4: 1st year The suggested project is a sheet metal decorations and lantern to teach the learner skills to: • Use jig to draw forms • Cut sheet metal with shears • Use hammer and punch/pin • Flatten sheet metal Identify and/or name, select and apply the following tools and materials safely to complete the suggested projects • Jig, shears, hammer, punch/pin • Wire, sheet metal

Grade 4 Term 1			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks and teaching tips, techniques, activities and resources**
		• Jig e.g. Use it for its purpose Keep it in a good condition • Shears e.g. not cutting yourself and others Inspect shears before use Ensure sharp cutting edges • Punch/pin e.g. not pierce yourself, others and property Ensure it is in a good condition Ensure the tip is sharp	The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session.  
		Grade 4: 2nd year • Measure the lengths of sheet metal • Cut the sheet metal • Bend the sheet metal • Rivet or tie the sheet metal Identify and/or name the following tools: • Electrical hand drill e.g. choose correct size drill bit • Pop rivet e.g. choose correct size pop rivet Follow safety precautions with the: • Drill - e.g. make sure that you do not hurt yourself and others. Select a suitable drill bit Tighten the drill bit properly in the chuck Remove chuck key before drilling Secure work piece before drilling Work at an appropriate work speed	Grade 4: 2nd year The suggested project is a sheet metal rose and ball to teach the learner skills to: • Measure the lengths of sheet metal • Cut the sheet metal • Bend the sheet metal • Rivet or tie the sheet metal The learner is able to identify and/or name, select and apply the following tools and materials safely to complete the suggested projects. • Drill pliers, pop rivet The teacher discusses and demonstrates the steps to produce and complete the project successfully.

Grade 4 Term 1			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks and teaching tips, techniques, activities and resources**
		• Pop rivet e.g. Inspect the tool to ensure it is in a good condition Choose an appropriate size insert for the pin • Nibbler e.g. Wear safety gear Refrain from using excessive force Inspect nibbler to see that all parts and shields is in place and in working order Ensure that all cutting edges is sharp Grip nibbler firmly when you use it	 Safety rules are discussed and applied during the practical session. 
7-9	General safety and good housekeeping practises Tools and safety Materials Processes Project costing	Grade 4: 1st year • Measure the lengths of wire • Cut the wire • Straighten the wire • Bend the wire • Tie the wire • Punch with letter/number punch	Grade 4: 1st year The suggested project is a copper bangle to teach the learner skills to: • Measure the lengths of wire • Cut the wire • Straighten wire • Bend the wire • Tie the wire • Punch with letter/number punch Identify and/or name, select and apply the following tools and materials safely to complete the suggested projects. The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the

Grade 4 Term 1			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks and teaching tips, techniques, activities and resources**
			practical session.  
		Grade 4: 2nd year • Measure the lengths of aluminium flat bar • Cut the aluminium flat bar • Mark out the aluminium flat bar • Bend the aluminium flat bar • Pop rivet the aluminium flat bar Identify and/or name: • Difference between steel an aluminium flat bar	Grade 4: 2nd year The suggested project is an aluminium braai tong to teach the learner skills to: • Measure aluminium flat bar • Cut the aluminium flat bar • Mark out aluminium flat bar • Bend aluminium flat bar • Pop rivet aluminium flat bar Identify and/or name, select and apply the following tools and materials safely to complete the suggested projects. • Measuring tape, hacksaw, pliers, hammer, punch, electrical hand drill, pop rivet • Aluminium flat bar The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the 

Grade 4 Term 1			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks and teaching tips, techniques, activities and resources**
			practical session.

Assessment: Term 1

Assessment is formally recorded during four (4) practical sessions with a minimum of four (4) skills reported. Learners, regardless of abilities, shall be assessed on the same skill. The following serves as suggestion of skills to record and report on.

The assessment goals for Grade 4, first and second year are the same, the articles are however more advanced.

Week 1	Apply appropriate workshop safety measures	Wear appropriate safety clothing and gear
Week 2	Use pliers correctly and safely	Make proper bends
Week 3	Measure the correct lengths	Use a hacksaw correctly and safely
Week 4	Use shears correctly and safely	Use nibbler correctly and safely
Week 5	Use a template to draw forms	Use pop rivet gun properly and safely
Week 6	Use a punch/pin correctly and safely	Use electrical hand drill correctly and safely
Week 7	Use letter/number punch correctly and safely	Choose the correct size drill bit
Week 8	Use the hammer correctly and safely	Use file correctly and safely
Week 9	Clean the file correctly	Use a template to mark out accurately

Theoretical Assessment: Term 1

Four theoretical activities are assessed and recorded, however, a minimum of 1 theoretical activity is reported on. The following serves as suggestions of theoretical activities to report on.

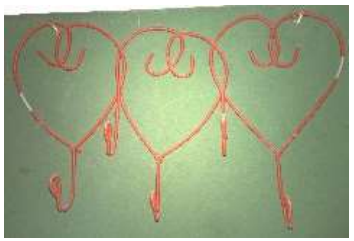
The learner must be able to:

Week 1	List the general safety measures to be taken in the workshop
Week 2	List the different pliers and make simple drawings
Week 3	Measure different lengths on a worksheet and write the lengths
Week 4	List the different types of shears and make simple drawings
Week 5	Discuss the use of a template, like the advantages of an template
Week 6	List the safety measures of the electrical hand drill
Week 7	List the different types of punches and make simple drawings
Week 8	List the different types of hammers and make simple drawings
Week 9	Make a simple drawing of a file

Grade 4: 1st and 2nd year Term 2

<table>
<tr><th colspan="4">Grade 4 Term 2</th></tr>
<tr><th>WEEK</th><th>TOPIC</th><th>CONTENT
The learner must be able to:</th><th>Practical tasks</th></tr>
<tr><td>1-3</td><td>General safety and good housekeeping practises
Tools and safety
Materials
Processes
Project costing</td><td>Grade 4: 1st year
• Measure the lengths of sheet metal, wire and gauze
• Cut the sheet metal, wire and gauze
• Straighten the wire
• Bend the sheet metal and wire
• Tie the wire and gauze
Identify and/or name the following tools:
• Bench vice
• Drill press
Follow safety precautions with the:
• Bench vice e.g. Secure bench vice to a secure base
Inspect to see the bench vice is in a good condition
Clamp the work piece as close as possible to the jaws.
Oil the thread and working parts regularly
Refrain from applying excessive pressure when clamping
• Drill press e.g. Wear appropriate safety gear
Ensure clean working area
Lubricate the drill bit
Use machine/pliers vice to clamp work piece
Adjust drill speed according drill size
Refrain from excessive pressure</td><td>Grade 4: 1st year
The suggested project is a sheet metal lantern to teach the learner skills to:
• Measure the lengths of sheet metal, wire and gauze
• Cut the sheet metal, wire and gauze
• Straighten the wire
• Bend the sheet metal and wire
• Tie the wire and gauze
Identify and/or name, select and apply the following tools and materials safely to complete the suggested projects.
• Bench vice, drill press
The teacher discusses and demonstrates the steps to produce and complete the project successfully.
Safety rules are discussed and applied during the practical session.
  </td></tr>
</table>

Grade 4 Term 2			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
		Remove chuck key before drilling Inspect drill press to ensure all guards is in place	
		Grade 4: 2nd year • Practice welding with welding rod on a line drawn on a table. • Make little circle/zigzag movements • Practise the above with welding helmet • Switch welder on, assist the learner by holding his/her hand to get the feel of the welding. • Repeat the above • Weld independently on off cut material Identify and/or name the following tools: • Welder • Chipping hammer • Different parts e.g. earth clamp, electrode/welding rod holder amperage gage, switch, plug Identify and/or name: • Off cut material Follow safety precautions with the: • Welder e.g. Wear safety gear like welding helmet, overall, leather gloves and closed shoes Ensure that the workshop is well ventilated, so that the gasses can escape	Grade 4: 2nd year The suggested project is welding orientation to teach the learner skills to: • Practice to weld with welding rod on a line drawn on a table. • Make little circle/zigzag movements • Do the above with welding helmet • Switch on welder, assist the learner by holding his/her hand to get the feel of the welding. • Repeat the above • Weld independently on off cut material Identify and/or name, select and apply the following tools and materials safely to complete the suggested projects. • Welder, chipping hammer • Off cut material The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session. Welding orientation

Grade 4 Term 2			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
		Remember the welded work piece and welding rod is hot. Remove all flammable materials near welding area	
4-6	General safety and good housekeeping practises Tools and safety Materials Processes Project costing	Grade 4: 1st year • Measure the lengths of wire • Cut the wire • Straighten the wire • Bend the wire • Tie the wire	Grade 4: 1st year The suggested project is wire cloth rail to teach the learner skills to: • Measure the lengths of wire • Cut the wire • Straighten the wire • Bend the wire • Tie the wire The learner is able to identify and/or name, select and apply the following tools and materials safely to complete the suggested projects. The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session. 
		Grade 4: 2nd year • Weld independently on off cut material • Make practice joints with off cut material	Grade 4: 2nd year The suggested project is welding orientation to teach the learner skills to:

Grade 4 Term 2			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
			• Weld independently on off cut material • Make practice joints with off cut material Identify and/or name, select and apply the following tools and materials safely to complete the suggested projects. • Welder, chipping hammer • Off cut material The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session. Welding orientation
7-9	General safety and good housekeeping practises Tools and safety Materials Processes Project costing	Grade 4: 1st year • Measure the lengths of wire • Cut the wire • Straighten the wire • Bend the wire • Tie the wire Identify and/or name the following tools: • Anvil Follow safety precautions with the: • Anvil e.g. Secure anvil to a steady base	Grade 4: 1st year The suggested project is wire fork and spoon to teach the learner skills to: • Measure the lengths of wire • Cut the wire • Straighten the wire • Bend the wire • Tie the wire Identify and/or name, select and apply the following tools and materials safely to complete the suggested projects. • Anvil  

Grade 4 Term 2			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
			The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session.
		Grade 4: 2nd year • Measure the lengths of round bar • Mark out the round bar • Bend the round bar • File the point • Bend the point • Weld the handle • Finish the welding joint with angle grinder • Paint the product Identify and/or name the following tools: • Angle grinder • Paintbrush and paint Follow safety precautions with the: • Angle grinder e.g. Wear overalls, ear muffs, safety goggles and safety shoes. Inspect angle grinder to see every part is in working order, the bade is securely fastened and not cracked or broken	Grade 4: 2nd year The suggested project is braai hook and bottle opener to teach the learner skills to: • Measure the lengths of round bar • Mark out the round bar • Bend the round bar • File the point • Bend the point • Weld the handle • Finish the welding joint with angle grinder • Paint the product Identify and/or name, select and apply the following tools and materials safely to complete the suggested projects. • Angle grinder, paint and paint brush The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session.

Grade 4 Term 2			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
		Hold the grinder with both hands in a strong grip Refrain from excessive force on blade Secure the work piece in the bench vice Adjust only if angle grinder is unplugged and to a complete still stand Remove all flammable material in working area Grind that sparks do not affect other people, yourself and property • Paintbrush and paint e.g. Ventilate work area Wear overall Ensure that no paint/paint cleaner get in your eyes, or is swallowed Read the label on the tin Work in area where there is no flames or sparks Store correctly Dispose rags etc. properly Know different paintbrush sizes Distinguish between different type of brush hairs Identify different types of metal paints namely water based, oil based, thinners based and turpentine based	 

Assessment: Term 2

Assessment is formally recorded during four (4) practical sessions with a minimum of four (4) skills reported. Learners, regardless of abilities, shall be assessed on the same skill. The following serves as suggestion of skills to record and report on.

The assessment goals for Grade 4, first and second year are the same, the articles are however more advanced.

Week 1	Use bench vice correctly safely	Apply safety measures of the welder
Week 2	Use drill press correctly and safely	Identify the different parts of the welder
Week 3	Use machine vice correctly and safely	Set up the welder correctly
Week 4	Use a jig to make bends	Use welder correctly and safely
Week 5	Bend multiple bends the same	Choose an appropriate setting for the welder
Week 6	Use pliers to cut, tie and bend wire properly and neatly	Choose an appropriate welding rod for specific work
Week 7	Use pliers to straighten wire	Choose the correct size welding rod
Week 8	Use an anvil correctly and safely	Choose the correct welding speed
Week 9	Use the hammer to straighten wire properly	Choose the correct welding angle

Theoretical Assessment: Term 2.

Four theoretical activities are assessed and recorded, however, a minimum of 1 theoretical activity is reported on. The following serves as suggestions of theoretical activities to report on.
The learner must be able to:

Week 1	List the safety measures of the drill press
Week 2	Discuss the differences and similarities of the machine vice and the bench vice
Week 3	Discuss the importance of using a jig to make a bend
Week 4	Make a drawing of an anvil
Week 5	List the safety measures of the welder
Week 6	Make a simple drawing of the welder
Week 7	Name the different parts of the drawing of the welder
Week 8	Make a simple drawing of a welding rod
Week 9	List different methods a welder is cooled

3.3.2 Grade 4: 1st and 2nd year Term 3

<table>
<tr><th colspan="4">Grade 4 Term 3</th></tr>
<tr><th>WEEK</th><th>TOPIC</th><th>CONTENT
The learner must be able to:</th><th>Practical tasks</th></tr>
<tr><td rowspan="2">1-3</td><td rowspan="2">General safety and good housekeeping practises
Tools and safety
Materials
Processes
Project costing</td><td>Grade 4: 1st year
• Measure the lengths of wire
• Cut the wire
• Straighten the wire
• Bend the wire
• Tie the wire</td><td>Grade 4: 1st year
The suggested project is a lantern covered in chicken mesh and a chicken mesh spoon to teach the learner skills to:
• Measure the lengths of wire
• Cut the wire
• Straighten the wire
• Bend the wire
• Tie the wire
 
The teacher discusses and demonstrates the step to produce and complete the project successfully.
Safety rules are discussed and applied during the practical session.
  </td></tr>
<tr><td>Grade 4: 2nd year
• Measure the lengths of round bar
• Mark out the round bar
• Bend the round bar
• File the end
• Weld the different parts together</td><td>Grade 4: 2nd year
The suggested project is a lantern stand to teach the learner skills to:
• Measure the lengths of round bar
• Mark out the round bar</td></tr>
</table>

Grade 4 Term 3			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
		• Finish the welding joint with angle grinder • Paint the product	• Bend the round bar • File the end • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product  The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session.
4-6	General safety and good housekeeping practises Tools and safety Materials Processes Project costing	Grade 4: 1st year • Measure the lengths of wire • Cut the wire • Straighten the wire • Bend the wire • Tie the wire	Grade 4: 1st year The suggested project is a heart shaped pot plant holder and wire words to teach the learner skills to: • Measure the lengths of wire • Cut the wire • Straighten the wire • Bend the wire • Tie the wire The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session.

Grade 4 Term 3			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
			 
		Grade 4: 2nd year • Measure the lengths of round bar • Mark out the round bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product	Grade 4: 2nd year The suggested project is a hosepipe holder to teach the learner skills to: • Measure the lengths of round bar • Mark out the round bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session. 
7-9	General safety	Grade 4: 1st year	Grade 4: 1st year

Grade 4 Term 3			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
	and good housekeeping practises Tools and safety Materials Processes Project costing	• Measure the lengths of wire • Cut the wire • Straighten the wire • Bend the wire • Tie the wire	The suggested project is a wire and mesh garden ranker to teach the learner skills to: • Measure the lengths of wire • Cut the wire • Straighten the wire • Bend the wire • Tie the wire The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session. 
		Grade 4: 2nd year • Measure the lengths of round bar • Mark out the round bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product	Grade 4: 2nd year The suggested project is a hanger for hanging baskets and pots to teach the learner skills to: • Measure the lengths of round bar • Mark out the round bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product 

Grade 4 Term 3			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
			The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical sessio

Assessment: Term 3

Assessment is formally recorded during four (4) practical sessions with a minimum of four (4) skills reported. Learners, regardless of abilities, shall be assessed on the same skill. The following serves as suggestion of skills to record and report on.

The assessment goals for Grade 4, first and second year are the same, the articles are however more advanced.

Week 1	Fasten material so that there are no sharp edges	Weld on the joint/ straight line
Week 2	Cut material so that there are no wastage	Use a chipping hammer correctly and safely
Week 3	Cut wire from an end and keep to the end	Chip the flux properly from the welding joint
Week 4	Make symmetrical bends	Prepare the welding joint correctly
Week 5	Bend letters/numbers the same size	Grind welding joint correctly
Week 6	Bend repeated letters/numbers the same size	Choose the correct paint size paint brush
Week 7	Choose the appropriate material for the project	Choose an appropriate paint for the project
Week 8	Cut material and keep in mind that you are working at an angle	Choose the correct cleaner for the paint brush
Week 9	Tie material uniformly to structure	Clean paint brush properly

Theoretical Assessment: Term 3.

Four theoretical activities are assessed and recorded, however, a minimum of 1 theoretical activity is reported on. The following serves as suggestions of theoretical activities to report on.
The learner must be able to:

Week 1	Make simple drawings to demonstrate a few electrode/welding rod movements
Week 2	Discuss the economic use of material
Week 3	Discuss the importance of cutting wire properly and stick to cutting at the end
Week 4	Make a simple drawing of the chipping hammer
Week 5	Explain the importance of preparing a welding joint
Week 6	List why it is important to choose the correct paint brush
Week 7	Discuss the importance of choosing the correct material for the project
Week 8	List why it is important to choose the correct paint for the project
Week 9	List the steps to clean a paint brush properly

3.3.3 Grade 4: 1st and 2nd year Term 4

Grade 4 Term 4			
WEEK	TOPIC	CONTENT The learner must be able to:	Practical tasks
1-3	General safety and good housekeeping practises Tools and safety Materials Processes Project costing	Grade 4:1st year • Measure the Sheet metal • Cut the sheet metal • Bend the sheet metal • Rivet the box Identify and/or name the following tools: • Square • Soldering iron • Clamps Follow safety precautions with the: • Square e.g. Use carefully to ensure accuracy • Soldering iron e.g. Wear safety gear Ventilated work area Keep work area free of flammable material Remember work piece and soldering iron is hot • Clamps e.g. Refrain from excessive force	Grade 4:1st year The suggested project is galvanise sheet tray to teach the learner skills to: • Measure the Sheet metal • Cut the sheet metal • Bend the sheet metal • Rivet the box Identify and/or name, select and apply the following tools and materials safely to complete the suggested projects. • Square, soldering iron, clamps The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session. 
		Grade 4: 2ndyear • Measure the lengths of round bar • Mark out the round bar • Bend the round bar	Grade 4: 2ndyear The suggested project is a broom and mop stand to teach the learner skills to: • Measure the lengths of round bar

Grade 4 Term 4			
WEEK	TOPIC	CONTENT The learner must be able to:	Practical tasks
		• Weld the different parts together • Finish the welding joint with angle grinder • Paint the product Identify and/or name the following tools: • Sliding bevel Follow safety precautions with the: • Sliding bevel e.g. Use carefully to ensure accuracy	• Mark out the round bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product Identify and/or name, select and apply the following tools and materials safely to complete the suggested projects. • Sliding bevel The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session. 
4-6	General safety and good housekeeping practises Tools and safety Materials Processes	Grade 4: 1st year • Measure the Sheet metal • Cut the sheet metal • Bend the sheet metal • Rivet the table Identify and/or name the following tools:	Grade 4: 1st year The suggested project is a galvanise sheet table to teach the learner skills to: • Measure the Sheet metal • Cut the sheet metal • Bend the sheet metal • Rivet the table

Grade 4 Term 4			
WEEK	TOPIC	CONTENT The learner must be able to:	Practical tasks
	Project costing	• Guillotine • Pan and brake Follow safety precautions with the: • Guillotine e.g. Inspect guillotine to see if all parts and shields is in place and working order Wear leather gloves to prevent cuts Ensure fingers and limbs are clear before cutting Lubricate working parts regularly Hold material firmly Refrain using machine beyond its capacity • Pan and brake e.g. Inspect pan and brake to see if all parts and shields is in place and working order Wear leather gloves to prevent cuts Ensure fingers and limbs are clear before cutting Lubricate working parts regularly Hold material firmly Refrain using machine beyond its capacity	Identify and/or name, select and apply the following tools and materials safely to complete the suggested projects. • Guillotine, pan and brake The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session. 
		Grade 4: 2nd year • Measure the lengths of round bar • Mark out the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Cut out the top • Weld the top to the legs	Grade 4: 2nd year The suggested project is a side table to teach the learner to: • Measure the lengths of round bar • Mark out the round bar • Weld the different parts together • Finish the welding joint with angle grinder

Grade 4 Term 4			
WEEK	TOPIC	CONTENT The learner must be able to:	Practical tasks
		• Paint the product Identify and/or name the following tools: • Screwdriver Follow safety precautions with the: • Screwdriver e.g. Match screwdriver to screw head and size Ensure handle is secured and has a proper grip Refrain from excessive force Refrain from holding the workpiece and fastening the screw Keep the tip in a good condition	• Cut out the top • Weld the top to the legs • Paint the product Identify and/or name, select and apply the following tools and materials safely to complete the suggested projects. • Screwdriver The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session. 
7-9	General safety and good housekeeping practises Tools and safety Materials Processes	Grade 4: 1st year • Measure the lengths of welded mesh and wire • Cut the welded mesh and wire • Straighten the welded mesh and wire • Bend the welded mesh and wire • Tie the welded mesh and wire Identify and/or name the following tools:	Grade 4: 1st year The suggested project is a braai broodjie grid to teach the learner to: • If project is complete it will enable the learner to do wirework on a more advanced level • Measure the lengths of welded mesh and wire • Cut the welded mesh and wire

Grade 4 Term 4			
WEEK	TOPIC	CONTENT The learner must be able to:	Practical tasks
	Project costing	• Spot welder Follow safety precautions with the: • Spot welder e.g. Check that electrodes is securely clamped, meet exactly and free of contaminants • Pre-set weld time • Ensure spot welder is cooled down • Avoid prolonged use due to heat build up • Remember the work piece and electrodes is warm • Wear safety gear	• Straighten the welded mesh and wire • Bend the welded mesh and wire • Tie the welded mesh and wire Identify and/or name, select and apply the following tools and materials safely to complete the suggested projects. • Spot welder The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session. 
		Grade 4: 2nd year • Measure the lengths of round bar • Mark out the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product	Grade 4: 2nd year The suggested project is a foldable braai grid to teach the learner to: • Measure the lengths of round bar • Mark out the round bar • Weld the different parts together • Finish the welding joint with angle grinder 

Grade 4 Term 4			
WEEK	TOPIC	CONTENT The learner must be able to:	Practical tasks
			• Paint the product The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session.

Assessment: Term 4

Assessment is formally recorded during four (4) practical sessions with a minimum of four (4) skills reported. Learners, regardless of abilities, shall be assessed on the same skill. The following serves as suggestion of skills to record and report on.

The assessment goals for Grade 4, first and second year are the same, the articles are however more advanced.

Week 1	Use a square to measure a project accurately	Lay out the different parts correctly
Week 2	Ensure that 90˚ corners measure 90˚	Use a clamp to keep bended ring in position to weld joint
Week 3	Use soldering correctly and safely to secure the joints	Use the sliding bevel to ensure you work at the right angle
Week 4	Use a guillotine to cut out material	Cut legs the same length to ensure the project is level
Week 5	Use a box and pan brake correctly and safely to do bending	Use a screwdriver correctly and safely to secure top
Week 6	Bend seams properly	Use a paint brush correctly
Week 7	Measure accurately to ensure that both parts are equal	Mark out both sides the same, to ensure that it is level
Week 8	Bend a hinge that working properly	Ensure that when you use a hinge that it does not slide
Week 9	Use a spot welder correctly and safely to secure different parts	Paint with fire resistant paint

Theoretical Assessment: Term 4.

Four theoretical activities are assessed and recorded, however, a minimum of 1 theoretical activity is reported on. The following serves as suggestions of theoretical activities to report on.

The learner must be able to:

Week 1	Make a simple drawing of a square and state the importance of using a square in projects
Week 2	List a few clamps and make a simple drawing of each clamp
Week 3	Describe the use of the use of the sliding bevel and make simple drawing
Week 4	Name two ways a soldering iron is heated and make simple drawing of a soldering iron
Week 5	List different screwdrivers and make simple drawing
Week 6	Name a few safety measures when using the pan and box brake when you bend seams and folds
Week 7	Discuss the importance of accurate measurements and lay out of the different parts.
Week 8	List different hinges and things that can be used as a hinge

Week 9 Make a simple drawing of the spot welder, name the different parts and indicate with arrows the water flow

Learners are three years in Grade 5, and therefore 3 suggested articles/projects are provided to allow the learners to complete the second and third suggested articles/projects during their second and third year in grade 5. It is not advisable to repeat the same articles/projects more than once as this will not provide the learner the opportunity to learn additional skills.

3.3.4 Grade 5: 1st, 2nd and 3rd year: Term 1

Grade 5 Term 1			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
1-3	General safety and good housekeeping practises Tools and safety Materials Processes Project costing	Grade 5: 1st year • Measure the lengths of round bar and flat bar • Mark out the round bar and flat bar • Cut the round bar and flat bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product	Grade 5: 1st year The suggested project is a tripod and cole scraper to teach  the learner skills to: • Measure the lengths of round bar and flat bar • Mark out the round bar and flat bar • Cut the round bar and flat bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product  The teacher discusses and demonstrates the steps to

Grade 5 Term 1			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
			produce and complete the project successfully. Safety rules are discussed and applied during the practical session.
		Grade 5:2nd year • Measure the lengths of round bar • Mark out the round bar • Cut the round bar • Bend the round bar • Weld the different parts together including castings • Finish the welding joint with angle grinder • Paint the product • Angle grinder • Paintbrush and paint	Grade 5:2nd year The suggested project is a fire wood stand to teach the Learner skills to: • Measure the lengths of round bar • Mark out the round bar • Cut the round bar • Bend the round bar • Weld the different parts together including castings • Finish the welding joint with angle grinder • Paint the product The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session.
		Grade 5:3rd year • Measure the lengths of round bar • Mark out the round bar	Grade 5:3rd year The suggested project is fire irons to teach the learner skills to:

Grade 5 Term 1			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
		• Cut the round bar • Bend the round bar • Weld the different parts together, including castings • Finish the welding joint with angle grinder • Paint the product	• Measure the lengths of round bar • Mark out the round bar • Cut the round bar • Bend the round bar • Weld the different parts together, including castings • Finish the welding joint with angle grinder • Paint the product The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session. 
4-6	General safety and good housekeeping practises Tools and safety Materials Processes Project costing	Grade 5:1st year • Measure the lengths of sheet metal • Cut the sheet metal • Bend the sheet metal • Rivet or tie the sheet metal	Grade 5:1st year The suggested project is a wall candlestick to teach the Learner skills to: • Measure the lengths of sheet metal • Cut the sheet metal • Bend the sheet metal • Rivet or tie the sheet metal  The teacher discusses and demonstrates the steps to produce and complete the project successfully.

Grade 5 Term 1			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
			Safety rules are discussed and applied during the practical session.
		Grade 5:2nd year • Measure the lengths of flat bar an pipe • Mark out the flat bar • Cut the round bar and pipe • Bend the flat bar • Weld the different parts together, including pole caps • Finish the welding joint with angle grinder • Paint the product	Grade 5:2nd year The suggested project is a candlestick to teach the learner to: • Measure the lengths of flat bar an pipe • Mark out the flat bar • Cut the round bar and pipe • Bend the flat bar • Weld the different parts together, including pole caps • Finish the welding joint with angle grinder • Paint the product The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session. 
		Grade 5:3rd year • Measure the lengths of flat bar and pipe	Grade 5:3rd year The suggested project is a welded ball candlestick to teach

Grade 5 Term 1			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
		• Mark out the flat bar • Cut the round bar and flat bar • Bend the flat bar • Weld the different parts together, including pole caps • Finish the welding joint with angle grinder • Paint the product	the learner skills to: • Measure the lengths of flat bar and pipe • Mark out the flat bar • Cut the round bar and flat bar • Bend the flat bar • Weld the different parts together, including pole caps • Finish the welding joint with angle grinder • Paint the product The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session. 
7-9	General safety and good housekeeping practises Tools and safety Materials Processes Project costing	Grade 5: 1st year • Measure the lengths of round bar • Mark out the round bar • Cut the round bar and flat bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product	Grade 5:3rd year The suggested project is a potjie lid holder to teach the learner to: • Measure the lengths of round bar • Mark out the round bar • Cut the round bar and flat bar 

Grade 5 Term 1			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
			• Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product  The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session.
		Grade 5:2nd year • Measure the lengths of round bar • Mark out the round bar • Cut the round bar and flat bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product	Grade 5:2nd year  The suggested project is a braai utensil stand to teach the learner to: • Measure the lengths of round bar • Mark out the round bar • Cut the round bar and flat bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product

Grade 5 Term 1			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
			The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session. 
		Grade 5:3rd year • Measure the lengths of round bar and expanded metal • Mark out the round bar and expanded metal • Cut the round bar and flat bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product	Grade 5:3rd year The suggested project is a folding braai grid or small portable braai to teach the learner skills to: • Measure the lengths of round bar and expanded metal • Mark out the round bar and expanded metal • Cut the round bar and flat bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product The teacher discusses and demonstrates the steps to produce and complete the project successfully. 

Grade 5 Term 1			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
			Safety rules are discussed and applied during the practical session.

Assessment: Term 1

Assessment is formally recorded during four (4) practical sessions with a minimum of four (4) skills reported. Learners, regardless of abilities, shall be assessed on the same skill. The following serves as suggestion of skills to record and report on.

The assessment goals for Grade 5, first, second and third year are the same, the articles are however more advanced.

Week 1	Apply appropriate workshop and general safety measures	Wear appropriate safety clothing an gear
Week 2	Report an accident an apply basic first aid	Know the basic use of fire equipment in case of a fire
Week 3	Demonstrate the emergency procedures of the workshop	Use a problem steel welding rod when joining different metals
Week 4	Store tools and equipment safely and securely	Store hazardous material safely and securely
Week 5	Apply the safety measures of the welder	Store materials properly, securely and out of the way
Week 6	Use angle grinder correctly and safely	Identify warning signs
Week 7	Use angle grinder to grind sharp edges	Change the angle grinder blade safely
Week 8	Use angle grinder to finish the joint	Choose the correct grinder blade for the work to be done
Week 9	Grind the joint with angle grinder just enough not to weaken joint	Adjust welder to correct setting, so that metal is not melted

Theoretical Assessment: Term 1.

Four theoretical activities are assessed and recorded, however, a minimum of 1 theoretical activity is reported on. The following serves as suggestions of theoretical activities to report on.

The learner must be able to:

Week 1	List different fire equipment and make simple drawings of it
Week 2	Discuss the importance of reporting an accident and the importance of first aid
Week 3	List different welding rods and their uses
Week 4	Explain the importance of storing tool, equipment and hazardous material correctly and safely
Week 5	List how and why material should be stored properly, safely and out of the way
Week 6	Use a worksheet to identify the warning signs
Week 7	List the safety measures of the angle grinder
Week 8	List the steps to change a angle grinder blade safely
Week 9	Make a simple drawing of a angle grinder and name the different parts

3.3.5 Grade 5: 1st, 2nd and 3rd year: Term 2

Grade 5 Term 2			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
1-3	General safety and good housekeeping practises Tools and safety Materials Processes Project costing	Grade 5: 1st year • Measure the lengths of round bar • Mark out the round bar • Cut the round bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product Identify and/or name the following tools: • Bench grinder Follow safety precautions with the: • Bench grinder e.g. Inspect bench grinder to see all shields and wheel housing are in position Inspect the wheels to see that there are not cracked Secure bench grinder to a popper base Wear safety gear Support work on work rest Ensure that grinder wheel is completely still after switched off Dress wheel regularly to ensure a good working surface	Grade 5: 1st year The suggested project is a toilet paper holder to teach the learner skills to: • Measure the lengths of round bar • Mark out the round bar • Cut the round bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product Identify and/or name, select and apply the following tools and materials safely to complete the suggested projects • Bench grinder The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session. 
		Grade 5:2nd year • Measure the lengths of round bar	Grade 5:2nd year The suggested project is a towel rail to teach learner skills

Grade 5 Term 2			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
		• Mark out the round bar • Cut the round bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product	to: • Measure the lengths of round bar • Mark out the round bar • Cut the round bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session. 
		Grade 5:3rd year • Measure the lengths of round bar • Mark out the round bar • Cut the round bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder	Grade 5:3rd year The suggested project is a toilet roll holder to teach the learner skills to: • Measure the lengths of round bar • Mark out the round bar • Cut the round bar • Bend the round bar

Grade 5 Term 2			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
		• Paint the product	• Weld the different parts together • Finish the welding joint with angle grinder • Paint the product The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session. 
4-6	General safety and good housekeeping practises Tools and safety Materials Processes Project costing	Grade 5: 1st year • Measure the lengths of round bar • Mark out the round bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product	Grade 5: 1st year The suggested project is a poolside towel rail to teach the learner skills to: • Measure the lengths of round bar • Mark out the round bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied 

Grade 5 Term 2			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
			during the practical session.
		Grade 5:2nd year • Measure the lengths of round bar • Mark out the round bar • Cut the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product	Grade 5:2nd year The suggested project is a clothes stand to teach the learner skills to: • Measure the lengths of round bar • Mark out the round bar • Cut the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session. 
		Grade 5:3rd year • Measure the lengths of round bar and pipe • Mark out the round bar and pipe e.g. in this case pipe can be used to make project lighter • Cut the round bar and pipe • Weld the different parts together • Finish the welding joint with angle grinder	Grade 5:3rd year The suggested project is a hall stand the to teach learner skills to: • Measure the lengths of round bar and pipe • Mark out the round bar and pipe e.g. in this case pipe can 

Grade 5 Term 2			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
		• Paint the product e.g. the product need to be painted properly	be used to make project lighter • Cut the round bar and pipe • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session.
7-9	General safety and good housekeeping practises Tools and safety Materials Processes Project costing	Grade 5: 1st year • Measure the lengths of round bar • Mark out the round bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product Identify and/or name the following tools: • Spray paint gun Follow safety precautions with the • Spray paint gun e.g. Ventilate work area good Remember not to work near open flames or sparks Ensure that no paint or cleaning material is inhaled and swallowed Make an eye wash station	Grade 5: 1st year The suggested project is a wine rack to teach the learner skills to: • Measure the lengths of round bar • Mark out the round bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product Identify and/or name, select and apply the following tools and materials safely to complete the suggested projects 

Grade 5 Term 2			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
		Spray at an appropriate pressure Check the gauges regularly	• Spray paint gun The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session.
		Grade 5:2nd year • Measure the lengths of round bar • Mark out the round bar • Cut the round bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product	Grade 5: 2nd year The suggested project is a bathroom/kitchen shelf to teach the learner skills to: • Measure the lengths of round bar • Mark out the round bar • Cut the round bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product • Round bar The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session. 
		Grade 5:3rd year	Grade 5:3rd year The suggested project is a towel shelf to teach the learner

Grade 5 Term 2			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
		• Measure the lengths of round bar • Mark out the round bar • Cut the round bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product	skills to: • Measure the lengths of round bar • Mark out the round bar • Cut the round bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product  The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session.

Assessment: Term 2

Assessment is formally recorded during four (4) practical sessions with a minimum of four (4) skills reported. Learners, regardless of abilities, shall be assessed on the same skill. The following serves as suggestion of skills to record and report on.

The assessment goals for Grade 5, first, second and third year are the same, the articles are however more advanced.

Week 1	Use a bench grinder correctly and safely	Use the correct grinding wheel/brush for the work
Week 2	Grind sharp edges with bench grinder	Grind joints with bench grinder
Week 3	Use cut-off machine correctly and safely	Cut metal with cut-off machine
Week 4	Clamp material securely in cut-off machine	Clamp material accurate to ensure the correct lengths
Week 5	Use sandpaper to sand off corrosion	Use a file in corners to file of corrosion
Week 6	Clean the surface properly before finishing/painting	Use spray painting gun correctly and safely
Week 7	Apply safety measures of the spray painting gun	Choose an appropriate nozzle for spray painting
Week 8	Ensure that there is enough air in the tank, read the pressure gauges	Choose the correct pressure for the work
Week 9	Choose the correct cleaner for spray painting gun	Clean the spray painting gun properly

Theoretical Assessment: Term 2.

Four theoretical activities are assessed and recorded, however, a minimum of 1 theoretical activity is reported on. The following serves as suggestions of theoretical activities to report on.

The learner must be able to:

Week 1	Use a worksheet to name and identify the parts of the bench grinder
Week 2	List the safety measures for the bench grinder
Week 3	Use a worksheet to name and identify the parts of the cut-off machine
Week 4	List the safety measures of the cut-off machine
Week 5	List ways to remove corrosion
Week 6	Discuss the importance of preparing the paint surface before painting
Week 7	Use a worksheet to name and identify the parts of the spray painting gun
Week 8	Use a worksheet to make pressure gauge readings and discuss why the correct pressure is important
Week 9	Discuss the importance of cleaning the spray paint gun properly and using an appropriate cleaner

3.3.6 Grade 5: 1st, 2nd and 3rd year: Term 3

<table>
<tr><th colspan="4">Grade 5 Term 3</th></tr>
<tr><th>WEEK</th><th>TOPIC</th><th>CONTENT
The learner must be able to:</th><th>Practical tasks</th></tr>
<tr><td rowspan="2">1-3</td><td rowspan="2">General safety and good housekeeping practises
Tools and safety
Materials
Processes
Project costing</td><td>Grade 5:1st year
• Measure the lengths of flat bar
• Mark out the flat bar
• Bend the flat bar
• Weld the different parts together
• Finish the welding joint with angle grinder
• Paint the product</td><td>Grade 5:1st year
The suggested project is a lantern to teach the learner skills to:
• Measure the lengths of flat bar
• Mark out the flat bar
• Bend the flat bar
• Weld the different parts together
• Finish the welding joint with angle grinder
• Paint the product
The teacher discusses and demonstrates the steps to produce and complete the project successfully.
 
Safety rules are discussed and applied during the practical session.</td></tr>
<tr><td>Grade 5:2nd year
• Measure the lengths of round bar and pipe
• Mark out the round bar and pipe
• Cut the round bar and pipe</td><td>Grade 5:2nd year
The suggested project is a lamp to teach the learner skills to:
• Measure the lengths of round bar and pipe</td></tr>
</table>

Grade 5 Term 3			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
		• Bend the round bar and pipe • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product e.g. in this case a paint technique or rust and varnish technique, because this is an indoor appliance.	• Mark out the round bar and pipe • Cut the round bar and pipe • Bend the round bar and pipe • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product e.g. in this case a paint technique or rust and varnish technique, because this is an indoor appliance. The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session.  
		Grade 5:3rd year	Grade 5:3rd year

Grade 5 Term 3			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
		• Measure the lengths of round bar and pipe • Mark out the round bar and pipe • Cut the round bar and pipe • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product	The suggested project is a portable garden light stand to teach the learner skills to: • Measure the lengths of round bar and pipe • Mark out the round bar and pipe • Cut the round bar and pipe • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product  The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session.
4-6	General safety and good housekeeping practises Tools and safety	Grade 5: 1st year • Measure the lengths of round bar • Mark out the round bar • Bend the round bar	Grade 5: 1st year The suggested project is a rain meter stand to teach the learner skills to: • Measure the lengths of round bar

Grade 5 Term 3			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
	Materials Processes Project costing	• Weld the different parts together • Finish the welding joint with angle grinder • Paint the product	• Mark out the round bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product The teacher discusses and demonstrates the steps to produce and complete the project successfully.  Safety rules are discussed and applied during the practical session.
		Grade 5:2nd year: • Measure the lengths of round bar • Mark out the round bar • Cut the round bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product	Grade 5:2nd year The suggested project is a pot plant stand to teach the learner to: • Measure the lengths of round bar • Mark out the round bar • Cut the round bar 

Grade 5 Term 3			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
			• Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session.
		Grade 5:3rd year • Measure the lengths of round bar • Mark out the round bar • Cut the round bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product	Grade 5:3rd year The suggested project is a pot plant shelf to teach the learner skills to: • Measure the lengths of round bar • Mark out the round bar • Cut the round bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder 

Grade 5 Term 3			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
			• Paint the product The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session. 
7-9	General safety and good housekeeping practises Tools and safety Materials Processes Project costing	Grade 5: 1st year • Measure the lengths of round bar • Mark out the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product	Grade 5: 1st year The suggested project is a trellis for ranking plants to teach the learner skills to: • Measure the lengths of round bar • Mark out the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical

Grade 5 Term 3			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
			session. 
		Grade 5:2nd year • Measure the lengths of round bar • Mark out the round bar • Cut the round bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product	Grade 5:2nd year The suggested project is a decorative wall pot plant holder to teach the learner skills to: • Measure the lengths of round bar • Mark out the round bar • Cut the round bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical

Grade 5 Term 3			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
			session. 
		Grade 5:3rd year • Measure the lengths of round bar • Mark out the round bar • Cut the round bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product	Grade 5:3rd year The suggested project is a trellis for a pot plant to teach the learner skills to: • Measure the lengths of round bar • Mark out the round bar • Cut the round bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product The teacher discusses and demonstrates the steps to produce and complete the project successfully.

Grade 5 Term 3			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
			Safety rules are discussed and applied during the practical session. 

Assessment: Term 3

Assessment is formally recorded during four (4) practical sessions with a minimum of four (4) skills reported. Learners, regardless of abilities, shall be assessed on the same skill. The following serves as suggestion of skills to record and report on.

The assessment goals for Grade 5, first, second and third year are the same, the articles are however more advanced.

Week 1	Know the procedure of shutting down the main switches in a case of emergency	Apply knowledge to plug and unplug a plug correctly and safely
Week 2	Apply basic electricity safety measures	Ensure that electrical switches are all in a working order
Week 3	Ensure that electrical cords and extension cords is in a good condition	Ensure that plugs is in a working order and safe
Week 4	Wire a plug correctly under supervision	Report faulty tools, equipment and damage of the workshop
Week 5	Do basic upkeep and maintenance of tools/ equipment under supervision	Do basic upkeep and maintenance of the workshop
Week 6	Identify/choose the appropriate material for the project	Report when there is no more material or a shortage of material
Week 7	Use a basic cutting list for a project	Clean the workshop properly
Week 8	Use the correct terminology	Plan a project
Week 9	Use chronological steps in assembling the project	Tack weld the different parts of the project

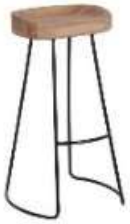
Theoretical Assessment: Term 3.

Four theoretical activities are assessed and recorded, however, a minimum of 1 theoretical activity is reported on. The following serves as suggestions of theoretical activities to report on.

The learner must be able to:

Week 1	List the procedure of shutting down the main switches in case of an emergency
Week 2	List the basic safety measures of electricity
Week 3	Discuss the process to fix a faulty cord
Week 4	Make a simple drawing of a plug and name the different parts and use colour pencils to show the correct connection of the electrical wires
Week 5	Make a list of things that can possibly fixed in the workshop
Week 6	Discuss the importance of the right choice of material and the importance of reporting when you run low on material
Week 7	Compile a basic cutting list
Week 8	Discuss the importance of using the correct terminology in the workshop
Week 9	Discuss the importance of tack welding the project before you ensue welding the joints

3.3.7 Grade 5: 1st, 2nd and 3rd year: Term 4

<table>
<tr><th colspan="4">Grade 5 Term 4</th></tr>
<tr><th>WEEK</th><th>TOPIC</th><th>CONTENT
The learner must be able to:</th><th>Practical tasks</th></tr>
<tr><td>1-3</td><td>General safety and good housekeeping practises
Tools and safety
Materials
Processes
Project costing</td><td>Grade 5: 1st year
• Measure the lengths of round bar
• Mark out the round bar
• Bend the round bar
• Weld the different parts together
• Finish the welding joint with angle grinder
• Paint the product
Identify and/or name the following tools:
• Cut-off machine
Follow safety precautions with the:
• Cut-off machine e.g. Inspect cut-off machine to ensure all shields are in place.
Inspect blade to ensure it is not cracked or broken
Wear safety gear
Ensure that hands and limbs is cleared from blade
Ensure that the blade is not rotating and still after switched off
Clean work area of flammable materials</td><td>Grade 5: 1st year
The suggested project is a stool and to teach the learner skills to:
• Measure the lengths of round bar
• Mark out the round bar
• Bend the round bar
• Weld the different parts together
 
• Finish the welding joint with angle grinder
• Paint the product
Identify and/or name, select and apply the following tools and materials safely to complete the suggested projects
• Cut-off machine
The teacher discusses and demonstrates the steps to produce and complete the project successfully.
Safety rules are discussed and applied during the practical session.
  </td></tr>
<tr><td></td><td></td><td>Grade 5:2nd year</td><td>Grade 5:2nd year</td></tr>
</table>

Grade 5 Term 4			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
		• Measure the lengths of square tubing and lip channel • Mark out the square tubing and lip channel • Cut the square tubing and lip channel • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product	The suggested project is a simple bench to teach the learner to: • Measure the lengths of square tubing and lip channel • Mark out the square tubing and lip channel • Cut the square tubing and lip channel • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product • channel The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session. 
		Grade 5:3rd year • Measure the lengths of round bar and angle iron • Mark out the round bar and angle iron • Cut the round bar and angle iron • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder	Grade 5:3rd year The suggested project is a bench the to teach learner skills to: • Measure the lengths of round bar and angle iron • Mark out the round bar and angle iron • Cut the round bar and angle iron • Bend the round bar

Grade 5 Term 4			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
		• Paint the product	• Weld the different parts together • Finish the welding joint with angle grinder • Paint the product The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session. 
4-6	General safety and good housekeeping practises Tools and safety Materials Processes Project costing	Grade 5: 1st year • Measure the lengths of square tubing • Mark out the square tubing • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product Identify and/or name the following tools: • Hand notcher Follow safety precautions with the: • Hand notcher e.g. Inspect hand notcher to see if all parts and shields is in place and working order Wear leather gloves to prevent cuts Ensure fingers and limbs are clear before cutting Lubricate working parts regularly Hold material firmly	Grade 5: 1st year The suggested project is a side table to teach the learner to: • Measure the lengths of square tubing • Mark out the square tubing • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product Identify and/or name, select and apply the following tools and materials safely to complete the suggested projects • Hand notcher The teacher discusses and demonstrates the steps to produce and complete the project successfully.

Grade 5 Term 4			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
		Refrain using machine beyond its capacity	Safety rules are discussed and applied during the practical session. 
		Grade 5:2nd year • Measure the lengths of square tubing • Mark out the square tubing • Cut the square tubing • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product Identify and/or name the following tools: • Plasma cutter • Spanner Follow safety precautions with the: • Plasma cutter e.g. Wear safety gear, like safety goggles, leather gloves etc. Turn power of before changing tips Inspect tip and electrode to ensure it is in good working condition • Spanners e.g. Choose the correct size spanner for the job Ensure spanner is not damaged	Grade 5:2nd year The suggested project is a trolley to teach the learner skills to: • Measure the lengths of square tubing • Mark out the square tubing • Cut the square tubing • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product Identify and/or name, select and apply the following tools and materials safely to complete the suggested projects • Plasma cutter, spanners The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session. 

Grade 5 Term 4			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
		Ensure the jaw of spanner is in full contact with the head of the nut Maintain spanners well to ensure an extended use	
		Grade 5:3rd year • Measure the lengths of square tubing • Mark out the square tubing • Cut the square tubing • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product	Grade 5:3rd year The suggested project is a coffee table to teach the learner to: • Measure the lengths of square tubing • Mark out the square tubing • Cut the square tubing • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session. 
7-9	General safety and good housekeeping practises Tools and safety Materials	Grade 5: 1stYear • Measure the lengths of round bar • Mark out the round bar • Bend the round bar • Weld the different parts together • Finish the welding joint with angle grinder	Grade 5: 1stYear The suggested project is burglar bars to teach the learner skills to: • Measure the lengths of round bar • Mark out the round bar • Bend the round bar

Grade 5 Term 4			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
	Processes Project costing	• Paint the product Identify and/or name the following tools: • 90˚ magnet Follow safety precautions with the: • 90˚ magnet e.g. handle it with care to ensure it will stay accurate • Protect it from heat so that it does not lose its magnetic abilities	• Weld the different parts together • Finish the welding joint with angle grinder • Paint the product Identify and/or name, select and apply the following tools and materials safely to complete the suggested projects • 90˚ magnet The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session. 
		Grade 5:2nd year • Measure the lengths of square tubing • Mark out the square tubing • Cut the square tubing • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product	Grade 5:2nd year The suggested project is a bed headboard to teach the learner to: • Measure the lengths of square tubing • Mark out the square tubing • Cut the square tubing • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product

Grade 5 Term 4			
WEEK	**TOPIC**	**CONTENT** **The learner must be able to:**	**Practical tasks**
			The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session. 
		Grade 5:3rd year • Measure the lengths of square tubing and round bar • Mark out the square tubing and round bar • Cut the square tubing and round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product	Grade 5:3rd year The suggested project is a security door to teach the learner to: • Measure the lengths of square tubing and round bar • Mark out the square tubing and round bar • Cut the square tubing and round bar • Weld the different parts together • Finish the welding joint with angle grinder • Paint the product  The teacher discusses and demonstrates the steps to produce and complete the project successfully. Safety rules are discussed and applied during the practical session.

Assessment: Term 4

Assessment is formally recorded during four (4) practical sessions with a minimum of four (4) skills reported. Learners, regardless of abilities, shall be assessed on the same skill. The following serves as suggestion of skills to record and report on.

The assessment goals for Grade 5, first, second and third year are the same, the articles are however more advanced.

Week 1	Use cut-off machine correctly and safely	Apply safety measures of the welder
Week 2	Identify the different parts of the cut-off machine	Identify the different parts of the welder
Week 3	Choose an appropriate setting for the welder	Set up welder correctly
Week 4	Choose an appropriate welding rod	Use spanners correctly and safely
Week 5	Use welder safely and correctly	Use plasma cutter correctly and safely
Week 6	Choose the correct welding angle	Apply safety measures of the plasma cutter
Week 7	Use 90˚ welding magnet correctly	Use angle grinder correctly and safely
Week 8	Choose a correct welding speed	Apply safety measures of angle grinder
Week 9	Tack weld the product correctly	Choose the correct welding speed

Theoretical Assessment: Term 4.

Four theoretical activities are assessed and recorded, however, a minimum of 1 theoretical activity is reported on. The following serves as suggestions of theoretical activities to report on.

The learner must be able to:

Week 1	Use a work sheet and name the different parts of the cut-off machine
Week 2	List the safety measures of the cut-off machine
Week 3	List the safety measures of the welder
Week 4	Name different spanners
Week 5	Use a worksheet to identify and name the different parts of the plasma cutter
Week 6	List the safety measures of the plasma cutter
Week 7	Explain the advantages of using a 90˚ magnet in welding
Week 8	Name the function of the flux of the welding rod
Week 9	Explain the importance of tack welding a product

4 SECTION 4
ASSESSMENT

4.1 Introduction

This section on assessment *standardises* the recording and reporting processes for the CAPS Grades R to 5 for learners with Severe Intellectual Disability. It also provides a policy framework for the management of School Based Assessment (SBA) and School Assessment Records.

It is required of teachers to offer a differentiated form of assessment, as learners with moderate to severe intellectual disability and learning difficulties also have diverse learning styles and support needs. Since a learner or learners may be functioning on different levels, the assessment / recording / reporting system must make provision for reflecting the level(s) of each individual learner. These different levels should be outlined in the Individual Support Plan which should be developed at the beginning of the year in accordance with the procedures contained in the *Policy on Screening, Identification, Assessment and Support* (SIAS). Each learner, regardless of his/her number of years in the school, must have access to various forms of assessment best suited to his/her competences, learning styles, strengths and needs. The targets set for each learner in terms of attainment of knowledge and skills outlined in each Subject Statement will always strive to take a learner to the next level and should never set a ceiling on learning potential. Individualised adaptation is required in terms of content, methods of presentation, classroom pedagogy, pacing of instruction and accommodations in assessment. The principle is to have high expectations for each learner, to identify and address barriers to learning so as to ensure fairness in assessment (See Chapter 9 of the National Protocol for Assessment, 2011).

Assessment does not imply that after every lesson the learners must complete a worksheet/assignment or project, but will be based on observation and recording of progress steps attained during the lesson or a series of lessons. Formal assessment can be done in a format which would be suitable for each learner, e.g. through written or oral assessments, or by making use of a range of accommodations measures, e.g. a reader and a scribe. The main aim is to be able to develop a report which is based on definable attainment (even through the smallest of steps) as prescribed in each subject and can be shared with parents and care-givers on at least a quarterly basis so as to elicit their participation and co-operation in the support programme of the

learner. At the end of the year a Statement of Achievement/Report card must be made available on which the Individual Support Plan for the following year will be based. There will be no learner retention, as the Individual Support Plan and the Curriculum Schedule (see SIAS Form 124) will indicate at which grade level learners are working in each subject.

4.2 Assessment principles

4.2.1 Definition

Assessment is a continuous planned process of identifying, gathering and interpreting information about the performance of learners, using various forms of assessment. It involves four steps: generating and collecting evidence of achievement; evaluating this evidence; recording the findings and using this information to understand and thereby assist the learner's development in order to improve the process of learning and teaching. Assessment should be both informal (Assessment for Learning) and formal (Assessment of Learning). In both cases regular feedback should be provided to learners to enhance the learning experience.

Assessment is a process that measures individual learners' attainment of knowledge (content and concepts) and skills by collecting, analysing and interpreting the data and information obtained from this process to:

- enable the teacher to assess a learner's progress in a reliable way.
- inform learners of their strengths, areas to be developed and progress.
- assist teachers, parents and other stakeholders in making decisions about the learning process, the progress of learners and the planning for their individualised support.

Assessment should be mapped against the content, skills, intended goals and topics specified in the learning programme. In both informal and formal assessments it is important to ensure that in the course of a school year:

- all of the topics and content are covered.
- the full range of skills is included.
- a variety of different forms of assessment are used.

4.2.2 Informal Assessment or Daily Assessment

Assessment **for** learning has the purpose of continuously collecting information on a learner's achievement that can be used to improve their learning. Informal assessment is a daily monitoring of learners' progress. This is done through observations, discussions, practical demonstrations, learner-teacher conferences, informal classroom interactions, etc. Informal assessment may be as

simple as stopping during the lesson to observe learners or to discuss with learners how learning is progressing. Informal assessment should be used to provide feedback to the learners and to inform planning for teaching but need not be recorded. It should not be seen as separate from learning activities taking place in the classroom.

Learners or teachers can assess their performance in the tasks. Self-assessment and peer assessment actively involves learners in assessment. This is important as it allows learners to learn from and reflect on their own performance. The results of all the informal daily assessment tasks may be recorded based on assessment instruments used such as rubrics and checklists. This may serve to give feedback to the learners, their parents and the school management team.

Informal, on-going assessments should be used to scaffold the acquisition of knowledge and skills and should be the stepping stones leading up to formal assessment.

4.2.3 Formal Assessment

All assessment tasks that make up a formal programme of assessment for the year are regarded as formal assessment. Formal assessment tasks are marked and results are formally recorded by the teacher. All formal assessment tasks are subject to internal moderation for the purpose of quality assurance and to ensure that appropriate standards are maintained in the school. Assessment tasks should always set high expectations for learners.

To implement formal assessment the teacher should:

- Ensure that the formal assessment task coincides with the practical skills and theoretical work embedded in the practical skill corresponding with the tasks performed on that day or within the previous week;
- Explain the task to guide the learner, show an example of the completed task in order for the learner to know exactly what to do and what is expected;
- Divide the class, according to abilities, in more than one group and give a task with similar content, but differentiated in terms of level of difficulty, abstractness or method of questioning, to all the learners. The way in which the assessment task is set should be in reach of the learners' level of development whilst also setting targets for the next step of development;

- Written tests could be set to assess theoretical knowledge within a set time, allowing for assessment accommodations in line with learners' individual needs;
- Write the date of expected completion of the task in the learner's book;
- Compile a suitable assessment tool; and
- Formal assessment should reflect 20 % theoretical knowledge embedded in practical work. Eighty percent (80%) should be practical work.

The formal assessment requirements are indicated in the formal School-Based Assessments table. In the three core subjects, the ratio may be adapted to the needs of the learners. The focus however must be on practical skills and not on the written tasks.

Formal School-Based Assessments			
Term 1	Term 2	Term 3	Term 4
Minimum of 1 worksheet/test/activity per term in order for 20 % of rating codes to reflect on theoretical knowledge	Minimum of 1 worksheet/test/activity per term in order for 20 % of rating codes to reflect on theoretical knowledge	Minimum of 1 worksheet/test/activity per term in order for 20 % of rating codes to reflect on theoretical knowledge	Minimum of 1 worksheet/test/activity per term in order for 20 % of rating codes to reflect on theoretical knowledge
Minimum of 4 practical assessment tasks or activities in order for 80% of rating codes to reflect on different practical skills	Minimum of 4 practical assessment tasks or activities in order for 80% of rating codes to reflect on different practical skills	Minimum of 4 practical assessment tasks or activities in order for 80% of rating codes to reflect on different practical skills	Minimum of 4 practical assessment tasks or activities in order for 80% of rating codes to reflect on different practical skills

In Creative Arts and Art and Crafts, the above table is not applicable. In these two subjects, a minimum of 4 practical assessment tasks should be completed. Theoretical content will not be assessed. Refer to the learning programme for assessment requirements.

In Physical Education assessment, the above tables does not apply. Refer to the learning programme for assessment.

Assessment in the CAPS Grades R to 5 for learners with Severe Intellectual Disability is underpinned by the objectives of the National Qualifications Framework (NQF). These objectives are to:

- Create an integrated national framework for learning achievements;
- Facilitate access to and progression within education, training and career paths;
- Enhance the quality of education and training;
- Redress unfair discrimination and past imbalances and thereby accelerate employment opportunities;
- Contribute to the holistic development of the learner and preparation for the world of work by addressing:

- social adjustment and responsibility;
- moral accountability and ethical work orientation;
- resilience and adaptability;
- economic participation and entrepreneurial skills; and
- nation-building.

The principles that drive these objectives are:

- ***Integration***

To adopt a unified approach to education and training that will strengthen the capacity of learners to adapt to the requirements of the workplace.

- ***Relevance***

To be dynamic and responsive to workplace needs and a range of employment fields.

- ***Credibility***

To demonstrate national and international values and recognition of qualification and acquired competencies and skills.

- ***Coherence***

To work within a consistent framework of principles.

- ***Flexibility***

To allow for creativity and resourcefulness when achieving skills to cater for different learning styles and use a range of assessment methods, instruments and techniques.

- ***Participation***

To enable stakeholders to participate in setting standards and co-ordinating the achievement of the qualification.

- ***Access***

To address barriers to learning at each level to facilitate learners' progress.

- ***Progression***

To ensure that the qualification framework permits individuals to move through the levels of the national qualification via different, appropriate combinations of the components of the delivery system.

- ***Articulation***

To allow for vertical and horizontal mobility in the education system when accredited pre-requisites have been successfully completed.

- ***Validity of assessments***

To ensure assessment covers a broad range of knowledge, skills, values and attitudes to demonstrate applied competency. This is achieved through:

- clearly stating the skill to be assessed;
- selecting the appropriate or suitable evidence;
- matching the evidence with a compatible or appropriate method of assessment; and
- selecting and constructing an instrument(s) of assessment.

- ***Reliability***

To assure assessment practices are consistent so that the same result or judgment is arrived at if the assessment is replicated in the same context. This demands consistency in the interpretation of evidence; therefore, careful monitoring of assessment is vital.

- ***Fairness and transparency***

To verify that no assessment process or method(s) hinders or unfairly advantages any learner. The following could constitute unfairness in assessment:

- Inequality of opportunities, resources or teaching and learning approaches
- Bias based on ethnicity, race, gender, age, disability or social class
- Lack of clarity regarding topic, content or skill being assessed
- Comparison of learners' work with that of other learners, without taking into account differences in learning styles, language and culture.

- ***Practicability and cost-effectiveness***

To integrate assessment practices within the teaching and learning process and strive for cost and time-effective assessment.

4.3 Managing assessment

4.3.1 Types of Assessment

Assessment benefits the learner and the teacher. It informs learners about their progress and helps teachers make informed decisions at different stages of the learning process. Depending on the intended purpose, different types of assessment can be used.

- **Baseline assessment:** At the beginning of a year or learning experience, baseline assessment establishes the knowledge, skills, values and attitudes that learners bring to the classroom. This knowledge assists teachers to plan learning programmes and learning activities

flexibly enough to accommodate a wide range of learning styles and learning needs. This assessment should be done at three levels, namely to determine:

Progress with the curriculum

- Are learner 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 content?
- 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?

- **Diagnostic assessment:** This assessment diagnoses the nature and causes of learning barriers experienced by specific learners. It is followed by guidance, appropriate support and intervention strategies. This type of assessment is useful to make referrals for learners requiring specialist assistance.
- **Formative assessment (Informal Assessment):** This assessment monitors and supports teaching and learning. It determines learners' strengths and areas to be addressed and provides feedback on progress. It determines if a learner is ready for summative assessment.
- **Summative assessment (Formal Assessment):** This type of assessment gives an overall picture of the learner's progress at a given time.

4.3.2 Planning Assessment

An assessment plan should cover three main processes:

- **Collecting evidence:** The assessment plan indicates which learning programme topics, content and skills will be assessed, what assessment method or activity will be used and when this assessment will be conducted.

The assessment tasks may be broken down (designed down) into smaller, achievable steps and support may gradually be withdrawn as the learner master the content/skills. Thus, designing down means to look at the assessment goal and dividing this into smaller components which are spread over a longer period.

Two or more grades may be straddled, in other words the evidence may be collected over more than one grade within a subject. But straddling should be carefully recorded and monitored through Form 125 of the SIAS Protocol.

- **Recording:** The process of recording refers to the assessment instruments or tools with which the assessment will be captured or recorded. Therefore, appropriate assessment instruments must be developed or adapted.
- **Reporting:** All the evidence is put together in a report to deliver a decision for the subject. Reporting must reflect the straddling that has been applied and should provide guidance to parents through meaningful descriptive paragraphs on what has been achieved and what the next expected outcomes are.

4.3.3 Methods of Assessment

Methods of assessment refer to who carries out the assessment and includes teacher assessment, self-assessment, peer assessment and group assessment.

TEACHER ASSESSMENT	The teacher assesses learners' performance against given criteria in different contexts, such as individual work, group work, etc.
SELF-ASSESSMENT	Learners assess their own performance against given criteria in different contexts, such as individual work, group work, etc.
PEER ASSESSMENT	Learners assess another learner or group of learners' performance against given criteria in different contexts, such as individual work,

	group work, etc.
GROUP ASSESSMENT	Learners assess the individual performance of other learners within a group or the overall performance of a group of students against given criteria.

4.3.4 Assessment tools/instruments to execute assessment

An assessment tool is the instrument the teacher utilizes to execute the assessment. When choosing and assessment tool ensure that the tool:

- is appropriate for the selected assessment method;
- provides the most valid and reliable information on the learners' performances;
- measures the objectives of the lesson.

Examples of assessment tools are checklist, rubrics, questionnaires, worksheets and video recordings.

A **rubric** serves as an objective assessment tool that provides, at varying levels, clear descriptions of the characteristics of the tasks. The descriptions or criteria in the rubric enables learners to understand what the teacher expects from them and complete the task accordingly. Rubrics are either holistic or analytic.

Rubrics should explain the competence level descriptors for the skills, knowledge, values and attitudes (SKVAs) a learners must demonstrate to achieve each level of the rating scale. The relevant content must be used to create the rubric to assess the task or question. The descriptions must clearly indicate the minimum level of attainment for each category on the rating scale.

Analytical descriptive rubrics focus on elements of the product or performances. Descriptive sentences are formulated for each of the seven rating codes, with the best performance reflected with a score of 7 and the poorest with a score of 1. This is the most reliable and trustworthy assessment tool.

Task lists and **checklists** are examples of a holistic rubric and show the learners what needs to be done. They consist of short statements describing the expected performance in a particular task. The statements on the checklist can be ticked off when the learner has adequately achieved the criterion. Checklists and task lists are useful in peer or group assessment activities.

Learners must do a minimum of 5 activities/projects/worksheets/tests per term 1 to 4. The teacher compiles the activities/worksheets/tests and these should consist of activities that require the learner to:

- Identify the correct answer/picture/object – the question as well as the answer may consist of images/objects, e.g. Boardmaker or clip art images;
- Match column A to B and both columns may consist of pictures/objects;
- Fill in the missing words. The missing words may be available to the learners (on a separate sheet or printed on the worksheet) and they can copy the words, or write the words on the dotted lines provided by the teacher;
- Perform a skill other than writing, e.g. to colour, to cut and paste in specified groups, to find pictures in a magazine and cut and paste in book; or
- Provide answers.

The following should at least be included in the Teacher's Assessment or Planning and Assessment File:

- Programme of Assessment for the grade
- The tools (rubric, checklist, etc.) used for each assessment task
- A mark sheet/record sheet for each assessment task

The learners Evidence must at least include:

- Classwork book
- Worksheet file

Evidence of learner performance must be available for quality assurance. This may be in the form of a Portfolio of Evidence (POE) which will include the learners' classwork books and the Support Needs Analysis (SNA).

4.4 School Assessment Programme

The **Programme of Assessment** takes place continuously and should commence in the second week of each term. The programme of assessment should include a minimum of five (5) assessment goals per subject. The programme of assessment should be recorded in the Teacher's assessment file or planning file (which may serve a dual purpose).

The following should at least be included in the Teacher's Assessment or Planning and Assessment File:

- A contents page
- The assessment goals for each subject
- The tools used for each assessment task
- A mark sheet/record sheet and report for each assessment task
- Recording instrument(s) for each assessment task
- A mark sheet and report for each assessment task

The learners Portfolio of Evidence must at least include:

- A contents page
- The assessment tasks according to the assessment programme as indicated below
- The assessment tools or instruments for the task
- A record of the rating code (and comments) achieved for each task.

Eighty to hundred percent (80% - 100%) of formal assessment should consist of **practical tasks/activities/skills**. Each learner should do a variety of practical tasks and activities during each term as indicated in the learning programmes.

4.5 Assessment programme across the five years

Assessment across the 5 years

Grade 4 – Skills

The assessment goals for Grade 4, first, second and third year are the same, the articles are however more advanced.

Task	Term 1		
1	Week 2 or 3	Use pliers correctly and safely Measure the correct lengths	Make proper bends Use a hacksaw correctly and safely
2	Week 4 or 5	Use shears correctly and safely Use a template to draw forms	Use nibbler correctly and safely Use pop rivet gun properly and safely
3	Week 6 or 7	Use a punch/pin correctly and safely Use letter/number punch correctly and safely	Use electrical hand drill correctly and safely Choose the correct size drill bit
4	Week 8 or 9	Use the hammer correctly and safely Clean the file correctly	Use file correctly and safely Use a template to mark out accurately
Task	Term 2		
1	Week 2 or 3	Use drill press correctly and safely Use machine vice correctly and safely	Identify the different parts of the welder Set up the welder correctly
2	Week 4 or 5	Use a jig to make bends Bend multiple bends the same	Use welder correctly and safely Choose an appropriate setting for the welder
3	Week 6 or 7	Use pliers to cut, tie and bend wire properly and neatly Use pliers to straighten wire	Choose an appropriate welding rod for specific work Choose the correct size welding rod
4	Week 8 or 9	Use an anvil correctly and safely Use the hammer to straighten wire properly	Choose the correct welding speed Choose the correct welding angle
Task	Term 3		
1	Week 2 or 3	Cut material so that there are no wastage Cut wire from an end and keep to the end	Use a chipping hammer correctly and safely Chip the flux properly from the welding joint
2	Week 4 or 5	Make symmetrical bends Bend letters/numbers the same size	Prepare the welding joint correctly Grind welding joint correctly

3	Week 6 or 7	Bend repeated letters/numbers the same size Choose the appropriate material for the project	Choose the correct paint size paint brush Choose an appropriate paint for the project
4	Week 8 or 9	Cut material and keep in mind that you are working at an angle Tie material uniformly to structure	Choose the correct cleaner for the paint brush Clean paint brush properly
Task	Term 4		
1	Week 2 or 3	Ensure that 90˚ corners measure 90˚ Use soldering correctly and safely to secure the joints	Use a clamp to keep bended ring in position to weld joint Use the sliding bevel to ensure you work at the right angle
2	Week 4 or 5	Use a guillotine to cut out material Use a box and pan brake correctly and safely to do bending	Cut legs the same length to ensure the project is level Use a screwdriver correctly and safely to secure top
3	Week 6 or 7	Bend seams properly Measure accurately to ensure that both parts are equal	Use a paint brush correctly Mark out both sides the same, to ensure that it is level
4	Week 8 or 10	Bend a hinge that working properly Use a spot welder correctly and safely to secure different parts	Ensure that when you use a hinge that it does not slide Paint with fire resistant paint

Grade 4 term 1 – 4: Theoretical assessment tasks

Evidence of one theoretical task of formal assessment between weeks 2 – 10 as in the annual teaching plan must be available for quality assurance.

Grade 4 – Practical assessment tasks

Assessment across the 5 years

Grade 5 – Skills

The assessment goals for Grade 5, first, second and third year are the same, the articles are however more advanced.

Task	Term 1		
1	Week 2 or 3	Report an accident an apply basic first aid Demonstrate the emergency procedures of the workshop	Know the basic use of fire equipment in case of a fire Use a problem steel welding rod when joining different metals
2	Week 4 or 5	Store tools and equipment safely and securely Apply the safety measures of the welder	Store hazardous material safely and securely Store materials properly, securely and out of the way
3	Week 6 or 7	Use angle grinder correctly and safely Use angle grinder to grind sharp edges	Identify warning signs Change the angle grinder blade safely
4	Week 8 or 9	Use angle grinder to finish the joint Grind the joint with angle grinder just enough not to weaken joint	Choose the correct grinder blade for the work to be done Adjust welder to correct setting, so that metal is not melted
Task	Term 2		
1	Week 2 or 3	Grind sharp edges with bench grinder Use cut-off machine correctly and safely	Grind joints with bench grinder Cut metal with cut-off machine
2	Week 4 or 5	Clamp material securely in cut-off machine Use sandpaper to sand off corrosion	Clamp material accurate to ensure the correct lengths Use a file in corners to file of corrosion
3	Week 6 or 7	Clean the surface properly before finishing/painting Apply safety measures of the spray painting gun	Use spray painting gun correctly and safely Choose an appropriate nozzle for spray painting
4	Week 8 or 9	Ensure that there is enough air in the tank, read the pressure gauges Choose the correct cleaner for spray painting gun	Choose the correct pressure for the work Clean the spray painting gun properly
Task	Term 3		
1	Week 2 or 3	Apply basic electricity safety measures Ensure that electrical cords and extension cords is in a good condition	Ensure that electrical switches are all in a working order Ensure that plugs is in a working order and safe
2	Week 4 or 5	Ensure that electrical cords and extension cords is in a good condition Wire a plug correctly under supervision	Report faulty tools, equipment and damage of the workshop Do basic upkeep and maintenance of the workshop

3	Week 6 or 7	Identify/choose the appropriate material for the project Use a basic cutting list for a project	Report when there is no more material or a shortage of material Clean the workshop properly
4	Week 8 or 9	Use the correct terminology Use chronological steps in assembling the project	Plan a project Tack weld the different parts of the project
Task	Term 4		
1	Week 2 or 3	Identify the different parts of the cut-off machine Choose an appropriate setting for the welder	Identify the different parts of the welder Set up welder correctly
2	Week 4 or 5	Choose an appropriate welding rod Use welder safely and correctly	Use spanners correctly and safely Use plasma cutter correctly and safely
3	Week 6 or 7	Choose the correct welding angle Use 90˚ welding magnet correctly	Apply safety measures of the plasma cutter Use angle grinder correctly and safely
4	Week 8 or 10	Choose a correct welding speed Tack weld the product correctly	Apply safety measures of angle grinder Choose the correct welding speed

Evidence of one theoretical task of formal assessment between week 2 – 10 as in the annual teaching plan must be available for quality assurance.

4.6 Recording and Reporting

Recording is a process in which the teacher documents the level of a learner's performance in a specific assessment task. It indicates learner progress towards the achievement of the knowledge and skill. Records of learner performance should provide evidence of the learner's progression. Records of learner performance should also be used to verify the progress made by teachers and learners in the teaching and learning process.

Reporting is a process of communicating learner performance to learners, parents, schools, and other stakeholders. Learner performance can be reported in a number of ways. These include report cards, parents' meetings, school visitation days, parent-teacher conferences, phone calls, letters, class or school newsletters, etc.

Good record keeping is essential in all assessment, particularly in continuous assessment. A record book or file must be kept up to date by each teacher. It should contain:

- learners' names;

- dates of assessment;
- name and description of the assessment activity;
- the results of assessment activities, according to Subject;
- comments for support purposes.

Teachers in all grades issue formal report cards quarterly indicating the competence level of the learner and as stated above also provide explanatory notes on what the learner has achieved per subject and what could be done by the parents at home to provide further stimulation.

The report cards may either be in narrative form that states the theory embedded in the skills and skill performed, or in a rating code as follows:

Rating code	**Description of competence**
7	Outstanding achievement
6	Meritorious achievement
5	Substantial achievement
4	Adequate achievement
3	Moderate achievement
2	Elementary achievement
1	Not achieved

The reports should always be a combination of both the narrative form and rating codes. All records must be accessible, easy to interpret, securely kept, confidential and helpful in the teaching and reporting process. The school assessment policy determines the details of how record books must be completed. Schools are required to provide quarterly feedback to parents, using a formal reporting tool, such as a report card. The schedule and the report card should indicate the overall level of performance of a learner.

NOTE:

Criterion referencing is best used to describe learner's performance in a skill. Teachers must make use of suitable analytical descriptive rubrics when assessing a learner's competence for a specific skill using practical demonstrations.

4.7 Moderation of Assessment

Moderation refers to the process that ensures that the assessment tasks are fair, valid and reliable. Moderation must be implemented at school as required. Comprehensive and appropriate moderation practices must be in place for the quality assurance of all subject assessments. The formal School-Based Assessment and the practical assessment tasks should be moderated internally and if necessary by the relevant subject specialists at the district.

4.7.1 Moderation serves five purposes:

- It must ascertain whether subject content and skills have been sufficiently covered.
- The moderator must ensure that the correct balance of cognitive demands are reflected in the assessments.
- The assessments and marking are of an acceptable standard and consistency.
- The moderator must make judgements about the comparability of learner performance across schools; whilst recognising that teachers teach in different ways.
- The subject specialist/moderator must identify areas in which a teacher may need development and support and must ensure that this support is provided.

4.7.2 Internal moderation

Assessment must be moderated according to the internal moderation policy of the School, Provincial and National Departments. Moderation is a continuous process. The moderator's involvement starts with the planning of assessment methods and instruments and follows with

continuous collaboration with and support to the assessor. Internal moderation creates common understanding of topics and skills and maintains these across the learning programmes.

Moderation is therefore an on-going process and not a once-off end-of-year event.

4.8 General

This document should be read in conjunction with:

- White Paper 6 on Special Needs Education: Building an Inclusive Education and Training System (2001);
- *National policy pertaining to the programme and promotion requirements of the National Curriculum Statement Grades R – 12*; and (NPPPPR) (2011);
- *National Protocol for Assessment Grades R – 12. (NPA) (2011);*
- *Guidelines for Responding to Diversity in the Classroom through the Curriculum and Assessment Policy Statements* (2011);
- *Guidelines to Ensure Quality Education and Support in Special Schools and Special School Resource Centres* (2013);
- *Policy on Screening, Identification, Assessment and Support* (2014);
- *Guidelines for Full-service/Inclusive Schools* (2010);
- *Standard Operating Procedures for Assessment of Learners who Experience Barriers to Assessment* (2016).