

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

PLUMBING

GRADE 4-5

Curriculum and Assessment

Policy Statement Grade R-5

for learners with Severe

Intellectual Disability

2018 Orientation

Learning programme

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1 SECTION 1

INTRODUCTION

2 SECTION 2: INTRODUCTION TO PLUMBING.

2.1 What is Plumbing?

Plumbing is a study of installing and repairing water supply and drainage systems as well as fixtures. This subject will equip learners to assist in the installing and repairing of cold and hot water supply to buildings, installing and repairing fixtures, installing and repairing above and below ground drainage systems, work as a team with bricklayers, electricians etc. The learner will be able to assist a qualified artisan, semi skilled artisan or be able to follow a supervisor's instructions.

Plumbing 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. During grade 5 in the second and third years the learners should preferably be placed in the learner work experience programme (LWEP) to acclimatise them to the world of work and prepare them for future jobs.

2.2 Specific Aims:

In Plumbing learners study:

- Health, safety and first aid procedures as well as good housekeeping principles
- The sectors in the plumbing industry and career possibilities in each sector
- Client services and customer care in the industry
- Managing resources and job planning
- Basic plumbing principles
- Basic skills in each aspect of the plumbing sector
- An introduction to the world of work

2.3 Topics to be studied in Plumbing

The table below indicates the main topics in the Plumbing programme.

1	Health, safety and good housekeeping practices.	
2	Basic construction sketches	
3	Tools.	
4	Plumbing principles	
5	Installation and maintenance of a water supply system	
6	Installation and maintenance of a water supply system	
7	Basic building work	
8	Planning and preparation for performing plumbing works	
9	Installation and maintenance of a drainage system	
10	Solar hot water systems	
11	World of work	

2.4 Requirements for Plumbing as a subject

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 **Plumbing** 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.

2.4.2 Resources

2.4.2.1 Human resources

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

2.4.2.2 Uniforms

Learners should wear a two piece overall and safety shoes.

2.4.2.3 Books, magazines and teaching media

- Each learner should have a learner workbook for the current module being studied
- The teacher should have:
 - plumbing books
 - You tube videos on plumbing
 - Models of plumbing components

2.4.2.4 Infrastructure and equipment

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

2.4.2.4.1 Infrastructure

A double or one and a half size classroom or a fully-fledged workshop.

The workshop should contain the following furniture and equipment

•	1 x teachers table and chair	2x lockable cupboards
•	2 x workbenches x 4 bench vices	1 x wash basin
•	4 x Plug points for welding and other	• 4 x sets combination spanners(6mm
	equipment	-32mm)
•	4 x shifting spanners(250mm)	• 4 x shifting spanner(150mm)
• ,	2 x stilson wrench(150mm)	2 x stilson wrench(250mm)
•	4 x pipe cutters	4 x hacksaws
	4 x pipe benders	4 x bending spring
•	4 x level	4 x tap reseating tool
•	4 x gas blowtorch	4 x water pump pliers
•	1 x chalk line	4 x builders square
•	4 x sets screwdrivers	4 x combination pliers
•	4 x long nose pliers	4 x measuring tape
•	4 x sink sockets	• 1 x socket set complete(6mm-32mm)
•	4 x rubber mallet	4 x ball pein hammers
•	2 x toilet auger	4 x plungers

4 x smooth files	4 x round files
4 x builders hawk	4 x plastering trowels
4 x vice grip	1 x inside circlip pliers
1 x outside circlip pliers	1 x file brush
4 x claw hammers	4 x chisels
4 x spade	2 x wheelbarrow
1 x vernier	4 x tubing pliers
4 x Stanley knives	2 x industrial drill
2x angle grinder	4 x pipe vices
1 x drill press	1 x bench grinder
4 x Club hammer	4 x Brick bolster chisel
2 x Pickaxe	2 x flaring tool
4 x G clamps	2 x fire extinguishers

• Consumables are not included in the list

The learners should work in groups of 4.

2.4.2.5 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

2.4.2.6 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.

2.5 Career opportunities

Learners can:

• Be employed as an assistant 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 7 % disability job clause.
- Be sub-contractors under supervision

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

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

3.1 Content overview of theoretical topics

The content is embedded in the skills and the learners should execute the skills in a stimulated working environment re created in the skills workshop. The table below indicates the topics and content in the Plumbing learning programme in Grade 4 and 5.

	Topics	Grade 4	Grade 5
		The learner must be able to:	The learner must be able to:
1	Health, safety	Identify and remove potential	Identify and remove
	and good	hazards in the work area.	potential hazards in the
	housekeeping	• Identify, use and care of	work area.
	practices	protective clothing and	State unsafe conditions
		equipment.	and acts.
		• Demonstrate the ability to	Practice good
		take appropriate steps in an	housekeeping.
		emergency.	Locate fire extinguishers
		• Set up protection and safety	and fire hoses.
		equipment for the working	Identify and use fire
		area.	extinguishers.
		Use, store and maintain	Identify and follow
		tools and equipment safely.	procedures for
		Comply with Health, safety	emergencies promptly and
		and Welfare in the	correctly.
		workplace.	Report injuries involving
		Understand unsafe	individuals to the relevant
		conditions and acts.	persons promptly.
		Practice good housekeeping.	Follow procedures that
			apply to illness or injuries
			in the work area.
			Access a first aid box
			Administer basic first aid
			• Intervene in a first aid

	Topics	Grade 4	Grade 5
		The learner must be able to:	The learner must be able to:
			scenario.
			Treat bleeding wounds.
			• Treat an injured person for
			shock.
2	Basic	Explain the role of drawings	
	construction	when carrying out plumbing.	
	sketches	Draw simple sketches of	
		plumbing layouts	
		Identify basic drawing and	
		symbols used in plumbing	
		activities.	
		• Describe elements of basic	
		plumbing drawings.	
		Apply information from	
		drawing in plumbing	
		activities.	
3	Tools	Identify, use and care basic	Identify, use and care for
		for hand tools.	power tools.
		• Identify, use and care for	• Maintain power hand tools.
		specialised tools.	• Identify, use and care for
		• Identify, use and care for	specialised tools.
		measuring tools.	• Identify, use and care for
			measuring tools.
			Maintain and repair tools.
4	Plumbing	Describe the role of the	Understand and apply
	principles	plumber.	water flow principles.
		Describe water sources.	Understand and apply
		Describe basic water flow	basic water pressure
		principles.	principles.
		Describe basic water	Understand and apply
		pressure principles.	water quality principles.
		Describe water quality	Understand and apply
			knowledge of corrosion of
		principles.	Knowledge of corrosion of
		principles.Explain basic corrosion of	plumbing materials.
			-
		Explain basic corrosion of	plumbing materials.

	Topics	Grade 4	Grade 5
		The learner must be able to:	The learner must be able to:
		Identify and describe	and sizing.
		plumbing tools and	• Select and understand the
		equipment.	purpose of valves.
		Identify and describe	• Select and understand the
		plumbing pipe work and	purpose of meters.
		related fittings and their	• Select and understand the
		uses.	purpose of pumps.
		 Identify and describe 	• Select and understand the
		plumbing sanitary ware	purpose of plumbing
		fixtures and fittings and their	materials for pipes and
		uses.	fittings.
		Identify ancillary plumbing	• Select and understand the
		materials and consumables	purpose of hot water
		and describe their uses.	systems.
			Select and understand the
			purpose of terminal fittings.
5	Installation and	Understand and describe	Describe cold water
	maintenance of a	basic plumbing principles.	systems and list their
	water supply	Install and maintain a water	components.
	system	supply under supervision.	Describe hot water
		Install and maintain a below	systems and list their
		ground drainage system	components.
		under supervision.	• Describe the use and
		Identify prescribed pipe	application of components.
		laying resources.	• Join pipes and assemble
		• Identify all tools, equipment	using pipe fittings.
		and personal protective	Install and maintain above
		equipment required for the	ground drainage
		task.	components and sanitary
		• Ensure that all tools,	fittings under supervision.
		equipment and personal	Install and maintain cold
		protective equipment are	water pipe systems.
		functional and ready for use	• Test the pressure in pipe
		at work area.	systems.
		 Identify safety requirements 	 Install and maintain hot
		Identify safety requirements for pipe laying activities.	 Install and maintain hot water pipe systems.

Grade 4	Grade 5
The learner must be able to:	The learner must be able to:
 The learner must be able to: requirements for evacuation and working in trenches. Check work site for hazards and take corrective measures. Set out work area to line and level to receive pipes. Excavate trenches using manual or mechanical equipment. Ensure that the excavated trench and work area is free of obstructions, water and loose materials. Ensure that excavated trench or work area is shored up according to acceptable procedures. Install pressure pipes. Complete installation of pressure pipelines. 	 The learner must be able to: Inspect and test hot water systems. Describe basic faults in hot and cold water systems. Inspect, repair and maintain cold water pipes. Inspect, repair and maintain hot water pipes. Repair taps and mixers. Find faults in cold water systems. Find faults in hot water systems. Find faults in geysers. Find faults in fittings. Apply fault finding techniques according to specifications. Trace hidden pipe work. Detect and repair water leaks. Inspect, maintain and repair soil and waste water systems. Inspect, maintain and repair drainage systems.
n, using smantling	Level and clear area where scaffolding is erected.
ent	 Place adjustable jacks in position. Level horizontal components. Position scaffold boards properly on supports.

	Topics Grade 4 Grade 5		Grade 5
		The learner must be able to:	The learner must be able to:
			 components in the correct order. Erect and dismantle a trestle scaffold. Erect and dismantle an extension ladder. Make use of a step ladder.
7	Basic building work	 Chase channels for piping in brickwork. Drill holes in concrete and brickwork. Use rawl bolts and other fasteners. Set out and construct brickwork for sanitary ware fixtures. Plaster channels, holes and brickwork. 	 Set out brick masonry work for manholes and chambers Mix mortar and concrete and apply. Construct brickwork for manholes and chambers. Plaster brickwork. Box plumbing pipes.
8	Planning and preparation for performing plumbing works	 Identify correct work area according to drawings. Communicate and agree on a work task. Set out and measure work area. Determine levels. Procure correct tools and equipment. Calculate,order and prepare quantities according to site procedures. Prepare work area for plumbing. 	 Estimate accurately quantities of materials needed. Identify suppliers correctly. List supplier selection criteria. Prepare an order list based on specifications. Purchase and deliver correct material to site. Identify, select and maintain tools and equipment. Check tools for defects before using.
9	Installation and maintenance of a drainage system	 Install and maintain a one pipe soil pipe system. Install and maintain a single stack soil pipe system. 	 Install, inspect a drainage system. Set out trenches and excavate to line and level.

	Topics	Grade 4	Grade 5
		The learner must be able to:	The learner must be able to:
		 Install soil and waste water fixtures and fittings, and sanitary fittings. 	 Bed, join and lay drainpipes. Backfill and compact excavations. Inspect drainpipes and clear blockages. Build, inspect and maintain drainage systems structures. Install in-site sanitation systems.
10	Solar hot water system		 Introduction of solar water systems Installation of solar water systems; passive and active systems Repair and maintenance of solar water systems
11	World of work	 Practice good work habits- personal presentation Practice good work habits- social presentation Conduct business ethically and professionally. Identify customer needs accurately. Deal with customers. Address customer complaints. 	 Identify the criteria for placement in the learner work experience programme (LWEP) Work with competence Show good work tolerance Practice appropriate social skills training Orientate learners to the open labour market Perform personal management/ activities for daily living. Participate in the learner work experience programme (LWEP).

The content is embedded in the skills and the learners should execute the skills in a simulated working area recreated in a Plumbing workshop.

3.2 Teaching plans

The theory is embedded in the practical tasks in Plumbing. Omitting one or more of the practical tasks imply that learners are deprived of the full learning programme. The learners are two years in Grade 4 and three years in Grade 5. Each term comprises of ten weeks and a minimum of 9 practical sessions is compulsory. The sequence within the term is not compulsory and the teacher may cover the learning content and skills in any appropriate sequence

3.2.1 Grade 4: 1st and 2nd year: Term One.

	Grade 4: Term 1			
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.	
	Health, safety and good	Grade 4 1 st year	Grade 4 1 st year	
1	housekeeping practices	Identify and remove potential	The teacher:	
		hazards in the work area.Describe the role of the plumber	Discuss and demonstrate health, safety and good housekeeping practices	
		Practice good housekeeping	Discuss and demonstrate how to identify and remove potential hazards in the work area	
			Discuss the role of the plumber and employment in the plumbing sector	
			The learners complete the following activities:Discusses health, safety and good housekeeping practices.	
			Answers questions on the role of the plumber and types of	

		Grade 4: Ter	erm 1	
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.	
			employment available	
			 Identify and removes potential hazards in the work area. 	
			Practice safety and good housekeeping	
		Grade 4 2 nd year	Grade 4 2 nd year	
		• Use, store and maintain tools and	The teacher:	
		equipment safely	• Discuss and demonstrate how to use, store and maintain tools and	
		Practice good housekeeping	equipment safely	
			Discuss and demonstrate good housekeeping practices	
			The learners complete the following activities:	
			Discuss the use, storage and maintaining of tools and equipment	
			Use, store and maintain tools and equipment safely	
			Carry out good housekeeping practices in the workshop	
2	Plumbing principles	Grade 4 1 st year	Grade 4 1 st year	
		Describe water sources	The teacher:	
			Discusses the water cycle	
			Discusses water purification process	
			The learners complete the following activities:	
			Discuss the water cycle and water purification	
			Draw a water cycle diagram and a water purification diagram	
	Basic construction	Grade 4 2 nd year	Grade 4 2 nd year	

		Grade 4: Ter	rm 1
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
	sketches	 Explain the role of drawings when carrying out plumbing Draw simple sketches of plumbing techniques 	 The teacher: Discusses the role of drawings when carrying out plumbing Discusses and demonstrates how to carry out simple plumbing sketches The learners complete the following activities: Explain the role of drawing when carrying out plumbing Draw simple sketches of plumbing techniques and plumbing components
3	Plumbing principles	Grade 4 1 st year Describe water quality principles 	 Grade 4 1st year The teacher: Discusses and demonstrates hardness, softness, solubility, suspended solids, salinity, bacterial levels water The learners complete the following activities: Explain and demonstrate hardness and softness of water. Carry out simple filtration process of water with suspended solids Check salinity levels of water
	Tools	 Grade 4 2nd year Identify and use of basic hand tools 	 Grade 4 2nd year The teacher: Discusses and demonstrates the use and care of basic hand tools.
			The learners complete the following activities:

		Grade 4: Ter	erm 1	
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.	
			Select, identify, utilise and maintain basic hand tools	
4	Plumbing principles	 Grade 4 1st year Describe water flow principles Describe basic water pressure principles Grade 4 2 nd year Identify and use of specialised tools Identify, use and care for measuring tools 	 Grade 4 1st year The teacher: Discusses, explains and demonstrates basic principles of pressure, flow and pipelines, pressure flow and gravity, reasons for different sizes of pipe sizes and the effect of pipe size on flow The learners complete the following activities: Demonstrate different pressure flow and water quantity with different diameters of pipes. Demonstrate how gravity and floor inclinations affect water flow Demonstrate how closing off the water meter tap affects pressure and water flow Grade 4 2nd year The teacher: Discusses and demonstrates the use and care of the toilet auger, bending spring, pipe benders, tap reseating tool and the gas blowtorch Discusses and demonstrates the use and care of the steel rule and the measuring tape. 	
			The learners complete the following activities:	

		Grade 4: Ter	rm 1
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
			Identify, care and use of the reseating tool
			 Identify, use and care of the blowtorch
			 Identify, use and care for a measuring tape
5	Plumbing principles	Grade 4 1 st year	Grade 4 1 st year
		Explain basic corrosion of plumbing	The teacher:
		materials	• Discusses corrosion and the causes and prevention of corrosion and material selection
			Discusses how corrosion affects the quality of water.
			Discusses and demonstrates erosion damage to components
			The learners complete the following activities:
			• Explain how corrosion affects the quality of water using water samples.
		C	State the pipes that cause little or no corrosion
	Basic building works	Grade 4 2 nd year	Grade 4 2 nd year
		Drill holes in concrete	The teacher:
			• Discusses and demonstrates the reasons for drilling holes in
			concrete
			• Discusses and demonstrates the use of the hand drill in the
			hammer position
		\sim	Discusses and demonstrates the use of masonry bits when drilling
			concrete
		•	

		Grade 4: Ter	rm 1
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
			The learners complete the following activities:
			Identify, use and care of the hand drill
			 Identify and use of the masonry bit
			Drill a hole in a concrete wall
6	Plumbing principles	Grade 4 1 st year	Grade 4 1 st year
		Describe basic pollution principles	The teacher:
			Discusses and demonstrates effluent and backflow prevention
			The learners complete the following activities:
			• Explain how effluent waste causes pollution and water borne diseases.
			Explain how to prevent backflow in waste lines
	Basic building work	Grade 4 2 nd year	Grade 4 2 nd year
		Use rawl bolts and other fasteners	The teacher:
			• Discusses and demonstrates the use of rawl bolts, nuts, bolts,
			screws and rivets
			The learners complete the following activities:
			Name the different types of fasteners used by plumbers
			Use a rawl bolt and/or screws to secure a part
7	Plumbing principles	Grade 4 1 st year	Grade 4 1 st year
		Identify and describe plumbing tools	The teacher:
		and equipment	• Discusses and demonstrates the use of the toilet auger, bending

	Grade 4: Term 1		
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
			spring, the pipe bender, the tap reseating tools and the gas blowtorch
			The learners complete the following activities:
			Identify, use and care of the toilet auger
			Use a bending spring
	Basic building work	Grade 4 2 nd year	Grade 4 2 nd year
		Set out and construct brickwork for	The teacher:
		sanitary ware fixtures	Discusses and demonstrates brick masonry
			The learners complete the following activities:
			Carry out basic brick masonry
8	Plumbing principles	Grade 4 1 st year	Grade 4 1 st year
		Identify and describe plumbing pipe	The teacher:
		work and related fittings and their	• Discusses and demonstrates the use of copper (capillary and
		uses	compression fittings), galvanised iron fittings, stop cocks and
			pressure reduction valves
			The learners complete the following activities:
			• Identify copper (capillary and compression fittings), galvanised iron
		\mathbf{O}	fittings, stop cocks and pressure reduction valves
			Use capillary and compression fittings on pipes

		Grade 4: Ter	rm 1
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
	Basic building work	Grade 4 2 nd year	Grade 4 2 nd year
		Set out and construct brickwork for	The teacher:
		sanitary ware fixtures	Discusses and demonstrates brick masonry and plastering
			The learners complete the following activities:
			 Carry out basic brick masonry and plastering
9	Plumbing principles	Grade 4 1 st year	Grade 4 1 st year
		 Identify and describe plumbing 	The teacher:
		sanitary ware fixtures and fittings	• Discusses and demonstrates plumbing sanitary ware fixtures and
		and their uses.	fittings and their uses
			The learners complete the following activities:
			Identify, name and state the uses of plumbing sanitary ware fixtures
			and fittings
	Basic building work	Grade 4 2 nd year	Grade 4 2 nd year
		• Set out and construct brickwork for	The teacher:
		sanitary ware fixtures	Discusses and demonstrates brick masonry and plastering
			The learners complete the following activities:
			Carry out basic brick masonry and plastering

Practical Assessments 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 learner must be able to:

Week	Grade 4 1 st year	Grade 4 2 nd year
2	Draw a water cycle diagram	Draw a simple sketch of a tap
	Draw a water purification diagram	Draw a simple sketch of a basin with 2 taps
3	Carry out a filtration process	Use a spanner to open a nut
	Check salinity levels of water	Use a water pump pliers to grip a pipe
4	Open and shut off a water meter	Use a measuring tape
	Demonstrate water flow on different	Use a reseating tool
	inclination of pipes	
5	Demonstrate the effects of corrosion on	Use a hammer drill
	water by passing water through a corroded	Drill a hole in the wall
	pipe	
	Show the effects of corrosion to tap	
	components	
6	Show how to prevent backflow in waste	Use a rawl bolt
	lines	Use screws to secure a part
	Explain the 'p' trap effect	
7	Use a toilet auger	Set a profile
	Use a bending spring	Dry mix mortar
8	Use a capillary fitting	Make a mortar mix
	Use a compression fitting	Lay a row of bricks
9	Identify plumbing sanitary ware fixtures	Make a plaster mix
	and fittings	Plaster a row of bricks
	State the uses of plumbing sanitary ware	
	fixtures and fittings	

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	Grade 4 1 st year	Grade 4 2 nd year
2	Name 2 sources of water in nature	State the role of drawings when carrying out
		plumbing
3	State what is softness of water	Identify 4 basic hand tools used in plumbing
4	State why we need water pressure in	State the purpose of the reseating tool
	water lines	
5	State which type of pipe is most affected	State the function of the hand drill
	by corrosion	
6	Name one water borne disease caused by	State the purpose of fasteners
	effluent waste	
7	State the purpose of the toilet auger	State the purpose of the profile
8	State the purpose of the stop cock	State the mortar mix proportions
9	Name 3 common sanitary ware fixtures in	State the plaster mix proportions
	a bathroom	

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

		Grade 4: Ter	rm 2
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
1	Health, safety and	Grade 4 1 st year	Grade 4 1 st year
	good housekeeping	• Identify, use and care of protective	The teacher:
		clothing and equipment	Discusses and demonstrates use and care of protective clothing
		Practice good housekeeping	and equipment
			 Discusses and demonstrates good housekeeping practices
			The learners complete the following activities:
			 Identify, use and care of protective clothing and equipment
			Carry out good housekeeping practices
		Grade 4 2 nd year	Grade 4 2 nd year
		• Use, store and maintain tools and	The teacher:
		equipment safely	• Discusses and demonstrates how to use, store and maintain tools
		Practice good housekeeping	and equipment safely
			Discusses and demonstrates good housekeeping practices
			The learners complete the following activities:
			Use, store and maintain tools and equipment safely
2	Tools	Grade 4 1 st year	Grade 4 1 st year
		Identify and use basic hand tools	The teacher:
			• Discusses and demonstrates use of basic hand tools; spanners,
			screwdrivers, hacksaws, shifting spanners and stilson wrench

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		Grade 4: Te	rm 2
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
			 The learners complete the following activities: Identify and use basic hand tools; spanners, screwdrivers, hacksaws, shifting spanner and the stilson wrench
			Grade 4 2 nd year
		Grade 4 2 nd year	The teacher:
		Identify, use and care for power tools	Discusses and demonstrates how to use and care for the following
			power tools; the hand drill, the angle grinder and the bench grinder
			The learners complete the following activities:
			• Identify, use and care for the following power tools; the hand drill,
			the angle grinder and the bench grinder
3	Tools	Grade 4 1 st year	Grade 4 1 st year
		Identify and use specialised tools	The teacher:
			• Discusses and demonstrates how to use the following specialized
			tools: the pipe cutter, the pipe bender and the bending spring
			The learners complete the following activities:
			Identify, use and care of the following specialised tools; the pipe
			cutter, the pipe bender and the bending spring
	Basic building work	Grade 4 2 nd year	Grade 4 2 nd year
		• Plaster channels, holes and brickwork	The teacher:

		Grade 4: Ter	erm 2	
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.	
			Discusses and demonstrates how to plaster channels, holes and brickwork	
			The learners complete the following activities:	
			Plasters channels, holes and brickwork	
4	Tools	Grade 4 1 st year	Grade 4 1 st year	
		Identify and use for measuring tools	The teacher:	
			• Discusses and demonstrates how to use the steel rule, the	
			measuring tape, the tri-square and the builders square	
			The learners complete the following activities:	
		G	• Identify, use and care of the steel rule, the measuring tape, the tri- square and the builders square.	
	Basic building work	Grade 4 2 nd year	Grade 4 2 nd year	
		• Plaster channels, holes and brickwork	The teacher:	
			• Discusses and demonstrates how to plaster channels, holes and	
			brickwork.	
			The learners complete the following activities:	
			 Plaster channels , holes and brickwork 	
5	Installation and	Grade 4 1 st year	Grade 4 1 st year	
	maintenance of a	• Understand and describe basic	The teacher:	
	water supply system	plumbing principles	• Discusses and demonstrates the design and sizing of pipes and	

		Grade 4: Ter	rm 2
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
	Plumbing and preparation for performing plumbing works	 Grade 4 2nd year Identify correct work areas according to drawings Communicate and agree on a work task 	 plumbing system components and materials The learners complete the following activities: Identify and use different plumbing pipes, plumbing components and materials. Grade 4 2nd year The teacher: Discusses and demonstrates how to identify correct work areas according to drawings Discusses and demonstrates how to communicate and agree on a work task The learners complete the following activities:
			 Identify correct work areas according to drawings Communicate and agree on a work task from a job card or supervisors instruction
6	Installation and	Grade 4 1 st year	Grade 4 1 st year
	maintenance of a	• Install a water supply system under	The teacher:
	water supply system	supervision	 Discusses and demonstrates how to install a water supply system under supervision Discusses and demonstrates how to install cold water pipes and fittings

Grade 4: Term			rm 2
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
	Plumbing and preparation for	Grade 4 2nd year • Set out work area	 The learners complete the following activities: Observe and assist in installing a water supply system under supervision Observe and assist in installing cold water pipes and fittings under supervision. Grade 4 2 nd year The teacher:
	performing plumbing works		 Discusses and demonstrates how to set out a work area. The learners complete the following activities: Identify and set out a work area according to work site plans
7	Installation and maintenance of a water supply system	 Grade 4 1st year Install a below ground drainage system under supervision 	 Grade 4 1st year The teacher: Discusses and demonstrates how to install a below ground drainage system under supervision Discusses and demonstrates how to install waste line and drainage pipes The learners complete the following activities: Observe and assist in installing a below ground drainage system Observe and assist in installing waste lines and drainage pipes
	Plumbing and	Grade 4 2 nd year	Grade 4 2 nd year

Grade 4: Term 2			m 2
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
	preparation for	Determine levels of work area	The teacher:
	performing plumbing		• Discusses and demonstrates how to determine the levels of work
	works		area.
			• Discusses and demonstrates how to determine the levels of pipes,
			the toilet, the bathtub and the basin under supervision
			The learners complete the following activities:
			Observe and assist in determining how to work out the levels of
			work area.
			Observe and assist in determining the levels of pipes, the toilet, the
			bathtub and the basin under supervision
8	Plumbing principles	Grade 4 1 st year	Grade 4 1 st year
		Identify and describe plumbing pipe	The teacher:
		work and related fittings and their	Discusses and demonstrates plumbing pipe work and related
		uses	fittings
			The learners complete the following activities:
			 Identify and use plumbing pipe work and related fittings
	Plumbing and	Grade 4 2 nd year	Grade 4 2 nd year
	preparation for	Procure correct tools and equipment	The teacher:
	performing plumbing	• Calculate, order and prepare	Discusses and demonstrates how to procure tools and equipment
	works	quantities according to site	• Discusses and demonstrates how to calculate, order and prepare
		procedures	quantities according to site procedures

		Grade 4: Ter	rm 2
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
			 The learners complete the following activities: Identify, procure and maintain correct tools and equipment for the job. Assist in calculating, ordering and preparing quantities according to
9	Plumbing principles	Grade 4 1 st year	site procedures Grade 4 1 st year
-		Install and maintain a below ground	The teacher:
		Install and maintain a below ground drainage system under supervision	 Discusses and demonstrates how to install and maintain a below ground drainage system under supervision Discusses and demonstrates how to lay waste lines and drainage pipes
			The learners complete the following activities:
			Observe and assist in installing a below ground drainage system
			Observe and assist in installing waste lines and drainage pipes
	Plumbing and	Grade 4 2 nd year	Grade 4 2 nd year
	preparation for	• Prepare work areas for plumbing	The teacher:
	performing plumbing		• Discusses and demonstrates how to prepare a work area for
	works		plumbing
			The learners complete the following activities:
			Assist in preparing the work area for plumbing

Practical Assessments 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 learner must be able to:

Week	Grade 4 1 st year	Grade 4 2 nd year
2	Use a screwdriver	Use an angle grinder
	Use a hacksaw	Use a hand drill
3	Use a pipe cutter	Make a plastering mix
	Use a bending spring	Plaster a channel
4	Use a tri-square	Make a plastering mix
	Use a builders square	Plaster a hole
5	Identify different water pipes	Identify a work area
	Identify 2 different types of taps	Communicate and agree on work tasks
6	Cut supply pipe to size	Mark out work area
	Attach a fitting to pipe	Set out work area
7	Cut a waste line pipe	Work out levels of work area
	Attach a fitting to pipe	Level out a bathtub
8	Connect a compression fitting	Procure tools for a job
	Connect a capillary fitting	Order material for a job
9	Set angle of waste line pipe	Clear out work areas
	Connect up the waste line pipe	Prepare area for plumbing

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	Grade 4 1 st year	Grade 4 2 nd year
2	State the purpose of a hacksaw	Identify the hand drill, angle grinder and bench grinder
3	State the purpose of the pipe cutter	State the plastering mix
4	State the purpose of the pipe cutter	State the drying time of plaster
5	State the advantage of using copper pipes	State the purpose of a job card
6	State the purpose of thread tape when installing water supply pipes	State the reason for marking out a work area

7	State the purpose of a gulley and trap	State the reason for working out levels of worksites
8	State one reason for using polycop pipe	State the reason for calculating the amount of
		material required
9	Name the different types of pipe used in	State the reason for preparing the work area for
	drainage	plumbing

	Grade 4: Term 3		
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources
1	Health, safety and good	Grade 4 1 st year	Grade 4 1 st year
	housekeeping practices	Demonstrate the ability to take	The teacher:
		appropriate steps in an emergency	Discusses and demonstrates how to take appropriate steps in an
		Practice good housekeeping	emergency
			Discusses and demonstrates good housekeeping practices
			The learners complete the following activities:
			Name and take appropriate steps in an emergency
			Practice good housekeeping
		Grade 4 2 nd year	
		Understand unsafe conditions and	Grade 4 2 nd year
		acts	The teacher:
		Practice good housekeeping	Discusses and demonstrates unsafe conditions and acts
			Discusses and demonstrates good housekeeping practices
			The learners complete the following activities:
			State unsafe and safe conditions and acts
			Practice safe conditions and acts
			Practice good housekeeping
2	Installation and	Grade 4 1 st year	Grade 4 1 st year

	Grade 4: Term 3		
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources
	maintenance of a water supply system	 Identify prescribed pipe laying Identify all tools, equipment and personal protective equipment 	 The teacher: Discusses and demonstrates pressure and flow principles Discusses and demonstrates how to lay pipe in ground Discusses and demonstrates use of basic tools, equipment and personal protective equipment The learners complete the following activities: Lay pipes on correct substrate in ground Identify, use and care of all tools, equipment and personal protective equipment
	Basic construction sketches	 Grade 4 2nd year Identify basic drawing and symbols used in plumbing activities. Describe elements of basic plumbing drawings Apply information from drawing in plumbing activities 	 Grade 4 2nd year The teacher: Discusses and identifies basic drawing and symbols use in plumbing activities Discusses how to apply information from drawing in plumbing activities
			 The learners complete the following activities: Identify basic drawing and symbols used in plumbing activities Apply information from drawing in plumbing activities. Copy basic symbols from worksheet
3	Installation and maintenance of a water	 Grade 4 1st year Ensure that all tools, equipment and 	Grade 4 1 st year The teacher:

		Grade 4: Term	3
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources
	supply system	personal protective equipment are functional and ready for use at work area.	 Discusses and demonstrates how to get all tools, equipment and personal protective equipment functional and ready for use at work area. The learners complete the following activities: Check all tools, equipment and personal protective equipment functionality. Check if all of the above is ready for use Maintain all tools, equipment and personal protective equipment
	Installation and maintenance of a drainage	Grade 4 2 nd year Install and maintain a one pipe soil 	Grade 4 2 nd year
	system	pipe system	 The teacher: Discusses and demonstrates how to install and maintain a one pipe soil pipe system Demonstrates how to fit soil, waste and vent pipes according to specification
			 The learners complete the following activities: Assist in installing and maintaining a one pipe soil pipe system. Assist in fitting soil, waste and vent pipes according to specifications
4	Installation of	Grade 4 1 st year	Grade 4 1 st year
	maintenance of a water supply system	 Identify safety requirements for pipe laying activities 	The teacher:Discusses and demonstrates safety requirements for pipe laying

		Grade 4: Term	3
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources
			 activities. Discusses and demonstrates shoring of trenches The learners complete the following activities: Identify safety requirements for pipe laying activities Shore up trenches
	Installation and	Grade 4 2 nd year	Grade 4 2 nd year
	maintenance of a drainage	Install and maintain a one pipe soil	The teacher:
	system	pipe system	 Discusses and demonstrates how to install and maintain a one pipe soil pipe system Demonstrates how to fit soil, waste and vent pipes according to specification
			The learners complete the following activities:
			 Assist in installing and maintaining a one pipe soil pipe system.
			Assist in fitting soil, waste and vent pipes according to
			specifications
5	Installation and	Grade 4 1 st year	Grade 4 1 st year
	maintenance of a water	• Understand and apply safety	The teacher:
	supply system	requirements for evacuation and	Discusses and demonstrates safety requirements for evacuation
		working in trenches	and working in trenches
			• Discusses and demonstrates how to mark a trench using pegs and a line

		Grade 4: Term	3
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources
	Installation and maintenance of a drainage system	Grade 4 2nd year • Install and maintain a single stack soil pipe system	 The learners complete the following activities: Practice safety requirements when working in trenches Understand and practice evacuation when working in trenches Observe and assist in marking out a trench Grade 4 2 nd year The teacher: Discusses and demonstrates how to install and maintain a single stack soil pipe system The learners complete the following activities: Assist in installing and maintaining a single stack pipe system Identify the components
6	Installation and	Grade 4 1 st year	Grade 4 1 st year
	maintenance of a water	Check work site for hazards and	The teacher:
	supply system	take corrective measures	 Discusses and demonstrates how to check worksites for hazards and take corrective measure Discusses unsafe acts and conditions in a worksite The learners complete the following activities: Check worksites for hazards and take corrective measures State the unsafe acts and conditions at a worksite

	Grade 4: Term 3		
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources
			Grade 4 2 nd year
	Installation and	Grade 4 2 nd year	The teacher:
	maintenance of a drainage	Install and maintain a single stack	Discusses and demonstrates how to install and maintain a single
	system	soil pipe system	stack soil pipe system
			• Discusses the different components of the single stack soil pipe
			system
			The learners complete the following activities:
			Assist to install and maintain the single stack soil pipe system
			• Name the different components of the single stack soil pipe
			system
7	Installation and	Grade 4 1 st year	Grade 4 1 st year
	maintenance of a water	Excavate trenches using manual	The teacher:
	supply system	and mechanical equipment	• Discusses and demonstrates how to excavate trenches using
			manual and mechanical equipment
			• Discusses and demonstrates safety practices when excavating
			trenches
			The learners complete the following activities:
			Assist in the excavation of trenches using manual and
			mechanical equipment
			Carry out safety procedures when excavating trenches
	Installation and	Grade 4 2 nd year	Grade 4 2 nd year

		Grade 4: Term	3
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources
	maintenance of a drainage	Install soil and waste water fixtures	The teacher:
	system	and fitting.	 Discusses and demonstrates how to install soil and waste water fixtures and fittings Discusses safety factors when installing soil and waste water fixtures The learners complete the following activities: Assist in the installation of soil and waste water fixtures and fittings Observe safety procedures when installing soil and waste water
			fixtures and fittings
8	Installation and	Grade 4 1 st year	Grade 4 1 st year
	maintenance of a water	Excavate trenches using manual	The teacher:
	supply system	and mechanical equipment	 Discusses and demonstrates how to excavate trenches using manual and mechanical equipment Discusses and demonstrates safety practices when excavating trenches The learners complete the following activities:
	Installation and	Grade 4 2 nd year	 Assist in the excavation of trenches using manual and mechanical equipment Carry out safety procedures when excavating trenches
	allu	Graue 4 2 ^m year	Grade 4 2 nd year

		Grade 4: Term	3
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources
	maintenance of a drainage	Install soil and waste water fixtures	The teacher:
	system	and fittings.	 Discusses and demonstrates how to install soil and waste water fixtures and fittings Discusses safety factors when installing soil and waste water fixtures Discusses and demonstrates fitting a rodding point and access point The learners complete the following activities: Assist in the installation of soil and waste water fixtures and fittings Observe safety procedures when installing soil and waste water fixtures and fittings Observe and assist in fitting a rodding point
9	Installation and	Grade 4 1 st year	Grade 4 1 st year
5	maintenance of a water	Excavate trenches using manual or	The teacher:
	supply system	mechanical equipment	• Discusses and demonstrates how to excavate trenches using
			manual and mechanical equipment
			Discusses and demonstrates safety practices when excavating
			trenches
			The learners complete the following activities:
			Assist in the excavation of trenches using manual and
			mechanical equipment

	Grade 4: Term 3			
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources	
			 Carry out safety procedures when excavating trenches 	
			Loosen hard ground	
	Installation and	Grade 4	Grade 4 2 nd year	
	maintenance of a drainage	Install soil and waste water fixtures	The teacher:	
	system	and fittings	• Discusses and demonstrates how to install soil and waste water	
			fixtures and fittings	
			Discusses safety factors when installing soil and waste water	
			fixtures	
			The learners complete the following activities:	
			• Assist in the installation of soil and waste water fixtures and	
			fittings	
			Observe safety procedures when installing soil and waste water	
			fixtures and fittings	

Practical Assessments 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 learner must be able to:

Week	Grade 4 1 st year	Grade 4 2 nd year
2	Lay pipes on ground	Copy symbols from worksheet
	Use personal protective equipment	Identifies basic drawing and symbols
3	Maintain hand tools	Install a waste line
	Maintain equipment	Install a vent pipe
4	Excavate up a trench	Install a 1 pipe soil pipe system
	Shore up a trench	Install a vent pipe
5	Mark out and peg a trench	Install a 1 pipe soil pipe system
	Work safely in a trench	Install a vent pipe
6	Practice good housekeeping	Check the gradient level of a 1 pipe soil pipe
		system
	Correct hazardous situations	Backfill a 1 pipe spoil pipe system
7	Excavate a trench using manual labour	Install a soil and waste water fixture
	Excavate a trench using mechanical	
	equipment	Complete installation of a soil and waste water
		fixture
8	Practice safety procedures when	Connect a rodding point
	excavating a trench	
	Drain a trench	Connect an access point
9	Excavate a trench with a gradient	Insert a cleaning eye
	Loosen hard ground	Backfill the trench

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.

Week	Grade 4 1 st year	Grade 4 2 nd year
2	State the reason for using personal	State the purpose of a plumbing drawing
	protective equipment	
3	State the reason for maintaining hand	State the purpose of a waste line
	tools	

4	State 1 reason for shoring up a trench	State the reason for a vent pipe
5	State 1 safety requirement when working in a trench	State the reason for a vent pipe
6	State 3 unsafe acts	State the reason for a gradient
7	State 1 reason for excavating a trench	State the purpose of a soil and waste water fixture
8	State 1 safety procedure when excavating trenches	State the purpose of a rodding point
9	State how you would loosen hard ground	State the purpose of the cleaning eye

		Grade 4: Te	erm 4
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
1	Health, safety and good	Grade 4 1 st year	Grade 4 1 st year
	housekeeping practices	Practice good housekeeping	The teacher:
			Discusses and demonstrates good housekeeping practices
			Keeps the workshop neat and tidy.
			The learners complete the following activities:
			Observe good housekeeping practices
			Carry out workshop cleanup and setup
		Grade 4 2 nd year	Grade 4 2 nd year
		Practice and understand the	The teacher:
		concept of good housekeeping	Discusses and demonstrates good housekeeping practices
			The learners complete the following activities:
			Observe good housekeeping practices
			Carry out workshop cleanup and setup
2	Installation and	Grade 4 1 st year	Grade 4 1 st year
	maintenance of a water	• Ensure that the excavated	The teacher:
	supply system	trench and work area is free of	• Discusses and demonstrates how to keep an excavated trench and
		obstructions, water and loose	work area free of obstructions, water and loose materials.

		Grade 4: Te	erm 4
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
		materials	 Discusses and demonstrates safety procedures when excavating trenches The learners complete the following activities:
			 Ensure that the excavated trench and work area is free of obstructions, water and loose materials Observe safety precautions when excavating trenches
		Grade 4 2 nd year	Grade 4 2 nd year
		Install sanitary fittings: the bathtub	The teacher:Discusses and demonstrates how to install the bathtub.
			The learners complete the following activities:Assist in installing the bathtub
3	Installation and	Grade 4 1 st year	Grade 4 1 st year
	maintenance of a water	• Ensure that the excavated	The teacher:
	supply system	trench or work area is shored up according to acceptable procedures	 Discusses and demonstrates how to shore up an excavated trench or work area according to acceptable procedures Discusses and demonstrates safety precautions when shoring up an excavated trench or work area.
			 The learners complete the following activities: Assist in ensuring that the excavated trench or work area is shored up according to acceptable procedures

		Grade 4: Te	rm 4
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
			Observe safety precautions when assisting to shore up an excavated trench or work area.
	Installation and	Grade 4 2 nd year	Grade 4 2 nd year
	maintenance of a drainage	 Install sanitary fittings: the 	The teacher:
	system	bathtub	Discusses and demonstrates how to install the bathtub.
			The learners complete the following activities:
			Assist in installing the bathtub
4	Installation and	Grade 4 1 st year	Grade 4 1 st year
	maintenance of a water	• Ensure that the excavated	The teacher:
	supply system	trench or work area is shored up	Discusses and demonstrates how to shore up an excavated trench
		according to acceptable	or work area according to acceptable procedures
		procedures	Discusses and demonstrates safety precautions when shoring up an
			excavated trench or work area.
			The learners complete the following activities:
			Assist in ensuring that the excavated trench or work area is shored
			up according to acceptable procedures
			Observe safety precautions when assisting to shore up an excavated
			trench or work area.
	Installation and	Grade 4 2 nd year	Grade 4 2 nd year
	maintenance of a drainage	Install sanitary fittings: the	The teacher:

		Grade 4: Te	erm 4	
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.	
	system	shower	Discusses and demonstrates how to install the shower	
			The learners complete the following activities:	
			Assist to install the shower	
5	Installation and	Grade 4 1 st year	Grade 4 1 st year	
	maintenance of a water	Install pressure pipes	The teacher:	
	supply system		Discusses and demonstrates how to shut off water supply	
			Discusses and demonstrates how to install pressure pipes	
			Discusses and demonstrates safety procedures when installing	
			pressure pipes	
			The learners complete the following activities:	
			Shut off water supply	
			Install pressure pipes	
			Observe safety precautions when installing pressure pipes	
	Installation and	Grade 4 2 nd year	Grade 4 2 nd year	
	maintenance of a drainage	Install sanitary fittings: the	The teacher:	
	system	shower	 Discusses and demonstrates how to install the shower 	
			The learners complete the following activities:	
			Assist to install the shower	
6	Installation and	Grade 4 1 st year	Grade 4 1 st year	
	maintenance of a water	Complete installation of pressure	The teacher:	
		1		

	Grade 4: Term 4		
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
	supply system	pipelines	 Discusses and demonstrates how to shut off water supply Discusses and demonstrates how to install pressure pipes Discusses and demonstrates safety procedures when installing pressure pipes Discusses and demonstrates how to check and repair water leaks The learners complete the following activities: Shut off water supply Install pressure pipes Observe safety precautions when installing pressure pipes Check for and repairs water leaks
	Installation and maintenance of a drainage system	Grade 4 2 nd year • Install sanitary fittings: the toilet	 Grade 4 2nd year The teacher: Discusses and demonstrates how to install the toilet The learners complete the following activities: Assist in installing the toilet
7	Installation and	Grade 4 1 st year	Grade 4 1 st year
	maintenance of a water	Complete installation of pressure	The teacher:
	supply	pipelines	 Discusses and demonstrates how to shut off water supply Discusses and demonstrates how to install pressure pipes Discusses and demonstrates safety procedures when installing
		1	

		Grade 4: Te	erm 4	
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.	
	Installation and	Grade 4 2 nd year	pressure pipes The learners complete the following activities: • Shut off water supply • Install pressure pipes • Observe safety precautions when installing pressure pipes	
	maintenance of a drainage	Install sanitary fittings: the toilet	Grade 4 2 nd year	
	system		The teacher:	
			 Discusses and demonstrates how to install the toilet 	
			The learners complete the following activities:	
			Assist in installing the toilet	
8	Basic building work	Grade 4 1 st year	Grade 4 1 st year	
		Chase channels for piping in	The teacher:	
		brickwork	• Discusses and demonstrates how to cut channels in brickwork for installing pipe work.	
			• Discusses and demonstrates how to use an angle grinder to chase channels in brickwork.	
			Discusses and demonstrates how to use a chisel and hammer to chase channels in brickwork	
			 Discusses and demonstrates safety precautions when making channels in brickwork 	

		Grade 4: Te	Ferm 4	
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.	
			The learners complete the following activities:	
			• Cut channels in brickwork using an angle grinder, a hammer and	
			chisel	
			Observe safety precautions when cutting channels in brickwork	
			Grade 4 2 nd year	
	World of work	Grade 4 2 nd year	The teacher:	
		Practice good work habits-	• Discusses and demonstrates how to practice good social habits;	
		personal and social presentation	personal and social presentation	
		Conduct business ethically and professionally	Discusses how to conduct business ethically and professionally	
			The learners complete the following activities:	
			Practice good social habits; personal and social presentation	
			Conduct business ethically and professionally	
9	Basic building work	Grade 4 1 st year	Grade 4 1 st year	
		Chase channels for piping in	The teacher:	
		brickwork	• Discusses and demonstrates how to cut channels in brickwork for	
			installing pipe work.	
			• Discusses and demonstrates how to use an angle grinder to chase	
			channels in brickwork.	
			• Discusses and demonstrates how to use a chisel and hammer to	
			chase channels in brickwork	
			Discusses and demonstrates safety precautions when making channels in brickwork	

Week To	opic	Content The learner must be able to:	Teaching tips, techniques, activities and resources. The learners complete the following activities: • Cut channels in brickwork using an angle grinder, a hammer and
Wo	orld of work	 Grade 4 2nd year Accurately identify customer needs Deal with customers Address customer complaints 	 chisel Observe safety precautions when cutting channels in brickwork Grade 4 2nd year The teacher: Discusses and demonstrates how to accurately identify customer needs Discusses and demonstrates how to deal with customers and address customers complaints The learners complete the following activities: Identify customers needs Deal with customers Address customers complaints

Practical Assessments 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 learner must be able to:

Week	Grade 4 1 st year	Grade 4 2 nd year
2	Clear work area from obstruction	Prepare area for bathtub installation
	Drain water from trench	Install the bathtub
3	Shore up a trench	Check drainage of bathtub
	Observe safety precautions when shoring	Connect supply pipes to bathtub
	up a trench	
4	Shore up a trench	Prepare area for shower
	Observe safety precautions when shoring	Install the shower
	up a trench	
5	Shuts off the water supply	Check drainage of shower
	Prepare ground for laying of supply pipe	Install supply pipes to shower
6	Install supply pipes	Prepare area for toilet
	Connect supply pipes with compression	Install the toilet
	fittings	
7	Connects up supply pipes above ground	Connect up water supply to toilet
	with capillary fittings	Connect up outlet to toilet
	Secure supply pipes above ground	
8	Mark out channel in brickwork	Practice good social habits
	Chase channel with angle grinder	Conduct business ethically
9	Use a chisel and hammer to clear channel	Identify customer needs
	Use protective gear when chasing a	Address customer complaints
	channel	

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.

Week	Grade 4 1 st year	Grade 4 2 nd year
2	State 1 safety precaution when working in	State 1 reason for levelling out a bathtub
	a trench	
3	State 1 safety precaution when shoring up	State 1 reason for correct drainage of bathtub
	a trench	

4	State 1 safety precaution when shoring up	State 1 advantage of installing a shower in a
	a trench	bathtub
5	State 1 safety precaution when preparing ground for laying of supply pipes	State 1 reason for a p trap in a shower
6	State an advantage of compression fittings	State 2 methods of securing a toilet
7	State an advantage of capillary fittings	State 2 methods of connecting the outlet of a toilet
8	State 1 reason for chasing out a channel in brickwork	State 1 reason to practice good social habits
9	State 1 way of sharpening a chisel	State the main needs of a customer

3.2.5 Grade 5: $1^{\text{st}},\,2^{\text{nd}}$ and 3^{rd} year: Term 1

3.2.5 G	rade 5: 1 st , 2 nd and 3 rd year: Te	erm 1	
Learners	are three years in Grade 5		
		Grade 5: Term 1	
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
1	Health , safety and good	Grade 5 1 st year	Grade 5 1 st year
	housekeeping practices	Identify and remove potential hazards	The teacher:
		in the work place	Discusses and demonstrates how to identify and remove
		Practice good housekeeping	potential hazards in the work place
			Discusses and demonstrates good housekeeping practices
			The learners complete the following activities:
			 Identify and removes potential hazards in the work place.
			Practice good housekeeping
		C	Clean up and set workshop
		Grade 5 2 nd year	Grade 5 2 nd year
		Locate fire extinguishers and fire	The teacher:
		hosesPractice good housekeeping	Discusses and demonstrates how to locate fire extinguishers and fire hoses
			Discusses and demonstrates the different fire extinguishers to put out different fires
			 Discusses and demonstrates good housekeeping practices
			The learners complete the following activities:

		Grade 5: Ter	m 1
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
		Grade 5 3 rd year • Administer basic first aid • Practice good housekeeping	 Locate fire extinguishers and fire hoses Assist in putting out fires using different fire extinguishers Practice good housekeeping Clean up and sets workshop Grade 5 3 rd year The teacher: Discusses and demonstrates basic first aid Discusses AIDS and HIV around bleeding injuries Discusses and demonstrates good housekeeping practices The learners complete the following activities: Assist in administering basic first aid Practice good housekeeping
2	Tools	Grade 5 1 st year	Clean up and sets workshop Grade 5 1 st year
_		Identify, use and care of power tool	

		Grade 5: Term 1	
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
	Installation and maintenance of a water supply system Plumbing and preparation for performing plumbing works	 Grade 5 2nd year Find faults in cold water systems Grade 5 3 rd year Estimate accurately quantities of material needed Identify suppliers correctly List suppliers selection criteria 	 Grade 5 2nd year The teacher: Discusses and demonstrates how to find faults in cold water systems Discusses and demonstrates how to repair water supply systems Discusses and demonstrates how to repair valves, taps and cocks The learners complete the following activities: Assist in finding faults in cold water systems Assist in repairing water supply systems Assist in repairing valves, taps and cocks Grade 5 3rd year The teacher: Discusses and demonstrates how to accurately estimate quantities of material needed Discusses selection criteria for suppliers The learners complete the following activities: Assist in estimating quantities of materials needed

	Grade 5: Term 1		
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
			Identify suppliersState selection suppliers criteria
3	Tools	Grade 5 1 st year Maintain power tools 	Grade 5 1 st year The teacher: • Discusses and demonstrates how to maintain power tools; the angle grinder, the hand drill and the bench grinder • Discusses and demonstrates safety precautions when maintaining power tools The learners complete the following activities: • Assist in maintaining power tools; the angle grinder, the hand drill and the bench grinder • Observe safety precautions when maintaining power tools
	Installation and	Grade 5 2 nd year	Grade 5 2 nd year
	maintenance of a water supply system	Find faults in hot water systems	 The teacher: Discusses and demonstrates how to find faults in hot water systems Discusses and demonstrates how to inspect, repair and maintain hot water systems Discusses and demonstrates how to repair and maintain geysers
			The learners complete the following activities:

Grade 5: Term 1		
Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
		 Assist in finding faults in hot water systems Assist in inspecting, repairing and maintaining hot water systems Assist in repairing and maintaining geysers Grade 5 3 rd year
- · ·	Grade 5 3 ^{ra} year	The teacher:
for performing plumbing	Prepare an order list based on	• Discusses and demonstrates how to prepare an order list
works	specification	based on specification
		The learners complete the following activities:
		Assist in preparing an order list based on specification
Tools	Grade 5 1 st year	Grade 5 1 st year
	Identify, use and care for specialised tools	The teacher:
		• Discusses and demonstrates how to use the following specialized tools: the pipe cutter, the pipe bender and the bending spring
		Discusses and demonstrates how to use the blowtorch
		Discusses and demonstrates safety precautions when using specialised tools
		The learners complete the following activities:
		Use the pipe cutter, the pipe bender and the bending springUse the blowtorch
	Plumbing and preparation for performing plumbing works	TopicThe learner must be able to:Plumbing and preparation for performing plumbing worksGrade 5 3 rd year • Prepare an order list based on specificationToolsGrade 5 1 st year

	Grade 5: Term 1		
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
			Observe safety when using specialised tools
	Installation and	Grade 5 2 nd year	Grade 5 2 nd year
	maintenance of a water	Find faults in geysers	The teacher:
	supply system		Discusses and demonstrates how to find faults in geysers
			Discusses and demonstrates how to fix a leaking geyser
			Discusses and demonstrates how to replace an faulty element
			The learners complete the following activities:
			Assist in finding faults in geysers
			Assist in fixing a leaking geyser
			Assist in replacing a faulty element
	Plumbing and preparation	Grade 5 3 rd year	Grade 5 3 rd year
	for performing plumbing	• Identify, select and maintain tools and	The teacher:
	works	equipment	• Discusses and demonstrates how to identify, select and
		Check tools for defects before using	maintain plumbing tools and equipment
			Discusses and demonstrates how to check plumbing tools for
			defects before using
			The learners complete the following activities:
			Identify, select and maintain plumbing tools
			Check plumbing tools for defects
5	Tools	Grade 5 1 st year	Grade 5 1 st year

	Grade 5: Term 1		
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
		Identify, use and care of measuring	The teacher:
		tools	 Discusses and demonstrates use and care of measuring tools; measuring tape, steel ruler and builder square Discusses the different units of measurements; millimetres, centimetres and metres. The learners complete the following activities: Identify, use and maintain measuring tools; measuring tape, steel rule and the builders square Use millimetres, centimetres and metres as units of measurements
	Installation and		Grade 5 2 nd year
	maintenance of a water	Find faults in fittings	The teacher:
	supply system		 Discusses and demonstrates how to find and repairs faults in different water supply fittings Discusses and demonstrate how to find and repair faults in compression and capillary fittings
		5	 The learners complete the following activities: Assist in finding and repairing faults in capillary and compression fittings
	Installation and	Grade 5 3 rd year	Grade 5 3 rd year

	Grade 5: Term 1		
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
	maintenance of a drainage	Install, inspect a drainage system	The teacher:
	system		 Discusses and demonstrates how to install and inspect a drainage system Discusses and demonstrates the layout of a below ground drainage system Discusses and demonstrates angles, bedding and backfilling of drainpipes
			The learners complete the following activities:
			Assists in installing and inspecting drainage system
			 Assists in the layout of a below ground drainage system
			Assists in angling pipes, bedding and backfilling of drainpipes
6	Tools	Grade 5 1 st year	Grade 5 1 st year
		Maintain and repair tools	The teacher:
			 Discusses and demonstrates how to maintain and repair plumbing tools
			The learners complete the following activities:
			 Assist to maintain and repair plumbing tools
	Installation and	Grade 5 2 nd year	Grade 5 2 nd year
	maintenance of a water	• Apply fault finding techniques	The teacher:
	supply system	according to specifications	 Discusses and demonstrates how to apply fault finding
			techniques in a water supply system according to specification

	Grade 5: Term 1		
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
	Installation and maintenance of a drainage system	 Grade 5 3rd year Set out trenches and excavate to line and level 	 The learners complete the following activities: Assist in applying fault finding techniques in a water supply system according to specification Grade 5 3rd year The teacher: Discusses and demonstrates how to set out trenches and excavate to line and level The learners complete the following activities:
7	Plumbing principles	Grade 5 1 st year	 Assist in setting out trenches, excavating to line and levelling Grade 5 1st year
		 Understand and apply water flow principles Understand and apply basic water pressure principles 	 The teacher: Discusses and demonstrates water flow principles Discusses and demonstrates basic water pressure principles Discusses and demonstrates pipe design and sizing
			 The learners complete the following activities: Demonstrate different pressure flow and water quantity with different diameters of pipes. Demonstrate how gravity and floor inclinations affect water flow Demonstrate how closing off the water meter tap affects

	Grade 5: Term 1			
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.	
			pressure and water flow	
	Installation and	Grade 5 2 nd year	Grade 5 2 nd year	
	maintenance of a water	• Trace hidden pipe works and rectify	The teacher:	
	supply system	faults	Discusses and demonstrates how to trace hidden pipe wo	
			and rectify faults	
			The learners complete the following activities:	
			Assist in tracing hidden pipe work and rectifying faults	
	Installation and	Grade 5 3 rd year	Grade 5 3 rd year	
	maintenance of a drainage	• Set out trenches and excavate to line	The teacher:	
	system	and level	Discusses and demonstrates how to set out trenches	
			excavate to line and level	
			The learners complete the following activities:	
			Assist in setting out trenches, excavating to line and levelling	
8	Plumbing principles	Grade 5 1 st year	Grade 5 1 st year	
		• Understand and apply water quality	The teacher:	
		principles	Discusses and demonstrates water quality principles;	
		Understand and apply knowledge of	hardness, softness, salinity, bacterial; levels and suspended	
		corrosion of plumbing materials	solids	
			• Discusses and demonstrates corrosion of plumbing materials	
			and the prevention thereof	

	Grade 5: Term 1		1
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
	Installation and maintenance of a water supply system	Grade 5 2 nd year • Detect and repair water leaks	 The learners complete the following activities: Explain and demonstrate hardness and softness of water. Demonstrate how to carry out simple filtration process of water with suspended solids Demonstrate how to check salinity levels of water Grade 5 2nd year The teacher: Discusses and demonstrates how to shut off water supply when carrying out repairs Discusses and demonstrates how to detect and repair water leaks The learners complete the following activities: Shut off water supply Detect and repair water leaks
	Installation and maintenance of a drainage	Grade 5 3 rd year • Bed, join and lay drainpipes	Grade 5 3rd year The teacher:
	system		 Discusses and demonstrates how to bed, join and lay drainpipes.
			The learners complete the following activities:

 The learners complete the follow Understand the effects supply system Undertake pollution press 	
9 Plumbing principles Grade 5 1 st year Grade 5 1 st year • Apply pollution principles • Apply basic pipe design and sizing The teacher: • Discusses pollution principles • Discusses effluent and • Discusses and demons • Discusses and demons • Understand the effects • Understand the effects • Understand the effects • Output • Output • Output	tivities and resources.
 Apply pollution principles Apply basic pipe design and sizing Discusses pollution principles Discusses effluent and Discusses and demons The learners complete the follow Understand the effects supply system Undertake pollution pre Assist in applying basis 	ng and laying drainpipes
 Apply basic pipe design and sizing Discusses pollution print Discusses and demons Discusses and demons The learners complete the follow Understand the effects supply system Undertake pollution pre Assist in applying bas 	
Discusses effluent and Discusses and demons The learners complete the follor Understand the effects supply system Undertake pollution pre Assist in applying bas	
 Discusses and demonstration Discusses and demonstration Understand the effects supply system Undertake pollution presented in applying based 	nciples
 The learners complete the follow Understand the effects supply system Undertake pollution pre Assist in applying bas 	backflow prevention
 Understand the effects supply system Undertake pollution pre Assist in applying bas 	trates basic pipe design and sizing
 supply system Undertake pollution pre Assist in applying bas 	wing activities:
Undertake pollution pre Assist in applying bas	s of effluent and backflow in a water
Assist in applying bas	
	vention projects
	ic pipe design and sizing in plumbing
projecta	
World of work Grade 5 2 nd year Grade 5 2 nd year	
Identify the criteria for the learner work The teacher:	
experience programme (LWEP) • Discusses the criteria	a for the learner work experience
programme (LWEP)	
The learners complete the follow	wing activities:
State and understand	d the criteria for the learner work
experience programme	
Participate in the learner	er work experience programme

	Grade 5: Term 1			
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.	
	Installation and	Grade 5 3 rd year	Grade 5 3 rd year	
	maintenance of a drainage	Bed, join and lay drainpipes	The teacher:	
	system		 Discusses and demonstrates how to bed, join and lay 	
			drainpipes.	
			The learners complete the following activities:	
			 Assist in bedding, joining and laying drainpipes 	

Practical 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.

Week	Grade 5 1 st year	Grade 5 2 nd year	Grade 5 3 rd year
2	Use an angle grinder	Reseat a tap	Estimate quantity of materia
	Use a hand drill	Replace a tap washer	needed
			Identify suppliers
3	Maintain an angle grinder	Find fault in geyser	Prepare an order list
	Maintain a hand drill	Repair fault in geyser	Price an order list
4	Use a pipe cutter	Remove an element	Select plumbing tools
	Use a pipe bender	Replace an element	Maintain plumbing tools
5	Use a measuring tape	Repair a leaking compression	Install a drainage system
	Use a builder square	fitting	Inspect a drainage system
		Repair a leaking capillary fitting	
6	Maintain plumbing tools	Remove a faulty stopcock	Mark out trench
	Repair plumbing tools	Replace a faulty stopcock	Excavate trench
7	Close a water meter	Find a hidden leaking pipe	Excavate trench
	Show pressure of different	Repair the hidden leaking pipe	Level out trench
	pipe diameters		
8	Demonstrate hardness of	Shut off water supply	Bed drainpipes
	water	Repair leaking pipe	Lay drainpipes
	Demonstrate softness of		
	water		
9	Show how pollution affects	State criteria for the work	Lay drainpipes
	the water cycle	experience programme	Join drainpipes
	Show how to prevent pollution	Participate in the work	
	in the water cycle	experience programme	

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.

Week	Grade 5 1 st year	Grade 5 2 nd year	Grade 5 3 rd year
2	State the use of an angle	State reason for repairing water	State reason for estimating
	grinder	supply systems	quantity of material needed
3	State why we maintain power	State the purpose of a geyser	State reason for pricing an
	tools		order list
4	Identify the pipe cutter and	State the purpose of an element	Identify basic plumbing tools
	pipe bender		
5	State why we use measuring	State reasons for leaking	State reason for bedding
	tools	capillary fittings	drainage pipe
6	State why we maintain	State reasons for maintaining a	State reason for excavating
	plumbing tools	water supply system	trenches
7	State why we use different	State reason for keeping pipes	State reason for gradient in
	diameter pipes in plumbing	hidden	trench
8	State what causes hardness	State reason for repairing leaks	State reason for inclination in
	and softness of water		drainage pipes
9	State 1 effect of effluent in	State the objective of the work	State the purpose of
	the water supply system	experience programme	drainage pipes

	Grade 5: Term 2			
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.	
1	Health, safety and good	Grade 5 1 st year	Grade 5 1 st year	
	housekeeping practices	State safe and unsafe conditions and	The teacher:	
		acts	Discusses and demonstrates safe and unsafe conditions and	
		Practice good housekeeping	acts	
			Discusses and demonstrates good housekeeping practices	
			The learners complete the following activities:	
			State safe and unsafe conditions and acts.	
			State how to prevent unsafe conditions and acts	
			Practice good housekeeping	
		C	Clean up and set workshop	
		Grade 5 2 nd year	Grade 5 2 nd year	
		Identify and follow procedures for	The teacher:	
		emergencies promptly and correctly	Discusses and demonstrates the procedures for emergencies	
		Practice good housekeeping	Discusses and demonstrates good housekeeping practices	
			The learners complete the following activities:	
			 Identify and follow procedures for emergencies promptly and correctly 	

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		Grade 5: Term 2	
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
			Practice good housekeeping
			Clean up and set workshop
		Grade 5 3 rd year	Grade 5 3 rd year
		Intervene in a first aid scenario	The teacher:
		Practice good housekeeping	Discusses AIDs and HIV in a bleeding first aid scenario
			Discusses and demonstrates intervention in a first aid scenario
			Discusses and demonstrates good housekeeping
			The learners complete the following activities:
			State the precaution to be taken in a bleeding first aid situation
			Assist in basic first aid scenario
			Practice good housekeeping
			Clean up and set up workshop
2	Plumbing principles	Grade 5 1 st year	Grade 5 1 st year
		• Select and understand the purpose of	The teacher:
		valves	 Discusses and demonstrates the purpose of valves.
			Demonstrate how to connect up valves
			The learners complete the following activities:
			State the purpose of valves
			Connect up valves
	Installation and	Grade 5 2 nd year	

	Grade 5: Term 2				
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.		
	maintenance of a water	Detect and repair water leaks	Grade 5 2 nd year		
	supply system		The teacher:		
			• Discusses and demonstrates how to shut off the water supply		
			• Discusses and demonstrates how to detect and repair water		
			leaks		
			The learners complete the following activities:		
			Shut off the water supply		
			Assist to detect and repair water leaks		
	Installation and	Grade 5 3 rd year			
	maintenance of a drainage	Backfill and compact excavation	Grade 5 3 rd year		
	system		The teacher:		
			• Discusses and demonstrates how to backfill and compact an		
			evacuation		
		The learners complete the following activities			
			Assist in backfilling and compacting an evacuation		
3	Plumbing principles	Grade 5 1 st year	Grade 5 1 st year		
		• Select and understand the purpose of	The teacher:		
	met	meters	Discusses and demonstrates the purpose of water meters		
			The learners complete the following activities:		
			Identify the water meter		
			Assist in connecting a water meter		
			Assist in connecting a water meter		

		Grade 5: Term 2		
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.	
	maintenance of a water supply systemInspect, maintain and repair soil and waste water systems		 Discusses and demonstrates how to inspect, maintain and repair soil and waste water systems Discusses and demonstrates how to remove an inspection waste line cover and clean out waste line The learners complete the following activities: Assist in inspecting, maintaining and repairing soil and waste 	
	Installation and maintenance of a drainage	Grade 5 3 rd year • Inspect drainpipes and clear	 water system Remove an inspection waste line cover and cleans out waste line Grade 5 3rd year The teacher: 	
	system	blockages	 Discusses and demonstrates how to inspect drainpipes and clear blockages The learners complete the following activities: Assist in inspecting drainpipes and clearing blockages 	
4	Plumbing principles	 Grade 5 1st year Select and understand the purpose of pumps 	Grade 5 1 st year The teacher: • Discusses and demonstrates the purpose of pumps	

		Grade 5: Term 2		
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.	
	Installation and maintenance of a water supply system	 Grade 5 2nd year Inspect, maintain and repair drainage systems 	 The learners complete the following activities: Assists in selecting and understanding the purpose of pumps Grade 5 2nd year The teacher: Discusses and demonstrates how to inspect, maintain and repair drainage systems 	
			 Discusses and demonstrates how to clean out a blocked p trap and drainage gulley The learners complete the following activities: Assist in inspecting, maintaining and repairing drainage systems Clean out p trap blockage Clean out drainage gulley 	
	Installation and maintenance of a drainage system	 Grade 5 3rd year Build, inspect and maintain drainage system structures 	 Grade 5 3rd year The teacher: Discusses and demonstrates how to build, inspect and maintain drainage system structures Builds a manhole for a drainage system The learners complete the following activities: 	

	Grade 5: Term 2				
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.		
			 Assist in building, inspecting and maintaining drainage system structures Assist in building a manhole for a drainage system 		
5	Plumbing principles	Grade 5 1 st year	Grade 5 1 st year		
		 Select and understand the purpose of plumbing materials for pipes and fittings Select and understand the purpose of hot water systems 	 The teacher: Discusses and demonstrates the purpose of plumbing materials for pipes and fittings Discusses and demonstrates the purpose of hot water systems Discusses and demonstrates how to select hot water systems The learners complete the following activities: Assist in selecting plumbing materials for pipes and fittings State the purpose of plumbing materials for pipes and fittings Select hot water systems State the purpose of hot water systems 		
	Erection, using and	Grade 5 2 nd year	Grade 5 2 nd year		
	dismantling access equipment	Clear and level area where scaffolding is erected	 The teacher: Discusses and demonstrates how to clear and level area where scaffolding is erected 		
			The learners complete the following activities:		
			Assist in clearing and levelling area where scaffolding is		

	Grade 5: Term 2				
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.		
	Installation and maintenance of a drainage system	 Grade 5 3rd year Build, inspect and maintain drainage system structures 	erected Grade 5 3 rd year The teacher: • Discusses and demonstrates how to build, inspect and maintain drainage system structures • Discusses and demonstrates how to lay out basic drainpipes The learners complete the following activities: • Assist in building, inspecting and maintaining drainage system structures • Assist in laying out basic drainpipes		
6	Plumbing principles	Grade 5 1 st year	Grade 5 1 st year		
		Select and understand the purpose of	The teacher:		
		terminal fittings	 Discusses and demonstrates the purpose of terminal fittings 		
			The learners complete the following activities:		
			Select and uses terminal fittings		
			State the purpose of terminal fittings		
	Erection, using and	Grade 5 2 nd year	Grade 5 2 nd year		
	dismantling access	Place adjustable jacks in position	The teacher:		
	equipment		Discusses and demonstrates how to place and use adjustable jacks		

7 Installation and Grade 5 1 st year Grade 5 1 st year 7 Installation and Grade 5 1 st year Grade 5 1 st year • Describe cold water systems and list their components • Discusses cold water systems and their components • Describe cold water systems and list their components • Discusses cold water systems and their components • Name the cold water system components • Name the cold water system components		Grade 5: Term 2			
Installation and maintenance of a drainage Grade 5 3 rd year system • Install in-site sanitation systems; the bathtub • Install in-site sanitation systems; the bathtub • Discusses and demonstrates how to select site and buil support structure for bathtub • Discusses and demonstrates how to install the bath • Discusses and demonstrates how to install the bath 7 Installation and maintenance of a water • Describe cold water systems and list supply system • Describe cold water systems and list their components • Describe cold water systems and list The learners complete the following activities: • Describe cold water systems and list their components • Describe cold water systems and list their components • Demonstrates how to connect and use cold water system components • Demonstrates how to connect and use cold water system components • Name the cold water system components	Week	Торіс		Teaching tips, techniques, activities and resources.	
7 Installation and Grade 5 1 st year Grade 5 1 st year maintenance of a water • Describe cold water systems and list The teacher: supply system • Describe cold water systems and list • Discusses cold water systems and their components • Demonstrates how to connect and use cold water system • Demonstrates how to connect and use cold water system • Demonstrates components • Demonstrates complete the following activities: • Name the cold water system components		maintenance of a drainage	Install in-site sanitation systems; the	 Assist in placing adjustable jacks in position Grade 5 3rd year The teacher: Discusses and demonstrates how to select site and build support structure for bathtub Discusses and demonstrates how to install the bath The learners complete the following activities: Assist in selecting site and building structure for bathtub 	
maintenance of a water supply system Describe cold water systems and list their components Describe cold water systems and list their components Demonstrates how to connect and use cold water system components Demonstrates how to connect and use cold water system components The learners complete the following activities: Name the cold water system components 	7	Installation and	Grade 5 1 st year		
		maintenance of a water	Describe cold water systems and list	 The teacher: Discusses cold water systems and their components Demonstrates how to connect and use cold water system components The learners complete the following activities:	

	Grade 5: Term 2				
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.		
	Erection, using and	Grade 5 2 nd year	The teacher:		
	dismantling access equipment	Level horizontal components	Discusses and demonstrates how to level horizontal components		
			Discusses drainage of the bathtub and shower floor		
			The learners complete the following activities:		
			Assist in the levelling of horizontal components		
			• Assist in positioning the bathtub and shower floor for proper		
			drainage		
			Grade 5 3 rd year		
	Installation and	Grade 5 3 rd year	The teacher:		
	maintenance of a drainage	Install in-site sanitation systems; the bath	Discusses and demonstrates how to install the bath		
	system	C	Discusses and demonstrates drainage of bathtub		
			The learners complete the following activities:		
			Assist in installing the bathtub		
			Assist in positioning bathtub for proper drainage		
8	Installation and	Grade 5 1 st year	Grade 5 1 st year		
	maintenance of a water	• Describe hot water systems and list	The teacher:		
	supply system	their components	Discusses and list hot water systems and their components		
			Discusses and demonstrates some use of hot water		
			components		
			• Discusses and demonstrates how to connect a pressure and		
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	Grade 5: Term 2				
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.		
	Erection, using and dismantling access equipment Installation and maintenance of a drainage system	 Grade 5 2nd year Position scaffold boards properly on supports Grade 5 3rd year Install in-site sanitation systems: the basin 	overflow valve The learners complete the following activities: Assist in fitting some hot water components Name the hot water system components Assist in connecting pressure valve Assist in connecting an overflow valve Grade 5 2 nd year The teacher: Discusses and demonstrates how to position scaffold boards properly on supports The learners complete the following activities: Assist in positioning scaffold boards properly on supports Grade 5 3 rd year The teacher: Discusses and demonstrates how to install the hand wash basin		
9	Installation and	Grade 5 1 st year	Grade 5 1 st year		

		Grade 5: Term 2	
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
	maintenance of a water	• Describe the use and application of	The teacher:
	supply system hot water system components		 Discusses and demonstrates the use and application of hot water system components Discusses and demonstrates how to remove and replace an
			element in a geyser
			The learners complete the following activities:
			 Assist in removing and replacing an element in a geyser
	World of work	Grade 5 2 nd year	Grade 5 2 nd year
		Able to work with competence	The teacher:
		Able to have good work tolerance	Discusses how to work with competence
		Practice appropriate social skills	Discusses how to have good work tolerances
		training	Discusses and demonstrates appropriate social skills training
			The learners complete the following activities:
			Work with competence
			Work with tolerance
			Practice appropriate social skills training
			Role play working with competence, tolerance and appropriate
			social skills
			Grade 5 3 rd year
	Installation and	Grade 5 3 rd year	The teacher:

	Grade 5: Term 2					
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.			
	maintenance of a drainage	Install in-site sanitation systems: the	• Discusses and demonstrates how to install the hand wash			
	system	basin	basin			
			• Discusses and demonstrates how to connect up supply lines			
			and waste line for basin			
			The learners complete the following activities:			
			Assist in installing the hand wash basin			
			 Assist in connecting supply line and waste line for basin 			

Practical 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 learner must be able to:

Week	Grade 5 1 st year	Grade 5 2 nd year	Grade 5 3 rd year
2	Select a valve	Shut off water supply	Backfill excavation
	Connect a valve	Repair water leaks	Compact excavation
3	Select a water meter	Remove inspection cover on	Inspect blockages
	Connect a water meter	waste line	Clear blockages
		Clean out waste line	
4	Select a pump	Clean out p trap blockage	Excavate area for manhole
	Connect a pump	Clean out drainage gulley	Build a manhole structure
5	Select plumbing materials	Clear out area for scaffolding	Select basic drainpipes
	Connect a fitting to a pipe	Level out area for scaffolding	Lay out basic drainpipes
6	Select a terminal fitting	Select adjustable jack	Select site for bathtub
	Connect a terminal fitting	Place adjustable jack in position	Build support structure for
			bathtub
7	Connect a tap	Level out horizontal components	Install bathtub
	Connect a stop cock	Position bathtub in place	Position bathtub for drainage
8	Connect a pressure valve	Select scaffold boards	Select position for basin
	Connect an overflow valve	Position scaffold boards	Install basin
9	Remove an element from a	Work with competence	Connect water supply
	geyser	Work with tolerance	Connect waste line
	Replace an element in a		
	geyser		

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.

Week	Grade 5 1 st year	Grade 5 2 nd year	Grade 5 3 rd year		
2	State the purpose of a valve	State how to detect a water leak	State the	purpose	of
			compacting	а	filled
			excavation		

3	State the purpose of a	State the purpose of an	State the cause of blockage
	water meter	inspection waste line cover	
4	State the purpose of a	State the purpose of a p trap	State the purpose of a
	pump		manhole
5	State the purpose of a	State purpose of levelling area for	State the purpose of drain
	fitting	scaffolding	pipes
6	State the purpose of a	State the purpose of adjustable	State the purpose of building
	terminal fitting	jacks	a support structure for a
			bathtub
7	State the purpose of thread	State the reason for levelling out	State the reason for correct
	tape	horizontal components	drainage position of a bathtub
8	State the purpose of an	State the purpose of scaffold	State the purpose of the
	overflow valve	boards	basin
9	State the purpose of an	State the purpose of appropriate	State the standard height of a
	element in a geyser	skills training	basin

3.2.7 Grade 5:1st, 2^{nd} and 3^{rd} year :Term 3

3.2.7 G	Grade 5:1 st , 2 nd and 3 rd year :Te		
		Grade 5: Term 3	T
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
1	Health, safety and good	Grade 5 1 st year	Grade 5 1 st year
	housekeeping practices	Practice good housekeeping	The teacher:
			Discusses and demonstrates how to practice good
			housekeeping
			Discusses and demonstrates how to clean up and set up
			the workshop
			The learners complete the following activities:
			Practice good housekeeping
			Clean up and sets up the workshop
		C	
		Grade 5 2 nd year	Grade 5 2 nd year
		• Report injuries involving individuals to	The teacher:
		the relevant persons promptly	• Discusses how to report injuries involving individuals to
		 Practice good housekeeping 	relevant persons promptly
			Discusses and demonstrates how to practice good
			housekeeping
			• Discusses and demonstrates how to clean up and set up
			the workshop
			The learners complete the following activities:
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		Grade 5: Term 3	
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
			 Report injuries involving individuals to the relevant persons promptly Practice good housekeeping Clean up and sets up the workshop Grade 5 3 rd year
		Grade 5 3 rd year	The teacher:
		Treat bleeding wounds	Discusses and demonstrates how to treat bleeding wounds
		Practice good housekeeping	 Discusses the effects of AIDS and HIV on exposure to bleeding wounds Discusses and demonstrates how to practice good housekeeping Discusses and demonstrates how to clean up and set up the workshop
			The learners complete the following activities:
			Assist in the treatment of bleeding wounds
			 Take safety precautions in terms of AIDS and HIV when treating bleeding wounds Practice good housekeeping Clean up and sets up the workshop
2	Installation and	Grade 5 1 st year	Grade 5 1 st year
	maintenance of a water	Join pipes and assemble using pipe	The teacher:
	supply system	fittings	Discusses and demonstrates how to join pipes and

	Grade 5: Term 3			
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.	
			 assemble using pipe fittings Discusses and demonstrates how to join capillary fittings using a blow torch and soldering wire The learners complete the following activities: Assist in joining pipes and assemble using pipe fittings Join pipes using capillary fittings Join pipes using a blow torch and soldering wire 	
	Erection, using and dismantling access equipment	 Grade 5 2nd year Tighten all couplings 	 Grade 5 2nd year The teacher: Discusses and demonstrates how to tighten all couplings 	
			The learners complete the following activities:Tighten all couplings	
	Solar hot water system	Grade 5 3 rd year Introduction of solar hot water systems 	 Grade 5 3rd year The teacher: Discusses and demonstrates what are solar hot water systems and how they work Discusses the advantages and disadvantages of solar hot water systems Discusses the components of the solar hot water system 	

	Grade 5: Term 3			
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.	
			 The learners complete the following activities: Give a brief explanation of how the solar hot water system works State the advantage sand disadvantages of a solar hot water system Name the components of the solar hot water system 	
3	Installation and	Grade 5 1 st year	Grade 5 1 st year	
	maintenance of a water	Join pipes and assemble using pipe	The teacher:	
	supply system	fittings	 Discusses and demonstrates how to join pipes and assemble using pipe fittings Discusses and demonstrates how to join pipe using compression fittings The learners complete the following activities: Assist in joining pipes and assemble using pipe fittings Join pipes using capillary fittings 	
	Erection, using and	Grade 5 2 nd year	Grade 5 2 nd year	
	dismantling access	Dismantle and stack access equipment	The teacher:	
	equipment	in the correct order	 Discusses and demonstrates how to dismantle access equipment in the correct order 	
			The learners complete the following activities:	
			Assist in dismantling of access equipment	

		Grade 5: Term 3	
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
	Solar hot water system	Grade 5 3 rd year	Grade 5 3 rd year
		Installation of a solar hot water system	 The teacher: Discusses and demonstrates the different components of the solar hot water system Discusses and demonstrates how to install a solar hot water system Discusses and demonstrates the passive solar water system Discusses and demonstrates how to connect up the solar collector
			The learners complete the following activities:
			 Name the different components of the solar hot water system; the passive solar water system Assist in the installation of the solar hot water system Assist in connecting the solar collector
4	Installation and	Grade 5 1 st year	Grade 5 1 st year
	maintenance of a water	Install and maintain cold water pipe	The teacher:
	supply system	systems.	 Discusses and demonstrates how to install and maintain cold water pipe systems Discusses and demonstrates how to mark off level lines on walls using a plumb line or level
			 Discusses and demonstrates how fit pipe holding clamps on

		Grade 5: Term 3	
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
	Erection, using and dismantling access equipment	Grade 5 2 nd year • Erect and dismantle a trestle scaffold	 wall The learners complete the following activities: Assist in installing and maintaining a cold water pipe system Mark off lines on wall Fit pipe holders on wall Grade 5 2nd year The teacher: Discusses and demonstrates how to erect and dismantle a trestle scaffold
	Solar hot water system	Grade 5 3 rd year	 The learners complete the following activities: Assist in erecting and dismantling a trestle scaffold Grade 5 3rd year
		Installation of a solar system	
			 The teacher: Discusses and demonstrates the different components of the solar hot water system Discusses and demonstrates how to install a solar hot water system Discusses and demonstrates how to connect up the hot water storage tank and other parts

		Grade 5: Term 3	
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
			 The learners complete the following activities: Name the different components of the solar hot water system
			Assist in the installation of the solar hot water systemAssist to connect up the storage tank and other parts
5	Installation and	Grade 5 1 st year	Grade 5 1 st year
	maintenance of a water	Install and maintain cold water systems	The teacher:
	supply system		Discusses and demonstrates how to install and maintain cold water pipe systems
			Discusses and demonstrates how to fit water pipe on brackets
			The learners complete the following activities:
			 Assist in installing and maintaining a cold water pipe system
			Fit water pipes on brackets
	Erection, using and	Grade 5 2 nd year	Grade 5 2 nd year
	dismantling access	Erect and dismantle a trestle scaffold	The teacher:
	equipment		Discusses and demonstrates how to erect and dismantle a trestle scaffold
1			The learners complete the following activities:
			Assist in erecting and dismantling a trestle scaffold

		Grade 5: Term 3	
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
	Solar hot water system	Grade 5 3 rd year • Installation of a solar system	 Grade 5 3rd year The teacher: Discusses and demonstrates the different components of the solar hot water system Discusses and demonstrates how to install a solar hot water system Discusses and demonstrates the active solar hot water system Discusses and demonstrates how to connect up the collector and controller The learners complete the following activities: Name the different components of the solar hot water system; the active system Assist in the installation of the solar hot water system Assist in connecting up the collector and controller
6	Installation and maintenance of a water supply system	Grade 5 1 st year Pressure test pipe system	 Assist in connecting up the collector and controller Grade 5 1st year The teacher: Discusses and demonstrates how to pressure test a pipe system
			The learners complete the following activities:Assist in pressure testing a pipe system

		Grade 5: Term 3	
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
	Erection, using and dismantling access equipment	Grade 5 2 nd year • Erect and dismantle an extension ladder	 Grade 5 2nd year The teacher: Discusses and demonstrates how to erect and dismantle an extension ladder The learners complete the following activities: Erect and dismantle an extension ladder
	Solar hot water system	Grade 5 3 rd year • Installation of a solar system	 Grade 5 3rd year The teacher: Discusses and demonstrates the different components of the solar hot water system Discusses and demonstrates how to install a solar hot water system Discusses and demonstrates how to connect up the storage tank and the solar pump
		5	 The learners complete the following activities: Name the different components of the solar hot water system Assist in the installation of the solar hot water system Assist in connecting up the storage tank and the solar pump
7	Installation and	Grade 5 1 st year	Grade 5 1 st year

		Grade 5: Term 3	
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
	maintenance of a water supply system	 Install and maintain hot water systems 	 The teacher: Discusses and demonstrates how to install and maintain a hot water system The learners complete the following activities: Assist in installing and maintaining a hot water system
	Erection, using and	Grade 5 2 nd year	Grade 5 2 nd year
	dismantling access equipment	Make use of a step ladder	 The teacher: Discusses and demonstrates how to make use of a step ladder The learners complete the following activities: Use a step ladder effectively
	Solar hot water system	Grade 5 3 rd year • Repair and maintenance of solar systems	 Grade 5 3rd year The teacher: Discusses and demonstrates how to repair and maintain solar systems Discusses and demonstrates how to remove the collector
		9	 The learners complete the following activities: Assist in repairing and maintaining a solar system Assist in removing the collector

	Grade 5: Term 3		
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
8	Installation and	Grade 5 1 st year	Grade 5 1 st year
	maintenance of a water	Install a geyser	The teacher:
	supply system		 Discusses and demonstrates how to install a pressure geyser
			• Discusses and demonstrates how to connect up the
			electrical wires on the element
			The learners complete the following activities:
			Assist in installing a geyser
			Assist in connecting up the electrical wires in the element
	Basic building work	Grade 5 2 nd year	Grade 5 2 nd year
		• Set out brick masonry for manholes and	The teacher:
		chambers	 Discusses and demonstrates how to set out brick masonry
			for manholes and chambers
			The learners complete the following activities:
			 Assist in setting out brick masonry for man holes and
			chambers
	Solar hot water system	Grade 5 3 rd year	Grade 5 3 rd year
		• Repair and maintenance of solar hot	
		water systems	Discusses and demonstrates how to repair and maintain
			solar hot water systems

		Grade 5: Term 3	
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
			 Discusses and demonstrates how to replace the collector The learners complete the following activities: Assist in repairing and maintaining a solar hot water system Assist in replacing the collector
9	Installation and	Grade 5 1 st year	Grade 5 1 st year
	maintenance of a water	Install a geyser	The teacher:
	supply system		 Discusses and demonstrates how to install a pressure geyser Discusses and demonstrates how to connect up the pressure and overflow valve The learners complete the following activities: Assist in installing a geyser Assist in connecting up the pressure and overflow valve
	World of work	Grade 5 2 nd year	Grade 5 2 nd year
		• Orientate learners to the open labour	The teacher:
		market	Discusses the open labour market
		Perform personal management activities	 Discusses personal management activities for daily living
		for daily living	Discusses the learner work experience programme
		• Participate in the learner work	
		experience programme (LWEP)	The learners complete the following activities:
			Talk about the open labour market
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	Grade 5: Term 3				
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.		
			Practice personal management activities for daily living		
			 Participate in the learner work experience programme 		
			Grade 5 3 rd year		
	Solar hot water system	Grade 5 3 rd year	The teacher:		
		Repair and maintenance of solar hot	Discusses and demonstrates how to repair and maintain		
		water systems	solar hot water systems		
			Discusses and demonstrates how to remove and replace		
			the storage tank		
			The learners complete the following activities		
			Assist in repairing and maintaining a solar hot water system		
			Assist in removing and replacing the storage tanks		

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Practical 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 learner must be able to:

Week	Grade 5 1 st year	Grade 5 2 nd year	Grade 5 3 rd year
2	Light up a blowtorch	Fit thread tape on couplings	Identify the storage tank
	Join capillary fittings using a	Tighten all couplings	Identify the collector
	blowtorch		
3	Join pipes using compression	Dismantle access equipment	Identify the components of the
	fittings	Stack access equipment	passive solar system
	Check pipes for leaks		Connect up the solar collecto
4	Mark off lines on the wall	Erect a trestle scaffold	Connect up the hot wate
	Drill holes in wall	Dismantle a trestle scaffold	storage tank
			Connect up the hot wate
			piping system
5	Drill holes in wall	Erect a trestle scaffold	Connect up the active sola
	Fit water pipe bracket in wall	Dismantle a trestle scaffold	collector
			Connect up the controller
6	Connect up pressure test	Erect an extension ladder	Connect up the active sola
	equipment	Dismantle an extension ladder	storage tank
	Pressure test pipe system		Connect up the solar pump
7	Install hot water pipes	Set up a step ladder	Strip the collector pipes
	Connect up hot water pipes	Climb up a step ladder	Remove the collector
8	Install geyser	Set up a profile for brickwork	Replace the collector
	Connect electrical wires	Set up brick masonry	Refit the collector pipes
9	Connect pressure valve	Practice personal management	Remove the storage tank
	Connect overflow valve	activities for daily living	Replace the storage tank
		Participate in the work	
		experience programme	

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.

Week	Grade 5 1 st year	Grade 5 2 nd year	Grade 5 3 rd year
2	State the purpose of soldering	State the purpose of thread	State the purpose of the
	wire	tape	collector
3	State the purpose of	State the purpose of access	State the advantage of the
	compression fittings	equipment	passive solar system
4	State the purpose of the	State the purpose of a trestle	State the purpose of the
	masonry bit	scaffold	storage tank
5	State the purpose of the water	State the purpose of a trestle	State the purpose of the
	pipe bracket	scaffold	controller
6	State the purpose of the	State the purpose of an	State the purpose of the solar
	pressure test equipment	extension ladder	pump
7	State the purpose of the hot	State the purpose of a step	State what causes the
	water system	ladder	collector from working
8	State the purpose of the	State the purpose of a manhole	State precautions that must
	geyser		be taken when working on
			the solar water system
9	State the purpose of the	State the learners place in the	State what causes the
	overflow valve	open labour market	storage tank from working

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3.2.8 G	rade 5: 1 st , 2 nd and 3 rd year: Terr	n 4	
		Grade 5: Term 4	
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
1	Health, safety and good	Grade 5 1 st year	Grade 5 1 st year
	housekeeping practices	• Identify and use fire extinguishers	The teacher:
		and hoses	• Discusses and demonstrates how to identify and use fire
		Practice good housekeeping	extinguishers and hoses
			Discusses and demonstrates how to practice good
			housekeeping
			The learners complete the following activities:
			Identify and uses fire extinguishers
			Practice good housekeeping
			Clean up and set workshop
		Grade 5 2 nd year	Grade 5 2 nd year
		• Follow procedures that apply to	The teacher:
		illness or injuries in the work area	• Discusses how to follow procedures that apply to illness or
		Practice good housekeeping	injuries in the work area
			Discusses and demonstrates how to practice good
			housekeeping
	2		The learners complete the following activities:

	Grade 5: Term 4	
Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
Installation and maintenance of a water supply system	Grade 5 3 rd year • Treat an injured person for shock • Practice good housekeeping Grade 5 1 st year • Inspect and test hot water systems	 Assist in following procedures that apply to illness or injuries in the work area Practice good housekeeping Clean up and set workshop Grade 5 3' ^d year The teacher: Discusses and demonstrates how to treat an injured person for shock Discusses and demonstrates how to practice good housekeeping The learners complete the following activities: Assist in treating a injured person for shock Practice good housekeeping Clean up and set workshop Grade 5 1 st year The teacher: Discusses and demonstrates how to inspect and test hot water systems
	Installation and maintenance	Topic Content The learner must be able to: Grade 5 3 rd year • Treat an injured person for shock • Practice good housekeeping Installation and maintenance Grade 5 1 st year

	Grade 5: Term 4		
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
			Grade 5 2 nd year
	Basic building work	Grade 5 2 nd year	The teacher:
		Mix concrete and apply	Discusses and demonstrate how to mix concrete and apply
			Discusses safety precautions when working with concrete
			The learners complete the following activities:
			Assist to mix concrete
			Observe safety precautions when working with concrete
			Grade 5 3 rd year
	Installation and maintenance	Grade 5 3 rd year	The teacher:
	of a water supply system	Repair taps and mixers	 Discusses and demonstrates why and how to repair taps and mixers
		C	The learners complete the following activities:
			 Identify the different washers and o rings in taps and mixers
			Repair taps and mixers
3	Installation and maintenance	Grade 5 1 st year	Grade 5 1 st year
	of a water supply system	• Describe 4 basic faults in hot and	The teacher:
		cold water systems	Discusses 4 basic faults in hot and cold water systems
			• Demonstrates how to repair the 4 basic faults in hot and cold
			water systems
			The learners complete the following activities:

	Grade 5: Term 4			
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.	
			Name the 4 basic faults in hot and cold water systems	
			Assist to repair the basic faults in hot and cold water systems	
	Desis kuikin nuusek	One de El ord weer	Grade 5 2 nd year	
	Basic building work	Grade 5 2 nd year	The teacher:	
		Set out brickwork profile	Discusses and demonstrates how to set profile for brickwork	
			The learners complete the following activities:	
			Assists in setting up brickwork profile	
			Grade 5 3 rd year	
	Installation and maintenance	Grade 5 3 rd year	The teacher:	
	of a water supply system	Repair taps and mixers	• Discusses and demonstrates why and how to repair taps and	
			mixers	
			The learners complete the following activities:	
			Identify the different washers and o rings in taps and mixers	
			Repair taps and mixers	
4	Installation and maintenance	Grade 5 1 st year	Grade 5 1 st year	
	of a water supply system	• Inspect, repair and maintain cold	The teacher:	
		water pipes	• Discusses and demonstrates how to inspect, repair and	
			maintain cold water pipes	
			The learners complete the following activities:	
			The learners complete the following activities:	

		Grade 5: Term 4	
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
			Assist to inspect, repair and maintain cold water pipes
	Basic building work	Grade 5 2 nd year	Grade 5 2 nd year
		Mix mortar and apply	The teacher:
			 Discusses and demonstrates how to mix mortar and apply
			The learners complete the following activities:
			Mix mortar and apply
	Installation and maintenance	Grade 5 3 rd year	Grade 5 3 rd year
	of a water supply system	Repair taps and mixers	The teacher:
			 Discusses and demonstrates why and how to repair taps and mixers
			The learners complete the following activities:
			 Identify the different washers and o rings in taps and mixers
			Repair taps and mixers
5	Installation and maintenance	Grade 5 1 st year	Grade 5 1 st year
	of a water supply system	• Inspect, repair and maintain hot	The teacher:
		water pipes	• Discusses and demonstrates how to inspect, repair and
			maintain hot water pipes
			Discusses safety precautions when working on hot water
			pipes

	Grade 5: Term 4			
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.	
			The learners complete the following activities:	
			Assist to inspect, repair and maintain hot water pipes	
			Observe safety precautions when working with hot water pipes	
	Basic building work	Grade 5 2 nd year	Grade 5 2 nd year	
		Construct brickwork for manholes	The teacher:	
		and chambers	Discusses and demonstrate how to set out brick masonry work	
			for manholes and chambers	
			Discusses and demonstrate how to mix mortar and apply	
			The learners complete the following activities:	
			 Assist in setting out brick masonry work for manholes and 	
			chambers	
		C	Mix mortar and apply	
	Installation and maintenance	Grade 5 3 rd year	Grade 5 3 rd year	
	of a water supply system	Repair taps and mixers	The teacher:	
			• Discusses and demonstrates why and how to repair taps and	
			mixers	
			 Discusses and demonstrates how to packing in a tap 	
			The learners complete the following activities:	
			Identify the different washers and o rings in taps and mixers	

	Grade 5: Term 4			
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.	
			Repair taps and mixers	
			 Assist in repairing/replacing packing in a tap 	
6	Installation and maintenance	Grade 5 1 st year	Grade 5 1 st year	
	of a water supply system	Install and maintain above ground	The teacher:	
		drainage components under	• Discusses and demonstrates how to install and maintain	
		supervision: the toilet	above ground drainage components under supervision; the	
			toilet	
			The learners complete the following activities:	
			• Assist in the installation and maintenance of above ground	
			drainage components; the toilet	
	Basic building work	Grade 5 2 nd year	Grade 5 2 nd year	
		Construct brickwork for manholes	The teacher:	
		and chambers	• Discusses and demonstrates how to construct brickwork for	
			manholes and chambers	
			The learners complete the following activities:	
			• Assist in setting out brick masonry work for manholes and	
			chambers	
	Installation and maintenance	Grade 5 3 rd year	Grade 5 3 rd year	
	of a water supply system	Find faults in cold water systems	The teacher:	
			Discusses and demonstrates how to find and fix faults in cold	

		Grade 5: Term 4	
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
			water systems
			 Discusses and demonstrates how to reseat a tap
			The learners complete the following activities:
			 Assist to find and fix faults in cold water systems
			Assist in reseat a tap
7	Installation and maintenance	Grade 5 1 st year	Grade 5 1 st year
	of a water supply system	Install and maintain above ground	The teacher:
		drainage component under	Discusses and demonstrates how to install and maintain
		supervision: the toilet	above ground drainage components under supervision; the toilet
			The learners complete the following activities:
			Assist in the installation and maintenance of above ground
			drainage components; the toilet
			Grade 5 2 nd year
	Basic building work	Grade 5 2 nd year	The teacher:
		Makes a plaster mix	Discusses and demonstrates how to mix plaster
		\mathbf{X}	The learners complete the following activities:
			Assist in mixing plaster
			Grade 5 3 rd year
	Installation and maintenance	Grade 5 3 rd year	The teacher:

		Grade 5: Term 4	
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
	of a water supply system	Find faults in cold water systems	 Discusses and demonstrates how to find and fix faults in cold water systems Discusses and demonstrates how to replace a tap The learners complete the following activities: Assist to find and fix faults in cold water systems Assist in replacing a tap
8	Installation and maintenance	Grade 5 1 st year	Grade 5 1 st year
	of a water supply system	Install and maintain above ground	The teacher:
		drainage components and sanitary fittings under supervision: the shower	 Discusses and demonstrates how to install and maintain above ground drainage components and sanitary fittings under supervision; the shower The learners complete the following activities: Assist in installing and maintaining above ground drainage components and sanitary fittings under supervision; the shower
	Basic building work	Grade 5 2 nd year	Grade 5 2 nd year
		Plaster brickwork	The teacher:
			 Discusses and demonstrates how to mix plaster and plaster brickwork
			The learners complete the following activities:

		Grade 5: Term 4	
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
			Mix plaster and plasters brickwork
	Installation and maintenance	Grade 5 3 rd year	Grade 5 3 rd year
	of a water supply system	 Find faults in hot water systems 	The teacher:
			• Discusses and demonstrates how to find and fix faults in a hot
			water system
			Discusses how to observes safety precautions when working
			with hot water
			Removes the geyser element
			The learners complete the following activities:
			 Assist in finding and fixing faults in a hot water system
			Observe safety precautions when working with hot water
			Assist in removing the geyser element
9	Installation and maintenance	Grade 5 1 st year	Grade 5 1 st year
	of a water supply system	Install and maintain above ground	The teacher:
		drainage components and sanitary	Discusses and demonstrates how to install and maintain
		fittings under supervision: the	above ground drainage components and sanitary fittings under
		shower	supervision; the shower
			The learners complete the following activities:
			Assist in installing and maintaining above ground drainage
			components and sanitary fittings under supervision; the
			shower

		Grade 5: Term 4	
Week	Торіс	Content The learner must be able to:	Teaching tips, techniques, activities and resources.
	Basic building work	Grade 5 2 nd year	Grade 5 2 nd year
		Box plumbing pipes	The teacher:
			 Discusses and demonstrates how to box plumbing pipes
			The learners complete the following activities:
			Assist in boxing plumbing pipe
	Installation and maintenance	Grade 5 3 rd year	Grade 5 3 rd year
	of a water supply system	Find faults in hot water systems	The teacher:
			 Discusses and demonstrates how to find and fix faults in a hot water system
			• Discusses how to observe safety precautions when working
			with hot water
			Replace the geyser element
			The learners complete the following activities:
			 Assist in finding and fixing faults in a hot water system
			 Observe safety precautions when working with hot water
			 Assist in replacing the geyser element

Practical assessment Term 4

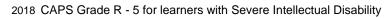
Assessment is formally recorded during four (4) practical sessions with a minimum of four (4) skills reported. Learners, regardless of abilities, shall be assessed on the same skill. The following serves as suggestion of skills to record and report on.

Week	Grade 5 1 st year	Grade 5 2 nd year	Grade 5 3 rd year
2	Inspect the hot water system	Dry mix concrete	Repair 1 basic fault in a cold
	Test the hot water system	Wet mix concrete	water system
			Repair 1 basic fault in a hot
			water system
3	Repair 1 fault in the hot water	Square brickwork profile	Remove a tap washer
	system	Set out brickwork profile	Replace a tap washer
	Repair 1 fault in the cold		
	water system		
4	Inspect cold water pipes	Dry mix mortar	Remove o rings in a tap
	Repair cold water pipes	Wet mix mortar	Replace o rings in a tap
5	Inspect hot water pipes	Construct brickwork for manhole	Remove packing in a tap
	Repair hot water pipes	Complete brickwork for	Replace packing in a tap
		manholes	
6	Install the toilet	Construct brickwork for manhole	Strip a tap
	Level the toilet	Complete brickwork for	Reseat a tap
		manholes	
7	Install supply water pipes	Dry mix plaster	Remove a tap
	Install outlet pipes	Wet mix plaster	Replace a tap
8	Install the shower	Apply plaster	Drain the geyser water
	Level the shower floor	Plaster brickwork	Remove geyser element
9	Install the water supply	Identify pipes to be blocked	Replace the geyser element
	Install the outlet pipes	Boxes plumbing pipes	Connect up element wiring

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.

Week	Grade 5 1 st year	Grade 5 2 nd year	Grade 5 3 rd year
2	State safety precautions when	State the proportions of	State the most basic fault in
	working on hot water systems	concrete mix	a cold water system
3	State 1 basic fault in a cold	State the purpose of a	State the purpose of a tap
	water system	brickwork profile	washer
4	State how to inspect cold water	State the proportions of mortar	State the purpose of an o
	pipes	mix	ring
5	State how to inspect hot water	State the purpose of manholes	State the purpose of the
	pipes		packing gland in a tap
6	State the purpose of the toilet	State the purpose of manholes	State the reason for
			reseating a tap
7	State how to adjust water	State the proportions of plaster	State the reason for
	levels in the cistern	mix	replacing a tap
8	State the purpose of levelling	State the purpose of plastering	State the reason for
	the shower floor	brickwork	replacing a geyser element
9	State the purpose of the outlet	State the reasons for boxing	State the reason for bleeding
	pipes	brickwork	the hot water system



4 SECTION 4

ASSESSMENT

Subject specific content to be added to generic section 4 after public comment changes/corrections have been made.

Assessment across the 5 years

Grade 4 – Practical assessment tasks

Tas	k Week	Grade 4 1 st year	Grade 4 2 nd year
Ter	m 1		
1	Week 2 or 3	Draw a water cycle diagram. Draw a water purification diagram	Draw a simple sketch of a tap. Draw a simple sketch of a basin with 2 taps
2	Week 4 or 5	Open and shut off a water meter. Demonstrate water flow on different inclination of pipes	Open and shut off a water meter. Demonstrate water flow on different inclination of pipes
3	Week 6 or 7	Show how to prevent backflow in waste lines. Explain the 'p' trap effect	Use a rawl bolt. Use screws to secure a part
4	Week 8 or 9	Use a rawl bolt. Use screws to secure a part	Make a mortar mix. Lay a row of bricks
Ter	m 2		
1	Week 2 or 3	Use a screwdriver. Use a hacksaw	Use an angle grinder. Use a hand drill
2	Week 4 or 5	Use a tri-square. Use a builders square	Make a plastering mix. Plaster a hole

		Cut supply pipe to size. Attach a fitting	Mark out work area. Set out work area
3	Week 6 or 7	Cut supply pipe to size. Attach a fitting	Mark out work area. Set out work area
0		to pipe	
		Connect a compression fitting.	Procure tools for a job. Order material for a
4	Week 8 or 9	Connect a capillary fitting	job
		Connect a capillary htting]00
		•	
Ter	m 3		
	1	T	
1	Week 2 or 3	Lay pipes on ground. Use personal	Copy symbols from worksheet. Identifies
I	Week 2 01 3	protective equipment	basic drawing and symbols
		Excavate up a trench. Shore up a	Install a 1 pipe soil pipe system. Install a vent
2	Week 4 or 5	trench	
		tiench	pipe
		Practice good housekeeping. Correct	Check the gradient level of a 1 pipe soil pipe
3	Week 6 or 7	hazardous situations	system. Backfill a 1 pipe spoil pipe system
		Practice safety procedures when	Connect a rodding point. Connect an access
4	Week 8 or 9	excavating a trench. Drain a trench	point
Ter	m 4		
		Clear work area from obstruction. Drain	Prepare area for bathtub installation. Install
1	Week 2 or 3	water from trench	the bathtub
		Shore up a trench. Observe safety	Prepare area for shower. Install the shower
2	Week 4 or 5	precautions when shoring up a trench	
		· · · · · · · · · · · · · · · · · · ·	
2	Week Car 7	Install supply pipes. Connect supply	Prepare area for toilet. Install the toilet
3	Week 6 or 7	pipes with compression fittings	
		Mark out channel in brickwork. Chase	Practice good social habits. Conduct
4	Week 8 or 9		Ũ
-		channel with angle grinder	business ethically
		-	

Grade 4 terms 1 – 4: Theoretical assessment tasks

Evidence of one theoretical task of formal assessment between weeks 2 - 09 as in the annual teaching plan must be available for quality assurance.

Grade 5 – Practical assessment tasks

Task	Week	Grade 5 1 st year	Grade 5 2 nd year	Grade 5 3 rd year
Term	1			
1	Week 2 or 3	Use an angle grinder. Use a hand drill	Reseat a tap. Replace a tap washer	Estimate quantity of material needed. Identify suppliers
2	Week 4 or 5	Use a pipe cutter. Use a pipe bender	Remove an element. Replace an element	Select plumbing tools. Maintain plumbing tools
3	Week 6 or 7	Maintain plumbing tools. Repair plumbing tools	Remove a faulty stopcock Replace a faulty stopcock	Mark out trench. Excavate trench
4	Week 8 or 9	Demonstrate hardness of water. Demonstrate softness of water	Shut off water supply. Repair leaking pipe	Bed drainpipes. Lay drainpipes
Term	2			
1	Week 2 or 3	Select a valve. Connect a valve	Shut off water supply. Repair water leaks	Backfillexcavation.Compact excavation
2	Week 4 or 5	Select a pump. Connect a pump	Clean out p trap blockage. Clean out drainage gulley	Excavate area for manhole. Build a manhole structure
3	Week 6 or 7	Select a terminal fitting. Connect a terminal fitting	Select adjustable jack. Place adjustable jack in position	Select site for bathtub. Build support structure for bathtub
4	Week 8 or 9	Connect a pressure valve. Connect an overflow valve	Select scaffold boards. Position scaffold boards	Select position for basin. Install basin
Term	3		·	
1	Week 2 or 3	Light up a blowtorch. Join capillary fittings using a blowtorch	Fit thread tape on couplings. Tighten all couplings	Identify the storage tank. Identify the collector

k 4 or 5 k 6 or 7 k 8 or 9	Mark off lines on the wall. Drill holes in wall Connect up pressure test equipment. Pressure test pipe system Install geyser. Connect electrical wires	Erect a trestle scaffold. Dismantle a trestle scaffold Erect an extension ladder. Dismantle an extension ladder Practice personal management activities for daily living. Participate in the work experience programme	Connect up the hot water storage tank. Connect up the hot water piping system Connect up the active solar storage tank. Connect up the solar pump Remove the storage tank. Replace the storage tank
k 6 or 7	Connect up pressure test equipment. Pressure test pipe system Install geyser. Connect electrical wires	Erect an extension ladder. Dismantle an extension ladder Practice personal management activities for daily living. Participate in the	the hot water piping system Connect up the active solar storage tank. Connect up the solar pump Remove the storage tank.
	equipment. Pressure test pipe system Install geyser. Connect electrical wires	Dismantle an extension ladder Practice personal management activities for daily living. Participate in the	system Connect up the active solar storage tank. Connect up the solar pump Remove the storage tank.
	equipment. Pressure test pipe system Install geyser. Connect electrical wires	Dismantle an extension ladder Practice personal management activities for daily living. Participate in the	Connect up the active solar storage tank. Connect up the solar pump Remove the storage tank.
	equipment. Pressure test pipe system Install geyser. Connect electrical wires	Dismantle an extension ladder Practice personal management activities for daily living. Participate in the	solar storage tank. Connect up the solar pump Remove the storage tank.
	pipe system Install geyser. Connect electrical wires	ladder Practice personal management activities for daily living. Participate in the	Connect up the solar pump Remove the storage tank.
k 8 or 9	Install geyser. Connect electrical wires	Practice personal management activities for daily living. Participate in the	pump Remove the storage tank.
k 8 or 9	Install geyser. Connect electrical wires	management activities for daily living. Participate in the	Remove the storage tank.
k 8 or 9	electrical wires	management activities for daily living. Participate in the	2
9 8 8 or 9		daily living. Participate in the	Replace the storage tank
		, , ,	
		work experience programme	
	Inspect the hot water	Dry mix concrete. Wet mix	Repair 1 basic fault in a
k 2 or 3	system. Test the hot	concrete	cold water system. Repair
	water system		1 basic fault in a hot water
			system
	Inspect cold water pipes.	Dry mix mortar. Wet mix	Remove o rings in a tap.
k 4 or 5	Repair cold water pipes	mortar	Replace o rings in a tap
	Install the toilet. Level the	Construct brickwork for	Strip a tap. Reseat a tap
k 6 or 7	toilet	manhole. Complete	
		brickwork for manholes	
	Install the shower. Level	Apply plaster. Plaster	Drain the geyser water.
		brickwork	Remove geyser element
ŀ		toilet	k 6 or 7 toilet manhole. Complete brickwork for manholes Install the shower. Level Apply plaster. Plaster

Grade 5 terms 1 – 4: Theoretical assessment tasks

Evidence of one theoretical task of formal assessment between weeks 2 – 09 as in the annual teaching plan must be available for quality assurance.

2018 CAPS Grade R - 5 for learners with Severe Intellectual Disability