

# 2021 Post – Covid: National Revised ATP: Grade 10 – Term 1: **Construction**

TERM 1 (45 days)	Week 1 27-29 Jan (3 days)	Week 2 1-5 Feb (5 days)	Week 3 8-12 Feb (5 days)	Week 4 15-19 Feb (5 days)	Week5 22-26 Feb (5 days)	Week 6 1-5 March (5 days)	Week 7 8-12 March (5 days)	Week 8 15-19 March (5 days)	Week 9 23-26 March (4 days)	Week 10 29-31 March (3 days)	
<b>CAPS Topics</b>	INTRODUCTION OCCUPATIONAL HEALTH AND SAFETY ACT 85 of 1993 (OHS)	INTRODUCTION OCCUPATIONAL HEALTH AND SAFETY ACT 85 of 1993 (OHS)	INTRODUCTION OCCUPATIONAL HEALTH AND SAFETY ACT 85 of 1993 (OHS)	Materials: (GENERIC)	Materials: (GENERIC)	Materials: (GENERIC)	Materials: (SPECIFIC)	Equipment and Tools (Generic)	Equipment and Tools (SPECIFIC)	COMPLETION OF ASSIGNMENT/PAT	
<b>Topics /Concepts, Skills and Values</b>	Requirements of the OHS Act pertaining to: Personal safety: • Clothing • Head protection • Eye and ear protection • Footwear General safety HIV/Aids awareness Awareness of substance abuse: • Drugs • Alcohol	Safety and health aspects associated with storage of materials: • On site • In workshops • Hazardous materials in the workplace. E.g. solids, liquids, gases and radioactive material Definition and advantages associated with good housekeeping practice in the workshop and on site		Basic properties of materials of: • Concrete • Screed • Mortar • Coarse aggregates • Fine aggregates • Cement • Lime • Water	Timber hard wood, soft wood and board products: • Saligna, Meranti, SA pine, Shutter board, Ply wood • Block board , Tempered and standard masonite (hard board) Synthetic materials: • Thermoplastics, Thermosetting plastics, Polythene, Polypropylene and Polyvinyl chloride	Bricks and Blocks: • Clay and Cement Metal: Ferrous metals: • Grey cast iron, Ductile cast iron, Wrought iron, Malleable iron, Low carbon steel, Stainless steel Non-ferrous metals: • Aluminium, Bronze, Copper, Lead, Tin, Zinc Adhesives: PVC adhesives, Silicone, Mastic sealants	Manufacturing processes of bricks: • Clay bricks: face, semi-face, stock • Cement bricks Differentiation between cellular and keyed bricks Advantages of bricks having holes over a solid brick	Identification and proper use of the following: Basic site equipment: Bricklaying tools: Setting out tools: Joining Tools: Woodworking tools:	Woodworking tools: for e.g. Wooden mallet Plumbing tools: for e.g. Pipe vice, hack saw, etc. Adjustable spanner or shifting spanner Identification of the following: Setting out tool: dumpy level Brick cutting tools: for e.g. comb and club hammer, cold chisel, bolster and sledge hammer Plastering tools: for e.g. Wooden/plastic float, Plastering trowel, Hand hawk, Straight edge, Block brush, Corner trowels (internal and external), Nose trowels	Freehand sketches relevant to the building environment.  • Interpretations of drawings:  FIRST TERM COMPLETION OF ASSIGNMENT.	<b>01-12 April 2021 School holiday</b>
<b>Requisite pre-knowledge</b>	Personal safety, general safety, safety and health aspects associated with storage of materials, HIV/Aids and awareness of substance abuse	Personal safety, general safety, safety and health aspects associated with storage of materials, HIV/Aids and awareness of substance abuse		Basic knowledge on materials: concrete, mortar, timber, bricks, blocks, metals, adhesives and synthetic materials	Basic knowledge on materials: concrete, mortar, timber, bricks, blocks, metals, adhesives and synthetic materials	Basic knowledge on materials: concrete, mortar, timber, bricks, blocks, metals, adhesives and synthetic materials	Basic knowledge on materials: concrete, mortar, timber, bricks, blocks, metals, adhesives and synthetic materials	Knowledge on basic site equipment: Bricklaying tools: Setting out tools: Woodworking tools	Knowledge on basic site equipment: Bricklaying tools: Setting out tools: Woodworking tools		
<b>Resources (other than textbook) to enhance learning</b>	Practical work can be done to expose learners to the real life situation. YouTube, videos, etc. Learners can do simulations of first aid as explained in the textbook.			Materials as indicated in the content	Materials as indicated in the content. Wall charts, videos on materials, etc.		Videos, YouTube, power point presentations, data projector, interactive whiteboard, etc. Materials as indicated in the content.	Equipment and tools as indicated in the content topic. Site visit can be arranged to explain practical work. Basic materials must be shown as sizes are important. Workshop can be visit to explain the parts of the machines.			

<b>Assessment</b>	<b>Informal Assessment: Remediation</b>	Test learners on content. Do practical to link content to real life situations.	Small informal test. Worksheet with practical situations.		Do practical work to show the different materials	Worksheets with materials on it. Informal test materials as indicated in the topic.	Worksheets with materials on it. Informal test materials as indicated in the topic.	Do informal testing by completing work sheet. Prepare worksheets from given examples in the textbook. Do drawings in class informally. Explain content within a practical lesson in the workshop. SBA - <a href="#">Informal Test</a> to be written – Total = 50		
	<b>SBA Formal Assessment</b>	<p><b>Assignment</b></p> <p><b>PAT- Simulation 1</b></p> <p>The legislation governing workplaces in relation to COVID – 19 is the Occupational Health and Safety Act, Act 85 of 1993, as amended, read with the Hazardous Biological Agents Regulations. Section 8 (1) of the Occupational Health and Safety (OHS) Act, Act 85 of 1993,- Safe work practices are types of administrative controls that include procedures for safe and proper work used to reduce the duration, frequency, or intensity of exposure to a hazard. Examples of safe work practices for SARS-CoV-2 include. Requiring regular hand washing or using of alcohol-based hand rubs. Learners and teachers should always wash hands when they are visibly soiled and after removing any PPE. Keep safe distances and wear a mask at all times. See the document on the workshop safety measures.</p>								

2020 Post – Covid: National Revised ATP: Grade 10 – Term 2: **Construction**

TERM 2 (54 days)		Week 1 13-16 April (4 days)	Week 2 19-23 April (4 days)	Week 3 28-30 April (3 days)	Week 4 3-7 May (5 days)	Week 5 10-14 May (5 days)	Week 6 17-21 May (5 days)	Week 7 24-28 May (5 days)	Week 8 31 May-4 June (5 days)	Week 9 7-11 June (5 days)	Week 10 14-18 June (4 days)	Week 11 21-25 June (5 days)
<b>CAPS Topics</b>		Graphics as means of communication	Graphics as means of communication	Graphics as means of communication	Graphics as means of communication	Graphics as means of communication	Graphics as means of communication	QUANTITIES (GENERIC)	Revision	Midyear Examination	Midyear Examination	Midyear Examination
<b>Topics /Concepts, Skills and Values</b>		Introduction to graphics as a means of communication: • Application of SANS 0143 Building regulations in all drawings • Types of lines; dimensioning and labelling (Code of Practice – SANS) • Basic freehand sketching (related to building industry)  Start with the PAT.	Freehand sketching and scale drawings Scale drawing of wall build in stretcher bond	Freehand sketching and scale drawings Scale drawing of wall build in stretcher bond	Freehand sketching and scale drawings Scale drawing of wall build in stretcher bond	Introductory concepts: Basic knowledge skills. Scale drawings	Introductory concepts: Basic knowledge skills. Scale drawings	Calculate the following: • Volume of concrete for a straight trench • Square meter of materials such as tiles and brick walls • Length of skirting and quarter round moulding				
<b>Requisite pre-knowledge</b>		Pre knowledge of Grade 9 technology drawings. Knowledge of Technology Mini PAT should be established by the teacher.	Learners prior knowledge of communication in Technology.	Learners prior knowledge of communication in Technology.	Learners prior knowledge of communication in Technology.	Learners prior knowledge of communication in Technology.	Learners prior knowledge of communication in Technology.	Basic mathematical skills				
<b>Resources (other than textbook) to enhance learning</b>			Drawing equipment	Drawing equipment	Drawing equipment	Drawing equipment	Drawing equipment	Calculator Power Point presentations				
<b>Assessment</b>	<b>Informal Assessment: Remediation</b>	Equipment and tools as indicated in the content topic. Site visit can be arranged to explain practical work. Basic materials must be shown as sizes are important. Workshop can be visit to explain the parts of the machines.	Make use of materials and test learner’s ability to draw or sketch of a basic floorplan. Complete drawings on worksheets. Visit a computer lab and expose learners to hardware.	Make use of materials and test learner’s ability to draw or sketch of a basic floorplan. Complete drawings on worksheets. Visit a computer lab and expose learners to hardware.	Make use of materials and test learner’s ability to draw or sketch of a basic floorplan. Complete drawings on worksheets. Visit a computer lab and expose learners to hardware.	Make use of materials and test learner’s ability to draw or sketch of a basic floorplan. Complete drawings on worksheets. Visit a computer lab and expose learners to hardware.	Make use of materials and test learner’s ability to draw or sketch of a basic floorplan. Complete drawings on worksheets. Visit a computer lab and expose learners to hardware.	Work sheets Class and homework activities Informal class tests				
	<b>SBA Formal Assessment</b>	Midyear Examination  PAT- Phase 2										

26 June-12 July  
School Holiday

### 2020 Post – Covid: National Revised ATP: Grade 10 – Term 3: **Construction**

TERM 3 52 days)		Week 1 13 -16 July (4 days)	Week 2 19-23 July (5 days)	Week 3 26-30 July (5 days)	Week 4 2-6 Aug (5 days)	Week 5 10-13 Aug (4 days)	Week 6 16-20 Aug (5 days)	Week 7 23-27 Aug (5 days)	Week 8 30-31Aug- 3 Sept (5 days)	Week 9 6-10 Sept (5 days)	Week 10 13-17 Sept (5 days)	Week 11 20-23 Sept (3 days)
<b>CAPS Topics</b>		<b>QUANTITIES (GENERIC)</b>	<b>QUANTITIES (GENERIC)</b>	<b>QUANTITIES (GENERIC)</b>	<b>JOINING (GENERIC)</b>	<b>JOINING (GENERIC)</b>	<b>JOINING (SPECIFIC)</b>	<b>JOINING (SPECIFIC)</b>	<b>FOUNDATIONS</b>	<b>FOUNDATIONS</b>	COMPLETION OF <b>ASSIGNMENT/PAT</b>	TERM TEST
<b>Topics /Concepts, Skills and Values</b>		Introductory concepts: Quantities on volume of concrete for a straight trench,.	Square meter of materials for tiles and brick walls, length of skirting etc	Introductory concepts: calculation of area of foundation, volume of sand, stone cement and water etc.	Basic joining content (will be used to join other materials in grade 11 and 12) Screws and nails	Basic joining content (will be used to join other materials in grade 11 and 12) Screws and nails	Introductory concepts: Methods of joining: steel to concrete, wood to concrete and existing concrete to fresh concrete	Introductory concepts: Methods of joining: steel to concrete, wood to concrete and existing concrete to fresh concrete	Important content on foundations: purpose, types, strip and step foundations, Compaction of soil.	Important content on foundations: purpose, types, strip and step foundations, Compaction of soil.		
<b>Requisite pre-knowledge</b>		Introduction to SI units Calculation of the following: • Area of foundation • Volume of sand • Volume of cement • Volume of stones • Volume of water Quantities for a small building up to floor level	Introduction to SI units Calculation of the following: • Area of foundation • Volume of sand • Volume of cement • Volume of stones • Volume of water Quantities for a small building up to floor level	Introduction to SI units Calculation of the following: • Area of foundation • Volume of sand • Volume of cement • Volume of stones • Volume of water Quantities for a small building up to floor level	Identify and explain the uses of: Screws: • Countersunk head, Round head, Raised head, Jetting screw, Drywall screw, Self-cutting bolt , Head screw, Drill tip bolt head screw, Coach screw	Advantages of using screws over nails. Nails: • Round wire , Masonry, Clout nail, Steel cut nail, Oval nail, Panel pin, Clout nail • Brad nails Advantages of using nails over screws	Methods of joining the following items: • Steel to concrete • Wood to concrete • Existing concrete to fresh concrete	Methods of joining the following items: • Steel to concrete • Wood to concrete • Existing concrete to fresh concrete	Foundations: • Purpose and functions • Types of soil and soil conditions • Strip and step foundations • Excavations in different types of soil	Five principle reasons to compact soil: • Increases load-bearing capacity • Prevents soil settlement and frost damage • Provides stability • Reduce soil contraction, swelling and water seepage • Reduce settling of the soil		
<b>Resources (other than textbook) to enhance learning</b>		YouTube, wall charts, calculators, quantities workbook.	YouTube, wall charts, calculators, quantities workbook.	YouTube, wall charts, calculators, quantities workbook.	YouTube, wall charts, calculators, quantities workbook.	Materials for eg: Nails and screws.	Sketches work. Scale drawings – how to interpret drawings. Knowledge on glues.	Sketches work. Scale drawings – how to interpret drawings. Knowledge on glues.	Sketches work. Scale drawings – how to interpret drawings.	Bricks Plastering Mortar Sketches of beam filling.		
<b>Assessment</b>	<b>Informal Assessment: Remediation</b>					Informal tests and peer marking. Open book tests.	Short tests and peer marking. Practical work as set out in the text book.	Short tests and peer marking. Practical work as set out in the text book.				
	<b>SBA Formal Assessment</b>	Term test PAT- Phase 3										

**24 Sept – 05 Oct**  
School Holiday

2020 Post – Covid: National Revised ATP: Grade 10 – Term 4: **Construction**

Term 4 (47 days)	Week 1 5-8 Oct (4 days)	Week 2 11-15 Oct (5 days)	Week 3 18-22 Oct (5 days)	Week 4 25-29 Oct (5 days)	Week 5 1-5Nov (5 days)	Week 6 8-12 Nov (5 days)	Week 7 15-19 Nov (5 days)	Week 8 22-26 Nov (3 days)	Week 9 29-30 Nov-3 Dec (3 days)	Week 10 6-8 Dec (3 days)	<b>9 Dec– 00 Jan</b> <b>School Holiday</b>
<b>CAPS Topics</b>	<b>CONCRETE AND BRICKWORK</b>	<b>CONCRETE AND BRICKWORK</b>	<b>CONCRETE AND BRICKWORK</b>	<b>FORMWORK</b>	<b>FORMWORK</b>	<b>FORMWORK</b>	CONSOLIDATION, FINAL EXAM AND ASSESSMENT OF PAT	CONSOLIDATION, FINAL EXAM AND ASSESSMENT OF PAT	CONSOLIDATION, FINAL EXAM AND ASSESSMENT OF PAT	CONSOLIDATION, FINAL EXAM AND ASSESSMENT OF PAT	
<b>Topics /Concepts, Skills and Values</b>	Important content on concrete: definition, site preparation, mix proportions etc	Important content on concrete: definition, site preparation, mix proportions etc		Introductory concepts on formwork	Introductory concepts on formwork	Introductory concepts on formwork					
<b>Requisite pre-knowledge</b>	<b>CONCRETE AND BRICKWORK (Specific)</b> Definition of concrete • Site preparation of placing concrete • Mix proportions for low, medium and high strength concrete • Types and purpose of admixtures to concrete • Purpose of slump test • Equipment used for slump test • Procedure for conducting slump test • Outcomes of slump test	<b>CONCRETE AND BRICKWORK (Specific)</b> Levelling and compacting of concrete • Placing, curing, curing temperatures and testing • Classification of concrete • Advantages of concrete • Factors leading to defects in concrete, Structural defects in concrete Alternate plan courses, front and elevation of a one brick and half brick wall built in stretcher bond. Front elevation of a stretcher bond wall showing raking back, toothing and block bonding Reinforcement for brickwork: • Purpose, Properties, Location • Purpose, Types Reinforcement for concrete: • Identification • Reason, Qualities, Properties Methods of tying reinforcement Spacers used with reinforcements:	Definition of formwork • Definition of striking of formwork • Factors to be observed when striking of formwork	Purpose of formwork Treatment of formwork before and after casting of concrete	Materials used for formwork for square and circular columns wood and steel Label drawings of square and circular columns						
<b>Resources (other than textbook) to enhance learning</b>	Pre-knowledge of concrete and material	Curing devises, reinforcement And bricks for bonds		Formwork practical	Formoils and curing	Squre and round Columns shapes/models					
<b>Assessment</b>	<b>Informal Assessment: Remediation</b>	Work sheets Class and homework activities Informal class tests	Work sheets Class and homework activities Informal class tests	Work sheets Class and homework activities Informal class tests	Work sheets Class and homework activities Informal class tests	Practical activity on installation of a gutter and down pipe Work sheets	Class and homework activities Informal class tests				
	<b>SBA (Formal)</b>	Final examination  Assessment of the PAT									