

TERM 1	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10	WEEK 11
CAPS TOPICS	Life and living										
	Plants and animals on Earth		Animal skeletons	Skeletons as structures		Food chains		Life cycles		Remediation, revision and consolidation	
CORE CONCEPTS, SKILLS AND VALUES	<ul style="list-style-type: none"> Many different plants and animals Interdependence Animal types 		<ul style="list-style-type: none"> Skeletons of vertebrates Movement 	Frame and shell structures		Food and feeding		Growth and development			
REQUISITE PRE-KNOWLEDGE	Grade 4: Life processes Structure of plants and animals; Habitats of plants and animals; Matter and Materials										
RESOURCES TO ENHANCE LEARNING	Pictures of plants and animals		Pictures and examples of animal skeletons/bones	Paper, drinking straws, wooden dowels or sticks (30 cm × 10 mm), sticky tape and metal paper fasteners		Pictures of various plants and animals		Pictures of different stages in the development of various plants and animals			
INFORMAL ASSESSMENT	<ul style="list-style-type: none"> Identify different habitats in South Africa and some of the plants and animals that we find there Describe and compare animals without bones to animals with bones Describe interdependence between living and non-living things Identify the interdependence between the animals and/or plants and the non-living things in their environment Identify common characteristics of invertebrates and vertebrates 		<ul style="list-style-type: none"> Identify the different types of skeletons Use pictures of animals to identify the five groups of vertebrates and their common characteristics Identify and describe different bones in a vertebrate skeleton and state the functions of each bone Label a diagram of the human skeleton Describe how different vertebrate animals move, including humans Design, draw, make and evaluate a skeleton. Write a paragraph about the skeleton that you built to address what worked and what did not work. Your skeleton should have the following specifications: It must be three-dimensional, it must look realistic, it must have/show the basic parts, i.e. skull, backbone and ribs, and it must be strong and rigid so that it can stand on its own 			<ul style="list-style-type: none"> Describe how each living thing gets food and how energy is passed from one organism to the next Sequence plants and animals to make up a proper food chain in which the energy is transferred from one organism to the next, with up to four organisms each, and describe their relationships Classify animals according to their feeding relationships (as herbivores, omnivores, carnivores, scavengers or decomposers) Explain the four stages in the life cycle of a flowering plant Describe the different stages in the life cycle of an animal 					
SBA (FORMAL ASSESSMENT)	<ul style="list-style-type: none"> Practical task/investigation Test 										

2023/24 ANNUAL TEACHING PLANS: NATURAL SCIENCES AND TECHNOLOGY: GRADE 5 (TERM 2)

TERM 2	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10	WEEK 11	
CAPS TOPICS	Matter and materials											
	Metals and non-metals			Uses of metals			Processing materials			Processed materials		Remediation, revision and consolidation
CORE CONCEPTS, SKILLS AND VALUES	<ul style="list-style-type: none"> Properties of metals Properties of non-metals 			<ul style="list-style-type: none"> Other properties of metals Uses of metals 			Combining materials			Properties and uses		
REQUISITE PRE-KNOWLEDGE	Grade 4: Materials around us; Solid materials											
RESOURCES TO ENHANCE LEARNING	<ul style="list-style-type: none"> Examples of metal objects such as copper wire, coins, nails, cooking pots or knives and forks Examples of non-metal objects such as a piece of chalk, a pile of sand or a piece of coal 			Magnets and objects such as coins, iron filings, nails, drawing pins, paper clips or wire			Materials and substances such as plaster of Paris (or Polyfilla), sand, gravel, cement, flour, ingredients to make dough, jelly powder, wet clay and straw			<ul style="list-style-type: none"> Clay Pictures and examples of objects made by weaving plant material 		
INFORMAL ASSESSMENT	<ul style="list-style-type: none"> Investigate, compare and record the properties of some metal objects (such as copper wire, coins, nails, cooking pots, knives and forks) and some non-metal objects (such as a piece of chalk, a stone, a pile of sand or a piece of coal) Investigate ways to make old and dull metal objects shiny again Investigate how rust occurs Research and write about the properties and uses of metals from the home environment 						<ul style="list-style-type: none"> Investigate reasons why we process materials Describe, with examples, the properties of processed materials Explain, with examples, the purpose of processing materials Explain the difference between raw materials, natural materials and processed materials Research the traditional processing methods that humans have been using to give materials more desirable properties 					
SBA (FORMAL ASSESSMENT)	<ul style="list-style-type: none"> Practical task/investigation Test 											

2023/24 ANNUAL TEACHING PLANS: NATURAL SCIENCES AND TECHNOLOGY: GRADE 5 (TERM 3)

TERM 3	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10	WEEK 11
CAPS TOPICS	Energy and change										
	Stored energy in fuels			Energy and electricity			Energy and movement			Remediation, revision and consolidation	
CORE CONCEPTS, SKILLS AND VALUES	<ul style="list-style-type: none"> Fuels Burning fuels Safety with fire 			<ul style="list-style-type: none"> Cells and batteries Mains electricity Safety with electricity 			Elastic and springs				
REQUISITE PRE-KNOWLEDGE	Grade 4: Energy and energy transfer; Energy around us						Grade 4: Movement and energy in a system				
RESOURCES TO ENHANCE LEARNING	<ul style="list-style-type: none"> Examples of substances including wood, coal, candle (wax), paraffin, peanut, a biscuit Candles and different sized glass containers Cells (batteries), lengths of wire, light bulbs 			<ul style="list-style-type: none"> Cells (batteries), lengths of wire and light bulbs 			<ul style="list-style-type: none"> Elastic bands and compressed springs, a catapult, elastic powered aeroplanes and a 'jack-in-a-box' 				
INFORMAL ASSESSMENT	<ul style="list-style-type: none"> Compare energy from various packaging for foods collected from home Examine various fuels including wood, coal, candle (wax), paraffin, peanut, a biscuit. Burn three different fuels from above, and compare and describe the <ul style="list-style-type: none"> input energy needed to make them burn output energy obtained from the fuel Investigate how long a candle will burn when covered with different sized glass containers (the candles will stop burning when all the oxygen is used up) Write and draw about fires in our communities including causes, prevention and act out what action to take during a fire [<i>This can be used as a possible project</i>] 			<ul style="list-style-type: none"> Investigate the source of electricity in a torch Compare the differences between batteries and cells Explore and explain various ways of making a complete simple circuit Draw simple circuit diagrams with correct symbols and labels Use diagrams to trace and explain how the electricity comes from the power station to our homes/schools, including the power station, pylons, substations, electricity boxes, wall sockets, plugs and appliances such as a TV, kettle, stove, torch, radio, iron, fan/hair dryer and computer, etc. Use pictures and illustrations to explain safety tips for using electricity 			<ul style="list-style-type: none"> Explain how stored energy can be changed into movement energy using elastic bands, a compressed metal spring, etc. Investigate the different ways in which stored energy can be changed into movement energy using elastic bands, a compressed metal spring, etc. 				
SBA (FORMAL ASSESSMENT)	<ul style="list-style-type: none"> Practical task/investigation Test 										

2023/24 ANNUAL TEACHING PLANS: NATURAL SCIENCES AND TECHNOLOGY: GRADE 5 (TERM 4)

TERM 4	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9
CAPS TOPICS	Planet Earth and beyond								
	Planet Earth	The surface of the Earth		Sedimentary rocks		Fossils		Remediation, revision and consolidation	
CORE CONCEPTS, SKILLS AND VALUES	The Earth moves	<ul style="list-style-type: none"> • Rocks • Soil comes from rocks • Soil types 		<ul style="list-style-type: none"> • Formation of sedimentary rock • Uses of sedimentary rock 		<ul style="list-style-type: none"> • Fossils in rock • Body and trace fossils • Importance of South African fossils 			
REQUISITE PRE-KNOWLEDGE	<ul style="list-style-type: none"> • Features of the Earth • Earth and Space 	Learners' experiences of soil and rocks							
RESOURCES TO ENHANCE LEARNING	<ul style="list-style-type: none"> • Pictures of the Earth showing its main features • Models of the Earth, Moon and Sun • Video clips • Pictures and models of the Earth, Moon, Sun and other planets • A light source such as a torch, lamp or candle 	<ul style="list-style-type: none"> • Samples of different types of soil • Measuring cylinders, funnels and filter paper and beakers • Seeds and rulers to measure length • Sandy soil • Clayey soil • Loamy soil • Stones • Dry plant material 		Pictures and/or samples of sedimentary rock such as limestone and sandstone		<ul style="list-style-type: none"> • Pictures and/or samples of sedimentary rock • Play dough, clay, plaster of Paris and a variety of parts of plants and animals • Pictures of fossils • Information texts about South African fossils 			
INFORMAL ASSESSMENT	<ul style="list-style-type: none"> • Describe and identify the main features of the Earth • Draw or make models of the Earth • Demonstrate the Earth's movement in its orbit around the Sun • Describe the Earth's movement around its own axis • Identify the main elements (soil, air, water and sunlight) that support life on Earth • Identify and describe different soil types correctly • Explain the formation of sedimentary rock • Distinguish between body and trace fossils • Explain aspects of South Africa's fossil record 								
SBA (FORMAL ASSESSMENT)	Test								

MAJOR PROCESS AND DESIGN SKILLS

The teaching and learning of Natural Sciences and Technology involves the development of a range of process and design skills that may be used in everyday life in the community and in the workplace. Learners also develop the ability to think objectively and use a variety of forms of reasoning while they use these skills. Learners can gain these skills in an environment that taps into their curiosity about the world, and that supports creativity, responsibility and growing confidence.

The following are the cognitive and practical process and design skills that learners will be able to develop in Natural Sciences and Technology.

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| <ol style="list-style-type: none">1. <i>Accessing and recalling information</i> – being able to use a variety of sources to acquire information, and to remember relevant facts and key ideas, and to build a conceptual framework2. <i>Observing</i> – noting objects, organisms and events in detail3. <i>Comparing</i> – noting similarities and differences between things4. <i>Measuring</i> – using measuring instruments such as rulers, thermometers, clocks and syringes (for volume)5. <i>Sorting and classifying</i> – applying criteria in order to sort items into a table, mind-map, key, list or other format6. <i>Identifying problems and issues</i> – being able to articulate the needs and wants of people in society7. <i>Raising questions</i> – being able to think of and articulate relevant questions about problems, issues and natural phenomena8. <i>Predicting</i> – stating, before an investigation, what the learner thinks the results will be for that particular investigation9. <i>Hypothesising</i> – putting forward a suggestion or possible explanation to account for certain facts. A hypothesis is used as a basis for further investigation that will prove or disprove the hypothesis10. <i>Planning investigations</i> – thinking through the method for an activity or investigation in advance. Identifying the need to make an investigation a fair test by keeping some things (variables) the same, while other things will vary | <ol style="list-style-type: none">11. <i>Doing investigations</i> – this involves carrying out methods using appropriate apparatus and equipment, and collecting data by observing and comparing, measuring and estimating, sequencing, or sorting and classifying. Sometimes an investigation has to be repeated to verify the results12. <i>Recording information</i> – recording data from an investigation in a systematic way, which includes drawings, descriptions, tables and graphs13. <i>Interpreting information</i> – explaining what the results of an activity or investigation mean (this includes reading skills)14. <i>Designing</i> – showing (e.g. by drawing) how something is to be made, taking into account the design brief, specifications and constraints15. <i>Making/constructing</i> – building or assembling an object using appropriate materials and tools and using skills such as measuring, cutting, folding, rolling and gluing16. <i>Evaluating and improving products</i> – using criteria to assess a constructed object and then stating or carrying out ways to refine that object17. <i>Communicating</i> – using written, oral, visual, graphic and other forms of communication to make information available to other people |
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