2026 Annual Teaching Plan
Natural Sciences and Technology: Grade 4

basic education
Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

Life and Living

Duration	CAPS Topics	Core Concepts, Skills and Values	Resources to Enhance Learning	Informal Assessment
2 weeks	**Living and non-living things**	**Living things** • there are many different kinds of living things • living plants and animals can carry out all the seven life processes - feeding, growing, reproducing, breathing, excreting, sensing, moving • some things appear not to be living (such as dried beans, dried yeast, a fertilised bird egg), but carry on 'living' given the right conditions **Non-living things** • non-living things cannot carry out **all** of the seven life processes • some things were living and are now dead: dead wood, dry leaves.	• Examples and pictures of living and non-living things, including plants, animals and bread mould • Seeds • Yeast • Pictures of hatched eggs	• Use pictures and read case studies to distinguish between living and non-living things with reasons • Use everyday life experiences and examples to describe the seven life processes • Identify the different parts of a flowering plant
2 weeks	**Structure of plants and animals**	**Structure of plants** • basic structure of plants: roots, stems, leaves, flowers, fruits, seeds • visible differences between plants: such as size, shape and colour of roots, stems, leaves, flowers, fruits and seeds **Structure of animals** • basic structure of animals: head, tail, body, limbs, sense organs • visible differences between animals: such as size, shape, body covering and sense organs	• Pictures/examples of different types of plant parts • Pictures of animals	• Compare the different parts of a plant (roots, stems and leaves) in terms of their size, colour and shape • Use various drawings and/or pictures to label the basic structure of flowering plants and animals • Use pictures of various animals to compare their differences and similarities
1 week	**What plants need to grow**	**Conditions for growth** • plants need light, water and air to grow • new plants can grow from cuttings and seeds • seeds need water and warmth to grow (germination of seeds)	• Seeds and cuttings • Rulers and measuring tape	• Do a scientific investigation to find out what seeds need to germinate and grow into new plants • Keep a diary during the investigation to record observations and the results • Predict the result of your investigation
2 weeks	**Habitats of animals**	**Different habitats** • a habitat is the place where a plant or animal lives • there are different kinds of habitats such as grassland, forest, river, sea **Need for a habitat** • animals need a habitat for food, water, a place to shelter, have babies and escape from dangers	• Pictures of plants and animals and their habitats	• Identify, draw and describe the habitat in your school. Your drawing should have ONLY the plants and little animals that you can see in your habitat • Identify the habitats of indigenous South African plants and animals • Compare natural and human-made animal shelters • Design and draw an animal shelter, taking into account its purpose, shape, size and materials • Evaluate the suitability of the design
2 weeks	**Structures for animal shelters**	**Animal shelters** • animal shelters can be natural including nests, shells, hollow trees, wasp nests or human made including dog kennels, cages, kraals, stables • animal shelters can be shell or frame structures, can have different shapes and sizes, and can be made from different materials	• Pictures and examples of animal shelters	• Compare natural and human-made animal shelters • Design and draw an animal shelter, taking into account its purpose, shape, size and materials • Evaluate the suitability of the design
1 week	**Remediation, revision and consolidation**			
SBA (FORMAL ASSESSMENT)	• Practical task/investigation • Test			

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Matter and materials

Duration	CAPS Topics	Core Concepts, Skills and Values	Resources to Enhance Learning	Informal Assessment
4 weeks	**Materials around us**	**Solids, liquids and gases** • solids, liquids and gases make up all the materials around us • some properties of solids, liquids and gases - solids keep their shape - liquids flow and take the shape of their container - gases, such as air, tend to spread out, have no definite shape but can be contained (like in a balloon) **Change of state** • heating and cooling (removing heat) cause solids, liquids and gases to change state - a solid first changes to a liquid (melting) when heated and then the liquid changes to a gas (evaporating) on further heating - gas first changes to a liquid (condensing) when cooled and then the liquid changes to a solid (freezing/solidifying) when cooled further **The water cycle** • water evaporates, condenses, freezes and melts in the water cycle	• Examples of materials and substances including wood, stone, plastic, fabric, water, juice, tea, air, cooking oil and cooking gas • Examples of different substances such as ice, butter, wax, ice cream and chocolate • Video clips from the internet	• Investigate and write down the properties of solids, liquids and gases • Compare the properties of solids, liquids and gases • Describe and draw the stages of the water cycle • Make a model of the water cycle
2 weeks	**Solid materials**	**Raw and manufactured materials** • examples of some raw materials we use to make other useful materials - sand is used to make glass - clay is used to make ceramics - coal and oil are used to make plastics, paints and fabrics - wood and fibre from plants are used to make paper - animal wool and hide are used to make fabrics and leather **Properties of materials** • raw and manufactured materials have specific properties. • These properties can include being hard or soft, stiff or flexible, strong or weak, light or heavy, waterproof or absorbent	• Examples of raw and manufactured materials to examine the properties, such as glass products, leather, ceramics, fabrics, wooden items and plastic products • Graph paper	• Explain the difference between raw and manufactured materials • Investigate materials that objects are made from • Classify materials into raw or manufactured • Investigate the properties of raw and manufactured materials, such as hard or soft, tough or fragile, stiff or flexible, strong in tension, etc. • Investigating the flexibility of a ruler. Record the results in a table and plot them on a graph • Link different materials with the purpose of the object
2 weeks	**Strengthening materials**	**Ways to strengthen materials** • there are different ways to strengthen materials (such as paper) to build a strong structure: - we can fold paper into hollow pillars which are circular, triangular or square - we can roll paper into long thin tubes (struts)	• Paper, wooden dowels (30 cm × 10 mm) or sticks, sticky tape and paper fasteners to make struts	• Explore different ways to strengthen paper, e.g. tubing and folding • Investigate the strongest pillar and draw a table and a bar graph of the results. Discuss the results and draw conclusions
1 week	**Strong frame structures**	**Struts and frame structures** • struts are joined into triangular shapes making a strong, stable structure, such as in roof trusses, bridges, cranes, pylons and skeletons (limb bones are struts) **Indigenous structures** • indigenous, traditional homes such as a Zulu hut (uguqa), Xhosa (rontabile and ungqu-phantsi) and Nama (matjieshuis) make use of a framework of struts (such as branches)	• Pictures of frame structures • Paper, wooden dowels (30 cm × 10 mm) or sticks, sticky tape and paper fasteners	• Explore ways to make a strong structure • Design and make a bridge. It must span a minimum length of 1 m. It must be able to support a load (bags of coins and books) • Identify materials used in traditional homes, e.g. Zulu hut, Xhosa rondavels, etc.
1 week	**Remediation, revision and consolidation**			
SBA (FORMAL ASSESSMENT)	• Practical task/investigation • Test			

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Energy and change

Duration	Caps Topics	Core Concepts, Skills And Values	Resources To Enhance Learning	Informal Assessment
2½ weeks	**Energy and energy transfer**	**Energy for life** • we use energy for everything we do • we get our energy from food • energy in our food comes from the Sun (plants use the energy from the Sun to make food for themselves and for animals and people) **Energy from the Sun** • energy is transferred from the Sun, to plants, to animals in a sequence known as an energy chain/ food chain	• Pictures and examples of a selection of machines and appliances including a kettle, stove, torch, radio, iron, fan/hair dryer, car/bicycle and drum • Video clips from the internet	• Describe the transfer of energy from the Sun • Identify activities that people and animals do that require energy • Draw and explain how animals get energy for life processes from the Sun • Investigate the input and output energy of appliances, e.g. a kettle, stove, torch, radio, iron, fan/hair dryer, car/bicycle, drum, etc.
2 weeks	**Energy around us**	**Energy** • we are aware of energy around us, including movement, heat, light, sound energy is also stored in sources such as food, wood, coal, oil products*, natural gas • energy can be transferred from a source to where it is needed **Input and output energy** • machines and appliances need an input of energy to make them work • machines and appliances provide an output of energy (work) useful to us		
1½ weeks	**Movement and energy in a system**	**Movement and musical instruments** • many musical instruments (systems) use movement input energy (such as blowing, beating and plucking) to make them work • many instruments have parts that can move or vibrate • musical instruments produce sound as the main output energy	• Examples of musical instruments • Materials to make musical instruments	• Research about the various indigenous musical instruments and how they work • Investigate how musical instruments make music • Design and make your own musical instrument
2 weeks	**Energy and sound**	**Vibrations and sound** • musical instruments make sounds through vibrations - the sound always moves outwards from the part that is vibrating - we can feel or hear vibrations - vibrations travel through materials such as air, water, plastic, metal and wood **Making sounds** • sounds can be made loud or soft (volume) • sounds can be made high or low (pitch) **Noise pollution** • sound that is loud, unpleasant or harmful to our ears and continues for a long time, is described as noise pollution • noise pollution can cause permanent damage to hearing (hearing aids can help people who are hearing-impaired)	• Pictures of the human ear, its parts and how one hears • Examples of musical instruments made by learners • Video clips from the internet	• Investigate how different types of movement cause vibrations that cause different sounds using an elastic band • Investigate how to make sounds louder and travel further • Identify and describe sources of noise pollution • Research the health risk of exposure to loud music and explain to your peers how best to protect their hearing
1 week	**Remediation, revision and consolidation**			
SBA (FORMAL ASSESSMENT)		• Practical task/investigation • Test		

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Planet Earth and Beyond

Duration	Caps Topics	Core Concepts, Skills And Values	Resources To Enhance Learning	Informal Assessment
2 weeks	**Planet Earth**	**Features of the Earth** • the Earth is round like a ball (sphere) and is made of rock • the main surface features of the Earth are land (rocks and soil), water and air • most of the surface of the Earth is covered with water (oceans and seas) • the land we can see is made up of continents* and islands • there is a thin layer of air surrounding the Earth • the Earth has many different habitats for living things **Earth and space** • the Earth is a planet in space • from the Earth we can see the Sun, Moon and stars	• Pictures of Earth showing its main features • Pictures of the Moon; Sun and planets • Models of the Earth, Moon and Sun • Video clips from the internet	• Describe and identify the main features of the Earth • Draw or make models of the Earth • Identify and describe the main features of the Sun • Draw or make models of the Sun • Explain how the Earth moves around the Sun • Interpret models and pictures of the Solar System
1 week	**The Sun**	**Our closest star** • the Sun is a star - the Sun is made of hot gas and gives out heat and light - the Sun is very big (much bigger than the Earth) - the Sun is very far away, but is the closest star to the Earth • the Sun provides heat and light to the Earth for living things		
2 weeks	**The Earth and Sun**	**Moving around the Sun** • the Earth moves around the Sun in a pathway called the orbit - the Sun is a star and is at the centre of the solar system** - the Earth is one of eight planets*** in the solar system **The Sun and life** • the Earth gets the right amount of light and heat from the Sun for supporting life		
2 weeks	**The Moon**	**Features of the Moon** • the Moon is a ball of rock in space - there is no air and water on the Moon - the Moon is smaller than the Earth - the Moon is closer to the Earth than the Sun **Phases of the Moon** • the Sun's light shines onto the surface of the Moon - we can only see that part of the Moon which the sunlight shines on - the changing pattern of sunlight on the Moon is called the phases of the moon - the pattern repeats every 29 ½ days (about a month) **Moon stories** • cultural stories about the Moon tell us about the importance of the Moon in people's lives	• Calendar for recording phases of the Moon • Cultural stories about the Moon • Video clips from the internet	• Investigate how the changing shape of light on the Moon results in different phases of the Moon • Identify the different phases of the Moon • Draw or make models of the Moon
1 week	**Rocket systems**	**Modelling a rocket** • people have used rockets to go into space and to travel to the Moon • a rocket is a system used to propel vehicles into space • A rocket moves by pushing exhaust gases out through its back end	• Apparatus including balloons of different sizes, straws, fishing line, hooks and measuring tape	• Make a model of a balloon rocket and test it • Investigate distances travelled by different balloon rockets • Evaluate balloon rockets
1 week	**Remediation, revision and consolidation**			
SBA (FORMAL ASSESSMENT)	• Test			

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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.

1. ***Accessing and recalling information*** – being able to use a variety of sources to acquire information, and to remember relevant facts and key ideas, and to build a conceptual framework
2. ***Observing*** – noting objects, organisms and events in detail
3. ***Comparing*** – noting similarities and differences between things
4. ***Measuring*** – using measuring instruments such as rulers, thermometers, clocks and syringes (for volume)
5. ***Sorting and classifying*** – applying criteria to sort items into a table, mind-map, key, list or other format
6. ***Identifying problems and issues*** – being able to articulate the needs and wants of people in society
7. ***Raising questions*** – being able to think of and articulate relevant questions about problems, issues and natural phenomena
8. ***Predicting*** – stating, before an investigation, what the learner thinks the results will be for that investigation
9. ***Hypothesising*** – 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 hypothesis
10. ***Planning investigations*** – 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
11. ***Doing investigations*** – 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 results
12. ***Recording information*** – recording data from an investigation in a systematic way, which includes drawings, descriptions, tables and graphs
13. ***Interpreting information*** – explaining what the results of an activity or investigation mean (this includes reading skills)
14. ***Designing*** – showing (e.g. by drawing) how something is to be made, taking into account the design brief, specifications and constraints
15. ***Making/constructing*** – building or assembling an object using appropriate materials and tools and using skills such as measuring, cutting, folding, rolling and gluing
16. ***Evaluating and improving products*** – using criteria to assess a constructed object and then stating or carrying out ways to refine that object
17. ***Communicating*** – using written, oral, visual, graphic and other forms of communication to make information available to other people.