

## SECTION 3: CONTENT TABLES

### NATURAL SCIENCES AND TECHNOLOGY: GRADE 4

GRADE 4 TERM 1				
STRANDS: NATURAL SCIENCES: LIFE & LIVING TECHNOLOGY: STRUCTURES				Equipment and Resources
Time	Topic	Content & Concepts	Suggested Activities: Investigations, practical work, and demonstrations	
2 weeks (7 hours)	Living and non-living things	<p><b>Living things</b></p> <ul style="list-style-type: none"> <li>there are many different kinds of living things</li> <li>living plants and animals can carry out all the seven life processes - feeding, growing, reproducing, breathing, excreting, sensing, moving</li> <li>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</li> </ul> <p><b>Non-living things</b></p> <ul style="list-style-type: none"> <li>non-living things cannot carry out <b>all</b> of the seven life processes</li> <li>some things were living and are now dead: dead wood, dry leaves.</li> </ul>	<ul style="list-style-type: none"> <li><i>begin Intermediate Phase by</i> looking at pictures and/or real examples of different living things, including plants, animals, bread mould, germs*</li> <li>germinating bean seeds (providing warmth, and moisture)**</li> <li>growing yeast (in warm water with sugar)</li> <li>looking at pictures of hatched eggs (warmth)</li> <li>identifying, sorting and comparing a selection of living and non-living things (including fire, rivers, rocks) <i>and all the interesting differences between them.</i></li> </ul>	<ul style="list-style-type: none"> <li>Examples and pictures of living and non-living things, including plants, animals, bread mould</li> <li>Seeds</li> <li>Yeast</li> <li>Pictures of hatched eggs</li> </ul>
<p><b>Notes:</b> * Point out that germs are living although they are too small to be seen with the naked eye</p> <p>** The germinated seeds can be used for the investigation below</p>				

## GRADE 4 TERM 1

**STRANDS: NATURAL SCIENCES: LIFE & LIVING**  
**TECHNOLOGY: STRUCTURES**

**Equipment and  
Resources**

Time	Topic	Content & Concepts	Suggested Activities: Investigations, practical work, and demonstrations	Equipment and Resources
2 ½ weeks (8 ¾ hours)	Structure of plants and animals	<p><b>Structure of plants</b></p> <ul style="list-style-type: none"> <li>• basic structure of plants: roots, stems, leaves, flowers, fruits, seeds</li> <li>• visible differences between plants: such as size, shape and colour of roots, stems, leaves, flowers, fruits and seeds</li> </ul> <p><b>Structure of animals</b></p> <ul style="list-style-type: none"> <li>• basic structure of animals: head, tail, body, limbs, sense organs</li> <li>• visible differences between animals: such as size, shape, body covering and sense organs</li> </ul>	<ul style="list-style-type: none"> <li>• identifying, labelling and describing the parts of a plant</li> <li>• describing the visible differences between at least three plants</li> <li>• drawing, labelling and describing the parts of at least one animal</li> <li>• describing the visible differences between at least three animals</li> </ul>	<ul style="list-style-type: none"> <li>• Pictures / examples of plant parts</li> <li>• Pictures of animals</li> </ul>
1 week (3 ½ hours)	What plants need to grow	<p><b>Conditions for growth</b></p> <ul style="list-style-type: none"> <li>• plants need light, water and air to grow</li> <li>• new plants can grow from cuttings and seeds</li> <li>• seeds need water and warmth to grow (germination of seeds)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Investigating</b> the growth of plants from seeds and cuttings by observing, measuring*** and recording the growth over time **** <i>[This can be used as a possible project]</i></li> </ul>	<ul style="list-style-type: none"> <li>• Seeds and cuttings</li> <li>• Rulers and measuring tape</li> </ul>

**Notes:** \*\*\* Learners can count the number of leaves as the plant grows and measure the height of the stem

\*\*\*\* The investigation and observations of this practical task will be done over time while learners continue with further work

GRADE 4 TERM 1				
STRANDS: NATURAL SCIENCES: LIFE & LIVING TECHNOLOGY: STRUCTURES				Equipment and Resources:
Time	Topic	Content & Concepts	Suggested Activities: Investigations, practical work, and demonstrations	
2 weeks (7 hours)	Habitats of animals	<p><b>Different habitats</b></p> <ul style="list-style-type: none"> <li>a habitat is the place where a plant or animal lives</li> <li>there are different kinds of habitats such as grassland, forest, river, sea</li> </ul> <p><b>Need for a habitat</b></p> <ul style="list-style-type: none"> <li>animals need a habitat for food, water, a place to shelter, have babies and escape from dangers</li> </ul>	<ul style="list-style-type: none"> <li>identifying, drawing and describing a habitat on or close to the school grounds</li> <li>matching different animals to their habitats and giving reasons why the animal can live there</li> <li>describing and writing about habitats of three African* wild animals and why they are suited to living in those habitats</li> </ul>	<ul style="list-style-type: none"> <li>Pictures of plants and animals and their habitats</li> </ul>
2 ½ weeks (8 ¾ hours)	Structures for animal shelters	<p><b>Animal shelters</b></p> <ul style="list-style-type: none"> <li>animal shelters can be natural including nests, shells, hollow trees, wasp nests or human made including dog kennels, cages, kraals, stables</li> <li>animal shelters can be shell or frame structures, can have different shapes and sizes, and can be made from different materials</li> </ul>	<ul style="list-style-type: none"> <li>identifying natural and human made animal shelters</li> <li>looking at pictures of different shell and frame structures for sheltering animals</li> <li>case study about the need for an animal shelter</li> <li><b>designing and drawing</b> an animal shelter, taking into account its:               <ul style="list-style-type: none"> <li>purpose</li> <li>shape and size</li> <li>materials</li> </ul> </li> <li>evaluating the suitability of the design</li> </ul>	<ul style="list-style-type: none"> <li>Pictures and examples of animal shelters</li> </ul>

**Notes:** \* This refers to animals that are indigenous to Africa

## GRADE 4 TERM 1

**STRANDS: NATURAL SCIENCES: LIFE & LIVING**  
**TECHNOLOGY: STRUCTURES**

**Equipment and  
Resources:**

Time	Topic	Content & Concepts	Suggested Activities: Investigations, practical work, and demonstrations	
<b>Assessment guidelines</b>		<p>This content and the associated concepts must be integrated with the aims and skills for Natural Sciences and Technology (<i>refer to Section 2</i>).</p> <ul style="list-style-type: none"> <li>• Learners should read, write, draw and do practical tasks regularly</li> <li>• Evidence of learner's work, including assessments, should be kept in the learner's notebook</li> </ul> <p>School-based assessment (including practical tasks and class tests), checking for correctness, and providing constructive feedback should be done regularly.</p> <p>Allow for a maximum of 7 hours to be used for assessment throughout the term. For more detailed guidelines on assessment, <i>refer to Section 4</i>.</p>	<p><b>Check the learner's knowledge and that they can:</b></p> <ul style="list-style-type: none"> <li>• sort a selection of living and non-living things</li> <li>• identify and describe the parts of a plant</li> <li>• identify and describe the parts of an animal</li> <li>• grow plants from seeds and measure and record their growth</li> <li>• describe different habitats</li> <li>• design, draw and evaluate an animal shelter</li> </ul>	

GRADE 4 TERM 2				
STRANDS: NATURAL SCIENCES: MATTER & MATERIALS TECHNOLOGY: STRUCTURES				Equipment and Resources
Time	Topic	Content & Concepts	Suggested Activities: Investigations, practical work, and demonstrations	
3 ½ weeks (12 ¼ hours)	Materials around us	<p><b>Solids, liquids and gases</b></p> <ul style="list-style-type: none"> <li>solids, liquids and gases make up all the materials around us</li> <li>some properties of solids, liquids and gases               <ul style="list-style-type: none"> <li>solids keep their shape</li> <li>liquids flow and take the shape of their container</li> <li>gases, such as air, tend to spread out, have no definite shape but can be contained (like in a balloon)</li> </ul> </li> </ul> <p><b>Change of state</b></p> <ul style="list-style-type: none"> <li>heating and cooling (removing heat) cause solids, liquids and gases to change state               <ul style="list-style-type: none"> <li>a solid first changes to a liquid (melting) when heated and then the liquid changes to a gas (evaporating) on further heating</li> <li>gas first changes to a liquid (condensing) when cooled and then the liquid changes to a solid (freezing/solidifying) when cooled further</li> </ul> </li> </ul> <p><b>The water cycle</b></p> <ul style="list-style-type: none"> <li>water evaporates, condenses, freezes and melts in the water cycle</li> </ul>	<ul style="list-style-type: none"> <li>sorting examples of common materials into solids, liquids and gases including wood, stone, plastic, fabric, water, juice, tea, air, cooking oil, cooking gas, and describing them</li> </ul> <ul style="list-style-type: none"> <li><b>Investigating</b> evaporating, condensing, freezing and melting using water and ice</li> <li><b>Investigating</b> melting and solidifying using different substances such as butter/ fat/ margarine, wax, icecream, chocolate</li> </ul> <ul style="list-style-type: none"> <li>drawing and writing about the water cycle</li> </ul>	<ul style="list-style-type: none"> <li>Examples of materials and substances including wood, stone, plastic, fabric, water, juice, tea, air, cooking oil, cooking gas</li> <li>Examples of different substances such as ice, butter, wax, ice cream, chocolate</li> <li>Video clips from internet</li> </ul>

## GRADE 4 TERM 2

GRADE 4 TERM 2				
STRANDS: NATURAL SCIENCES: MATTER & MATERIALS TECHNOLOGY: STRUCTURES				Equipment and Resources
Time	Topic	Content & Concepts	Suggested Activities: Investigations, practical work, and demonstrations	
2 weeks (7 hours)	Solid materials	<p><b>Raw and manufactured materials</b></p> <ul style="list-style-type: none"> <li>examples of some raw materials we use to make other useful materials               <ul style="list-style-type: none"> <li>sand is used to make glass</li> <li>clay is used to make ceramics</li> <li>coal and oil are used to make plastics, paints and fabrics</li> <li>wood and fibre from plants are used to make paper</li> <li>animal wool and hide are used to make fabrics and leather</li> </ul> </li> </ul> <p><b>Properties of materials</b></p> <ul style="list-style-type: none"> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>reading about how paper is made from plant fibres</li> <li>describing the properties of raw and manufactured materials</li> </ul>	<ul style="list-style-type: none"> <li>Examples of raw and manufactured materials to examine the properties such as glass products, leather, ceramics, fabrics, wooden items, plastic products</li> </ul>

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STRANDS: NATURAL SCIENCES: MATTER & MATERIALS TECHNOLOGY: STRUCTURES				Equipment and Resources
Time	Topic	Content & Concepts	Suggested Activities: Investigations, practical work, and demonstrations	
2 weeks (7 hours)	Strengthening materials	<p><b>Ways to strengthen materials</b></p> <ul style="list-style-type: none"> <li>there are different ways to strengthen materials (such as paper) to build a strong structure:               <ul style="list-style-type: none"> <li>we can fold paper into hollow pillars which are circular, triangular or square</li> <li>we can roll paper into long thin tubes (struts)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><b>Investigating</b> which shape of pillar is the strongest (can support the most weight). Draw a bar graph of the results</li> <li>making paper struts by rolling into long thin tubes (struts)</li> </ul>	<ul style="list-style-type: none"> <li>Paper, wooden dowels (30cm X 10mm) or sticks, sticky tape, paper fasteners to make struts</li> </ul>
2 ½ weeks (8 ¾ hours)	Strong frame structures	<p><b>Struts and frame structures</b></p> <ul style="list-style-type: none"> <li>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)</li> </ul> <p><b>Indigenous structures</b></p> <ul style="list-style-type: none"> <li>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)</li> </ul>	<ul style="list-style-type: none"> <li>looking at pictures of frame structures strengthened with struts</li> <li>exploring ways to join struts to make a strong structure (joining struts into triangular and square shapes)</li> <li><b>designing, making and evaluating</b> a strong structure using tubular struts, such as a model of a tower, bridge, pylon, chair [<i>This can be used as a possible project</i>]</li> </ul>	<ul style="list-style-type: none"> <li>Pictures of frame structures</li> <li>Paper, wooden dowels (30cm X 10mm) or sticks, sticky tape, paper fasteners</li> </ul>
<b>Assessment guidelines</b>		<p>This content and the associated concepts must be integrated with the aims and skills for Natural Sciences and Technology (<i>refer to Section 2</i>).</p> <ul style="list-style-type: none"> <li>Learners should read, write, draw and do practical tasks regularly</li> <li>Evidence of learner's work, including assessments, should be kept in the learner's notebook</li> </ul> <p>School-based assessment (including practical tasks and class tests), checking for correctness and providing constructive feedback should be done regularly.</p> <p>Allow for a maximum of 7 hours to be used for assessment throughout the term. For more detailed guidelines on assessment, <i>refer to Section 4</i>.</p>	<p><b>Check the learner's knowledge and that they can:</b></p> <ul style="list-style-type: none"> <li>distinguish between solids, liquids and gases</li> <li>explain how selected materials may change their state</li> <li>explain the water cycle in terms of change of state of water</li> <li>give examples of raw materials used to make manufactured materials</li> <li>describe the properties of raw and manufactured materials</li> <li>demonstrate ways of strengthening materials</li> <li>demonstrate ways of making and joining paper struts</li> <li>design, make and evaluate a strong structure</li> </ul>	

## GRADE 4 TERM 3

STRANDS: NATURAL SCIENCES: ENERGY &amp; CHANGE

TECHNOLOGY: SYSTEMS &amp; CONTROL

Equipment and  
Resources

Time	Topic	Content & Concepts	Suggested Activities: Investigations, practical work, and demonstrations	Equipment and Resources
2 ½ weeks (8 ¾ hours)	Energy and Energy transfer	<p><b>Energy for life</b></p> <ul style="list-style-type: none"> <li>we use energy for everything we do</li> <li>we get our energy from food</li> <li>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)</li> </ul> <p><b>Energy from the Sun</b></p> <ul style="list-style-type: none"> <li>energy is transferred from the Sun, to plants, to animals in a sequence known as an energy chain/ food chain</li> </ul>	<ul style="list-style-type: none"> <li>identifying things that people and animals do that require energy such as carrying out the life processes and all other actions</li> <li>drawing and writing about how the energy from the Sun is transferred through the food made by plants, to animals/a person's body (energy chain – use arrows to show the direction in which the energy is transferred from the Sun)</li> </ul>	<ul style="list-style-type: none"> <li>Pictures and examples of a selection of machines and appliances including a kettle, stove, torch, radio, iron, fan/hair dryer, car/bicycle, drum</li> <li>Video clips from the internet</li> </ul>
2 ½ weeks (8 ¾ hours)	Energy around us	<p><b>Energy</b></p> <ul style="list-style-type: none"> <li>we are aware of energy around us, including movement, heat, light, sound</li> <li>energy is also stored in sources such as food, wood, coal, oil products*, natural gas</li> <li>energy can be transferred from a source to where it is needed</li> </ul> <p><b>Input and output energy</b></p> <ul style="list-style-type: none"> <li>machines and appliances need an input of energy to make them work</li> <li>machines and appliances provide an output of energy (work) useful to us</li> </ul>	<ul style="list-style-type: none"> <li>Using pictures to identify situations where energy is involved or transferred</li> <li>describing the input and output of energy of a selection of machines and appliances including a kettle, stove, torch, radio, iron, fan/hair dryer, car/bicycle, drum</li> </ul>	

**Notes:** \* petrol, diesel, paraffin, jet fuel, candle wax are all products made from natural crude oil

GRADE 4 TERM 3				
STRANDS: NATURAL SCIENCES: ENERGY & CHANGE TECHNOLOGY: SYSTEMS & CONTROL				Equipment and Resources
Time	Topic	Content & Concepts	Suggested Activities: Investigations, practical work, and demonstrations	
2 ½ weeks (8 ¾ hours)	<b>Movement and Energy in a system</b>	<p><b>Movement and musical instruments</b></p> <ul style="list-style-type: none"> <li>• many musical instruments (systems) use movement input energy (such as blowing, beating and plucking) to make them work</li> <li>• many instruments have parts that can move or vibrate</li> <li>• musical instruments produce sound as the main output energy</li> </ul>	<ul style="list-style-type: none"> <li>• reading about / looking at indigenous musical instruments and how they work</li> <li>• researching, designing, making and evaluating a musical instrument (such as a guitar, shaker, drum, blowing instrument such as pan pipes, whistles, flutes) that uses movement energy to make sounds <i>[This can be used as a possible project]</i></li> </ul>	<ul style="list-style-type: none"> <li>• Examples of musical instruments</li> <li>• Materials to make musical instruments</li> </ul>

## GRADE 4 TERM 3

GRADE 4 TERM 3				Equipment and Resources
STRANDS: NATURAL SCIENCES: ENERGY & CHANGE TECHNOLOGY: SYSTEMS & CONTROL				
Time	Topic	Content & Concepts	Suggested Activities: Investigations, practical work, and demonstrations	
2 ½ weeks (8 ¾ hours)	Energy and Sound	<p><b>Vibrations and sound</b></p> <ul style="list-style-type: none"> <li>musical instruments make sounds through vibrations               <ul style="list-style-type: none"> <li>the sound always moves outwards from the part that is vibrating</li> <li>we can feel or hear vibrations</li> <li>vibrations travel through materials such as air, water, plastic, metal and wood</li> </ul> </li> </ul> <p><b>Making sounds</b></p> <ul style="list-style-type: none"> <li>sounds can be made loud or soft (volume)</li> <li>sounds can be made high or low (pitch)</li> </ul> <p><b>Noise pollution</b></p> <ul style="list-style-type: none"> <li>sound that is loud, unpleasant or harmful to our ears and continues for a long time, is described as noise pollution</li> <li>noise pollution can cause permanent damage to hearing (hearing aids can help people who are hearing-impaired)</li> </ul>	<ul style="list-style-type: none"> <li>looking at pictures of the human ear, its parts and how sound travels through it</li> <li>making loud and soft sounds with your voice and/or musical instruments</li> <li>making high and low pitched sounds with your voice and/or musical instruments</li> <li>describing sources of noise pollution including at home, school, in the community and how best to protect ourselves from it</li> </ul>	<ul style="list-style-type: none"> <li>Pictures of the human ear, it's parts and how one hears</li> <li>Examples of musical instruments made by learners</li> <li>Video clips from the internet</li> </ul>

GRADE 4 TERM 3				
STRANDS: NATURAL SCIENCES: ENERGY & CHANGE TECHNOLOGY: SYSTEMS & CONTROL				Equipment and Resources
Time	Topic	Content & Concepts	Suggested Activities: Investigations, practical work, and demonstrations	
<b>Assessment guidelines</b>		<p>This content and the associated concepts must be integrated with the aims and skills for Natural Sciences and Technology (<i>refer to Section 2</i>).</p> <ul style="list-style-type: none"> <li>• Learners should read, write, draw and do practical tasks regularly</li> <li>• Evidence of learner's work, including assessments, should be kept in the learner's notebook</li> </ul> <p>School-based assessment (including practical tasks and class tests), checking for correctness, and providing constructive feedback should be done regularly.</p> <p>Allow for a maximum of 7 hours to be used for assessment throughout the term.</p> <p>For more detailed guidelines on assessment, <i>refer to Section 4</i>.</p>	<p><b>Check the learner's knowledge and that they can:</b></p> <ul style="list-style-type: none"> <li>• sequence an energy / food chain showing how the energy from the Sun is transferred through the food made by plants, to animals/a person's body</li> <li>• explain the input and output of energy of a selection of machines and appliances</li> <li>• design, make and evaluate a musical instrument</li> <li>• describe noise pollution and how best to protect our hearing</li> </ul>	

## GRADE 4 TERM 4

**STRANDS: NATURAL SCIENCES: PLANET EARTH & BEYOND**  
**TECHNOLOGY: SYSTEMS & CONTROL**

**Equipment and  
Resources**

Time	Topic	Content & Concepts	Suggested Activities: Investigations, practical work, and demonstrations	Equipment and Resources
<b>2 weeks (7 hours)</b>	<b>Planet Earth</b>	<p><b>Features of the Earth</b></p> <ul style="list-style-type: none"> <li>• the Earth is round like a ball (sphere) and is made of rock</li> <li>• the main surface features of the Earth are land (rocks and soil), water and air</li> <li>• most of the surface of the Earth is covered with water (oceans and seas)</li> <li>• the land we can see is made up of continents* and islands</li> <li>• there is a thin layer of air surrounding the Earth</li> <li>• the Earth has many different habitats for living things</li> </ul> <p><b>Earth and space</b></p> <ul style="list-style-type: none"> <li>• the Earth is a planet in space</li> <li>• from the Earth we can see the Sun, Moon and stars</li> </ul>	<ul style="list-style-type: none"> <li>• interpreting pictures and models showing features of the Earth including visible features such as oceans, seas, lakes, continents, islands and polar ice caps</li> <li>• making drawings or models of the Earth</li> <li>• writing descriptions of the Earth and its features</li> </ul>	<ul style="list-style-type: none"> <li>• Pictures of Earth showing its main features</li> <li>• Pictures of the Moon, Sun and planets</li> <li>• Models of the Earth, Moon and the Sun</li> <li>• Video clips</li> </ul>
<b>1 week (3 ½ hours)</b>	<b>The Sun</b>	<p><b>Our closest star</b></p> <ul style="list-style-type: none"> <li>• the Sun is a star <ul style="list-style-type: none"> <li>- the Sun is made of hot gas and gives out heat and light</li> <li>- the Sun is very big (much bigger than the Earth)</li> <li>- the Sun is very far away, but is the closest star to the Earth</li> <li>- the Sun provides heat and light to the Earth for living things</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• interpreting pictures and models of the Sun</li> <li>• making drawings or models of the Sun</li> <li>• writing descriptions of the Sun</li> </ul>	

**Notes:** \* Continents refer to larger land masses on the surface of the Earth

GRADE 4 TERM 4				
STRANDS: NATURAL SCIENCES: PLANET EARTH & BEYOND TECHNOLOGY: SYSTEMS & CONTROL				Equipment and Resources
Time	Topic	Content & Concepts	Suggested Activities: Investigations, practical work, and demonstrations	
1 week (3 ½ hours)	The Earth and the Sun	<p><b>Moving around the Sun</b></p> <ul style="list-style-type: none"> <li>the Earth moves around the Sun in a pathway called the orbit</li> <li>the Sun is a star and is at the centre of the solar system**</li> <li>the Earth is one of eight planets*** in the solar system</li> </ul> <p><b>The Sun and life</b></p> <ul style="list-style-type: none"> <li>the Earth gets the right amount of light and heat from the Sun for supporting life</li> </ul>	<ul style="list-style-type: none"> <li>interpreting pictures and models of the solar system</li> <li>making drawings and writing about the Earth and its orbit around the Sun</li> </ul>	
<p><b>Notes:</b> ** This is a basic introduction to the concept of the solar system</p> <p>*** Pluto is now called a dwarf planet, and is therefore not included as a planet</p>				

## GRADE 4 TERM 4

**STRANDS: NATURAL SCIENCES: PLANET EARTH & BEYOND  
TECHNOLOGY: SYSTEMS & CONTROL**

**Equipment and  
Resources:**

Time	Topic	Content & Concepts	Suggested Activities: Investigations, practical work, and demonstrations	Equipment and Resources:
2 weeks (7 hours)	The Moon	<p><b>Features of the Moon</b></p> <ul style="list-style-type: none"> <li>the Moon is a ball of rock in space               <ul style="list-style-type: none"> <li>there is no air and water on the Moon</li> <li>the Moon is smaller than the Earth</li> <li>the Moon is closer to the Earth than the Sun</li> </ul> </li> </ul> <p><b>Phases of the Moon</b></p> <ul style="list-style-type: none"> <li>the Sun's light shines onto the surface of the Moon               <ul style="list-style-type: none"> <li>we can only see that part of the Moon which the sunlight shines on</li> <li>the changing pattern of sunlight on the Moon is called the phases of the moon</li> <li>the pattern repeats every 29 ½ days (about a month)</li> </ul> </li> </ul> <p><b>Moon stories</b></p> <ul style="list-style-type: none"> <li>cultural stories about the Moon tell us about the importance of the Moon in people's lives</li> </ul>	<ul style="list-style-type: none"> <li>interpreting pictures and models of the Moon</li> <li>making drawings or models of the Moon</li> <li>writing descriptions of the Moon</li> </ul> <ul style="list-style-type: none"> <li><b>Investigating</b> - observing and recording the changing shape of light on the Moon each night for at least a month (Moon watch)*</li> </ul>	<ul style="list-style-type: none"> <li>Calendar for recording phases of the Moon</li> <li>Cultural stories about the Moon</li> <li>video clips</li> </ul>
2 weeks (7 hours)	Rocket systems	<p><b>Modelling a rocket</b></p> <ul style="list-style-type: none"> <li>people have used rockets to go into space and to travel to the Moon</li> <li>a rocket is a system used to propel vehicles into space               <ul style="list-style-type: none"> <li>A rocket moves by pushing exhaust gases out through its back end</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><b>Designing, making and evaluating</b> a rocket model using a balloon               <ul style="list-style-type: none"> <li>attach a balloon to a drinking straw threaded onto a fishing line pulled tight between two points</li> <li>release the inflated balloon and measure how far it travels along the fishing line. Draw bar graphs and evaluate different balloon rockets [<i>This can be used as a possible project</i>]</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Apparatus including balloons of different sizes, straws and fishing line, hooks, measuring tapes</li> </ul>

**Notes:** \* carry out the Moon watch while continuing with other work

GRADE 4 TERM 4				
STRANDS: NATURAL SCIENCES: PLANET EARTH & BEYOND TECHNOLOGY: SYSTEMS & CONTROL				Equipment and Resources:
Time	Topic	Content & Concepts	Suggested Activities: Investigations, practical work, and demonstrations	
<b>Assessment guidelines</b>		<p>This content and the associated concepts must be integrated with the aims and skills for</p> <p>Natural Sciences and Technology (<i>refer to Section 2</i>).</p> <ul style="list-style-type: none"> <li>• Learners should read, write, draw and do practical tasks regularly</li> <li>• Evidence of learner's work, including assessments, should be kept in the learner's notebook</li> </ul> <p>School-based assessment (including practical tasks and class tests), checking for correctness, and providing constructive feedback should be done regularly.</p> <p>As this is the exam term, the final two weeks may be required for revision of the year's work and for examinations.</p> <p>For more detailed guidelines on assessment, <i>refer to Section 4</i>.</p>	<p><b>Check the learner's knowledge and that they can:</b></p> <ul style="list-style-type: none"> <li>• identify and describe the main features of the Earth</li> <li>• describe the main features of the Sun and the Moon</li> <li>• explain how Earth moves around the Sun</li> <li>• recognise that the phases of the Moon are a result of the changing pattern of sunlight that we can see on the Moon</li> <li>• make a model of a balloon rocket, and test it</li> <li>• record and compare the distances travelled by different balloon rockets</li> <li>• evaluate balloon rockets</li> </ul>	