NATURAL SCIENCES AND TECHNOLOGY
PROGRAMME OF FORMAL ASSESSMENT 2019
GRADE 4

TERM	PLANNED DATES		TASK	TOPICS	TOTAL 100
1ST TERM	27/02	SCHOOL BASED ASSESSMENTS	Selected **practical task** [10 marks]	• Living and nonliving things • Structures of plants and animals • What plants need to grow • Habitats of animals • Structures for animal shelters	TOGETHER MAKE UP 75% OF TOTAL MARKS FOR THE YEAR
	05/02/2019 11/03/2019		**Short Test** [15 - 40 marks] + **Controlled Test** [40 marks]		
2ND TERM	22/05		Selected **practical task** [10 marks]	• Materials around us • Solid materials • Strengthening materials • Strong frame structures	
	07/05/2019 11/06/2019		**Short Test** [15 - 40 marks] + **Exam** on work from terms 1 & 2 [40 marks]	Work from terms 1 & 2	
3RD TERM	21/08	SCHOOL BASED ASSESSMENTS	Selected **Practical task** [15 marks]	• Energy and • Energy transfer • Energy around us • Movement energy in a system • Energy and sound	
	05/08/2019 09/09/2019		**Short Test** [15 - 40 marks] + **Controlled Test** [40 marks]		
4TH TERM	12/11		Selected **Practical task** [15 marks]	• Planet Earth • The Sun • The Earth & the Sun • The Moon • Rocket systems	
	27/11/2019	END OF YEAR EXAM	**Exam** on work from terms 3 & 4 [40 marks]	Work from terms 3 & 4	MAKE UP 25% OF TOTAL MARK OF EXAM

NATURAL SCIENCES AND TECHNOLOGY
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GRADE 5

<table>
<tr><th>TERM</th><th>PLANNED DATES</th><th></th><th>TASK</th><th>TOPICS</th><th>TOTAL

100</th></tr>
<tr><td rowspan="2">1ST TERM</td><td>13/02</td><td rowspan="7">SCHOOL BASED ASSESSMENTS

SCHOOL BASED ASSESSMENTS</td><td>Selected practical task [15 marks]</td><td rowspan="2">• Plants and animals on Earth
• Animal skeletons
• Skeletons as structures
• Food chains
• Life cycles</td><td rowspan="7">TOGETHER MAKE UP 75% OF TOTAL MARKS FOR THE YEAR</td></tr>
<tr><td>06/02/2019

11/03/2019</td><td>Short Test [15 - 45 marks] + Controlled Test [45 marks]</td></tr>
<tr><td rowspan="2">2ND TERM</td><td>22/05</td><td>Selected practical task [15 marks]</td><td rowspan="2">• Metals and nonmetals
• Uses of metals
• Processing materials
• Processed Materials</td></tr>
<tr><td>30/04/2019

11/06/2019</td><td>Short Test [15 - 45 marks] + Exam on work from terms1 & 2 [45 marks]</td></tr>
<tr><td rowspan="2">3RD TERM</td><td>13/09</td><td>Selected Practical task [15 marks]</td><td rowspan="2">• Stored energy in fuels
• Energy and electricity
• Energy and movement
• Systems for moving things</td></tr>
<tr><td>16/08/2019

09/09/2019</td><td>Short Test [15 - 45 marks] + Controlled Test [45 marks]</td></tr>
<tr><td rowspan="2">4TH TERM</td><td>22/10</td><td>Selected Practical task [15 marks]</td><td>• Planet Earth
• Surface of the Earth
• Sedimentary rocks
• Fossils</td></tr>
<tr><td>27/11/2019</td><td>END OF YEAR EXAM</td><td>Exam on work from terms 3 & 4 [45 marks]</td><td>Work from terms 3 & 4</td><td>MAKE UP 25% OF TOTAL MARK OF EXAM</td></tr>
</table>

NATURAL SCIENCES AND TECHNOLOGY
PROGRAMME OF FORMAL ASSESSMENT 2019
GRADE 6

<table>
<tr><th>TERM</th><th>PLANNED DATES</th><th></th><th>TASK</th><th>TOPICS</th><th>TOTAL 100</th></tr>
<tr><td rowspan="2">1ST TERM</td><td>20/02</td><td rowspan="8">SCHOOL BASED ASSESSMENTS

SCHOOL BASED ASSESSMENTS</td><td>Selected practical task [15 marks]</td><td rowspan="2">• Photosynthesis
• Nutrients in food
• Nutrition
• Food Processing
• Ecosystems and Food webs</td><td rowspan="8">TOGETHER MAKE UP 75% OF TOTAL MARKS FOR THE YEAR</td></tr>
<tr><td>05/02/2019

11/03/2019</td><td>Short Test [20 - 50 marks] + Controlled Test [50 marks]</td></tr>
<tr><td rowspan="2">2ND TERM</td><td>08/05</td><td>Selected practical task [15 marks]</td><td rowspan="2">• Solids, liquids and gases
• Mixtures
• Solutions as special mixtures
• Dissolving
• Mixtures and water resources
• Processes to purify water</td></tr>
<tr><td>07/05/2019

11/06/2019</td><td>Short Test [20 - 50 marks] + Exam on work from terms1 & 2 [50 marks]</td></tr>
<tr><td rowspan="2">3RD TERM</td><td>14/08</td><td>Selected Practical task [15 marks]</td><td rowspan="2">Work from terms 1 & 2

• Electric circuits
• Electrical conductors and insulators
• Systems to solve problems
• Mains electricity</td></tr>
<tr><td>29/07/2019

09/09/2019</td><td>Short Test [20 - 50 marks] + Controlled Test [50 marks]</td></tr>
<tr><td rowspan="2">4TH TERM</td><td>05/11</td><td>Selected Practical task [15 marks]</td><td>• The Solar System
• Movements of the Earth and planets
• The movement of the Moon
• Systems for looking into space
• Systems to explore the Moon and Mars</td></tr>
<tr><td>27/11/2019</td><td>END OF YEAR EXAM</td><td>Exam on work from terms 3 & 4 [50 marks]</td><td>Work from terms 3 & 4</td><td>MAKE UP 25% OF TOTAL MARK OF EXAM</td></tr>
</table>

SOME OF THE CAPS RECOMMENDED INVESTIGATIONS/PRACTICAL TASKS PER GRADE

TERM	GRADE 4	GRADE 5	GRADE 6
TERM 1	• **Investigating** the growth of plants from seeds and cuttings by observing, measuring and recording the growth over time • **Designing and drawing** an animal shelter, taking into account its: ○ purpose ○ shape and size ○ materials And evaluating the suitability of the design	• **Designing,** making a model of a vertebrate skeleton using struts made from rolled paper or drinking straws	• Comparing glucose sugar (such as glucose sweets) and starch (such as maize flour) according to their taste and colour • Testing starch with iodine solution to show the colour change. Testing foods for starch including cooked rice, flour, potato, bread, oil, boiled egg, cheese • **Researching** how to process food (raw material) by combining, cooking, freezing, pickling, fermenting, drying and salting to make a product, including indigenous ways of processing of food in different communities and choosing a food and processing it in some way
TERM 2	• **Investigating** evaporating, condensing, freezing and melting using water and ice • **Investigating** melting and solidifying using different substances such as butter/ fat/ margarine, wax, ice cream, chocolate • **Investigating** which shape of pillar is the strongest (can support the most weight). Draw a bar graph of the results • **Designing, making and evaluating** a strong structure using tubular struts, such as a model of a tower, bridge, pylon, chair	• **Investigating, comparing and recording** 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, a piece of coal) • Testing different metal objects (such as coins, iron filings, nails, drawing pins, paper clips, wire) to see if they are attracted by a magnet	• **Investigating** different solids to see if they dissolve in water including: ○ salt, sugar (soluble substances) ○ sand, mealie meal, flour, maize flour, samp, curry powder, custard powder (insoluble substances) • **Investigating** solutions to see if we can recover the solute by: ○ filtering ○ settling ○ evaporating the water (crystallisation) • **Investigating, measuring and drawing graphs** of the time taken to dissolve a solute: ○ in hot or cold water ○ when stirring/shaking or not stirring/shaking ○ using coarse or fine salt • **Designing, making and evaluating** a simple system to clean dirty water, (such as a sand filter) according to specifications and constraints

TERM	GRADE 4	GRADE 5	GRADE 6
TERM 3	• 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	• **Investigating** 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) • Making wheels and axles and evaluating whether they move easily (use materials such as bottle tops, round tins or cardboard circles for the wheels, sosatie sticks or dowels and straws for the axles)	• Investigating how to make a simple circuit using cell/ battery, conducting wires, light bulb and design and make a switch to control the circuit testing different materials (such as metal paper clips, nails, wire, steel-wool, coins, plastic, glass, ceramic, cardboard, paper, wood, rubber, chalk) in an electric circuit to see if they are conductors or insulators, and recording the results on a table • **Designing, making, evaluating and presenting** a system that uses a circuit to produce movement, light, sound or heat in a structure such as a steady hand game, house, light house or a toy. The circuit should include components such as cell/s, light bulb/s, buzzer/s, and switch/es
TERM 4	• **Investigating** - observing and recording the changing shape of light on the Moon each night for at least a month (Moon watch) • **Designing, making and evaluating** a rocket model using a balloon attach a balloon to a drinking straw threaded onto a fishing line pulled tight between two points release the inflated balloon and measure how far it travels along the fishing line. Draw bar graphs and evaluate different balloon rockets	• **Investigating** – different soil types ○ writing and drawing about the colour, smell and texture of the soil ○ measuring and recording on a table how much water different soils can hold ○ using the results to draw bar graphs • **Investigating** – growing seedlings in different soil types ○ measuring, recording and comparing the heights of the seedlings ○ using the results to draw bar graphs	• **Researching** the key features and purposes of the Mars or Moon Rovers including wheels and axles, cameras, mechanical arms, and systems for using solar energy and communications • **Designing, making and evaluating** a model of one of these vehicles which can move by means of wheels and axles, measuring how far the different vehicles can run down a ramp and draw bar graphs