

CAPS CURRICULUM
Grade 5 NS and Technology

 Can use LEGO

TERM 1 – Gr. 5		
Hours	Topic	Content, concepts and skills
14	Properties of Materials	<p>Comparison of materials:</p> <ul style="list-style-type: none"> • Solid, liquid, gas • Forces that can be exerted on different materials: • Push (compression), pull (tension), twist (torsion), bend and shear. <p>Properties Bk 1 pg 53 - Bk 2 pg 68 Investigate the effect of different forces on materials Bk 2 pg 29 – 30 and demonstrate and explain the difference between the properties of materials by compressing, or stretching or twisting or bending or shearing them. Bk 1 pg 57 - 60</p> <p>Learners must engage in at least 2 practical activities themselves (at school) to explore the properties of different materials</p>
3½	Uses of materials	<p>Materials used in frame structures to support loads Record the results in a table.</p> <ul style="list-style-type: none"> • Research: read about and observe materials that are used and are designed to support loads(used for building structures specifically to support loads like water tanks/towers, power lines, houses, traditional homes.) Bk 2 pg 74 • the shape of the members of the building (folding, tubing) Bk 1 pg 57 - 60 • strengthening of the structure (braces and struts) Bk 2 pg 23 - 28 <p>Compare materials used to construct traditional homes and materials used to construct a modern building</p>
10½	Structure to support a load: design a solution.	<p>Technology: Design process - Learners must</p> <ul style="list-style-type: none"> • respond to a story or scenario (problem statement) and identify the problem (regarding a structure which must support a load) Bk 2 pg 31 -32 • identify, with help, possible specifications and constraints. • sketch a possible solution (2 dimensions) to the problem • make a model/prototype/product to solve the problem. • evaluate their own product (use pictures/drawings and/or description of the structure.)
		Test and practical task

28 hours in total

TERM 2 – Gr. 5		
Hours	Topic	Content, concepts and skills
5¼	Energy	Concept of energy Renewable and non-renewable sources of energy Kinetic energy
10½	Energy we can see, hear and feel	Light Heat Sound
3½	Energy for moving things (work)	Electrical energy
3	Energy systems	Systems that store and release energy <ul style="list-style-type: none"> Investigate simple systems (prepared by teacher) that use springs/rubber bands: e.g. catapult (Bk 1 pg 92)(Bk 2 pg 50-53), model vehicle using twisted/stretched rubber band/spring etc. Observe how they work. Operate the systems (make them work). Investigate simple systems (prepared by teacher) that use objects that fall (gravity) to make them move: e.g. water, (water wheel), a weight falling causing wheels to turn, wind (windmill) (Bk 1 pg 93-96) etc. Observe how they work. Operate the systems (make them work).
5¼	Machines and mechanisms	Mechanisms <ul style="list-style-type: none"> Wheels and axles (Bk 1 pg 63-75)(Bk 2 pg 33 – 38), gears and axles. (Bk 79-950) Hinges (Bk 1 pg 83-92) (Bk 2 pg 42-57) Identify the flow of energy: potential to kinetic in machine or mechanism. (system) Identify machines that move or have moving parts that are based on the principle of wheels and axles. This will include examples of gears and pulleys. Demonstrate the working of wheels and axles Identify machines that move or have moving parts that are based on the principle of hinges.
		Test and mid year exam

28 hours in total

TERM 3 – Gr. 5		
Hours	Topic	Content, concepts and skills
10½	Moving an object (Links to Term 2 Grade 5)	Technology process: The whole of the following process must be done IN CLASS: Design and make a solution to a problem (Bk 2 pg 39 – 41) <ul style="list-style-type: none"> Respond to a story or scenario (problem statement) and identify the problem regarding a machine that can be used to move objects/an object using elastic/rubber bands/springs and/or falling weights.
8¾	Energy flow and biodiversity	Food chains and flow of energy
8¾	Biodiversity of living things	Plants, Soil, Plant lifecycle, Animals
		Test and translation task

28 hours in total:

TERM 4 – Gr. 5		
Hours	Topic	Content, concepts and skills
3½	Structure of the Earth	Centre of the Earth Different types of rock: <ul style="list-style-type: none"> igneous sedimentary metamorphic
5¼	Surface of Earth	Surface of the land on Earth Different soils
3½	Rocks	Sedimentary Rocks
5¼	Fossils	Fossils formed in sedimentary rocks: process
10½	Senses in animals and humans	Importance of senses Sense organs

28 hours in total