

Primary Science
Level 6
DRAFT – Year 5 Learning Outcomes

Learning Outcome 1
What do Scientists do?

Learning Outcome 1 *What do Scientists do?* will be integrated throughout the framework for Level 5 (Year 3 and Year 4).

- | | |
|---------------|---|
| 5.1.1 | I can ask questions about a scientific topic being discussed in class. |
| 5.1.2 | I can find answers to simple questions on a scientific topic. |
| 5.1.3 | I can use limited scientific knowledge to predict the outcome of an experiment. |
| 5.1.4 | I can carry out a simple practical investigation, which involves up to two variables, with teacher guidance. |
| 5.1.5 | I can record observations by completing a table of results. |
| 5.1.6 | I can identify simple cause and effect relationships. |
| 5.1.7 | I can present information about work I did and link this to direct outcomes using some key scientific terms. |
| 5.1.8 | I can explain how a scientist uses a model to explain ideas. |
| 5.1.9 | I can through a role play exercise, act out simple stories about famous scientists. |
| 5.1.10 | I can give examples and explain how technology and science have improved life. |
| 5.1.11 | I can present information about some science occupations. |
| 5.1.12 | I can name, use and describe the purpose of a range of basic scientific apparatus. |
| 5.1.13 | I can take basic measurements of size, mass and temperature, and express the reading using appropriate units. |
| 5.1.14 | I can apply basic safety rules when working on an investigation. |
| 5.1.14 | I can take some decisions while working on an experiment in a group. |

Learning Outcome 2 <i>How do we stay alive?</i>			
	LEARNING OUTCOMES <i>Children will be able to:</i>	KEY VOCABULARY	LEARNING OPPORTUNITIES <i>Children should be encouraged to:</i>
5.2.1	I can list the seven characteristics of life and explain why each is essential (movement, respiration, sensitivity, growth, reproduction, excretion, nutrition).	movement respiration sensitivity growth reproduction excretion nutrition vertebrate mammal bird reptile fish amphibian life cycle endangered extinct	<ul style="list-style-type: none"> • Identify what makes something living. • Use multimedia resources to distinguish between vertebrates and invertebrates. • Classify pictures of vertebrates into different groups. • Explore life cycles of different organisms. • Investigate how species become endangered and how that can lead to extinction.
5.2.2	I can name and give examples of the five different groups of vertebrates (mammals, birds, reptiles, fish and amphibians).		
5.2.3	I can classify humans as mammals and can identify some characteristics of being a mammal (have hair or fur; are warm blooded; have lungs; give birth to their young ones; give milk to their young).		
5.2.4	I can describe the lifecycles of birds, insects and frogs.		
5.2.5	I can present information on an endangered species, and describe how this can lead to extinction.		

Learning Outcome 3 <i>How do we keep fit and healthy?</i>			
	LEARNING OUTCOMES <i>Children will be able to:</i>	KEY VOCABULARY	LEARNING OPPORTUNITIES <i>Children should be encouraged to:</i>
5.3.1	I can find out about the effects human intervention can have on natural habitats and the organisms that live there including over development, trespassing, pollution (air, water, light and noise).	<p style="text-align: center;"> pollution plastic hygiene germs soap diseases </p>	<ul style="list-style-type: none"> • Explore different ways by which the environment can be harmed and prevention. • Practise proper hygiene during everyday life.
5.3.2	I can create a poster about some of the ways that humans pollute their environment and what can be done.		
5.3.3	I can explain how germs cause disease and relate to everyday life including washing hands before touching food, taking necessary precautions when sneezing, coughing or when sick.		
Learning Outcome 4 <i>How do our senses help us gather information?</i>			
	LEARNING OUTCOMES <i>Children will be able to:</i>	KEY VOCABULARY	LEARNING OPPORTUNITIES <i>Children should be encouraged to:</i>
5.4.1	I can see and feel the vibrations that sounds	vibrations	<ul style="list-style-type: none"> • Explore sound using a variety of

5.4.2	make. I can show how sound vibrations are carried by waves through water and other materials.	waves vacuum reflection mirror periscope eye protection	objects. <ul style="list-style-type: none"> Use resources to understand how light travels allowing us to see.
5.4.3	I can explain why sound does not travel in space and how astronauts communicate in space.		
5.4.4	I can demonstrate that light travels in straight lines.		
5.4.5	I can explain that we see an object when it reflects light from a light source into our eyes.		
5.4.6	I can explain when and how eyes need to be protected.		
Learning Outcome 5 <i>What is energy?</i>			
	LEARNING OUTCOMES <i>Children will be able to:</i>	KEY VOCABULARY	LEARNING OPPORTUNITIES <i>Children should be encouraged to:</i>
5.5.1	I can demonstrate examples of different energy transformations.	energy transformation, movement, heat, electrical, light, sound	<ul style="list-style-type: none"> Use resources such as wires, batteries, bulbs, motor and buzzer to explore and understand how energy can be transformed from one form to another. Give examples of energy
5.5.2	I can name the main forms of energy: movement, heat, electrical, light and sound.		
5.5.3	I can find out about scientists who were responsible for various electrical discoveries e.g.		

	Benjamin Franklin (lightning) and Thomas Edison (light bulb).		<p>transformations in everyday life.</p> <ul style="list-style-type: none"> • Design and create a project to show how energy can be transformed from one form to another. • Research about scientists who made electrical discoveries.
Learning Outcome 6 <i>What are things made of?</i>			
	LEARNING OUTCOMES <i>Children will be able to:</i>	KEY VOCABULARY	LEARNING OPPORTUNITIES <i>Children should be encouraged to:</i>
5.6.1	<u>MAGNETISM</u> I can classify materials as magnetic or non-magnetic.	solutions	<ul style="list-style-type: none"> • Investigate different mixtures and solutions to distinguish between the two, using everyday resources. • Investigate how different mixtures can be separated. • Research about Melitta Bentz.
5.6.2	I can investigate everyday uses of magnetism.	suspensions	
5.6.3	<u>MIXTURES AND SOLUTIONS</u> I can make a solution by dissolving a substance in water.	mixtures dissolve separation filtration evaporation magnetic	
5.6.4	I can investigate how some substances form suspensions, while others dissolve in water.	non-magnetic	

5.6.5	I can perform simple experiments to separate some mixtures (filtration, evaporation, separation using a magnet).		
5.6.6	I can find out about scientists who were responsible for discoveries related to mixing and dissolving substances and separation of mixtures e.g. Melitta Bentz (coffee filters).		
Learning Outcome 7 <i>How does planet Earth support life?</i>			
	LEARNING OUTCOMES <i>Children will be able to:</i>	KEY VOCABULARY	LEARNING OPPORTUNITIES <i>Children should be encouraged to:</i>
5.7.1	I can investigate the components of soil.		<ul style="list-style-type: none"> • Handle soil samples and investigate soil components. • Explore different organisms living in soil and their importance for the environment. • Identify the different properties of seeds essential for successful growth. • Plant seeds in class, and
5.7.2	I can observe and name organisms found in the soil.	organisms	
5.7.3	I can find out about scientists, archaeologists and their work e.g. Temi Zammit (archaeologist).	seeds	
5.7.4	I can identify and describe different means of seed dispersal including wind, animal, explosion and water dispersal.	seed dispersal	
		wind	
		animals	
		water	
		explosion/bursting	

			<p>observe and record growth.</p> <ul style="list-style-type: none"> • Research about Sir Temi Zammit and find out about other archeologists.
Learning Outcome 8 <i>How do things move?</i>			
	LEARNING OUTCOMES <i>Children will be able to:</i>	KEY VOCABULARY	LEARNING OPPORTUNITIES <i>Children should be encouraged to:</i>
5.8.1	I can explain that our skeleton is made up of bones and that joints and muscles help us move.	skeleton bones muscles joints X-rays support movement	<ul style="list-style-type: none"> • Carry out simple investigations to show how bones support body structures, protect organs and how muscles help us move. • Research about Marie Curie.
5.8.2	I can explain that our skeleton and that of other animals support, protect organs in the body.		
5.8.3	I can find out about Marie Curie and her work on x-ray machines used to show pictures of the skeleton.		
Learning Outcome 9 <i>What is there out in Space?</i>			
	LEARNING OUTCOMES <i>Children will be able to:</i>	KEY VOCABULARY	LEARNING OPPORTUNITIES <i>Children should be encouraged to:</i>
5.9.1	I can demonstrate using drawings or a model	day / night	<ul style="list-style-type: none"> • Describe why we have leap

<p>5.9.2 5.9.3</p>	<p>why we have day and night. I can explain what a leap year is. I can explain how seasons change.</p>	<p>leap year seasons Earth's rotation sun</p>	<p>years and different seasons. • Explain why different parts of the Earth have different seasons at a given time.</p>
--------------------------------------	--	---	--