



## Forest Hall Primary School

### Whole school science overview 21/22

Year Group	Aut 1	Aut 2	Spr 1	Spr 2	Sum 1	Sum 2
1	Plants Name common plants including deciduous and evergreen trees. Describe their basic structure.	Materials Name a variety of everyday materials and describe their properties. Compare and group materials.	Seasonal Change. Observe changes across the 4 seasons, including the weather and how day length varies.	Seasonal Change continued	Animals including humans Identify and name common fish, amphibians, reptiles, birds and mammals and compare their structures. Name some carnivores, herbivores, and omnivores.	Animals including humans continued. Name the basic parts of the human body and say which part is associated with each sense.
2	Living things and their habitats The basic needs of living things and how they are suited to their environment. Name plants and animals in different habitats including micro-habitats. Simple food chains and animal diets.	Materials Identify and compare the suitability of different materials for particular uses. Explore how the shape of solid objects, made from some materials, can be changed.	Materials continued	Plants Observe and describe how seeds and bulbs grow. Know the basic needs of plants.	Animals including humans Describe the basic needs of animals and humans and know that they have offspring which grow into adults. Describe the importance of exercise, hygiene and eating the right amounts of different	Animals including humans continued.

					types of food.	
3	<p><b>Light</b>  Identify light sources.  Observe how light is reflected and how shadows are formed.  Investigate why shadows change size.  Know the potential dangers of the sun and how to keep safe.</p>	<p>Animals including humans  Know that animals and humans need the right types and amounts of nutrition.  Explore different animal and human skeletons and explain how skeletons and muscles are used for support, protection and movement.</p>	<p>Rocks  Compare and group different kinds of rocks, based on their properties.  Know how fossils are formed.  Recognise that soils are made from rocks and organic material.</p>	<p>Plants  Identify and describe the functions of the different parts of flowering plants.  Reinforce the basic needs of plants.  Investigate how water is transported within plants.  Explore the lifecycle of a flowering plant including pollination, seed formation and seed dispersal.</p>	<p>Forces and magnets  Investigate how magnets attract or repel each other and attract some materials and not others.  Describe magnets as having two poles.  Investigate friction by comparing how things move on different surfaces</p>	<p>Key skills  Identify and name common equipment used by scientists.  Practise measuring different lengths accurately and using the correct units of measure.  Weigh accurately using kitchen scales and measure a variety of liquids.</p>
4	<p>Animals including humans  Explore the functions of the different types of human teeth.  Describe the simple functions of the basic parts of the digestive system.  Construct and interpret food chains, identifying producers, predators and prey.</p>	<p>States of matter  Compare and group solids, liquids and gases.  Observe how some materials change state when they are heated or cooled. Know how to measure and record temperature. Identify the part played by evaporation and condensation</p>	<p>Living things and their habitats  Group living things in different ways. Use classification keys to help identify living things in the local and wider environment.</p>	<p>Living things and their habitats continued.  Explore the impact on living things when environments change.</p>	<p>Sound  Explore how sounds are made and how we hear things.  Find patterns in how pitch and volume change.</p>	<p>Electricity  Identify electrical appliances.  Construct a simple series circuit and identify and name the basic components used.  Know the purpose of a switch.  Recognise some common conductors and insulators and associate metals with being good conductors.</p>

		<p>in the water cycle.</p> <p>Associate the rate of evaporation with temperature.</p>				
5	<p>Materials</p> <p>Compare and group materials on the basis of their properties including conductivity and response to magnets.</p> <p>Give reasons for their suitability for particular uses.</p> <p>Mix substances to form solutions and describe how to recover them.</p> <p>Investigate separating mixtures by filtering, sieving and evaporating.</p> <p>Identify reversible and irreversible changes and that know that some changes can result in new materials</p>	<p>Earth and Space</p> <p>Describe the movement of the Earth, and other planets relative to the sun. Describe the movement of the moon relative to the earth.</p> <p>Describe the sun, Earth and moon as approximately spherical bodies.</p> <p>Explain why we have night and day.</p>	<p>Living things</p> <p>Describe the differences in the lifecycles of a mammal, an amphibian, an insect and a bird.</p> <p>Describe the life process of reproduction in some plants and animals.</p>	<p>Forces</p> <p>Explain that unsupported objects fall towards the Earth because of gravity.</p> <p>Identify the effects of air and water resistance.</p> <p>Describe the life process of reproduction in some plants and animals.</p>	<p>Forces cont.</p> <p>Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.</p> <p>Deepen understanding of friction and how it impacts our everyday lives.</p>	<p>Animals including humans</p> <p>Describe the changes as humans develop from birth to old age.</p>

	being formed.					
6	<p>Animals including humans</p> <p>Identify and name the parts of the human circulatory system and describe the functions of the heart, blood vessels and blood.</p> <p>Recognise the impact of diet, exercise, drugs and lifestyle on the way their body functions.</p> <p>Describe how nutrients and water are transported around the body.</p>	<p><b>Light</b></p> <p><b>Recognise that light appears to travel in straight lines.</b></p> <p>Know that objects are seen because they give out or reflect light into the eye.</p> <p>Explain that we see things because light travels from its source to the object and into our eyes.</p> <p>Explain how shadows behave in relation to light travelling in straight lines. Predict the size of shadows when the position of the light source changes.</p>	<p><b>Evolution and Inheritance</b></p> <p><b>Recognise that living things have changed over time and that fossils provide evidence of this.</b></p> <p>Investigate how living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents.</p> <p>Identify how animals and plants are adapted to suit their environment and how adaptation may lead to evolution.</p>	<p><b>Living things and their environment</b></p> <p><b>Describe how living things are classified into broad groups according to observable features and based on similarities and differences, including micro-organisms, plants and animals.</b></p> <p>Give reasons for classifying plants and animals based on specific characteristics.</p>	<p><b>Electricity</b></p> <p><b>Associate the brightness of a bulb or the volume of a buzzer with the number and voltage of cells used in the circuit.</b></p> <p>Compare and give reasons for variations in how components function.</p> <p>Use recognised symbols when representing a simple circuit in a diagram.</p>	<p>Application of key skills and knowledge.</p> <p>Revision of key learning.</p> <p>Planning different types of scientific investigations to answer questions.</p> <p>Taking accurate measurements and recording data in different ways. Using diagrams, labels, tables and graphs to report and present findings.</p> <p>Using secondary sources to identify evidence which has been used to support or refute scientific ideas.</p>