**KS3 SCIENCE CURRICULUM PLAN**

**Group 1, 2 and 3**

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| **Topic** | **Term 1 or Block 1** | **Term 2 or Block 2** | **Term 3 or Block 3** |
| **Working scientifically** | * Ask relevant questions.
* Plan & set up simple experiments that are fair tests that involve equipment such as thermometers and stop watches.
* Draw simple conclusions using correct scientific language.
* Produce & interpret data. Make simple conclusions. Know repeating an experiments leads to reliable results.
 | * Make predictions. Use *standard units* correctly.
* Draw labelled diagrams.
* Store results in tables & draw simple conclusions from them.
* Look for trends, similarities and differences.
 | * Use secondary evidence.
* Produce bar charts.
* Use evidence to suggest improvements for investigations and raise further questions.
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| **Plants**  | * Structure of a tree and a flowering plant limited to stem, root, leaves, flower.
* Name common trees and flowers they will find growing wild in their garden.
* Label a plant and know the function of each part, including stem to carry water from roots to leaves.
* Be able to label a flower and know it is the reproductive part of the plant. Describe how pollination occurs by insects or wind.
 | * Be able to label a flower and know it is the reproductive part of the plant.
* Describe how pollination occurs by insects or wind.
* What are the requirements of plants to grow?
 | * Be aware that different plants require different amounts of light and water to grow.
* Know how seeds are formed in seed formation and describe seed dispersal.
* There is scope to investigate how making seeds with different masses affects how far they can be dispersed… using a hair dryer or straws.
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| **Animals including humans** | * Calcium is needed to make strong bones. Animals cannot make their own food but eat other animals and plants.
* Be able to name and locate, skull, pelvis and rib cage.
* Name important bones of the skeleton and know the function of bones and what would happen if humans did not have bones
* Name common birds and mammals and know if they are herbivores or carnivores and be able to make simple comparisons.
 | * Humans need meat (protein to grow), diary, starchy foods for energy, and vegetables/fruit (for health) in their diet.
* Know the sense organs for sight and sound
* Recognise diagrams of the human circulatory system and know the function of the heart. State the job of the heart and lungs.
* Know blood vessels carry food oxygen and water around the body.
* Know the difference in the function of arteries (away from heart) and veins (towards heart).
 | * Compare and contrast the diets of different animals.
* Know the function of muscles.
* Reinforce features of the 5 vertebrates and differences between insects and spiders, which are invertebrates.
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| **Rocks** | * Use hand lenses or their eyes to group rocks based on whether they have grains, or crystals in them.
* Describe what a fossil is.
* Know pumice is a light rock that can float. Know that soil comes from rocks and dead plant and animals.
* Identify fossils in some rocks.
* Reinforce that rocks can have grains or crystals
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| **Light** |  | * Light can be reflected from surfaces and know how shadows are made.
* Make a shadow puppet and explain how it works.
* Light is needed to see and dark is the absence of light.
* Know that it is dangerous to look directly at the sun.
* Investigate the height of shadow changes during the day.
* Use sunlight and chalk in the yard or torches and small toys.
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| **Forces and Magnets** | * Know that magnets will stick to magnetic materials.
* Magnetic forces act at a distance
* Know that magnets have 2 poles - a north and a south.
* Suggest uses for magnets
* Be able to predict whether magnets will attract or repel based on the poles that are brought together. Show this by dangling a magnet on a sting and bring another magnet towards it.
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| **Evolution and Inheritance** |  | * Know that without fossils we may never have known that animals have adapted slowly over time.
* Describe how offspring are not identical to either parent but inherit features from both.
* Describe how animals are adapted - both those who are predators and prey.
* Recognise which features an offspring has inherited from which parent.
 | * Know how plants are adapted to live in the desert.
* Know that Charles Darwin suggested the theory of evolution that states that organisms change slowly over time to adapt to their surroundings in order to survive.
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| **Electricity** |  |  | * Recognise and draw symbols for wires, cells, bulbs, buzzers and switches.
* Investigate what happens to the brightness of bulbs when the number of cells are increased. Build circuits from circuit diagrams and vice versa.
* Investigate role of switches and conductors.
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