Key Stage 2 Year 5/ 6 Science, Hamilton Trust & Twinkl planning

Climate curriculum integrated into planning

Year / Term	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
A	**Properties and Changes of Materials** Compare and group together everyday materials on the basis of their properties, including their hardness, transparency, and conductivity (electrical and thermal). Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic	**Electricity** Plan and carry out a series of electrical circuit investigations. Draw a circuit diagram with a summary of the brightness, volume and speed of components within it.	**Animals (including humans)** Describe the changes as humans develop with age. Identify and name the main parts of the human circulatory system, including the heart, blood vessels and blood. Describe how nutrients and water are transported within bodies. Recognise the impact of diet, exercise, drugs and lifestyle on the body's function.	**Light** Recognise that light appears to travel in straight lines. Use the idea to explain that objects are seen because they give out or reflect light into the eye. That we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes. This is why shadows have the same shape as the objects that cast them.	**Living things and their habitats** Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. Describe the life process of reproduction in some plants and animals	**Revision Block** A review of the year's science topics
B	**Properties and Changes of Materials** Compare and group together everyday materials based on their properties, including their solubility and response to magnets. Demonstrate dissolving, mixing & changes of state, and how these can create new materials.	**Earth and Space** Describe the movement of the Earth and other planets, relative to the Sun in the solar system. Describe the movement of the Moon relative to the Earth. Describe the Sun, Earth and Moon as approximately spherical bodies	**Forces** Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object Identify the effects of air resistance, water resistance and friction that act between moving surfaces	**Evolution & Inheritance** Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. Identify how animals and plants are adapted to suit their environment in different ways, and that adaptation may lead to evolution.	**Living things and their habitats** Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including microorganisms, plants and animals	**Revision Block** A review of the year's science topics

Key Stage 2 Year 3/4 Science, Hamilton Trust & Twinkl planning

Climate curriculum integrated into planning

Year / Term	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
A	**Forces & Magnets** Compare and group together a variety of everyday materials based on whether they are attracted to a magnet, and identify some magnetic materials. Observe how magnets attract or repel each other and attract some materials and not others.	**Animals (including humans)** Identify that animals, including humans, need the right types and amounts of nutrition, and that they cannot make their own food; they get nutrition from what they eat. Identify that humans and some other animals have skeletons and muscles for support, protection and movement.	**Living things and their habitats** Recognise that living things can be grouped in a variety of ways. Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.	**Plants** Explore the part that flowers play in the life cycle of flowering plants.	**States of Matter** Compare and group materials together, according to whether they are solids, liquids or gases Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C). Identify the part played by evaporation and condensation in the water cycle, and associate the rate of evaporation with temperature	**Light** Recognise that they need light to see things and that dark is the absence of light Notice that light is reflected from surfaces. Recognise that shadows are formed when the light from a light source is blocked by an opaque object
B	**Sound** Identify how sounds are made, associating some of them with something vibrating. Recognise that vibrations from sounds travel through a medium to the ear. Find patterns between the pitch of a sound and the features of the object that produced it	**Rocks & Fossils** Compare and group together different kinds of rocks based on their appearance and simple physical properties. Describe in simple terms how fossils are formed when things that have lived are trapped within rock Recognise that soils are made from rocks and organic matter.	**Living Things & their Habitats** Recognise that environments can change and that this can sometimes pose dangers to living things	**Plants** Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers. Explore the requirements of plants for life and growth and how they vary from plant to plant. Investigate the way in which water is transported within plants	**Electricity** Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. Recognise some common conductors and insulators, and associate metals with being good conductors.	**Animals (including humans)** Describe the simple functions of the basic parts of the digestive system in humans Identify the different types of teeth in humans and their simple functions Construct and interpret a variety of food chains, identifying producers, predators and prey.