Year 6 – Living Things and Their Habitats	
Recall	**<u>Materials and States of Matter</u>** 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. Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets. **Vocabulary**: solid, liquid, gas, particles, boiling, melting, condensation, evaporation, water cycle, shape
End Point Disciplinary Knowledge (National Curriculum Statements)	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. Give reasons for classifying plants and animals based on specific characteristics.
Sequence of Learning / Contextual Knowledge (Lesson ideas)	Classify organisms into kingdom and phylum Sort organisms into categories Classify vertebrates into their 5 groups Classify invertebrates into different groups Explain the Linnaean system
Key Vocabulary	phylum, kingdom, photosynthesis, organisms, vertebrates, invertebrates, birds, fish, mammals, reptile, amphibian, Linnaean
Coverage Within School	Year 2 Year 4 Year 5
Teacher Assessment	
Possible Misconceptions	
Class Teacher Notes	

Year 6 – Inheritance and Evolution	
Recall	**<u>Materials and States of Matter</u>** Know that some materials will dissolve in liquid to form a solution and describe how to recover a substance from a solution. Use knowledge of solids, liquids, and gases to decide how mixtures might be separated, including through filtering, sieving, and evaporating. Give reasons, based on evidence from comparative and fair tests, for the uses of everyday materials, including metals, wood, and plastic. Demonstrate that dissolving, mixing and changes of state are reversible changes. Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. **Vocabulary**: materials, solids, liquids, gases, melting, freezing, evaporating, condensing, conductor, insulator, transparency
End Point Disciplinary Knowledge (National Curriculum Statements)	Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.
Sequence of Learning / Contextual Knowledge (Lesson ideas)	Understand inheritance and features that can or can't be inherited. Explore how different organisms adapt to their environment. Explore what a fossil is and how they can be used to inform us of the past. Understand the process of natural selection and evolution Conduct research on Charles Darwin
Key Vocabulary	fossils, adaptation, evolution, inheritance, generation, offspring, natural selection.
Coverage Within School	N/A
Teacher Assessment	
Possible Misconceptions	
Class Teacher Notes	

Year 6 – Electricity	
Recall	**<u>Forces and Sound</u>** 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. Recognise that some mechanisms, including levers, pulleys, and gears, allow a smaller force to have a greater effect. **Vocabulary**: forces, gravity, gravitational pull, weight, mass, friction, air resistance, water resistance, buoyancy, streamlined, mechanism, upthrust
End Point Disciplinary Knowledge (National Curriculum Statements)	Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. Use recognised symbols when representing a simple circuit in a diagram.
Sequence of Learning / Contextual Knowledge (Lesson ideas)	Investigate the function of components in a circuit Use symbols to draw accurate electrical circuits Investigate effects of voltage on components in a circuit
Key Vocabulary	series circuit, symbol, bulb, voltage, cells, electric current, component, Thomas Eddison, wires, switch, buzzers, electrodes, electrolyte, motor
Coverage Within School	Year 4
Teacher Assessment	
Possible Misconceptions	
Class Teacher Notes	

Year 6 – Light	
Recall	**<u>Earth and Space</u>** 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. Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky. **Vocabulary**: moon, Sun, star, planet, sphere, spherical bodies, satellite, orbit, rotate, axis, astronomer
End Point Disciplinary Knowledge (National Curriculum Statements)	Recognise that light appears to travel in straight lines. Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye. Explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes. Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.
Sequence of Learning / Contextual Knowledge (Lesson ideas)	Understand how light travels Understand that we can see objects because they are reflected Understand that refraction changes the direction of light Identify the colours that make up white light Investigate shadows
Key Vocabulary	photons, incidence, vacuum, reflection, spectrum, prism, refraction, shadow
Coverage Within School	Year 4
Teacher Assessment	
Possible Misconceptions	
Class Teacher Notes	

Year 6 – Animals including Humans	
Recall	**<u>Animals including Humans</u>** Describe the changes as humans develop to old age. **Vocabulary**- fertilisation, prenatal, gestation, reproduce, asexual reproduction, sexual reproduction, life cycle, adolescence, puberty, menstruation, adulthood **<u>Living Things and Their Habitats</u>** 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. **Vocabulary**- fertilise, gestation, life cycle, metamorphosis, pollination, reproduction
End Point Disciplinary Knowledge (National Curriculum Statements)	Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. Describe the ways in which nutrients and water are transported within animals, including humans
Sequence of Learning / Contextual Knowledge (Lesson ideas)	Identify parts of the heart and their function Identify the parts of the human circulatory system Investigate how exercise affects the heart Understand how diet, lifestyle and exercise affect the human body Recognise the impact of drugs and alcohol on the way bodies function
Key Vocabulary	circulatory system, heart, blood, blood vessels, veins, arteries, capillaries, diet, exercise, drugs, lifestyle, nutrients, water
Coverage Within School	Year 1 Year 2 Year 3 Year 4 Year 5
Teacher Assessment	
Possible Misconceptions	
Class Teacher Notes	