

Gatehouse School – Science Curriculum Overview Years 1-6 – 2020-2021

	Autumn 1	Autumn2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Humans What are our body parts? How do we use them? Are we alike or different?	Materials Can we identify different materials? Can we sort different materials? What are they used for?	Humans and Animals What are the similarities and differences between animals and humans? What are the similarities and differences between different animals?	Animals What do different animals need to survive? How can we care for different animals?	Plants Can you identify and name common plants? What are the different parts of a plant called?	Seasonal Changes What are the different seasons? How do the seasons change?
Year 2	Animals and Humans What do animals need to survive?	Living things and their Habitats What are the differences between living and non-living things? How do animals survive in different habitats?	Materials How can we use different materials? How can we change materials?	Electricity What are the uses of electricity? How can we create a simple circuit?	Plants I What do plants need to grow?	Plants II What are the different parts of a plant?
Year 3	Teeth and Balanced Diets Can you name the different teeth and their functions?	Rocks and Fossils What are the different types of rocks? How are rocks formed?	Forces and Magnets What are the different forces at work? What can a force do to an object?	Helping Plants Grow Well What are the functions of different parts of the plant?	Light and Shadows What happens in reflection? What happens in dispersion?	Light and Shadows/Revision Children will be introduced to topics from the autumn term next year

	<p>What is a balanced diet? What is digestion?</p>	<p>How are fossils formed?</p>	<p>What is a magnet? Where is the magnetic field found?</p>	<p>What happens in photosynthesis? What is mineral deficiency?</p>	<p>How is a shadow formed?</p>	
<p>Year 4</p>	<p>Moving and Growing</p> <p>What is the function of the skeleton? How do the muscles help us to move? What are the different types of muscles?</p> <p><i>Muscle dissection</i></p>	<p>Solids, Liquids and Gases</p> <p>What are the properties of solids, liquids and gases? Can you draw particle diagrams to show the arrangement of particles in the different states of matter? What happens in changes of state? What happens in the water cycle?</p>	<p>Electricity</p> <p>How does electricity flow? What is the difference between a parallel and series circuit? What is a conductor/insulator?</p>	<p>Habitats</p> <p>How have animals adapted to live in different habitats? What does a food chain show? How do we draw a food web?</p>	<p>Sound</p> <p>How does sound travel? How do we hear sound?</p>	<p>Sound/Revision</p> <p>How can we change the pitch and amplitude of sound? Children will be introduced to topics from the autumn term next year</p>
<p>Year 5</p>	<p>The Heart and Circulatory System</p> <p>What are names of the chambers of the heart? What happens in the double circulatory system? How does the heart pump blood? (cardiac cycle)</p>	<p>Separating Mixtures</p> <p>What methods can we use to separate mixtures? How do you carry out chromatography? What is the difference between a chemical and physical change?</p> <p><i>Using Bunsen Burners</i></p>	<p>Advanced Forces and Friction</p> <p>What is the difference between a balanced and unbalanced force? What is a resultant force? How can we reduce the effects of air resistance?</p>	<p>Respiration and Digestion</p> <p>What is aerobic respiration? What is anaerobic respiration? What are the differences between aerobic and anaerobic respiration?</p>	<p>Space</p> <p>What are the different planets in the solar system? What happens in the life cycle of a main sequence star? What happens in the life cycle of a massive star? How can we explore the cosmos?</p>	<p>Space/Revision</p> <p>Can we predict the future of space exploration?</p>

	<i>Lamb's heart dissection</i>			What happens in the process of digestion? What is an enzyme?		
Year 6	DNA, Genes, Inheritance and Evolution What is DNA made of? What is inheritance? What is an allele? What is a DNA mutation? What is natural selection?	Cells and Pathogens What is the difference between an animal and plant cell? What are the main disease-causing pathogens? How does the immune system respond to pathogens? What is the difference between a communicable and non-communicable disease?	Periodic Table and Chemical Changes What is the structure of an atom? What are the alkali metals (group 1)? What is the reactivity series and displacement reactions? What happens in a neutralization reaction?	Advanced Light How do we see? What happens in reflection/refraction /dispersion? How do we see different colours? <i>Lamb's eye dissection</i>	Advanced Circuits/Science Fair Preparation How can we make an electromagnet? What is the difference between current and voltage? Preparation for Year 6's Science Fair in Late June/early July	Science Fair Preparation Preparation for Year 6's Science Fair in Late June/early July for the whole school and parents