Amherst School - Science Overview

KEY – B = Biology C = Chemistry P = Physics

Year 3

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Rocks and Fossils - C 1. Igneous rocks 2. Sedimentary and Metamorphic 3. Weathering 4. Explore how water contributes to weathering 5. How fossils are formed 6. Explore different types of soil	**Animals, including humans – B** 1. 5 key food groups 2. Nutrition 3. Different types of skeleton 4. Human skeleton 5. Animals and their skeletons 6. Role of muscles	**Forces and Magnets - P** 1. Contact and non-contact forces 2. Explore how things move on different surfaces 3. Types of magnet 4. Magnetic materials 5. Testing magnet strength **6.** Everyday uses of magnets	**Light - P** 1. Light sources and non-light sources 2. Sunlight and safety 3. Reflective materials 4. How shadows are formed 5. Shadow change throughout the day 6. Investigate how you can change shadow size	**Living things - Plants - B** 1. What plants need to grow (conditions) 2. Parts of a flower 3. How water is transported in plants 4. Pollination and Germination in flowering plants 5. Seed dispersal 6. Investigate effect of different factors on plant growth	**Scientific Enquiry** 1. Solar oven predicting 2. Solar oven recording and presenting 3. Cleaning coins 1 4. Cleaning coins 2 5. Making a cake – fair testing, controls and variables 6. Making a cake – scientific enquiry

Year 4

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Animals including Humans - B 1. Organs in the digestive system 2. Digestive system and its function 3. Teeth and their functions 4. Investigate the effects of different liquids on the teeth 5. Food chains 6. Food webs	**States of Matter - C** 1. 3 states of matter 2. Particles in solids, liquids and gases 3. Melting points 4. Freezing and boiling points 5. Evaporation, condensation 6. Water Cycle	**Electricity - P** 1. Electrical appliances and safety 2. Simple circuits (series) and naming components 3. Investigate circuits 4. Conductors and insulators of electricity 5. Switches and their effects on circuits 6. Investigate how components can change a circuit	**Sound - P** 1. How sounds are made 2. How vibrations travel to the ear 3. Sound insulation 4. Volume 5. Pitch 6. Sounds and distance	**Living things and their habitats - B** 1. Explore different habitats 2. Research a habitat 3. Classifying animals 4. Create a classification key 5. Adaptations and classification within species 6. Explore and classify pond plants	**Living things and their habitats (conservation)** 1. Describing ecosystems 2. Human impact on the environment 3. Air pollution 4. Water pollution 5. Conserving water 6. Positive impacts humans can have on nature

Year 5

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Earth and Space - P 1. Solar system and its planets 2. Heliocentric model of the solar system 3. Earth's movement in space 4. Earth's rotation and night and day 5. Phases and movement of the moon 6. Design a planet	**Properties of Materials - C** 1. Explore properties of materials 2. Thermal conductors and insulators 3. Hardness of materials 4. Solubility in water 5. Investigate solubility of materials 6. Separating mixtures (sieving/evaporating /magnets/filtering)	**Living things and their habitats - B** 1. Life processes of a plant 2. Life cycles of mammals 3. Compare life cycles of insects and amphibians 4. Life cycles of birds and reptiles 5. Life process of reproduction in some plants and animals 6. Life and work of Jane Goodall and David Attenborough 7. Research and present the life cycle of a creature	**Forces - P** 1. Gravity and Isaac Newton 2. Air resistance and parachute 3. Water resistance 4. Investigate friction on different surfaces 5. Investigate mechanisms – levers and pulleys 6. Mechanisms - gears	**Changes of Materials - C** 1. Evaporation to recover a solute from a solution 2. Reversible changes 3. Chemical reactions 4. Rusting reactions 5. Burning reactions 6. Investigate chemical reactions (acids and bicarb)	**Animals including Humans - B** 1. Identify key stages of a mammal's life cycle 2. Gestation periods in mammals 3. Foetal development 4. Investigating hand span 5. Changes experienced in puberty 6. Human changes during old age

Year 6 – Sevenoaks Science Workshops on rotation – Thursday PM

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Animals including humans - B **1.** Function of the heart and circulatory system **2.** Identify and compare blood vessels **3.** Explore blood **4.** How the body transports water and nutrients **5.** Investigate what affects your heart rate **6.** Impact of drugs and alcohol on the body	**Electricity - P** 1. Parts of an electric circuit 2. Explore voltage 3. Identify and correct problems in a circuit 4. What affects the output of a circuit 5. Build a set of traffic lights 6. Electrical conductors and insulators	**Light - P** 1. Light travels in straight lines 2. Explore reflection 3. How reflection helps us see 4. Investigate how shadows change 5. Why shadows have the same shape as the objects that cast them 6. Light phenomena	**Evolution and Inheritance - B** 1. How offspring vary 2. Animal adaptations 3. Plant adaptations 4. Exploring fossils 5. Theory of evolution by natural selection 6. Explore human evolution	**Living things and their habitats - B** 1. Classifying organisms 2. Kingdoms of life 3. Classify living things using Linnaean system 4. Characteristics of microorganisms 5. Asexual reproduction (spores) 6. Classify and describe a living organism	**Looking after our environment - B** 1. Climate change 2. Explore ways to reduce rubbish 3. Explore ways to reduce energy consumption 4. What happens when fuels are burnt 5. Outcomes of COP26 6. Comparing weather data