Hawkesley Church Primary Academy
Science - KS2 to KS3 Bridging Document

KS2 National Curriculum End points	How do we prepare children at the end of Year 6?	Year 7 End points
Working Scientifically - planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary - taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate - recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs - using test results to make predictions to set up further comparative and fair tests - reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations - identifying scientific evidence that has been used to support or refute ideas or arguments. 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 - give reasons for classifying plants and animals based on specific characteristics Animals including humans:	Once children have met and securely achieved the National Curriculum end points for KS2, what do children need to do to meet Year 7 starting points: We aim to improve opportunities for all young people regardless of background. In science, this means pupils developing a comprehensive and connected understanding of the big picture of science and ensuring that young people leave school with enough science capital to inform their decision making throughout their life, to understand their impact on the environment and how to be and stay healthy. To do this we will ensure pupils build up a body of key knowledge, concepts and practical skills over time and these will be interleaved throughout a 7-year curriculum to ensure success. Pupils will be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena.	• Cell Structure & Specialised Cells • Using Microscopes • Particle model- solids, liquids and gases • State changes • Diffusion • Types of forces • Resultant forces • Density • Sexual and asexual reproduction • Puberty & The Menstrual cycle • Embryo development & Plant reproduction • Atoms, elements and compounds • Conservation of mass • Chemical formulae • Weight & Gravitational force • Solar System • Ecosystems • Feeding Relationships & Competition • Biotic & Abiotic Factors • Types of energy • Energy Transfers & Efficiency • Solvents, Solutes and Solutions • Filtration, Distillation & Chromatography • Circuits symbols • Current, potential difference and resistance • Series V Parallel circuits

- 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. <u>Evolution and Inheritance</u> - 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. <u>Light</u> - 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. Electricity - 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.		