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| **Long Term Forecast SCIENCE Upper Key Stage 2 2017-18** | | | | | | | | |
|  | | **Autumn Term 2017** | | | **Spring Term 2018** | | **Summer Term 2018** | |
| Pupils should be taught about: **WORKING SCIENTIFICALLY** During years 5 and 6, pupil should be taught to use the following practical scientific methods, processes and skills through the teaching of the programmes of study content:   * 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 enquires, 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   **Seasonal Changes** to be taught throughout the year   * Observe life cycles of plants, trees and animals in the local environment throughout the year | | | | | | | | |
| Year 5 | **Properties and changes of materials**   * 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   * Know that some   materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution | | **Properties and changes of materials continued** | **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   * Use the idea of   the Earth’s rotation to explain day and night and the apparent movement of the sun across the sky | | **Living things and their habitat**   * Describe the   differences in the life cycle of a mammal, an amphibian, an insect and a bird   * Describe the life   process of reproduction in some plants and animals | Animals including **humans**   * Describe the   changes as humans develop to old age | **Forces**   * Explain that   unsupported objects fall toward the Earth because of the force of gravity acting between the Earth and the falling objects   * 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 |
| Year 6 | **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 functions, 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 | | **Light**   * Recognise   that light appears to travel in straight lines   * Use the   ideas 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 they 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 | **Evolution and 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   * 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 | | **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 micro-organisms, plants and animals   * Give reasons for   classifying plants and animals based on specific characteristics | **Animals including humans**   * 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 |  |