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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
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| 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 |  |