Bromesberrow St Mary's Primary School

Science Curriculum Overview 2018/2019 – Class 3

Working Scientifically (UKS2):

- Can plan different types of scientific enquiries to answer questions, including recognising & controlling variables where necessary.
- Can take measurements, using a range of scientific equipment, with increasing accuracy & precision, taking repeat readings where necessary.
- Can record data & results of increasing complexity using scientific diagrams & labels, classification keys, tables, scatter graphs, bar & line graphs.
- Can use tests to make predictions to set up further comparative & fair tests.
- Can report & present findings from enquiries, including conclusions, casual relationships & explanations of & degree of trust in results, in oral & written forms such as displays & other presentations.
- Can identify scientific evidence that has been used to support or refute ideas or arguments.

Working Scientific Language:

Y4: *questions, types of scientific enquiry, answer, similarities, differences, changes, identify, classify, sort, group, order, observe changes over time, notice pattern, link, secondary sources, comparative tests, fair tests, careful, accurate, observations, questions, answers, equipment, gather, measure, record, results, evidence, present, data/evidence/results, keys, bar charts, table, conclusions, prediction, support/no support, thermometers, data loggers, magnifying glass, microscope, increase, decrease, appearance.*

Y5: *questions, types of scientific enquiry, answer, similarities, differences, changes, increase, decrease, identify, classify, sort, group, order, observe changes over time, notice pattern, link, secondary sources, comparative tests, fair tests, variables, independent variable, dependent variable, controlled variable, careful, accurate, accuracy, precision, degree of trust, observations, questions, answers, equipment, gather, measure, record, results, evidence, present, data/evidence/results, keys, bar charts, scatter graphs, line graphs, table, conclusions, casual relationships, prediction, support/refute, support/not support, thermometers, data loggers, magnifying glass, microscope, appearance.*

Y6: *as Y5*

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	Autumn 2018	Spring 2019	Summer 2019
Class 3 **Y4** **Y5** **Y6**	**States Of Matter:** -compare and group materials together, according to whether they are solids, liquids or gases -observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C) -identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature **Properties & Changes of Materials** -compare and group together everyday materials based on evidence from comparative and fair tests, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets. -understand that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution. -use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. -give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. -demonstrate that dissolving, mixing and changes of state are reversible changes. -explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.	**Forces** -explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. -identify the effects of air resistance, water resistance and friction, that act between moving surfaces. -understand that force and motion can be transferred through mechanical devices such as gears, pulleys, levers and springs. **Earth & 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.	**Sound:** -identify how sounds are made, associating some of them with something vibrating -recognise that vibrations from sounds travel through a medium to the ear -find patterns between the pitch of a sound and features of the object that produced it -find patterns between the volume of a sound and the strength of the vibrations that produced it -recognise that sounds get fainter as the distance from the sound source increases **Light:** -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

Created by Sue Carpenter

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Class 3 Y4 Y5 Y6	**Evolution & 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.	**Animals (inc humans)** -describe the simple functions of the basic parts of the digestive system in humans -identify the different types of teeth in humans and their simple functions -construct and interpret a variety of food chains, identifying producers, predators and prey -describe the changes as humans develop from birth to old age. -identify and name the main parts of the human circulatory system, and explain 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.	**Living Things and their Habitats:** -recognise that living things can be grouped in a variety of ways -explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment -recognise that environments can change and that this can sometimes pose dangers to living things -describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird -describe the life process of reproduction in some plants and animals -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