Crays Hill Primary School

BERLESDUNA ACADEMY TRUST

| | Autumn 1 and Autumn 2 | | | Spring 1 and 2 | | | Summer 1 and Summer 2 | | | |
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| | **Week 1-5** | **Week 6-10** | **Week 11-12** | **Weeks 1-4** | **Weeks 5-9** | **Weeks 10-12** | **Weeks 1-3** | **Weeks 4-7** | **Week 8** | **Weeks 9-10** |
| **Year 5**<br><br>**Focus** | **Forces** | **Space** | **Global warming** | **Properties of materials** | **Animals including humans** | **Life cycles** | **Reproduction A** | **Reversible and irreversible changes**<br><br>Animals including humans | **Plastic Pollution** | **Reproduction B** |
| **Knowledge check for start of each unit** | Y3 forces and magnets – pupils learned how things move on different surfaces and how forces can need contact of in the case of magnets can act at a distance. Pupils looked at magnets and how they attract and repel and compared and grouped materials that were magnetic or not. Pupils should know that a magnet has two poles and be able to describe what happens when two poles face each other. | This is the first time pupils will have been taught a scientific unit on Earth and space. | This is the first time pupils will have been taught a scientific unit on Global Warming. | Y4 - pupils learned about states of matter. They compared and grouped materials and identified if they were a solid, liquid or gas. | Y4 - Pupils learned the simple functions of the basic parts of digestive system in humans. They learned about different types of teeth in humans and their simple functions. Pupils learned about a variety of food chains and used the terms producer, predator and prey. | | Y4 - Pupils learned the simple functions of the basic parts of digestive system in humans. They learned about different types of teeth in humans and their simple functions. Pupils learned about a variety of food chains and used the terms producer, predator and prey. | Y4 - They observed how some materials changed state when heated or cooled and identified evaporation and condensation as part of the water cycle. | This is the first time pupils will have been taught a scientific unit on Plastic pollution. | Y4 - Pupils learned the simple functions of the basic parts of digestive system in humans. They learned about different types of teeth in humans and their simple functions. Pupils learned about a variety of food chains and used the terms producer, predator and prey. |

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| Key concepts | I can: | I can: | I can: | I can: | I can: | I can: | I can: | I can: | I can: | I can: |
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| | explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object<br><br>identify the effects of air resistance, (parachutes and sycamore seeds),<br><br>identify the effects of water resistance (testing boats of different shapes)<br><br>identify the effects of friction (brakes on a bicycle), that act between moving surfaces<br><br>explain that some mechanisms, including levers, pulleys | describe the movement of the Earth and other planets relative to the sun in the solar system<br><br>describe the movement of the moon relative to the Earth<br><br>describe the sun, Earth and moon using the term spherical<br><br>use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky | Describe what global warming is.<br><br>I can identify how global warming affects living things. | 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<br><br>give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic | Describe the changes as humans develop to old age<br>- To draw a timeline to indicate the stages in growth and development of humans<br>- To record the length and mass of a baby as it grows<br><br>(non-statutory – gestation periods of animals compared with humans, changes experienced in puberty) | describe the differences in the life cycles of:<br>• a mammal (human and one other)<br>• an amphibian (frog),<br>• an insect (butterfly)<br>• a bird (Chicken) | describe the life process of reproduction in some plants and animals<br>- sexual reproduction in plants<br>- asexual reproduction in plants<br><br>explain who David Attenborough/ Jane Goodall are and what they do. | explain that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution<br><br>use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating<br><br>describe what a reversible change means:<br>- Melting: Solid to liquid when heat is applied i.e. ice to water<br>- Freezing: when a liquid is turned to a solid. Water to ice cube or cream to ice cream<br><br>describe what an irreversible change means:<br>- vinegar and bicarbonate of soda<br>- burning | Explain what plastic pollution is.<br><br>Identify the affects of plastic pollution on the planet. | describe the life process of reproduction in some plants and animals<br>- sexual reproduction in plants<br>- asexual reproduction in plants<br><br>explain who David Attenborough/ Jane Goodall are and what they do. |

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| | and gears, allow a smaller force to have a greater effect.<br><br>Know who Isaac Newton and Galileo were | | | | | | | | | |
| **Vocabulary** | Friction<br>Gravity<br>Air resistance<br>Water resistance<br>Levers<br>Pulleys<br>Gears<br>Parachute<br>Galileo<br>Newton | Orbit<br>solar system<br>astronomical<br>Planets: mercury, venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune<br>Rotation<br>Spherical<br>Crescent moon<br>Gibbous moon<br>Eclipse<br>Lunar<br>Sun | global warming<br>greenhouse gases<br>fossil fuels<br>climate change | Soluble<br>Insoluble<br>Transparent<br>Opaque<br>Electrical conductor<br>Electrical insulator<br>Thermal<br>Thermal insulator<br>Magnetic<br>Non magnetic | Puberty<br>Gestation<br>Reproduction<br>Foetus<br>Baby<br>Toddler<br>Teenager<br>Young adult<br>Adult<br>Embryo | Life cycle, reproduction,<br><br>Mammal: baby, child, adults, seniors, pregnancy, live young<br><br>Amphibian: eggs, young, different forms, frog spawn, tadpole, froglet, frog, metamorphosis<br><br>Insects: egg, larva, pupa, chrysalis, caterpillar, butterfly<br><br>Birds: egg, nest, embryo, young, chick, hatch, hatchling, chicken | Sexual reproduction of a plant: stamen, carpel, pollen, eg, stigma, pollination, fertilistation<br><br>Do not discuss human reproduction other than the basic stages of life – this is non-statutory and parental consent needs to be obtained | Dissolve<br>Solution<br>Particles<br>Sieving<br>Filtering<br>Evaporating<br>Reversible changes<br>Irreversible changes<br><br>Melting<br>Freezing<br>Evaporating<br>Condensing<br>Solid liquid gas | plastic habitat<br>plastic pollution<br>landfill<br>pollution | Sexual reproduction of a plant: stamen, carpel, pollen, eg, stigma, pollination, fertilistation<br><br>Do not discuss human reproduction other than the basic stages of life – this is non-statutory and parental consent needs to be obtained |
| **Link book** | The man who walked between the towers | Earth and Space | Earth and Space | Chemical chaos<br>Change it | The Nowhere Emporium<br><br>Big Cat, Little Cat | The Nowhere Emporium<br><br>Big Cat, Little Cat | Y The Nowhere Emporium<br><br>Big Cat, Little Cat | Chemical chaos<br>Change it | | Y The Nowhere Emporium<br><br>Big Cat, Little Cat |
| **Knowledge mat** | Year 5: Forces | Year 5: earth and space | Year 5: earth and space | Year 5: reversible and irreversible changes | Year 5: Living things and their habitats | Year 5: Life Cycles | Year 5: Life Cycles | Year 5: reversible and irreversible changes | | Year 5: Life Cycles |

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| **Enrichment** | | | | | Hatching chicks | Hatching chicks | Hatching chicks | | | |