

Autumn 1 A new perspective	Autumn 2 Courage and conflict	Spring 1 Polar regions	Spring 2 Digital dreams	Summer 1 Neuvo Mundo	Summer 2 ID
Light The children will: • 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 the light that 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. Ibn Sahl - Mathematician who observed the paths of rays of light as they reflected off different mirrors	Electricity – morse code The children will: • 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. Nikola Tesla - Electrical & Mechanical Engineer who developed the AC electrical system and made important advances in technologies such as x-rays, neon lights and robotics	Polar adaptations/ Darwin Evolution and inheritance The children will: • 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. Charles Darwin - Natural Historian who developed the theory of evolution by natural selection Living things and their habitats The children will: • 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	Electricity - batteries The children will: • 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. Mildred S Dresselhaus Materials Scientist whose research led to the development of the rechargeable batteries in all modern electronic equipment Science week: producing a poster about: Paiute: Alfred Russel Wallace Kiowa: Sarah Gilbert	Adaptations – hot Evolution and inheritance The children will: • 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. Telma Laurentino Evolutionary Biologist who measures differences in the colour of lizards that live in white desert sands to find differences in their genes which might have allowed them to survive in such an extreme environment Living things and their habitats The children will: • describe how living things are classified into broad groups according to	Circulatory system Animals including humans The children will: • 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. William Harvey Doctor who discovered the nature of blood circulation and the function of the heart as a pump

		• give reasons for classifying plants and animals based on specific characteristics Carl Linnaeus Botanist & Zoologist who developed a taxonomy for classifying organisms.		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	
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Pupils will be taught to use the following skills when carrying out investigations:

- Plan different types of scientific enquiries to answer questions, including recognise and controlling variables where necessary
- Independently take measurements, using a range of scientific equipment, (thermometers, pedometers, stop watches, force meters) with increasing accuracy and precision and take repeat readings when appropriate
- Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, graphs, bar and line graphs. Think sensibly about the scales to use.
- Make predictions that relate to past learning and give reasons for their predictions

- Discuss if they feel they have achieved a valid result
- Identifying scientific evidence that has been used to support or refute ideas or arguments in relation to the origin of man
- Explore systematically and logically to reach a conclusion
- Recognise that scientific ideas change and develop over time for example the knowledge of our solar system
- Draw conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific knowledge and understanding to explain their findings.
- Pupils should read, use, spell and pronounce scientific Vocabulary correctly, unless a specific education need has been identified