

Autumn 1 The Boy King	Autumn 2 To infinity and beyond	Spring 1 The Tudors	Spring 2 Sow and grow	Summer 1 The Alchemist's Island	Summer 2 Travelling through time
Properties and changes of materials The children will: <ul style="list-style-type: none"> • 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 • give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic • 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. Jamie Garcia - links to free resources requiring a login (Chemist who discovered a fully recyclable plastic)	Earth and space The children will: <ul style="list-style-type: none"> • 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. Nicolaus Copernicus (Astronomer who developed the theory that the Sun was at the centre of the Solar System around which the planets orbited)	Forces The children will: <ul style="list-style-type: none"> • 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 • recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. Brahmagupta - search document for information (Mathematician & Astronomer who was the first scientist to talk about gravity)	Living things and their habitats The children will: <ul style="list-style-type: none"> • describe the life process of reproduction in some plants and animals. • describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird Jane Goodall (Wildlife Researcher & Conservationist who studied chimpanzees) Science week: producing a poster about: Innoko: William Cookworthy Comanche: Maria Mitchell	Properties and changes of materials The children will: <ul style="list-style-type: none"> • know 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 • 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 Andre Geim & Konstantin Novoselov (Physicists who discovered graphene)	Animals, including humans The children will: <ul style="list-style-type: none"> • describe the changes as humans develop to old age. Virginia Apgar (Doctor & Medical Researcher who developed a method of evaluating the well-being of new-born babies)

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