Science Curriculum Map

Science - Our Why?

The Aim of Science at Discovery is to inspire curiosity, provoke thinking, understand scientific concepts and investigate questions. Scientific thinking and investigative skills prepare students for adulthood and lifelong learning and critical thinking about wider scientific issues. STEAM allows for students to apply their knowledge to a real life application, through cross curricular links with maths, technology and art. Pupils develop their knowledge and skills through our K&S Statements.

Big Ideas promoted in our Science Curriculum













Substantive Concepts of our Science Curriculum

Cells	000	All organisms are constituted of one or more cells. Organisms are organised on a cellular basis. All the basic functions of life are the result of what happens inside the cells which makeup an organism. Growth is the result of multiple divisions
Energy		Many processes or events involve change and require energy to make them happen. Energy can be transferred from one body to another in various ways. In these processes some energy is changed to a form that is less easy to use. Energy cannot be created or destroyed. Energy obtained from fossil fuels is no longer available in a convenient form for use.
Earth and Space	\$ 000 B	The composition of the Earth and its atmosphere and the processes occurring within them to shape the Earth's surface and its climate. Our solar system is a very small part of the one of millions of galaxies in the Universe
Ecosystems	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	Organisms require a supply of energy and materials for which they are often dependent on or in completion with other organisms
Particles		All material in the universe is made of very small particles. Atoms are the building blocks of all materials, living and non-living. The behaviour of atoms explains the properties of different materials. Chemical reactions involve the rearrangement of atoms in substances to form new substances. Each atom has a nucleus containing neutrons and protons surrounded by electrons. The opposite electric charge of protons and electrons attract each other, keeping atoms together and accounting for the formation of some compounds.
Fields and Lightwaves		Objects can affect other objects at a distance, through light and sound, effect of radiation travelling out from the source to the receiver.
Evolution		The diversity of organisms living and extinct is the result of evolution.

















2.2 U6 Power & Conflict

GCSE Science. Chemistry Paper 1/2 3.1 U6 Resourcefulness & Resilience

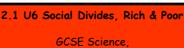
GCSE Science, Physics Paper 1/2

GCSE Science. Physics Paper 1/2

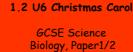




Chemistry Paper 1/2









GCSE Science.

Biology, Paper 1/2

3.2 U6 Identity

Nebula, Galaxy & Cosmos





3.1 Heroes & Villains

Entry Level Science: Biology (B2) Environment, Evolution and Inheritance.

1.2 Stargazers







Entry Level Science: Chemistry (C4) Chemistry in Our World.



Entry Level Science: Biology (B2)

Environment, Evolution and Inheritance.

Twilight, Eclipse



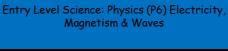
Entry Level Science: Chemistry (C4)



<u>&</u> Orbit

2.1 Peasants, Princes & Pestilence

Chemistry in Our World.



1.1 1066

Entry Level Science: Physics (P6) Electricity, Magnetism & Waves







2.2 Off With Your Head!

Entry Level Science: Biology (B1) The Human Body

Entry Level Science: Physics (P5) Energy, Forces and the Structure of Matter

3.1 Environmental Artists

3.2 Darwin's Delights

Entry Level Science: Physics (P5) Energy, Forces and the Structure of Matter.









2.1 States of Matter

Entry Level Science: Biology (B1) The Human Body



.Entry Level Science: Chemistry (C3) Elements, Compounds & Mixtures

Entry Level Science: Chemistry (C3) Elements, Compounds & Mixtures



2.2 Blood Heart

Biology: Human Body, Circulatory System









3.2 I Am Warrior! Chemistry: Materials, coins and weapons.





















3.1 Road Trip USA

Physics: Light, Electricity





Nova

2.1 Tremors

Physics: Rocks, Earth's Layers



1.2 Gods and Mortals Chemistry: States of Matter

3.1 Coastline

1.1 Spirit

Biology: Exercise and healthy eating Physics: Forces











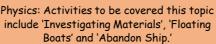




2.2 Misty Mountain, Winding River

Biology and Chemistry: Students will carry out experiments to study soil and water. They will study the water cycle, look into river formations and compare different plants.





3.2 Muck, Mess and Mixtures

Physics: Activities to be covered this topic include 'What makes the loudest sound?'.









Astro

2.1 Towers Tunnels and Turrets

Physics and Chemistry: Activities to be covered this topic include 'Playground Visit', Sorting and Classifying', 'Slip and Slide', 'Magnetic Object Hunt' and 'Investigating Magnets.'



1.2 Scrumdiddlyumptious

Biology: Healthy eating





1.1 Tribal Tales

Physics: Materials. Biology: Planting and caring for crops.







2.1 Enchanted woodland



3.1 Our Wonderful World

Chemistry: Activities to be covered this topic include 'Playing in the wind', 'melting' and 'freezing'



2.2 Paws claws and whiskers

Biology: Activities to be covered this topic

include 'fossils', 'Reptile Day', 'How Big?' and

'Dino dentist!'

Biology: Identify plants and animals. Recognise living and dead materials and observe changes. Plant and care for seeds





Comets

3.2 Rio Da Vida

Physics: Activities to be covered this topic 'time zones', 'day and night' and 'moon phases'

2.2 Amazing Animals

Exploring and using media and materials; Being

imaginative. Activities to be covered include

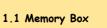
'reptile house visit.' And 'who eats who?'

topic include 'Shiny Things', 'reflections' and 'mirror images'

The World: Activities to be covered this

1.2 TEAM



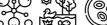


Biology: Activities to be covered this topic include 'seasonal clothing' and 'tree changes'









3.1 Peculiar Plants

Exploring and using media and materials;

Being imaginative. Activities to be covered

this topic include 'Supermarket Visit' and 'Are

all carrots orange?.





3.2 On The Beach

Exploring and using media and materials. Activities to be covered include 'Seabirds' and 'Brightly Coloured Shells.'.











Rockets

2.1 Puppet Show

The world, Technology: Activities to be covered in this topic include 'What noise did I make?' and 'toy mechanisms'

1.2 Winter Wonderland

Exploring and using media and materials; Being imaginative. Activities to be covered include 'woodland visit" and "land artists".

1.1 Build It Up

Exploring and using media and materials; Being imaginative: Activities to be covered this topic include 'Loose Parts.'