UKS2 Science
Stay and Learn – March'25

BRITISH SCIENCE WEEK
7 – 16 March 2025

Great Sankey Primary School
'Together We Learn and Grow'

PART OF THE CHALLENGE ACADEMY TRUST | SERVE | CHALLENGE | EMPOWER
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Welcome!

Today we hope to:

- **Provide you with some information as to what the science curriculum looks like for your children in Years 5 and 6.**
- **Explain to you how we teach science at Great Sankey Primary School .**
- **Give you some ideas as to how you can support your child with their science learning and understanding at home.**
- **Offer an insight into what aspects of science can look like in school.**
- **No planned fire drills.**
- **Use of mobile phones not allowed due to safeguarding policies in place.**

The National Curriculum – KS2

Working scientifically

Statutory requirements

During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
- recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- using test results to make predictions to set up further comparative and fair tests
- reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations
- identifying scientific evidence that has been used to support or refute ideas or arguments.

The National Curriculum For Science in UKS2 builds upon the children's learning in Science from LKS2, KS1 and their understanding of the world around them.

It's a subject where children are encouraged to be inquisitive, ask questions and learn about the world around them.

The 'Working Scientifically' aims underpin the practical Science that children will cover across UKS2.

Working Scientifically – UKS2

I can ask different kinds of questions.

I can set up tests when necessary.

I can plan different types of scientific enquiries to answer questions.

I can use relevant scientific language and illustrations.

Working Scientifically at Upper Key Stage 2

I can decide what observations and measurements to make.

I can use results to make predictions and set up more test (including fair tests)

I can report and present findings using speaking and writing, including displays and presentations.

I can use different scientific equipment to measure with precision. I can take repeat readings when appropriate

I can gather, record, classify and present data in different ways.

We teach topics across a two-year cycle at GSP due to our mixed age range classes:

CYCLE A

AUTUMN		SPRING	SUMMER
FORCES Pupils should be taught to: • 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.	EARTH & SPACE Pupils should be taught to: • 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.	PROPERTIES & CHANGES OF MATERIALS Pupils should be taught to: • 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 • 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 • 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.	LIVING THINGS Pupils should be taught to: • 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 the changes as humans develop to old age. • 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.

Working Scientifically objectives span across the two years that children spend in UKS2. Some topics lend themselves to objectives more than others.

CYCLE B

AUTUMN		SPRING	SUMMER
ELECTRICITY Pupils should be taught to: • 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.	ANIMALS INCLUDING HUMANS Pupils should be taught to: • 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.	LIGHT Pupils should be taught to: • 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.	EVOLUTION & INHERITANCE Pupils should be taught to: • 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.

How is Science taught at GSP?

- When we start each unit of learning, we retrieve all relevant prior knowledge from our time in either the previous year or the previous topic using various retrieval tasks – e.g. quizzing, true/false statements, odd one out picture tasks etc.

- We address any misconceptions at this point - before we build on their current understanding with new learning.

How is Science taught at GSP?

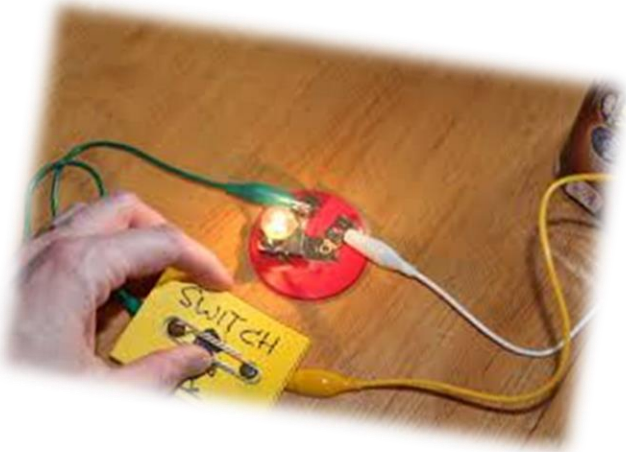
Explorify

FabLab Warrington

How is Science taught at GSP?

- We deliver the knowledge content set by the National Curriculum through a series of carefully sequenced lessons which incorporate the practical enquiry sessions to cover the Working Scientifically objectives.

- We use various resources to aid the children's understanding including video clips, actual resources, books, trips and technology. We also use the range of Science resources we have in school – minibeast finders, magnifiers, electrical circuits etc.

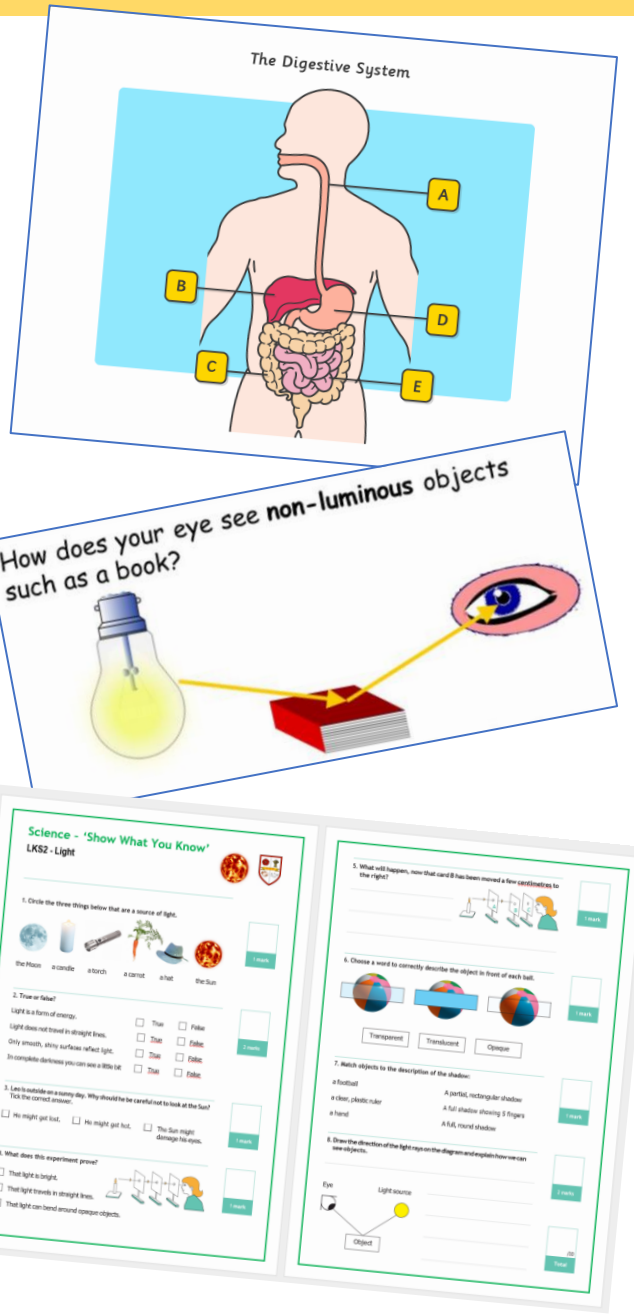


- The children are asked to think like scientists, work like scientists and record like scientists.

Assessing Science @ GSP

- Assessment takes place every day, every lesson as a part of the teaching cycle. Lots of this is done practically or through the lesson activities the children complete.

- At the end of Key Stage 2 when children finish their time at Primary School, teachers make a judgement as to whether the children have achieved the Expectations in Science and understand the content that has been delivered.



RSE

- As a school, we have a duty to teach relationships education and about what healthy friendships look like. This is covered through our school PSHE curriculum and is shared each academic year with families.

- In terms of Sex Education, after consultation with parents, carers and governors it is agreed that at GSP we only cover what is statutory through the Science National Curriculum.

SUMMER

LIVING THINGS
Pupils should be taught to:

- 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 the changes as humans develop to old age.
- 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.

SUMMER

EVOLUTION & INHERITANCE
Pupils should be taught to:

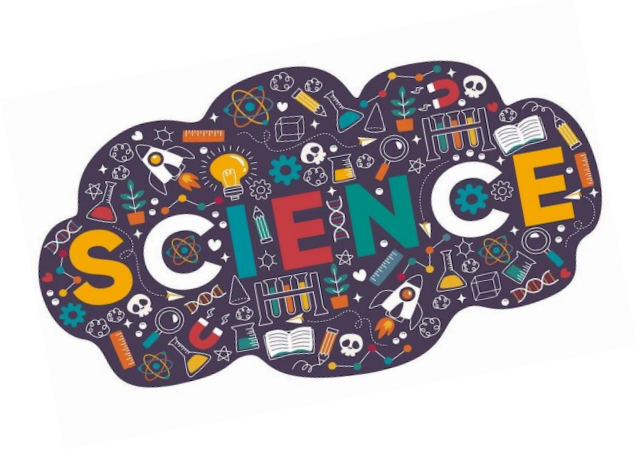
- recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago
- recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents
- identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.

How can families support at home?

- Help your child learn about the world around them by talking to them about Science in the home and out in Nature - e.g steam from the kettle, condensation, rainbows, animal habitats etc.

- Ask your children to explain what they have been learning about in their science lessons.

- Help them to explain any scientific vocabulary accurately.



- Visit our Science section on the school website and look at the different Science resources available online.

Places To Visit

Questions & Classroom Visits