

## Primary Workshops

### Enjoy the new science curriculum, stimulate curiosity and have fun

All our workshops support the overall aims of the Curriculum:

#### Foundation

*“Children should experience the familiar world through enquiry ... in a safe and systematic way. They should be given experiences that help them to increase their curiosity about the world around them ... Using all their senses, they should be encouraged to enjoy learning by exploration, enquiry, experimentation, asking questions and trying to find answers.”*

#### Key Stage 2

*“Learners should be taught to relate their scientific skills, knowledge and understanding to applications of science in everyday life, including current issues. They should be taught to recognise that scientific ideas can be evaluated by means of information gathered from observations and measurements. Teaching should encourage learners to manage their own learning and develop learning and thinking strategies appropriate to their maturity. They should be taught to value others’ views ...*

*Activities should foster curiosity and creativity and be interesting, enjoyable, relevant and challenging for the learner. They should enable learners to initiate, explore and share ideas, and extend, refine and apply their skills, knowledge and understanding in new situations. They should allow time for thinking, peer discussion and reflection.”*

These are our workshops and the curriculum areas they support – they don’t all cover everything!

They are designed, mainly for specific age groups, to develop scientific skills.

We can be flexible.

Please ask for details.

\*These workshops need extra help from adults or older pupils. Please discuss this with the Workshop Leader.

## Air

How things work: *forces of different kinds ... including air resistance; the ways in which forces can affect movement ...*

Context: how things move through the air and how their movement can be altered.

These are a set of contrasting investigations making gyrocopters, hoopsters and kites.

Space: hall

Time: 1½ hours

Age group: Y5/Y6

## Boats

The sustainable Earth: *the properties of materials relating to their uses.*

This is a sequence of short investigations making boats and rafts.

Space: classroom with access to a tap

Time: 1½ hours

Age group: Y3/Y4, Y5/Y6

## Buggies

How things work: *forces of different kinds, eg friction; the ways in which forces can affect movement ...*

Context: how the energy from the release of air in a balloon powers a small car (buggy).

As the pupils make buggies, they investigate the variables affecting how they work.

The class keeps the buggies.

Space: hall or very large classroom

Time: 1½ hours

Age group: Y3/Y4, Y5/Y6

## Candles

The sustainable Earth: *the properties of materials relating to their uses; how some materials are formed or produced.*

Context: the origins and properties of waxes, changes of state and non-reversible changes.

This is a lively interactive discussion, easily differentiated to focus on specific topics.

Space: classroom or hall with electrical point

Time: 1¼ hours

Age group: Y1/Y2, Y3/Y4, Y5/Y6

## Carousel\*

The sustainable Earth: *the properties of materials relating to their uses.* Uses of everyday materials: *identify and compare the suitability of a variety of everyday materials, ...* Forces and magnets: *notice that some forces need contact between two objects, but magnetic forces can act at a distance; observe how magnets attract or repel each other and attract some materials and not others*

Context: materials and forces. This is a set of five investigations based around the theme of a circus.

Space: hall or classroom

Time: 1¼ hours

Age group: Y1/Y2

## Electricity\*

How things work: *the uses of electricity and its control in simple circuits; how light ... can be used.*

Context: how a simple circuit is affected by a sequence of small changes.

This is a number of small investigations some of which use solar cells.

Space: classroom and outdoors (weather permitting).

Time: 1½ hours.

Age group: Y3/Y4, Y5/Y6

## Citrus

Interdependence of organisms: *the need for a variety of foods ... for human good health.*

Context: how much Vitamin C (relatively) is found in different citrus fruits.

This is an investigation by pupils, discussing fair testing and accurate results.

Space: classroom with at least one sink.

Time: 1½ hours.

Age group: Y5/Y6

## Fizz!

The sustainable Earth: *the properties of materials relating to their uses; how some materials are formed or produced.*

Context: the pupils use litmus to identify acids and then design a fair test to investigate the effect of temperature on an acid/carbonate reaction.

Space: classroom with at least one sink.

Time: 1½ hours.

Age group: Y5/Y6

## Light

How things work: *how light travels and how this can be used.*

Context: this is a set of five short investigations comprising reflection, casting shadows, how shadows change during the day, light being an energy source.

Space: classroom

Time: 1¼ hours.

Age group: Y3/Y4

## Paper-making

The sustainable Earth: *how some materials are formed or produced; a consideration of what waste is and what happens to local waste that can be recycled and that which cannot be recycled.*

Context: pupils think about recycling in general and then use old sugar paper to produce small pieces of new paper, and examine different combinations of new fibres.

Space: classroom with sink

Time: 1½ hours

Age group: Y3/Y4, Y5/Y6

## Rollers

How things work: *forces of different kinds, eg friction; the ways in which forces can affect movement ...*

Context: how the energy from the release of an elastic band powers a small toy (bandroller).

This is an investigation, as the pupils make bandrollers, of the variables affecting how they work.

The class keeps the bandrollers.

Space: hall or classroom

Time: 1¼ hours.

Age group: Y3/Y4, Y5/Y6

## Separating

The sustainable Earth: *how some materials are formed or produced.*

Context: pupils work through a sequence of activities to separate a dry mixture, look at dissolving gases, and observe an exciting nucleation.

Space: classroom  
Time: 1¼ hours.  
Age group: Y5/Y6

### Space\*

The sustainable Earth: *the daily and annual movements of the Earth and their effect on day and year length; the relative positions and key features of the Sun and planets in the solar system.*

Context: simple investigations into phases of the moon, the solar system, stars, the night sky, and shadows.

Space: hall  
Time: 1½ hours  
Age group: Y5/Y6

### Story \*

Simple, accessible science investigations, linked to a story book. Parents and carers can be invited to take part.

Space: classroom  
Time: 1 hour  
Age group: N/R/Y1 and Y5/Y6

### Studying Substances

The sustainable Earth: *how some materials are formed or produced.*

Context: pupils try ten different experiments to test their ability to follow instructions, observe carefully and record accurately.

Space: hall  
Time: 1½ hours  
Age group: Y5/Y6

### Wind

Context: pupils design a model wind turbine and investigate variables to improve its efficiency.

Space: hall or large classroom  
Time: 1½ hours  
Age group: Y5/Y6

We have over twenty years' experience of supporting and inspiring practical and investigative science in thousands of schools.  
Tell us what you want.  
Ask us what we can do.

To book workshops, please contact us at [email@spherescience.co.uk](mailto:email@spherescience.co.uk)