

Delivery guide

Earth and space

Ages 7-11

Home learning

For most pupils: 35-40 minutes to read the main presentation and complete the quiz.
For more able pupils, or more motivated pupils and families: 2-3 hours to complete the extra 'To do' research, worksheets and discussion activities.

Curriculum focus:

- Earth and Space, Light, Evolution and inheritance.



About Science Talks

bp Science Talks brings topical and real-world science into the home and classroom by tapping into current conversations and the latest developments in science.

How to use this resource

This is an independent learning resource for students to complete at home. The engaging and inspiring activities stimulate further research and help to initiate topical science conversations and discussions between young people, their families and friends, thereby building science capital.

About science capital

Science capital measures an individual's science-related resources, attitudes and ways of thinking. At bp we believe that building science capital is a tool for social justice, helping to improve people's life chances and foster active citizenship.

To find out more about building science capital go to ucl.ac.uk/ioe-sciencecapital

About 'Earth and space'

Learning objective

- To learn about the Sun, the Earth and the other planets in our solar system.

Pupils learn to:

- Recognise that the Sun is a star at the centre of our solar system.
- Explain why we have day and night.
- Identify the phases of the moon.
- Name and compare the planets in our solar system.
- Describe an alien planet and the imaginary life that lives there.
- Compare space exploration in the past and in the future.



Curriculum links

England

KS2 Science

Working scientifically

- Using straightforward scientific evidence to answer questions or to support their findings.
- Identifying scientific evidence that has been used to support or refute ideas or arguments.

Year 3: Light

- Recognise that they need light in order to see things and that dark is the absence of light.
- Notice that light is reflected from surfaces.
- Recognise that light from the sun can be dangerous and that there are ways to protect their eyes.
- Recognise that shadows are formed when the light from a light source is blocked by an opaque object.
- Find patterns in the way that the size of shadows change.

Year 5: Earth and space

- Describe the movement of Earth and other planets relative to the Sun in the solar system.
- Describe the movement of the Moon relative to Earth.
- Describe the Sun, Earth and Moon as approximately spherical bodies.
- Use the idea of Earth's rotation to explain day and night.

Year 6: Evolution and inheritance

- Identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.

Scotland

Planet Earth: Biodiversity and independence

I can relate physical and behavioural characteristics to their survival or extinction. SCN 2-01a

Planet Earth: Space

By safely observing and recording the sun and moon at various times, I can describe their patterns of movement and changes over time. I can relate these to the length of a day, a month and a year. SCN 1-06a

By observing and researching features of our solar system, I can use simple models to communicate my understanding of size, scale, time and relative motion within it. SCN 2-06a

Forces, electricity and waves: Light

By exploring reflections, the formation of shadows and the mixing of coloured lights, I can use my knowledge of the properties of light to show how it can be used in a creative way. SCN 2-11b

Topical science

I have contributed to discussions of current scientific news items to help develop my awareness of science. SCN 1-20a

Through research and discussion I have an appreciation of the contribution that individuals are making to scientific discovery and invention and the impact this has made on society. SCN 2-20a

I can report and comment on current scientific news items to develop my knowledge and understanding of topical science. SCN 2-20b

Northern Ireland

Interdependence

Technology challenges of living in Space, for example, how to survive in Space.

Place

Our place in the Universe.

Movement and energy

How knowledge in science inventions, for example, robots in Space.

Changes over time

The formation of shadows and how they change. Voyages of exploration in the past, present and future, for example, from Columbus to Apollo and into the future.

How the world has changed over time.

Wales

Interdependence of organisms

The environmental factors that affect what grows and lives in environments, e.g. sunlight, water availability, temperature.

The sustainable Earth

The daily movements of the Earth and effect on day length.

The relative positions and key features of the Sun and planets in the solar system.



Essential skills

Essential skills are highlighted throughout the resource. For more information about essential skill development, go to skillsbuilder.org/ a bpES partner.

Careers

This resource encourages students to engage in science careers at home.

For more information about careers, go to startprofile.com/ a bpES partner.

