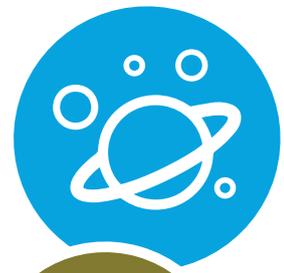
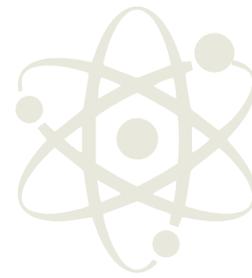




making physics matter



Age
5-11
years

Phizzi focus

Earth and space

There are so many areas of the primary curriculum, from EYFS to Year 6, in which Earth and space can be utilised as an inspirational and engaging context linking to science and other curriculum areas. This Phizzi focus includes stimulating ideas, links and resources to bring Earth and space into the primary classroom.



Tim Peake Primary Project

The amazing potential for Earth and space as a context for learning in primary schools became even more apparent during the Tim Peake Primary Project led by ESERO-UK from 2015 to 2017. ESERO-UK (the European Space Education Resource Office for the UK) is an education project from the European Space Agency (ESA).

The Tim Peake Project ran over two years to co-ordinate with British astronaut Tim Peake's six-month mission to the ISS. The project used space to increase the engagement of primary school children with science, numeracy and literacy. A team of specially trained space ambassadors worked with hundreds of primary schools to develop enjoyment and engagement in all lessons using the context of space, building confidence in learning science and working scientifically, developing knowledge of career opportunities available to pupils who study science and mathematics subjects, and increasing teacher confidence in teaching space topics.

ESERO-UK resources

As a legacy to this project, there are now a wealth of high-quality, stimulating resources to support the primary curriculum freely available to schools from the **ESERO-UK eLibrary**.

Some of the highlights of this collection include a beautiful set of animations that tell the story of the **Rosetta Mission**, which is a fantastic resource to support writing activities, as well as **additional resources** from ESA including nets to make 3D models of Rosetta and Philae. The ESA mascot, **Paxi**, also appears in his own set of short films that take children on a tour of the solar system, investigate comets and explore how scientists aim to find out if there is evidence for life on Mars. These animations are a great introduction to learning about space and ESA missions in a way that is accessible to children; ESA has also created supplementary **lesson plans** specifically designed for primary schools that link science with mathematics and art.





Space Education Quality Mark

Schools that have actively developed the context of space for learning across their setting should consider applying for the prestigious **Space Education Quality Mark (SEQM)**. This is an award given to UK primary or secondary schools and colleges that have shown significant use of the context of space in subjects, have worked with other organisations, shared resources and used space to enrich the curriculum.

Benefits of the award include:

- gaining recognition for your achievements
- raising the profile of quality science teaching within your school
- inspiring students to study STEM subjects
- encouraging further engagement with parents, other schools or colleges and the wider community
- accessing professional development
- forging links with space professionals and organisations
- sharing good practice and resources with schools and colleges across the UK.

Cross-curricular learning

The collection also includes many cross-curricular resources that link science with mathematics, computing, design & technology and other curriculum areas. For example, **EO Detective** is a fantastic resource produced by the National Centre for Earth Observation and aimed at primary learners. The activities use early astronaut photographs to encourage children to think about how features on Earth look from space, and satellite images to enable students to measure the growth of a city and the shrinking of a glacier.

For schools wanting to develop links between science and PE there is **Mission X**, an exciting international project in which children train like astronauts and learn more about the importance of healthy eating and exercise. There are some really engaging **classroom activities** to accompany the programme that are available from the ESERO-UK collection.

For a focus on working scientifically the **Mission Starlight project** from The Royal Society of Chemistry provides opportunities for children to experiment with different materials to discover which is best for blocking UV light and use this information to help design a suit for an astronaut. Alternatively, the context of space can be linked to children's learning about plants by challenging children to design a building that can withstand the challenging Martian environment and enable future astronauts to **grow plants on Mars**.



Why not 'borrow the moon'?

The Science and Technology Facilities Council has six sets of lunar and meteorite samples with additional classroom resources that they loan out to schools. This would be a memorable way to enhance children's learning about materials and rocks and could be utilised by all year groups in the primary setting.

Photos/Images:

Tim Peake ISS with Rocket Seeds – Credit ESA/NASA / Earth Observation from ISS – Credit ESA/NASA
ISS Image – Credit NASA