

Galaxy Quest



Recommended year group: Year 5

Theme focus: Science

Suggested term: Autumn

Theme introduction:

Galaxy Quest is about the universe and space. Learning in this theme is focused on Science, but also includes Geography, Art, History, Music, and Design and Technology. In Galaxy Quest, pupils look at the universe and the solar system. They gain an understanding of the planets that are in the Milky Way, and how these planets orbit the Sun. Pupils will learn about significant astronomers who theorised about the universe and also about those individuals who have experienced space travel and lived on the International Space Station. They will learn about the phases of the Moon and gain an understanding of how we get days and nights as well as the seasons.

Driving question:

What's beyond the stars?

Suggested switched on science unit

Year 5: Out of this world

Suggested switched on computing unit

We are adventure gamers

Linked reading texts:

Space maps Lara Albanefe and Tommasa Vidus Rosin
Biographies (Major Tim Peake/Dr Valentina Tereshkova)

Writing outcomes:

Non-chronological report
Diary writing
Biography
Letters

Curriculum coverage

Geography - Human geography

Art - Painting; other techniques

History - Significant individuals, events and achievements; chronology, historical enquiry and sources

Music - Improvise and compose, instruments, notation

Design and Technology - Evaluating - existing products; representing design ideas

Science - Planets; forces; working scientifically

Computing - Film making



Excite:

Borrow the Moon

Bring real pieces of the moon into the classroom for pupils to get hands on with. This can be done through the Science and Technologies Facilities Council. The loan kit comes with real pieces of Moon rock and equipment for pupils to closely study it. Perhaps combine *Borrow the Moon* sessions with a visit from an astronomer or a space workshop.

Explore:

Explore 1 – How many stars are in the universe?

Explore 2 – The solar system

Explore 3 – Pointillism

Explore 4 – Day, night and seasons

Explore 5 – Sundials

Explore 6 – Phases of the Moon

Explore 7 – Key astronomical figures

Explore 8 – Galileo

Explore 9 – Gravity

Explore 10 – The space race

Explore 11 – Rockets

Explore 12 – Satellites and the ISS

Explore 13 – Space-themed music

Explore 14 – Our universe documentary

Theme essential vocabulary:

air resistance, annotate, astronomer, astronomy, atmosphere, big bang, clock, cold war, day, debate, design, discoveries, distance, documentary, Earth, edit, engage, evidence, galaxy, gravity, impact, instruments, influential, International Space Station, ISS, Jupiter, mass, Milky Way, mission, mood, Moon, musical score, neo-impressionism, newton, night, observations, observatory, orbit, perform, persuasive, phase, planets, pointillism, position, present, rocket, rotation, Russia, satellite, Saturn, script, season, shadow, solar system, spectrograph, spyglass, style, sun, sundial, telescope, temperature, texture, time, universe, USA, weight, zero gravity

Theme essential knowledge/concepts

1. To know the order of the planets of the Milky Way.
2. To understand that the sun can be used to tell the time (using sundials and shadows).
3. Define the Big Bang theory in terms of current understanding.
4. To understand that astronomers have been looking at space for thousands of year – Eratosthenes (276BC–194BC) being one of the first.
5. To know that Galileo (1564 – 1642) was probably the most influential astronomer of all time.
6. To know what a galaxy is.
7. To describe the impact that Isaac Newton (1643 – 1727) had on the theory of gravity.
8. To explain how gravity affects different objects based on mass.
9. To show an understanding of how musical elements can be combined to create a composition that can represent something, e.g. space.
10. To scientifically explain why night and day occur.
11. To understand the artistic techniques involved in Pointillism and to know a key figure was Georges Seurat.
12. To understand that Earth is constantly rotating.
13. To know that the Earth is tilted 23%, and this is why we get seasons.
14. To understand the different phases of the Moon during a lunar month.

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Excel:

- 'All you need to know about...' poster
- Day, night and seasons explanation
- Astronomer timeline with key discoveries and achievements
- Newton metre measurement table
- Our universe documentary

Exhibit:

Our universe documentary

Pupils to share their documentary from the final Explore. This could either be recorded and shown or even performed live. Invite parents to this celebration of everything learned through the Galaxy Quest theme. See the final Explore for more information on this.

Possible wider experiences:

1. Visit a local planetarium or observatory.
2. Bring in a local astronomer for a space workshop.

Flipped learning opportunities:

1. What else exists in our solar system other than planets? Pupils could investigate other aspects of space such as asteroids or even space junk.
2. Keep a Moon log: Pupils draw the shape of the Moon every day for the first four weeks of the theme and bring it with them for the Explore on Moon phases.

Family learning opportunity:

Eat like an Astronaut. Pupils create their own space food and learn about what astronauts eat in space.
Shadows. Pupils explore light and shadows by making a star projector.

Cultural Awareness

Key piece of music

'Eine kleine Nachtmusik' – Mozart
'Moonlight Sonata' – Beethoven
'Space Oddity' – David Bowie

Key piece of art

A Starry Night – Vincent van Gogh

Key poem

The Light of Stars – Henry Wadsworth Longfellow