Science Topic Overview: Earth and Space

Previous linked learning

Year 1

- Explore how Neil Armstrong explored space and went to the moon
- Seasons and the changes in day length

I think I already know…

I would like to find out…

Key Vocabulary

Sun, earth, moon, seasons

Solar system

axis of rotation

day

night

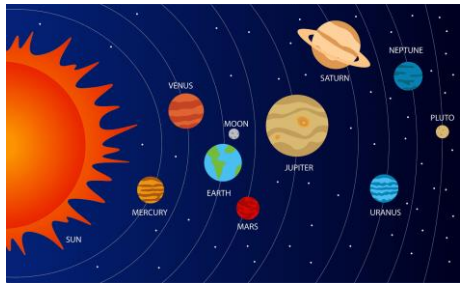
phases of the moon

star

sphere

By the end of this unit you will be able to….

- Describe the movement of the Earth and other planets relative to the sun in the solar system
- Explain what moons are and describe the movement of 'our' moon relative to the Earth
- Describe the sun, Earth and moon as approximately spherical bodies and use research to enquire 'How can we prove the earth is a sphere?'
- Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky
- Explore our solar system and beyond at Winchester science museum and in a space dome workshop



Earth and Space: Teacher notes, medium term plan

Previous learning

Year 1

Explore how Neil Armstrong explored space and went to the moon

Common misconceptions

- There are stars in our Solar System other than our Sun
- The Earth is the center of the Solar System about which the other objects revolve
- The Earth is the largest object in the Solar System
- The Solar System is very crowded
- The Sun is not a star

See how you go fitting in as much learning as you can compared to a whole term of learning last year. Use the trip and space dome as replacement of lessons to keep things simple and maybe just put a photo and short written explanation from the children in their books. No matter how hard I try, I find it very hard to find ways to include working scientifically skills into the lessons – perhaps this one will have less skills and then the children can build on them from aut 2.

This unit only has 5 lessons. This allows you to dedicate one lesson to your expectations in science and explain 'working scientifically' skills to the class. Show them the science display, topic overview example and take time to discuss 'what a good science lesson looks like in year 5'. You may also wish to do the topic overview in this lesson so the children know what to expect this half term.

Lesson 2: Describe the movement of the Earth and other planets relative to the sun in the solar system

Use plenty of videos for context of size/distance – getting the children up and modelling this is also good.

Lesson 3: Explain what moons are and describe the movement of 'our' moon relative to the Earth

I've added the little bit to the curriculum expectation for context about 'moons' so children have a general understanding of what they are. Then look into earth's moon.

Lesson 4: Describe the sun, Earth and moon as approximately spherical bodies and use research to enquire 'How can we prove the earth is a sphere?'

Just like last year, get the children to research and then prove the earth is a sphere through their own research. (analysis)

Lesson 5: Use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky

This has potential to use some observation skills as well as a chance to use conclusive skills. Get the children outside at different times of day and note where the sun is – then perhaps link to some videos of the earth rotating etc. Ask the children, what effect this has to life on earth. Build an answer (analysis) whole class, which doesn't need to go into books, explaining how we get day and night and then children can write a conclusion – perhaps supported whole class shared writing style about what they have explored. There is even potential for children to 'make predictions of further tests' - can the children discuss an experiment we could do to prove the earth is rotating? Get them to bullet point or mind map some ideas down. (conclusion)

Lesson 6/additional sessions: Explore our solar system and beyond at Winchester science museum and in a space dome workshop

Photos to go into books please just as evidence of 6 lessons (or equivalent)