Stargazers

YEAR 5: RUBY SPRING TERM 2020

Connected Learning

This term's 'Imaginative Learning Project' has a science focus - Year 5 will embark on a scientific journey, exploring Earth and Space.

In meeting the programmes of study for the science National Curriculum, children will use the breadth of the curriculum to:

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

We will conclude our topic with a trip to the National Space Centre in Leicester.

Connected Writing

As writers, Year 5 will consolidate their writing skills and deepen their knowledge and understanding of what is required to become an astronaut, writing a biography about Tim Peake. In continuing to develop their understanding of life in space, children will conduct interviews in role, as an astronaut, to further develop their oracy skills.
Our focus text will be **'Cosmic'** by Frank Cottrell Boyce. Using this as our inspiration, we will develop our own narratives around the theme of the book. In Science, children will also write a non-chronological report on the planets in our solar system, and then apply this skill to write an information text on their own imaginary planet, developed from their narratives. Additionally, the children will continue to build on their use of technical vocabulary in their explanation writing of the phases of the moon.

As readers, Year 5 will focus on their detective skills in order to infer from a text and make deductions.
There will be a continued focus on word meaning within context, and applying taught skills to find the meanings of unknown words.

Maths

As mathematicians, Year 5 will continue to consolidate their arithmetic skills based around the four operations. We will also begin to transfer these skills to solve problems involving fractions, decimals and percentages. This will be supported with high level reasoning and application across the curriculum.

Additionally, we will focus on measurement, learning specifically how to measure and calculate the perimeter of composite rectilinear shapes, including finding missing lengths. Pupils will also calculate and compare the area of rectangles and estimate the area of irregular shapes.

As part of their learning on statistics, children will construct and interpret simple line graphs, as well as solving comparison, sum and difference problems using the information presented in these graphs. Other tables will also be completed and interpreted by the children. This learning will be addressed in a range of relevant contexts, such as during their science investigations.

Key Vocabulary

asteroid
A rock that orbits the Sun.

astronaut
A person who is trained to travel into space.

astronomer
A person who makes observations about and studies the stars, planets and space.

axis
The imaginary, straight line on which a planet rotates.

comet
A small, frozen mass of dust and gas orbiting the Sun.

crater
A huge hole formed by the impact of a meteorite or other space objects.

free fall
Any object that moves under the force of gravity only.

gravity
The force by which an object with a large mass, such as a planet, pulls objects toward its centre. The force of gravity keeps all of the planets in the Solar System in orbit around the Sun.

jovian planet
Planets made primarily of gas. Also known as gas and/or ice giants. Jovian planets in our Solar System include Jupiter, Saturn, Uranus and Neptune.

lunar
Relating to the Moon, for example, lunar landscape or lunar landing.

meteoroid
A rock that orbits the Sun. Smaller than asteroids.

Art/DT

As artists, the children will create different scaled cylindrical and spherical forms using a range of media, to create a representation of the planets in our solar system.
The children will also study space themed art by Peter Thorpe, using his abstract style of work to influence and develop their own.
As designers, the children will design and build their own moon buggy, using gears, pulleys and creating an electrical circuit. Children will apply their knowledge of forces and electricity for this.

RE

In RE, the key question for children in Yr 5 will be 'How do Muslim beliefs influence world view?'
Children will be focusing on the Five Pillars of Islam, drawing together their prior knowledge and learning what the Five Pillars are and understanding their significance. Children will think about the importance of religion and reflect on the 'pillars' in their own lives.

PSHE

In PSHE, the children will consider social and moral dilemmas, which will include debating emotive issues, such as whether it was right to send animals to space as a test trail before humans? We will also consider how you would treat an alien if you met one and link this to understanding differences in people and hidden biases, which can be formed from a lack of understanding of such differences.

Music

As musicians, the children will describe how elements have been used to create mood and effect.
In doing this, they will listen to and evaluate the effectiveness of sound tracks from sci-fi films using musical vocabulary.
The children will then work together to compose a piece of music based to accompany their space narratives, before maintaining their own part in a performance with confidence, accuracy and awareness of what others are playing.

PE

In sport, this term, Yr 5 will focus on gymnastics, performing individually or with partners with increasing confidence and accuracy developing flexibility, strength, technique, control and balance. They will compare their performances with previous ones and demonstrate improvement to achieve their personal best.

Computing

In computing, the children will select appropriate software to use stop motion animation, to create a short fantasy film using their sci-fi narrative writing.
As part of their science investigations, children will use spreadsheets to create graphs from the data and calculations made, in order to present findings.

Family Learning Opportunities

30 minutes reading and TT Rockstars DAILY.

Recommended Reads:

- 'Cosmic' by Frank Cottrell Boyce
- 'Solar System: Fascinating Facts' by Collins.
- 'The Usborne Official Astronaut's Handbook' by Louie Stowell
- 'See Inside the Universe' by Alex Frith

For additional ideas and activities, linked to this 'Imaginative Learning Project', please refer to the 'Home learning ideas' sheet attached.

Science

As scientists, the children will create models of the Earth's rotation, to help explain day and night. As well as this, they will name and describe the eight planets of the solar system in a report and present this information orally to the class. Additionally, children will create an 'orrery' to represent the planets' positions relative to the sun and neighbouring planets.
Working scientifically, the children will explore how craters are formed by investigating what happens when objects of different sizes and weights are dropped from different heights onto a 'planet'. Building on their learning of statistics in Maths, they will measure the size of the crater and record their results in a graph.
Pupils will also use their reading skills and historical knowledge to study and research the work of scientists such as Galileo and Newton, to better understand scientific theories, such as the effects of gravity.