

Key idea: Earth and space

Possible applications and activities related to new NC

Yr 6

Objects like planets, moons and stars spin (describe their movement relative to each other)

Y5

Smaller mass objects like planets orbit large mass objects like stars

Objects with larger masses exert bigger gravitational forces

Y5

Day and night is caused by the rotation of the Earth

Y5

Stars, planets and moons have so much mass they attract other things, including each other due to a force called gravity. Gravity works over a distance.

Y5

Stars produce vast amounts of heat and light. All other objects are lumps of rock, metal or ice and can be seen because they reflect the light of stars.

Y5

Forces acting on celestial bodies

How we see celestial bodies

- Children should be introduced to the solar system and asked to make predictions, e.g., which planet they would expect to be the warmest, the coldest, have the most moons, have the longest year. They should then check their predictions through research.
- **Children should relate the spin of the planets to the length of their 'day' and the distance from the sun to the length of their year.**
- They should consider how it is we are able to collect this information when people have not visited the planets. The size and relative emptiness of the solar system should be explored through models.
- Children should be encouraged to view the night sky and record what they see, in particular the position of the moon over the course of the night. They could note down what they objects they see and consider why virtually all of these are stars (because they produce their own light).
- They could consider why it is so difficult to detect meteorites and comets that may be on a collision course with earth
- Children should be introduced to the moons of other planets, in particular Jupiter. Our changing ideas about Jupiter & its moons can be used to exemplify how science has to change its' ideas as new evidence becomes available. This can be linked to understanding how the geocentric model of the solar system gave way to the heliocentric model by considering the work of scientists such as Ptolemy, Alhazen and Copernicus.
- There are now many software applications that can also help us find objects in the night sky.

Yr 4

Yr 2

Children need to learn about how a number of things change with the seasons including the weather, the temperature and the number of daylight hours. They don't need to know why these things change. It would be best to teach these phenomena through exploring the local environment rather than on topics to do with Earth and Space

Y1 – Changes in the pond, trees and plants

Y2 – Changes in temperature and rainfall