






Moon (Junior Cycle)

Keywords	Level	Time	Core Skills	Type of Activity
				
The Moon Craters Phases Size of Moon and Earth	Junior Cycle Secondary	1 – 1.5 hours	Modelling Inquiry activity	Science experiments

Brief Description



Students will use models to explain features of the Moon, including the size of the Moon compared to the Earth, craters and lunar phases. Live Moon observations will be made (weather permitting and 3rd Quarter Moon Phase permitting).

Learning Objectives and Curricular Links



Junior Cycle Science
Earth and Space:

3. Interpret data to compare the Earth with ... moons in the solar system, with respect to properties including ... size, and composition.
4. Develop and use a model of Earth-Sun-Moon system to describe predictable phenomena observable on Earth, including... lunar phases and eclipses of the Sun and Moon.

Nature of Science: a broad section of “Investigating in Science”

Materials



Modelling clay / materials
Rulers
Sand trays
Impactors
Lunar images from TARA telescope

Background Information / Skills required



Background for Teachers: Lunar Crater Images are available [here](#). A Moon Phase Calculator is [here](#). A map of the Moon and activities are [here](#). Students should be familiar with the spherical nature of the Moon and know that the Moon orbits the Earth. Students will be designing their own investigations, so should have had some experience carrying out fair tests in experimental work.

Summary Activity Description



1. Students will examine lunar images for evidence that the same side of the Moon always faces the Earth.
2. Students will make scale models of the Earth and Moon, then work out the correct scale distance to the Moon.
3. Students will model the Earth-Sun-Moon system to explain phases of the Moon.
4. Students will create lunar landscapes with a cratering activity, exploring how different factors affect the formation of craters.

Additional Information / Follow on Activities



[Deadly Moons](#) combines art and science.
[International Observe the Moon Night](#) occurs annually.
The lunar cratering activity is similar to [this](#) Discover Primary Science & Maths Investigation and can easily be extended.
Eclipse information can be found at [Mr Eclipse.com](#)
An article on Relativity and the Solar Eclipse of 1919 is [here](#).
A Phases of the Moon outdoor activity is [here](#).