

Try this in the classroom!



Investigating Gravity

Gravity and the effects it has on us here on Earth are important parts of understanding the world around us. Gravity is an invisible force that on Earth pulls objects to the ground. Gravity also keeps the planets in orbit around the Sun and the satellites in orbit around the Earth.

Investigating gravity and its effects relates to the energy and forces strand of the Primary Science Curriculum (SESE Social, Environmental and Scientific Education). This also links to the Cosmic Collisions workshop available for registered Discover Primary Science and Maths school groups at Armagh Planetarium.

As a result of gravity, two objects of varying masses dropped at the same time should hit the ground at the same time.

The experiment

Using two similar objects of different masses, e.g. plastic bottles, one filled with water and one empty, ask pupils to predict which one will hit the ground first, and then drop both bottles at the same time.



Results

Both bottles should hit the ground at the same time, proving gravity is acting on Earth.

Why not try dropping different objects or dropping them from a greater height to see if this makes a difference to the results.

Evaluate

Gravity exists on Earth, why is it important? Keep in mind air resistance acting on Earth may slow very light objects down. The best place to test the experiment is on the moon. David Scott Commander of Apollo 15 completed this experiment by dropping a hammer and a feather, which both hit the lunar surface at the same time.

Links

Armagh Planetarium website <http://www.armaghplanet.com>

Watch Apollo 15 astronaut in action
http://www.youtube.com/watch?v=5C5_dOEyAfk

