

Why Does an Apple Fall?

PHYSICAL SCIENCES

Get curious

Video/ Slide show

Watch a short film about astronauts living in a space station and talk about the ways their life is different from life on Earth.

Ask the students:

What would it be like if life on Earth was the same as life on a Space Station?

What things would we not be able to do?

What things would we be able to do?



Try to ensure a dynamic, lively conversation. The point is for the students to come up with as many ideas as possible without judging whether any idea is bad or not.

Get going

Experiment

The students determine the direction of movement of objects on Earth – downward.

Ask the students: In what direction do objects move when released from a space station, and in what direction do objects move when released on Earth?

Conclusions

The students mark on their worksheets the direction in which objects are pulled, i.e. toward the center of the planet.

Discussion

Talk about the factors that influence this force of attraction (gravitational pull).

Ask the students: why do you think objects and people move differently on earth to the way they do on a space ship?

Video/ Slide show

The students watch a film and draw conclusions on how gravitational force is determined by the mass of a body.

The film shows an astronaut “jumping” on the surface of the Moon.

The most important fragment: 1:46-2:00.

Analyzing

The students use an online calculator to calculate their weight on other planets.

Online calculator: <http://www.exploratorium.edu/ronh/weight/>

Get practicing

Video/ Slide show

The students watch a film showing an experiment conducted on the Moon and draw conclusions on why a feather and a hammer fall at the same speed on the Moon.
