



Content - Big ideas

P1.1 Forces

Big Question: Where do forces come from?

Learning Outcome:

Identify some forces acting on objects in everyday situations, identify an interaction pair and use a Newton meter. State an example of a force deforming an object and use Hooke's Law. Identify examples of drag forces and friction. Identify gravity as a force that acts at a distance. Identify familiar situations of balanced and unbalanced forces and define equilibrium.

P1.2 Sound

Big Question: How do we hear things?

Learning Outcome:

State some features of waves and what happens when waves hit a barrier. Name some sources of sound and materials that sound can travel through. State the link between loudness and amplitude and that frequency is measured in Hertz. Name some parts of the ear and state some ways that hearing can be damaged. State what ultrasound is and some uses of ultrasound.

Prior learning

- QE2 introduction to science module & Working Scientifically
- Gravity pulls objects to Earth
- Friction slows down moving objects
- Vibrating objects make sound

Global/IOM/Subject Links

Global & IOM links:

- Engineering & Mechanics, Sound pollution

Subject:

- Forces → PHYSICAL EDUCATION AND D&T
- Sound → MUSIC

Subject specific skills development

- Use a Newton meter to make predictions about sizes of forces.
- Present data in a line graph and identify a pattern.
- Carry out an experiment to test a prediction of friction caused by different surfaces.
- Draw a table and present results.
- Present observations in a table with help.
- Record observations from wave experiments.
- Use data to compare the speed of sound in different materials.
- Predict how sounds will change in different situations.