

## Glossary

**acceleration** - the rate at which an object's velocity changes with time.

**buoyancy** - the tendency of an object to float in a liquid.

**buoyant force** - the weight of the fluid (gas or liquid) displaced by a body submerged in the fluid, measured in newtons. It is expressed as an upward force.

**density** - the amount of mass per unit volume.

**direction** - the general course in which an object moves.

**force** - an influence that causes an object to change its rate of motion.

**gravitational acceleration** - the specific force of an object caused by gravity. On the surface of the Earth, this measurement is  $9.81 \text{ m/s}^2$ .

**gravitational force** - the force of attraction between all masses in the universe. In everyday life, this is what gives weight to objects which have a mass, causing them to fall to the ground when dropped.

**magnitude** - a property that measures the size or strength of a force regardless of direction.

**mass** - the amount of matter in an object.

**net force** - the sum of forces in a system. In this activity, the net force is the sum of the downward gravitational force and upward buoyant force.

**newton** - the SI unit of force. It is expressed in kilograms times metres per seconds squared.

**vector** - a quantity that has a magnitude and a direction.

**volume** - the amount of space that a three-dimensional object occupies. It is measured in cubic metres.

**weight** - the heaviness of an object, measured in newtons. Weight is equivalent to the gravitational force acting on the object. Unlike mass, weight changes according to gravity, which is why an object will weigh less on the moon than on Earth.