

1 Make it change speed, direction or shape.

2 Any sensible suggestions are valid. Examples include:

Friction: stop tyres slipping on a road, allow you to pull a rope, make brakes work.

Upthrust: make ships/balloons float.

Gravity: pull things downwards/make things fall.

Magnetism: attract iron objects, stick notes to fridges, hold doors closed.

Air resistance: slow down things moving through air, make things move when the wind blows.

Static electricity: attract things.

3 gravity, magnetism, static electricity

4 a A

b The arrow is longest.

c Arrow drawn with a length shorter than those shown.

d They will start to move/move faster.

5 a A large arrow pointing to the left drawn to the left of A.

b An arrow pointing to the right drawn to the right of B.

c A small arrow to the left drawn to the left of C.

6 a, b Upwards arrow labelled upthrust; downwards arrow labelled gravity (or weight). These arrows should be the same size as each other.

Left arrow labelled (forwards) force from engines/propellers; right arrow labelled air resistance. Equal sizes.

The vertical arrows should be much larger than the horizontal ones, but students are not expected to know this.

7 a The force of gravity pulling on something.

b newtons (N)

c The amount of matter in something.

d kilograms (or grams) (kg or g)

8 Gravity is not as strong on the Moon as it is on the Earth.

9 a Any sensible answer such as eating/drinking, going to the toilet.

b Your weight also changes, because the force of gravity on you depends on how much mass you have.