

Y5 Forces

KS2 Y5 Science · Follows the national curriculum

Name _____ Class _____ Date _____

1. Worked example

What is a force?

Step 1 · What can forces do?

Push or pull — make things start moving, speed up, slow down, stop, or change direction or shape

Step 2 · How are they measured?

In newtons (N), with a forcemeter

Step 3 · How are they shown in diagrams?

With arrows pointing in the direction of the force

Answer: A force is a push or a pull, measured in newtons and shown with an arrow.

Check: Forces can't be seen — only their effects.

2. Now try one with the steps

Which forces act on a falling parachute?

Step 1 · Pulling down

Step 2 · Pushing up

Step 3 · Effect of a bigger canopy

Answer:

3. Practice

Have a go at each one. There is space underneath to work it out.

1. What is a force?

2. What is the unit of force?

3. What instrument measures force?

4. What force pulls objects towards the Earth?

5. What force slows things moving through air?

6. What force slows things moving through water?

7. What force acts between two surfaces rubbing together?

8. Name a simple machine that uses a wheel and a rope to lift loads.

9. A toy car rolls to the right. In which direction does friction act on it?

10. Name TWO forces acting on a skydiver with a parachute open.

11. A box needs 9 N to pull on sandpaper and 2 N on ice. How many more newtons on sandpaper?

12. Why does a bicycle with smooth, worn tyres skid more easily?

13. Name THREE mechanisms that let a smaller force have a greater effect.

14. Which scientist explained that the force making an apple fall also keeps the Moon in orbit?

4. Before you hand it in

Heavier objects always fall faster because of gravity.

A hammer and a feather fall together on the Moon, where there is no air.

Friction and gravity are the same thing.

Name each force by what causes it.

A moving object needs a force to keep it moving.

Remove friction (as on ice) and things keep sliding much further.

Forces only act on moving things.

Forces act on still objects