

Y5 Air Water Resistance

KS2 Y5 Science · Follows the national curriculum

Name _____ Class _____ Date _____

1. Worked example

What is air resistance?

Step 1 · What is in the way of a moving object?

Air

Step 2 · What does the object have to do?

Push the air out of its way

Step 3 · What does the air do back?

Pushes against the object, slowing it down

Answer: Air resistance is a force that acts against things moving through air, slowing them down.

Check: It acts in the opposite direction to the movement.

2. Now try one with the steps

Why does a parachute slow a skydiver down?

Step 1 · Gravity pulls the skydiver down

Step 2 · The parachute opens

Step 3 · Air resistance increases

Answer:

3. Practice

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

1. What force slows things moving through air?

2. What force slows things moving through water?

3. Does air resistance push in the same direction or the opposite direction?

4. What does 'streamlined' mean?

5. Name an animal with a streamlined shape.

6. Does a bigger parachute fall faster or slower?

7. Why does a flat sheet of paper fall more slowly than a crunched ball of the same paper?

8. Why is it harder to walk through a swimming pool than across the playground?

9. In a parachute test, what should you change?

10. In a parachute test, name TWO things to keep the same.

11. A parachute takes 2.6 s to fall. A bigger one takes 4.1 s. How many seconds longer is that?

12. Three drops take 3.2 s, 3.4 s and 3.3 s. What is the middle value?

13. How does a sycamore seed's shape help it?

14. Why does a cyclist crouch low over the handlebars in a race?

4. Before you hand it in

A parachute works by making gravity weaker.

Air resistance pushes up while gravity pulls down, so the fall slows.

Air resistance only happens when it's windy.

Air resistance acts whenever something moves through air.

Heavier objects always have more air resistance.

A light sheet of paper has lots; a heavy marble has little.

Water resistance is the same

Water resistance slows movement through water.