

Water Resistance



twinkl

Aim

- To explore the effects of water resistance.

Success Criteria

- I can explain the effects of water resistance.
- I can identify streamlined shapes.
- I can minimise the effects of water resistance on an object.

Water Resistance



How does it feel to walk through deep water?

Think of some words and phrases to describe the feeling.

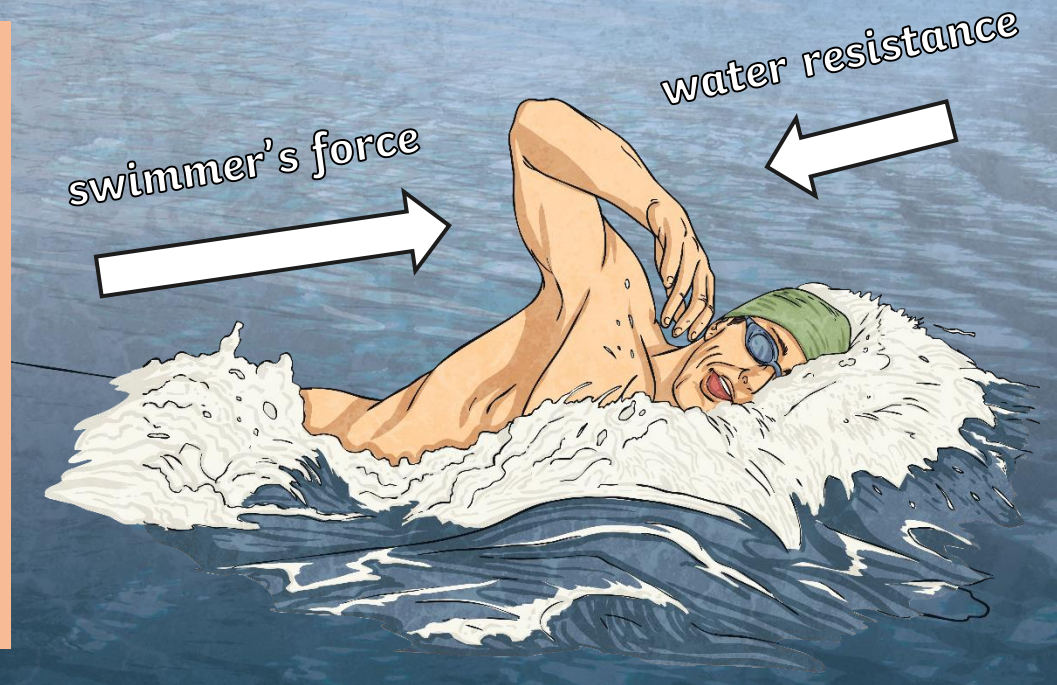
Share your ideas with the class.



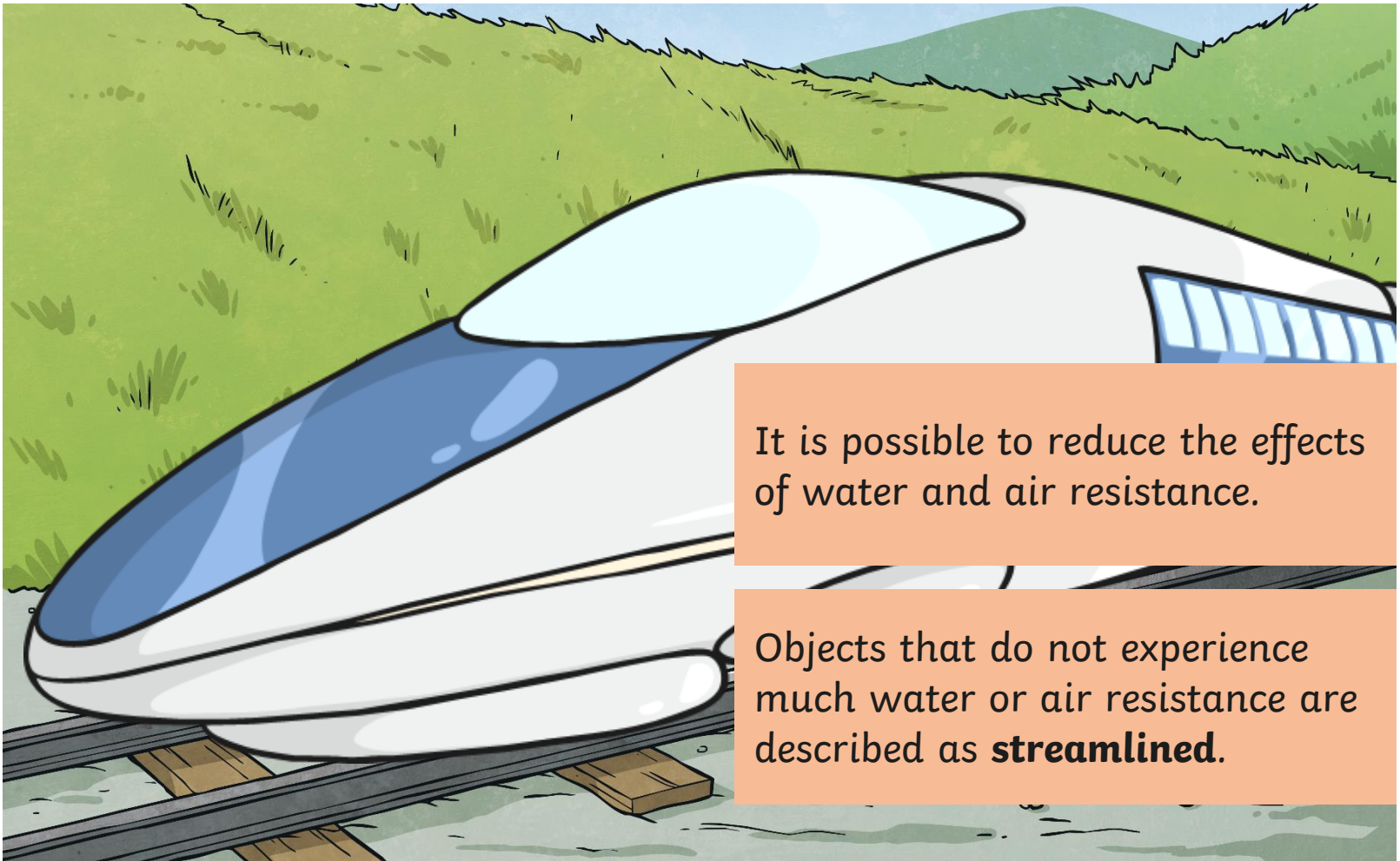
Water Resistance

If you have ever walked through water, you will have felt the effects of **water resistance** pushing against you.

However, this also helps you to swim, as when you push against the water with your hands, the water resistance pushes back and helps you to move forward, like using oars to push against the water to row a boat.



Streamlined Shapes



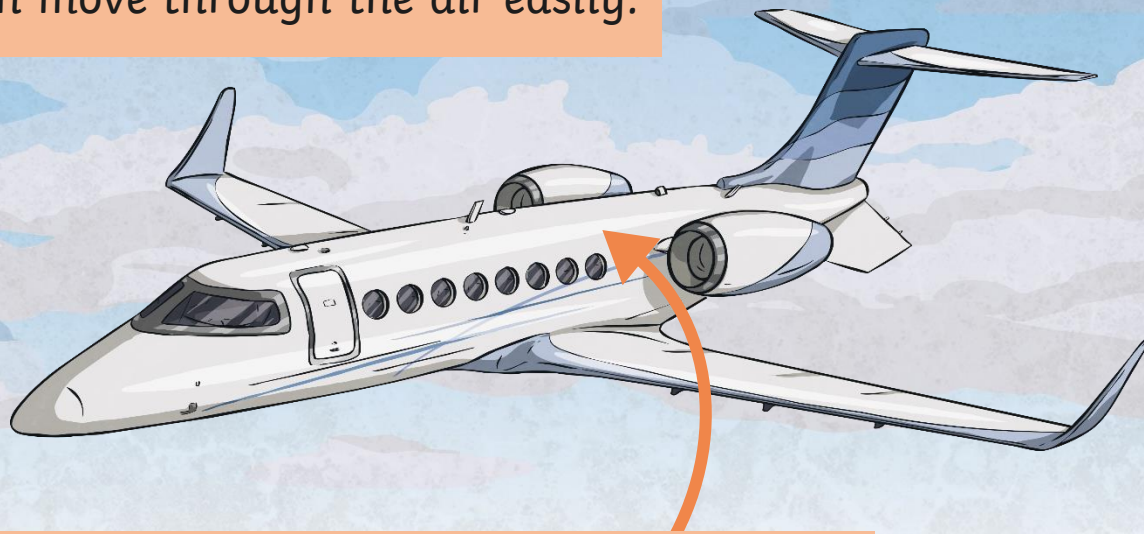
It is possible to reduce the effects of water and air resistance.

Objects that do not experience much water or air resistance are described as **streamlined**.

Streamlined Shapes

This aeroplane is **streamlined**.

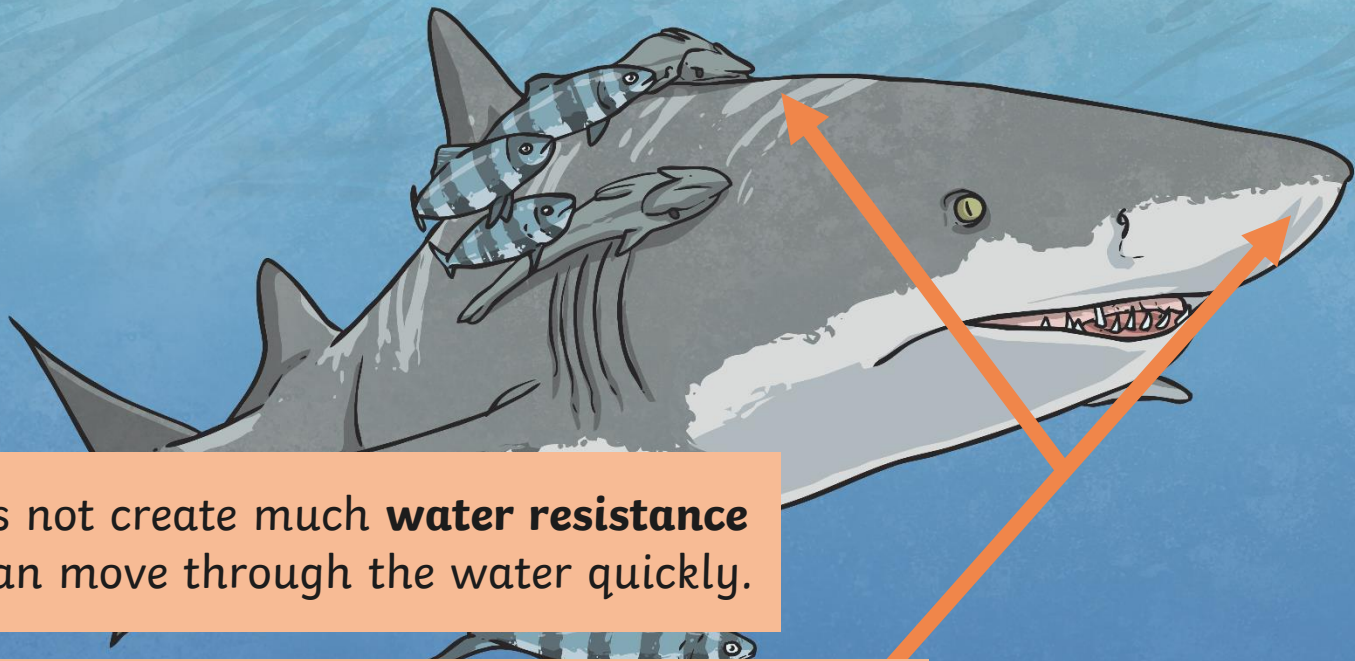
It does not create much **air resistance** so it can move through the air easily.



Its nose is **pointed** so that it can cut through the air, and it has a **smooth, low, curved back** to allow the air to flow over and around it.

Streamlined Shapes

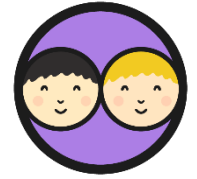
This shark is **streamlined**.



It does not create much **water resistance** so it can move through the water quickly.

It has a **pointed** nose to cut through the water, and a **smooth, low, curved back** to allow the water to flow over and around it.

Boat Building

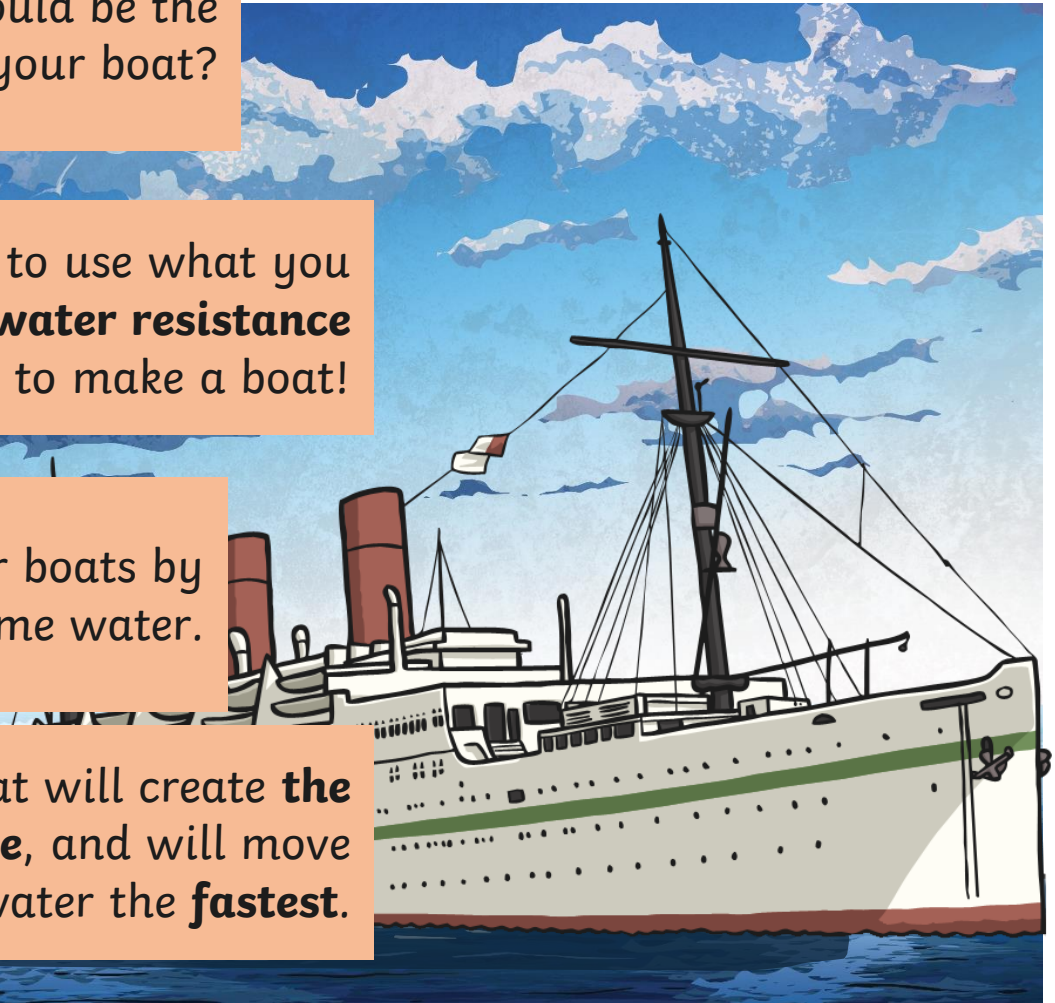


What do you think would be the best shape for your boat?

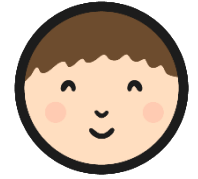
Your challenge today is to use what you have found out about **water resistance** and **streamlined shapes** to make a boat!

You will test your boats by blowing them along some water.

The **most streamlined** boat will create the **least water resistance**, and will move through the water the **fastest**.



Boat Building

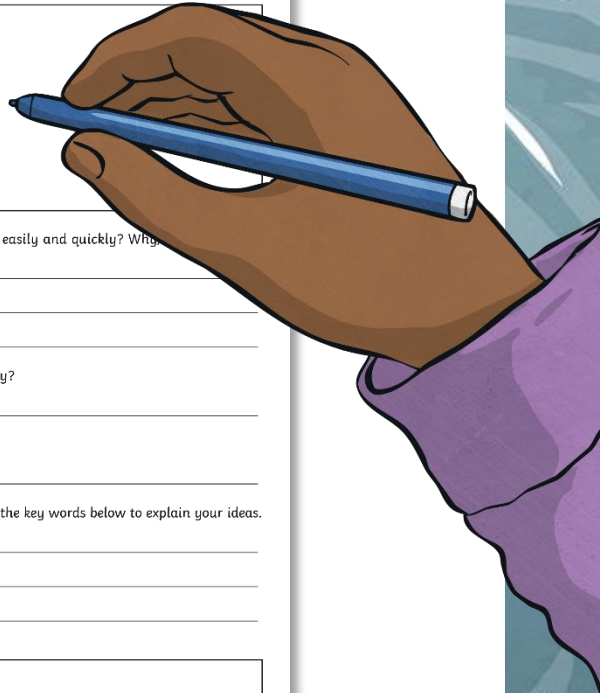


Evaluate your boat's performance on your Boat Race Activity Sheet.

Make sure to explain the effects of water resistance and how you designed your boat to minimise these effects.

★ Boat Race

Draw and label your boat here.



Do you think your boat will move through the water easily and quickly? Why?


How long did it take your boat to cross the water tray?

How did your boat do compared to the other boats?

Why do you think your boat performed this way? Use the key words below to explain your ideas.

Key Words

water resistance streamlined pointed flat curved low high smooth surface push

 **planit**

Science | Year 5 | Forces | Water Resistance | Lesson 4