

Science

Week 9: Forces on Water



How do forces make things move through water?



Vocabulary

foil

combination

float

direction

shape

A force is a push or a pull that can make things move, change direction or change shape.

1

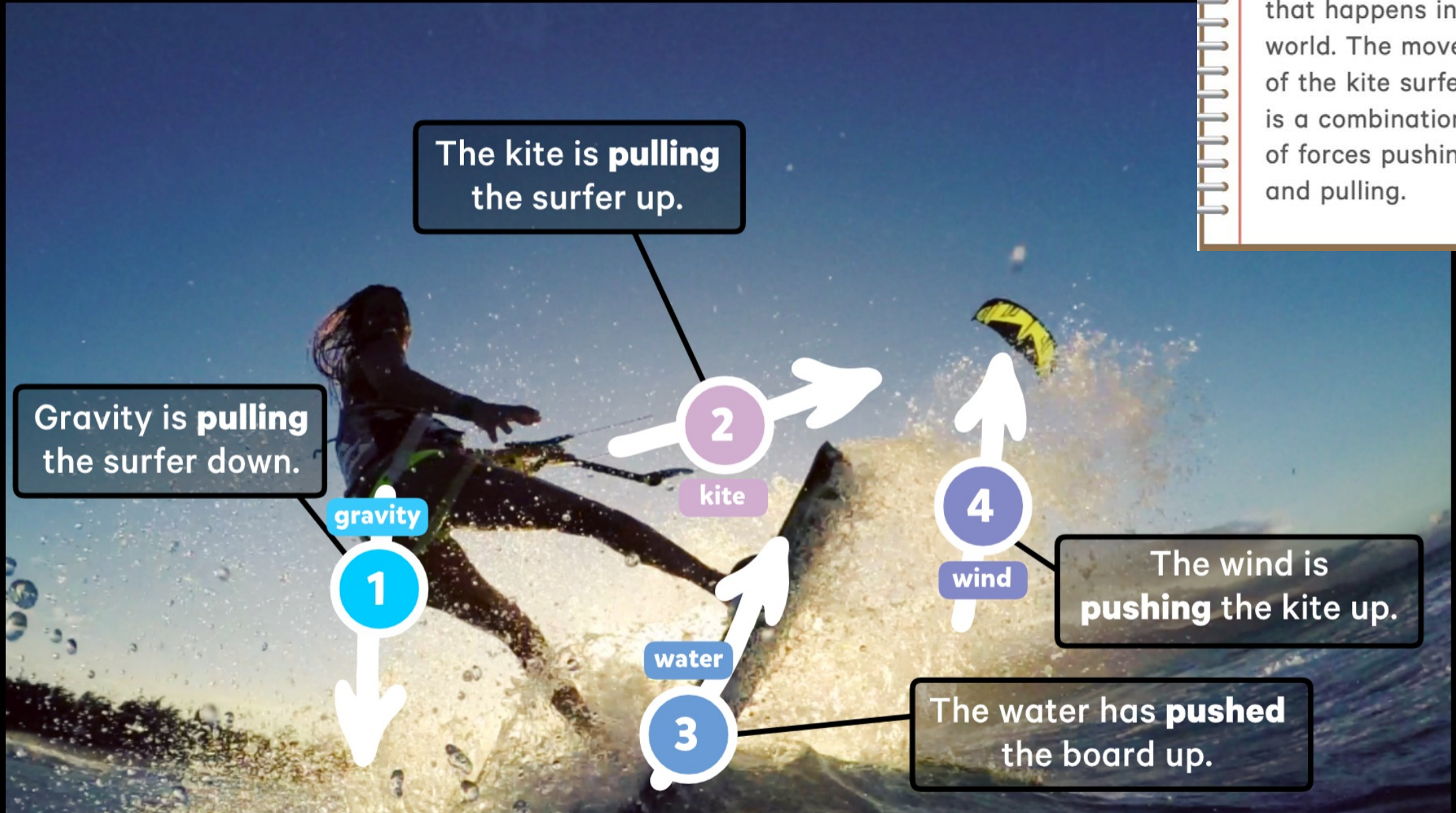
▶ Watch the kite surfer video and talk about:

- what you saw moving
- what you saw changing direction
- what you saw changing shape.

Video link: https://www.youtube.com/watch?v=F_hgd3e0G3U



Forces are the power behind everything that happens in our world. The movement of the kite surfer is a combination of forces pushing and pulling.



Gravity pulls the ocean towards the Earth. It will also pull something that is on the ocean towards the Earth making it sink, unless the object has been shaped to make it float.

3

This boat has been shaped so that it will float.

Talk with a partner about how the shape of the boat helps it to float.



Let's Investigate!

Materials needed

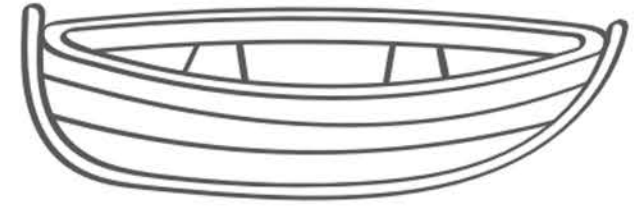
ACTIVITY QUESTION 6

You will need:

- foil – one piece for each student
- straws
- scrap paper
- scissors
- sticky tape
- Blu tack
- tub of water



- 4 You are going to investigate how to push and pull a piece of foil to make it float.



List some things you think a boat needs to make it float.

- 5 Draw your boat design and label it.

6 Follow this procedure to do your investigation.

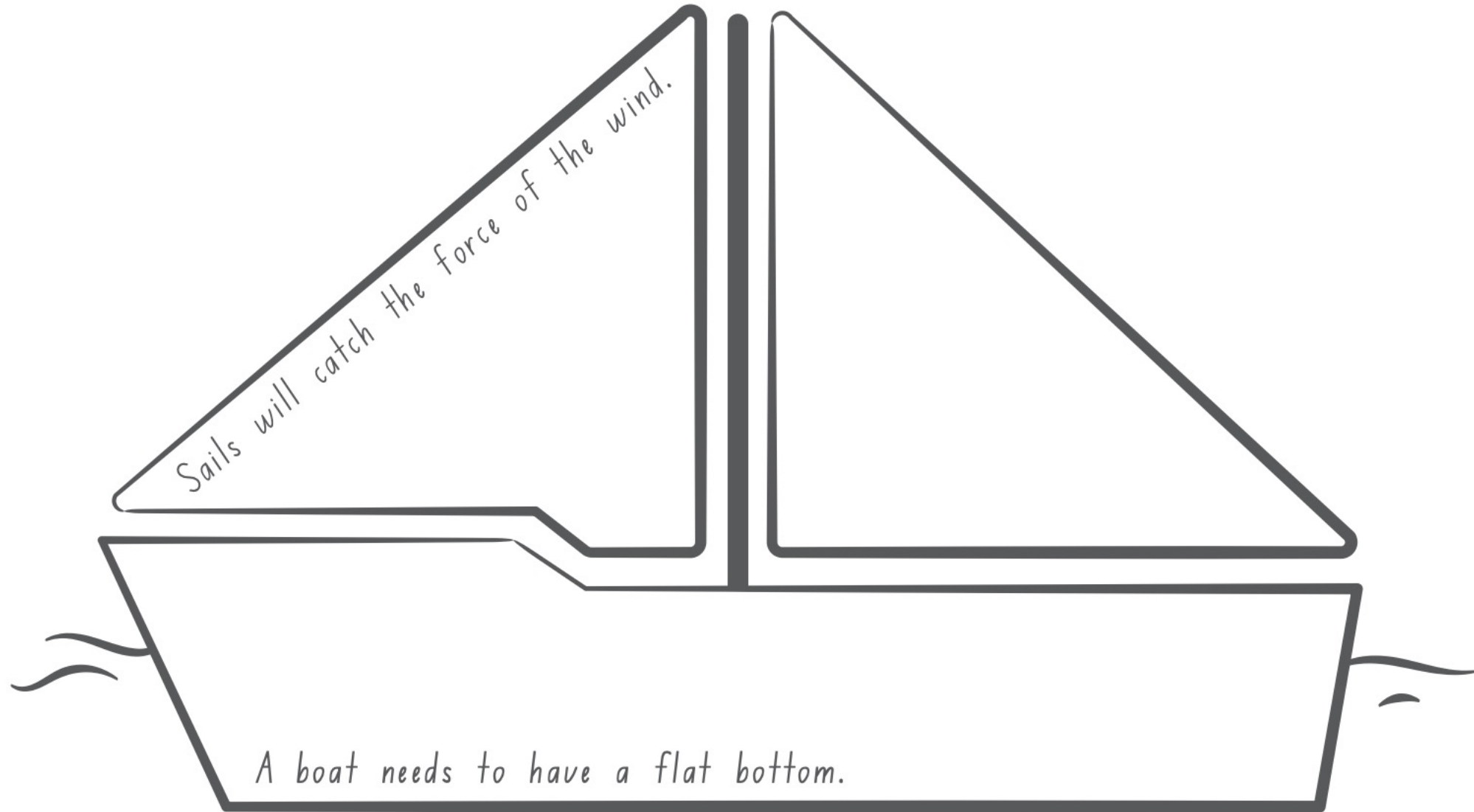
Tick these things as you do them:

- ☐ get a piece of foil
- ☐ make the foil into a boat
- ☐ test your boat on the water
- ☐ make some changes to your boat to improve the way it floats
- ☐ move your boat on the water without touching it
- ☐ add something to your boat to make it go faster
- ☐ make your boat change direction.



7

Fill the boat with information about how things move through water.



8

There are lots of forces that make things move through water.

Think of three ways to **stop** a boat from moving.

Test your ideas on your boat. Choose your best one and draw and label it.



9

A sailboat cannot sail if there is no wind.

Think of three different ways to make a sailboat move without wind.



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2

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