



# The REAL STEAM

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A2

  
Express Publishing



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# SCIENCE



-  Science
-  Technology
-  Engineering
-  Arts
-  Maths

# STEAM (SCIENCE)

1

## NATURAL DISASTERS

### Aim

'What is a natural disaster? What happens during a natural disaster?'  
To try and answer these questions, let's find out more about tornadoes.



**natural disaster:** any sudden event in nature that causes a lot of damage



**storm:** bad weather with rain and strong winds



**spin:** to turn round and round very quickly



**column:** something that has got a tall thin shape



**damage:** physical harm to something

### A iWonder

1 What natural disasters do you know? Write their names below.

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2 Read the descriptions of natural disasters and label the pictures.

**earthquake:** a sudden shaking of the ground

**flood:** a very large amount of water that covers the ground

**tornado:** a very strong storm with winds that move in a circle

**tsunami:** a huge wave in the sea



1 \_\_\_\_\_



2 \_\_\_\_\_



3 \_\_\_\_\_



4 \_\_\_\_\_

3 Why do you think we call them 'natural' disasters? Talk with a partner.

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### B Imagine

4 Look at the things below. How can we use them to do an experiment and understand what happens during a tornado? Talk with your partner.



an empty glass jar with a lid



water



washing-up liquid



glitter

### DID YOU KNOW?

- A tornado is a spinning column of air between a storm cloud and the ground.
- Most tornadoes happen in the USA. There are about 1,200 tornadoes every year.
- Some tornadoes are so strong that they can carry objects several kilometres away!

### C iExplore

5 Let's do the experiment. What are the steps?

- Fill  $\frac{3}{4}$  of a jar with water.
- Add two drops of washing-up liquid.
- Put some glitter into the jar.
- Put the lid on the jar.
- Start shaking the jar in a circle as fast as you can for about 20 seconds. What happens?



### DID YOU KNOW?

Scientists in the USA and Canada use the Fujita Scale to put tornadoes in groups, according to their wind speed and the damage they cause. The weakest tornadoes (EF0) cause small damage; the strongest (EF5) cause very bad damage.

### D iObserve

6 What do you observe? Tell your partner.

1 What happens inside the jar?

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2 What does a tornado look like? Use your own words to describe it to your partner.

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# STEAM (SCIENCE)

1

## NATURAL DISASTERS

### E iCreate

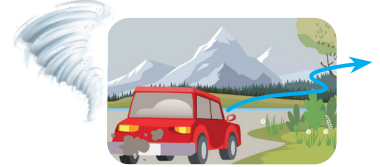
7 Tornadoes are very dangerous. What can people do to stay safe? In pairs, look at the pictures below and think. Then put a tick (✓) next to the things people should do and a cross (✗) next to the things people shouldn't do.



A Go into the basement of your house.



B Hide under a table away from windows.



C Drive to a safe place.



D Take photos of the tornado to post them online.



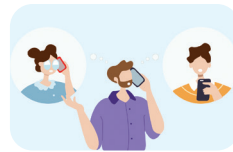
E Lie down on the ground.



F Cover your head and your body with a blanket.



G Go to a large open area, e.g. the park.



H Call your friends to see if they are safe.



I Stay calm.

8 In groups, design a poster about how people can stay safe during a tornado. Use the ideas in Ex. 7 and your own ideas, too. Add photos or drawings to show what people should/shouldn't do during a tornado.

### F iEvaluate

9 Answer the questions.

1 What did you know about tornadoes?

\_\_\_\_\_

2 What did you learn about tornadoes?

\_\_\_\_\_

3 What else would you like to learn about tornadoes?

\_\_\_\_\_



### iExtend

Research online and collect more information about the Fujita Scale. You can also find videos to show the different types of tornadoes (EF0 – EF5) and the damage they cause. Prepare and give a short presentation to the class.

❖ Complete the Evaluation Form at the back of the book.

# The REAL STEAM

A2

*The REAL STEAM* is a five-level series for students at CEFR levels Pre-A1 to B2 that promotes experiential and holistic language learning through STEAM activities. Students carry out a variety of scientific experiments, engineering projects, mathematical calculations and art projects, all carefully tailored to their language level. The series provides hands-on activities for students to explore the STEAM world through six collaborative steps: *iWonder* (asking questions), *ilmanage* (preparing for the activity), *iExplore* (doing the activity), *iObserve* (making observations), *iCreate* (presenting results) and *iEvaluate* (analysing results).

## Components

- Student's Book
- Teacher's lesson plans (downloadable)



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