

 Exploring  
extreme weather



# Introduction

## Overview

This lesson ignites pupils' interest in the world around them by looking at examples of extreme weather and the impact of these events. Pupils will explore ways of portraying weather that are interesting, thought-provoking and creative, while also applying their maths and geography skills in a real-world context.



## Time required

70 minutes for all activities (or less if individual tasks are selected)



## Materials required

- Exploring extreme weather film
- Exploring extreme weather slides
- Extreme weather profile cards (available on pages 6 - 7)
- Poster-making materials e.g. coloured pens, sugar paper etc.
- Pens, pencils and paper
- Internet enabled devices

## Learning objectives

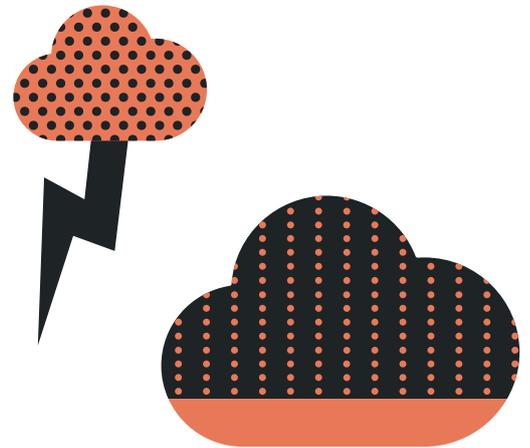
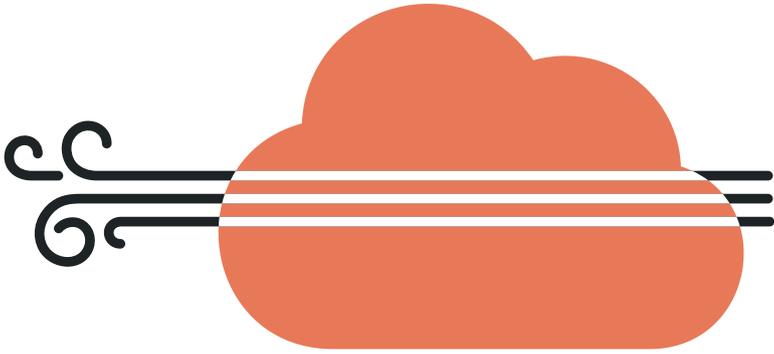
This lesson will enable pupils to:

- Define extreme weather and identify past extreme weather events
- Understand the causes of extreme weather events and the impact these can have
- Think, respond and reflect creatively with regard to different sources and stimuli

## Curriculum links

- **English literacy and language** – written and verbal communication
- **Sciences/science and technology** – prediction and evidence
- **Geography/social studies/the world around us** – observation, data collection and communicating data, prediction, global distribution of tropical storms, protection and planning
- **Art and design/expressive arts** – design, communication

# Activity steps



**01** To kick off the lesson, introduce the topic of extreme weather by asking the class some prompt questions:

- Have you ever heard of extreme weather?
- What does it make you think of?
- Have you seen any extreme weather reported in the news?
- What happened?
- Do you know where in the world it happened?

Ask the class to help you create a mind map. Take suggestions from the class for different words they associate with the term 'extreme weather'. This will help gauge the level of understanding of what extreme weather is. You might like to do this on an interactive whiteboard.

Use the supporting film and images, which can be found on the slides, to introduce some different types of extreme weather and associated vocabulary.



10 minutes



Individual task



Slides 2 – 3



Exploring extreme weather film

# Activity steps

## 02

Divide the class into small groups and give each group one of the extreme weather profile cards, found on pages 6 – 7.

Ask each group to read through their card and make some notes on what features of this extreme weather they think make it extreme, using prompt questions including:

- What do you think would happen to you if you were outside in this weather?
- What differences would you be able to see in the local area before and after the extreme weather event?

Ask them to imagine they are working for the local weather office in an area where an extreme weather event is expected to happen in the future. Tell them their task is to research and make a poster to help local people understand what they can do to mitigate (take action) the impacts if and when the extreme weather event occurs.

Give each group a tablet or other device to conduct their research using the links on their extreme weather profile card as a starting point. Use the prompt questions on the slide which include:

- What makes a weather event extreme?
- How might it affect people? (businesses, infrastructure, school, social lives)
- Who should people contact if they need help?
- Who puts out a warning and who should receive it?
- How do the emergency services respond?
- Do different people need to prepare differently? (Very old, very young etc.)
- What would make responding to the situation more difficult? (how far in advance you can issue warnings – if flash flooding occurs or the location of a storm path is unknown it limits the time you have to act)

They will need to take notes so they can use the information in their posters later on.



20 minutes



Groupwork



Slide 4



Exploring extreme weather profile cards

# Activity steps

03

Give each group poster-making materials and ask them to prepare their poster, making sure to include:

- A description of the extreme weather event
- What the warning signs are of the extreme weather event
- The risks of the extreme weather event
- How and how far in advance will they know if the event is going to occur?
- What can people do before, during and after?
- Advice about how to prepare tailored to different audiences
- Advice on how to behave if and when the extreme weather event occurs
- Any emergency service information

04

Ask each group in turn to present their poster and a summary of their key findings to the rest of the class. Ask pupils to evaluate what the impacts were and why (for both people and place).

Allow the rest of the class to ask questions if there is sufficient time.

05

Invite pupils to tell the person next to them three things that they have learned that they did not know before.

Bring the lesson to a close by asking the class to define what an extreme weather event is and to identify the key examples of extreme weather from around the world that they have learned about.



10 minutes



Groupwork



25 minutes



Groupwork



5 minutes



Groupwork

# Extreme weather profile cards

## Hurricane

Hurricanes are very large, rapidly rotating storms, with very strong winds and thunderstorms. Each year several make landfall and can cause considerable damage to property and loss of life. They are also known as typhoons or tropical cyclones.

### Find out more:

[www.metoffice.gov.uk/research/weather/tropical-cyclones/hurricane](http://www.metoffice.gov.uk/research/weather/tropical-cyclones/hurricane)

[www.oceanservice.noaa.gov/facts/hurricane.html](http://www.oceanservice.noaa.gov/facts/hurricane.html)

[www.cdc.gov/features/hurricanepreparedness/index.html](http://www.cdc.gov/features/hurricanepreparedness/index.html)

## Tornado

Sometimes called a twister, a tornado is a rapidly rotating column of air that reaches between the base of a storm cloud and the Earth's surface.

### Find out more:

[www.metoffice.gov.uk/weather/learn-about/weather/types-of-weather/tornadoes](http://www.metoffice.gov.uk/weather/learn-about/weather/types-of-weather/tornadoes)

[www.emsaonline.com/mediacenter/articles/00000184.html](http://www.emsaonline.com/mediacenter/articles/00000184.html)

[www.stormaware.mo.gov/preparing-for-a-tornado/](http://www.stormaware.mo.gov/preparing-for-a-tornado/)

## Wildfires

Sometimes called brush fires, bushfires or forest fires, a wildfire is an uncontrolled fire in a natural area. It can be caused by a combination of very hot and dry weather, with fires being started either through lightning strikes or human activity.

### Find out more:

[www.kfwf.org.uk](http://www.kfwf.org.uk)

[www.nationalgeographic.com/environment/natural-disasters/wildfires/](http://www.nationalgeographic.com/environment/natural-disasters/wildfires/)

[www.readyforwildfire.org/What-To-Do-If-Trapped/](http://www.readyforwildfire.org/What-To-Do-If-Trapped/)

# Extreme weather profile cards

## Blizzards

A blizzard refers to a cold, strong wind that is laden with snow which significantly reduces visibility (this means a blizzard makes it very hard to see things that are further away).

### Find out more:

[www.metoffice.gov.uk/weather/learn-about/weather/types-of-weather/snow/blizzard](http://www.metoffice.gov.uk/weather/learn-about/weather/types-of-weather/snow/blizzard)

[www.which.co.uk/news/2019/01/how-to-stay-safe-in-snow-and-ice/](http://www.which.co.uk/news/2019/01/how-to-stay-safe-in-snow-and-ice/)

## Sandstorm

Sometimes called a dust storm, sandstorms happen when very strong winds blow up sand and/or dust from an area that is extremely dry. They are common in deserts.

### Find out more:

[www.sciencing.com/are-there-warning-signs-before-a-dust-storm-occurs-13419067.html](http://www.sciencing.com/are-there-warning-signs-before-a-dust-storm-occurs-13419067.html)

[www.arizonahighways.com/blog/do-you-know-what-do-during-dust-storm](http://www.arizonahighways.com/blog/do-you-know-what-do-during-dust-storm)

[www.health.nsw.gov.au/environment/factsheets/Pages/dust-storms.aspx](http://www.health.nsw.gov.au/environment/factsheets/Pages/dust-storms.aspx)

## Heatwave

A heatwave is a long period of hot weather, which may be accompanied by high humidity.

### Find out more:

[www.metoffice.gov.uk/weather/learn-about/weather/types-of-weather/temperature/heatwave](http://www.metoffice.gov.uk/weather/learn-about/weather/types-of-weather/temperature/heatwave)

[www.health.nsw.gov.au/environment/beattheheat/Pages/prepare-for-heat.aspx](http://www.health.nsw.gov.au/environment/beattheheat/Pages/prepare-for-heat.aspx)