

Extreme Earth

Learning Objective:

To find out about extreme weather conditions across the world.

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What is the weather like today?

What was it like
yesterday?

?

What do you
expect it to be
like tomorrow?



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For many parts of the world, weather changes very little. It can be hot or cold, wet or dry, windy, snowy, icy or foggy, but these changes are simply the changes you would expect to see with the seasons.

However, freak weather occurrences can happen anywhere in the world and some places frequently have to endure extreme weather.

How many types of extreme weather can you think of?



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Lightning

Lightning is one of the most dramatic weather phenomena. Lightning occurs in storm clouds when ice and water rub together. This creates static electricity and makes parts of the cloud become charged. The charge is eventually released as a fork of lightning that shoots down to Earth or as flashes in the clouds.



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Did you know that thunder comes from lightning? Thunder is the sound lightning makes but we hear thunder after we see lightning because light travels faster than sound.



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Lightning will always look for objects closest to them to strike. This could be anything sticking up from the ground such as mountains, buildings, trees or people.

Did you know that in the world around 24,000 people every year are struck by lightning?



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Tropical Storms

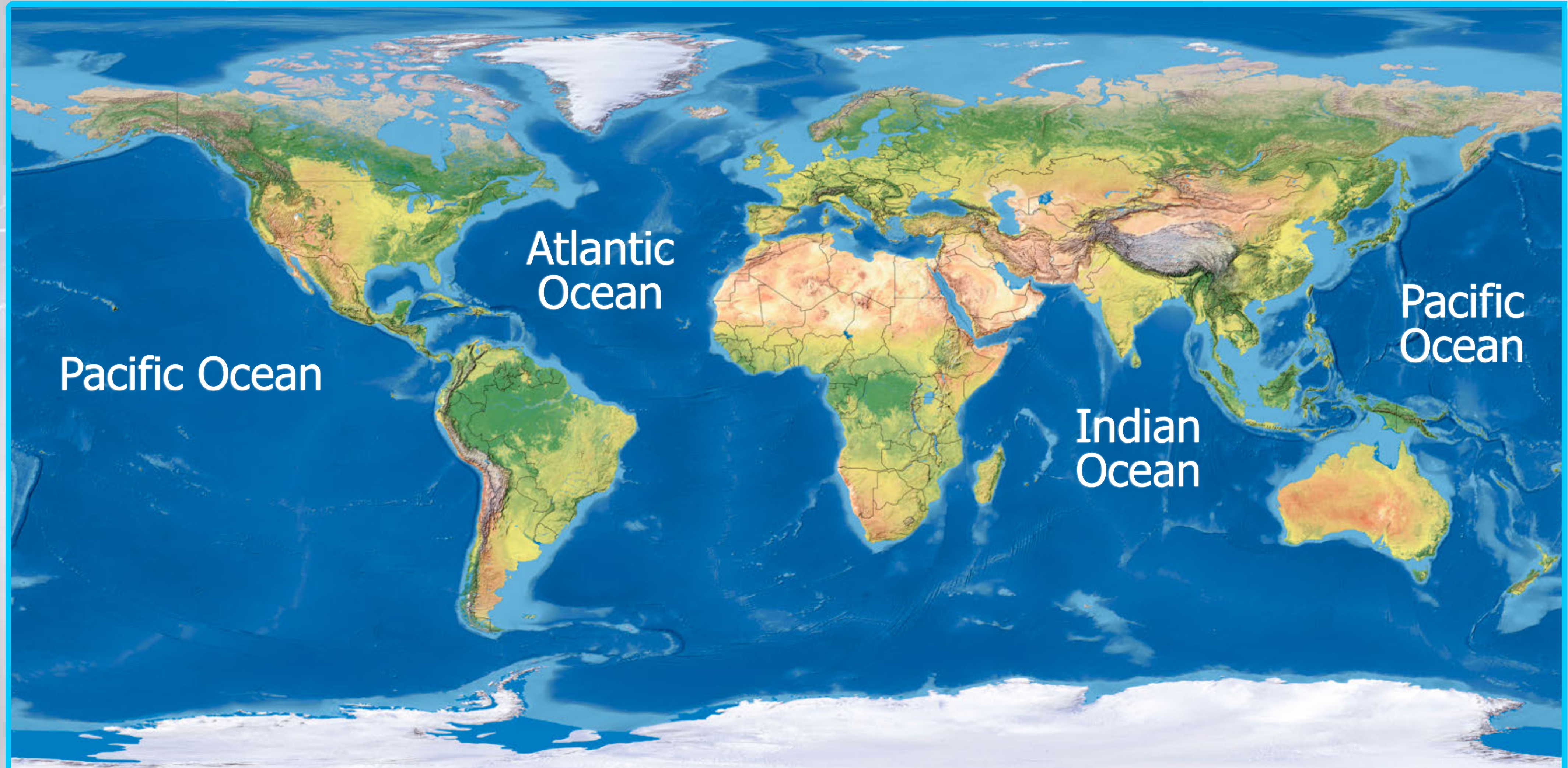
Tropical storms can be some of the fiercest storms on Earth. These storms develop in tropical areas of oceans and are called different things depending on where they are. Hurricanes, typhoons and cyclones are all types of tropical storms.

This picture shows a tropical storm from space.
The middle of the storm is called the **eye**. The eye is an area of calm around which the storm rages.

The warm air in tropical regions, mixed with ocean currents and high sea temperatures, causes small thunderstorms which gather energy from the heat and make the storms become more powerful.

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Tropical storms in the Pacific Ocean are called **typhoons.**

Tropical storms in the Atlantic Ocean are called **hurricanes.**

Tropical storms in the Indian Ocean are called **cyclones.**

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When a hurricane, cyclone or typhoon hits land, it can cause devastation. High waves, strong winds and heavy rain can batter the land and destroy buildings. They cause a danger for people too.



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These pictures show damage caused by typhoons. **What can you see?**



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Floods

Flooding is the biggest natural disaster on Earth, besides disease. As well as destroying crops and buildings, floods also carry the biggest death toll.

Floods are more common in tropical areas due to the frequency of tropical storms but they can happen anywhere in the world.

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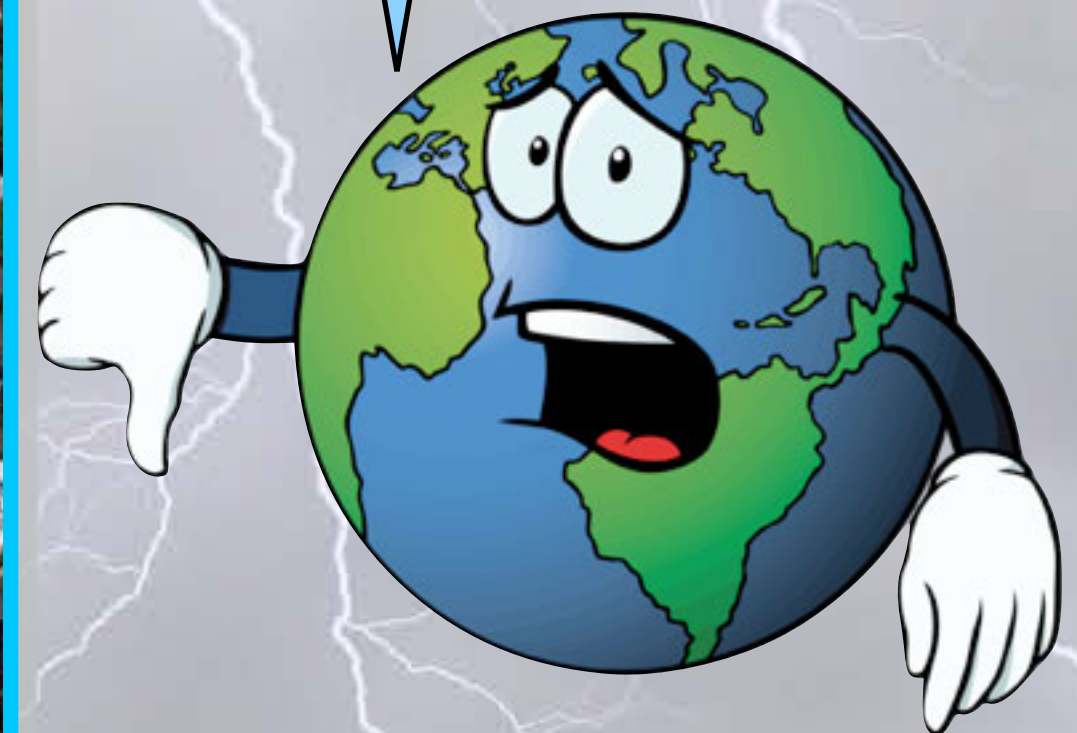
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Floods can occur when there is more rainfall than usual. This can make rivers burst their banks and cause floods in areas where the rain has nowhere else to go. Areas on the coast can be flooded after a sea storm too.

Brisbane floods, 2011



In 2011, the Brisbane River in Australia burst its banks. 20,000 homes were flooded.



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Hail Storms

Another example of extreme weather is hail storms where balls of ice fall as precipitation. Some hailstones are small but some can measure up to 12cm in diameter. Hailstorms can destroy crops and cause damage to cars and buildings. They will also hurt a lot if you get hit by them!



Check out the size of these hailstones!



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Blizzards

Blizzards are severe winter storms. Blizzards have high winds, low temperatures and heavy snow. In severe blizzards, winds can blow over 45mph (72kmh). The strong wind and driving snow make visibility drop to almost zero.



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Blizzards can occur very quickly, catching people off-guard. In 1967 in Midwestern America, a blizzard dropped around 61cm of snow with winds faster than 50mph (80kmh). The storm left 76 people dead.



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Tornadoes

A tornado (or twister) is a spiralling funnel of air which descends from a storm cloud. They are formed when warm air is drawn in at the base of the cloud. It then rises upwards, spiralling as it does so to create a funnel.



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Tornadoes are vicious and destroy anything in their path. The strongest tornadoes can reach speeds of 300mph (482kph) and can be up to a kilometre wide. They can pick up buildings, people, animals, cars and trees.

Can you see the path taken by this tornado in Oklahoma, USA?



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Have you ever experienced any of these types of extreme weather?
What was it like? How did you feel?



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