

Extreme Earth

Learning Objective:

To find out about the Earth's climate and areas of extreme temperatures.

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A lot of what we do is determined by the weather, from what we wear to the activities we can do and to the foods we eat.



How many different types of weather and phenomena associated with the weather can you think of?

Discuss your ideas with a partner.

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What ideas did you come up with? Let's write a list!



Weather words

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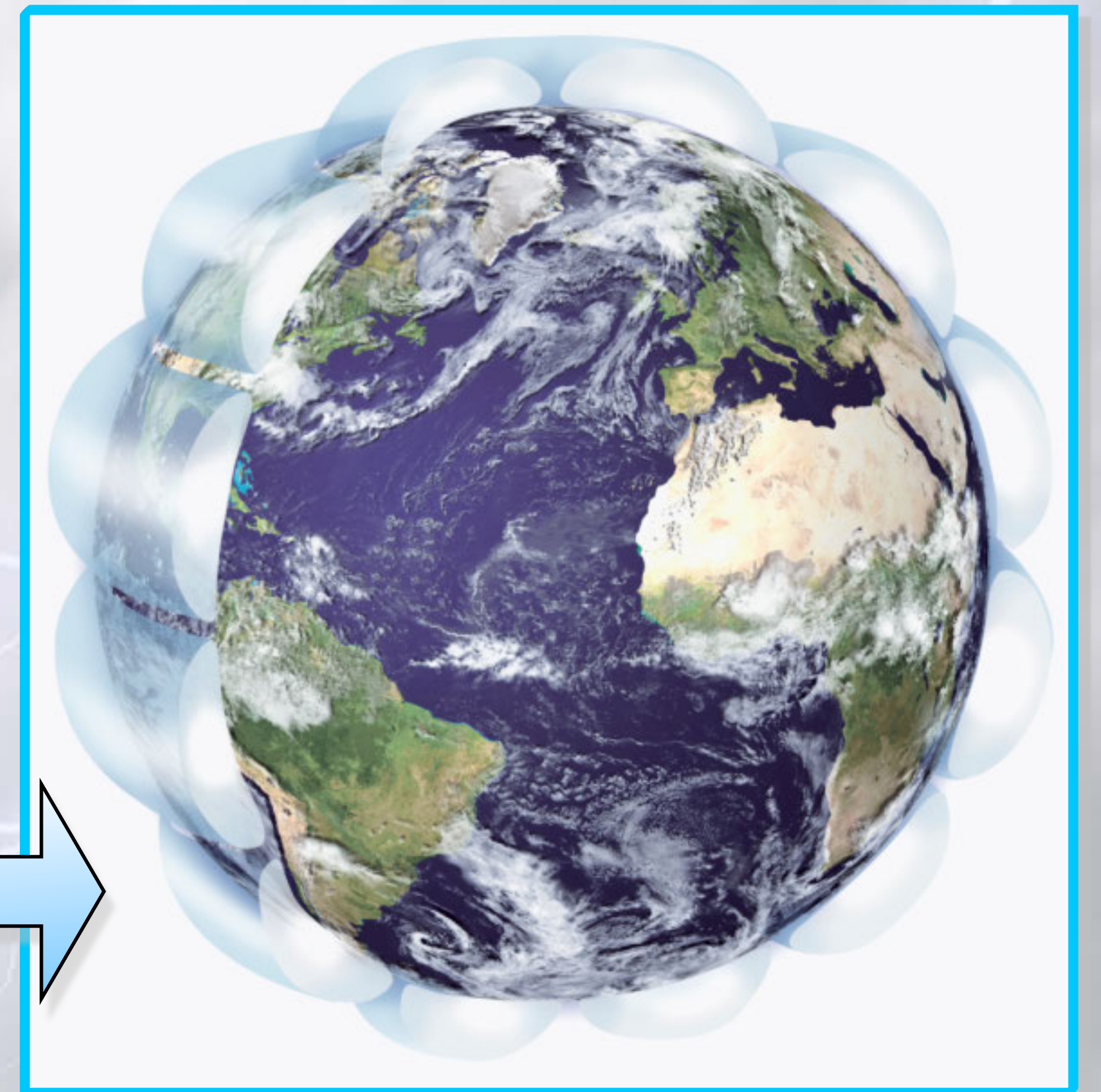
How would you describe what the word **climate** means?

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Weather is the state of the atmosphere around the Earth at any given time. This is affected by factors such as temperature, wind, air pressure and humidity.

This diagram shows the first layer of the Earth's atmosphere, called the troposphere. This layer is where weather occurs.



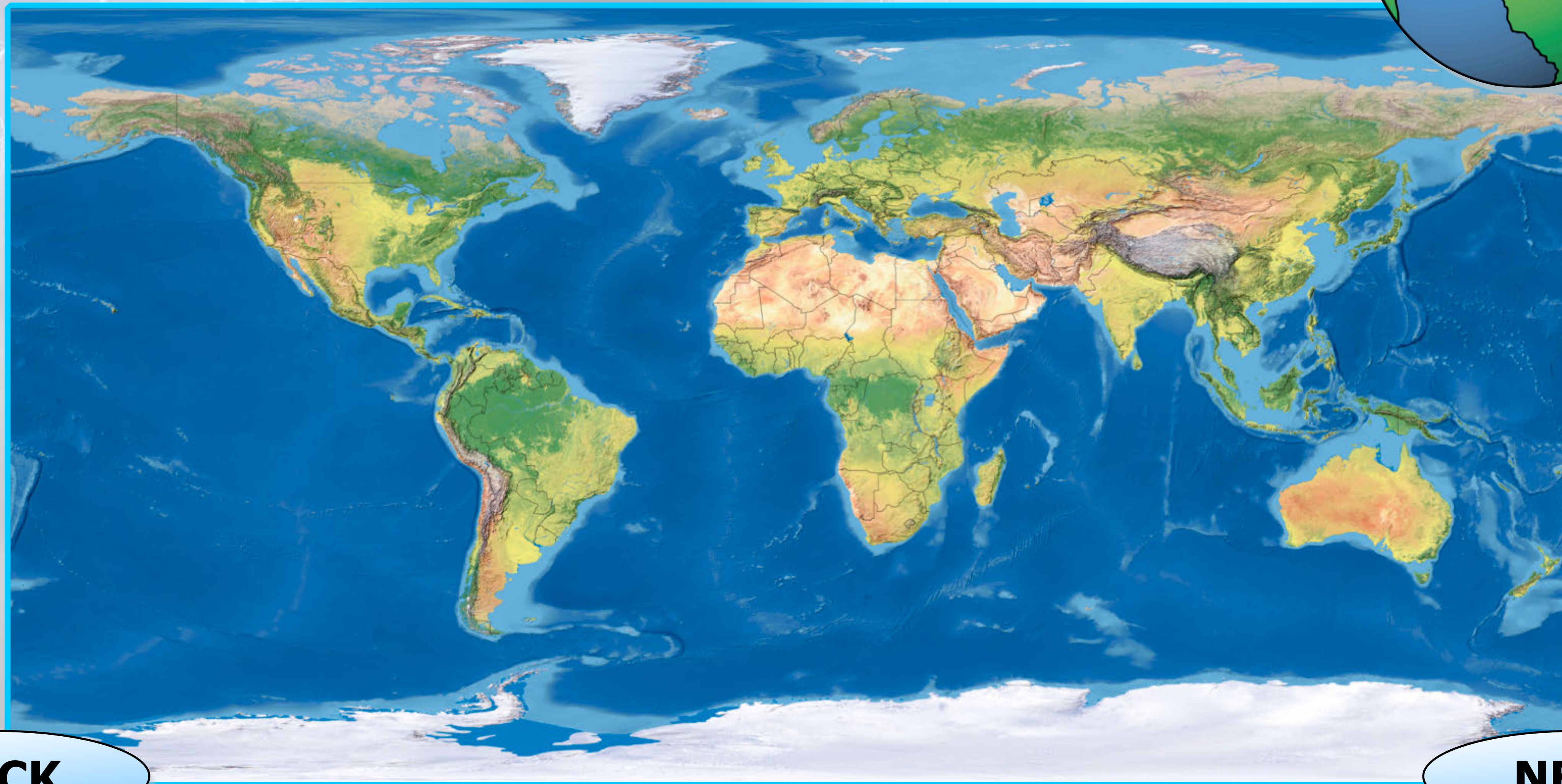
Climate is a region's weather patterns over a period of time.

Different areas of the world experience different climates depending on where they are. Some areas experience hot climates while others have cold climates. Some have dry or humid climates.

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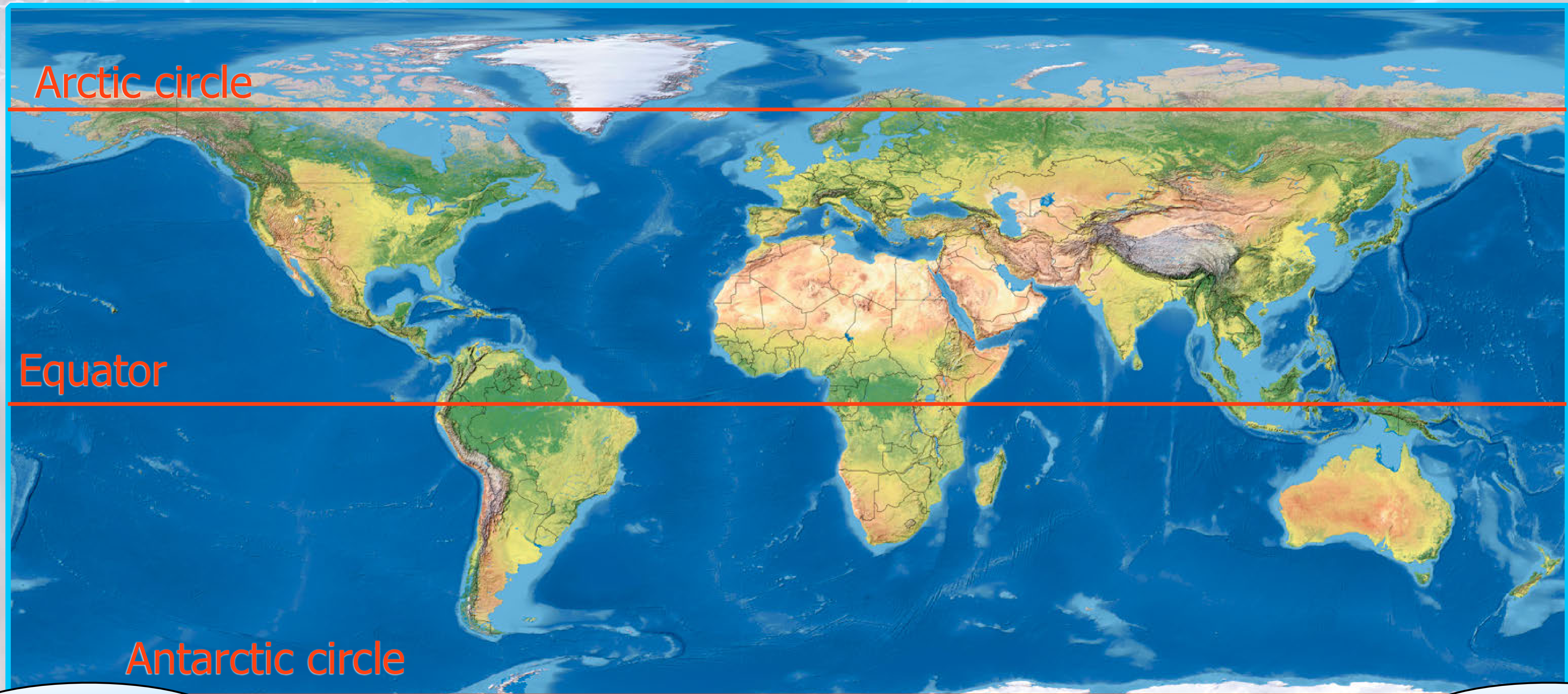
Have a look at this world map. Where would you expect the hottest and coldest places to be? Why?



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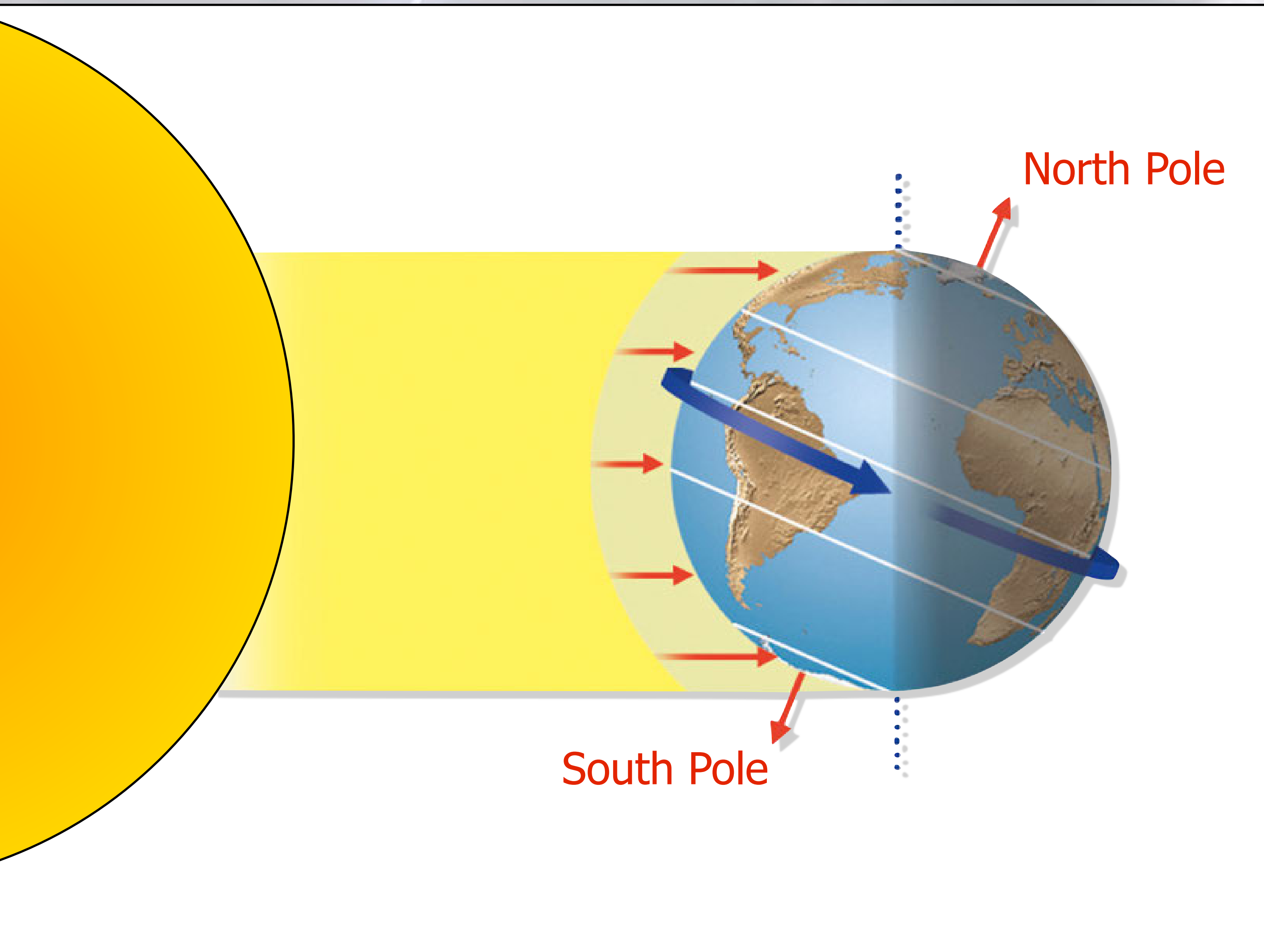
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The globe has a set of imaginary lines around it to help people locate where places are. The line exactly in the middle of the world is called the **equator**. The highest line is the **Arctic circle** and the lowest line is the **Antarctic circle**.



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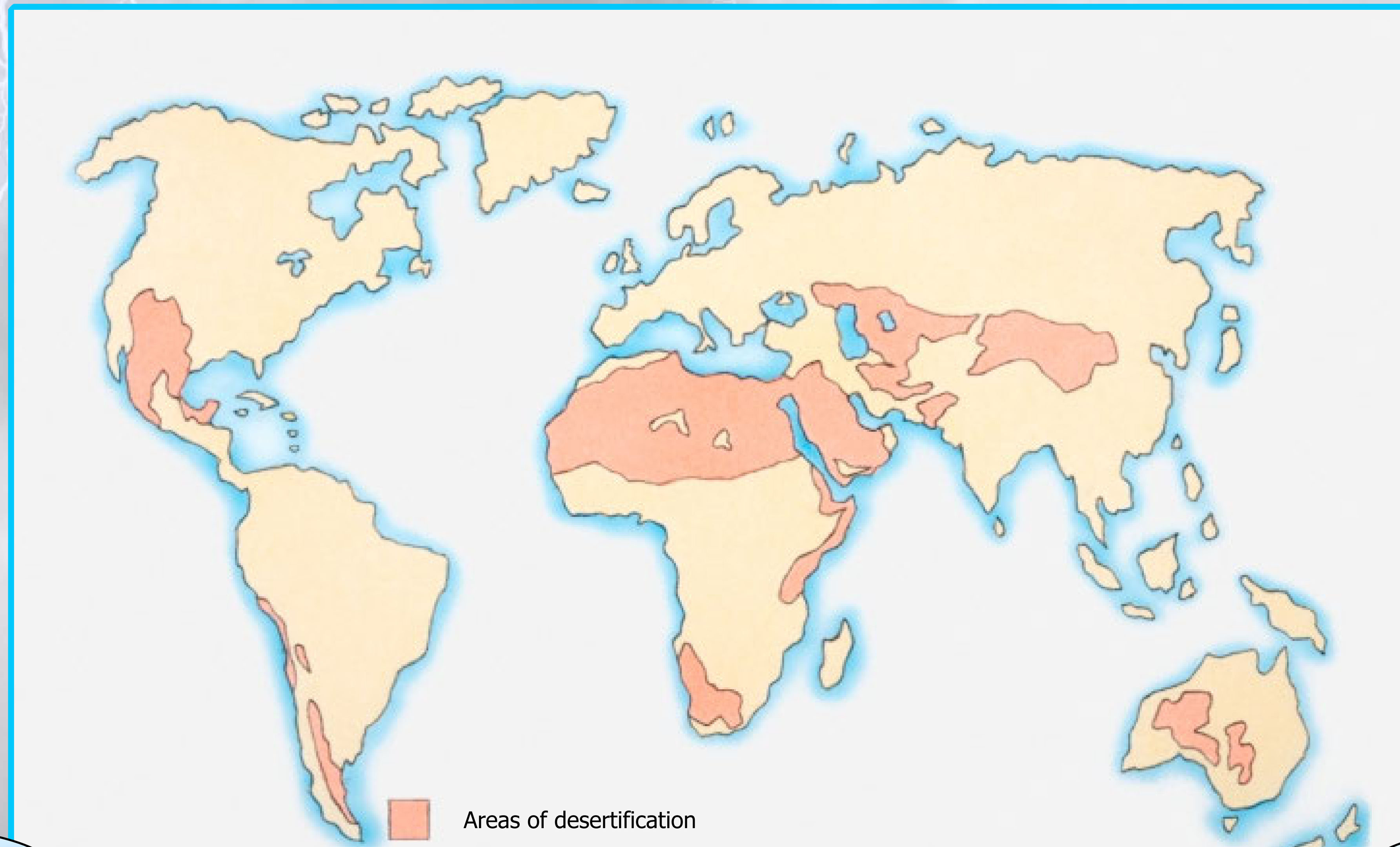


The area around the equator, between the Tropic of Cancer and the Tropic of Capricorn, is always closest to the sun. This makes these areas the hottest in the world. The North and South Poles are the furthest points from the sun which make the areas in the Arctic and Antarctic the coldest.

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Some of the hottest places in the world are deserts. These areas get little rainfall and have temperatures that remain hot all year round.



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This is the Sahara desert in Africa. What can you see? What do you think it would be like here?

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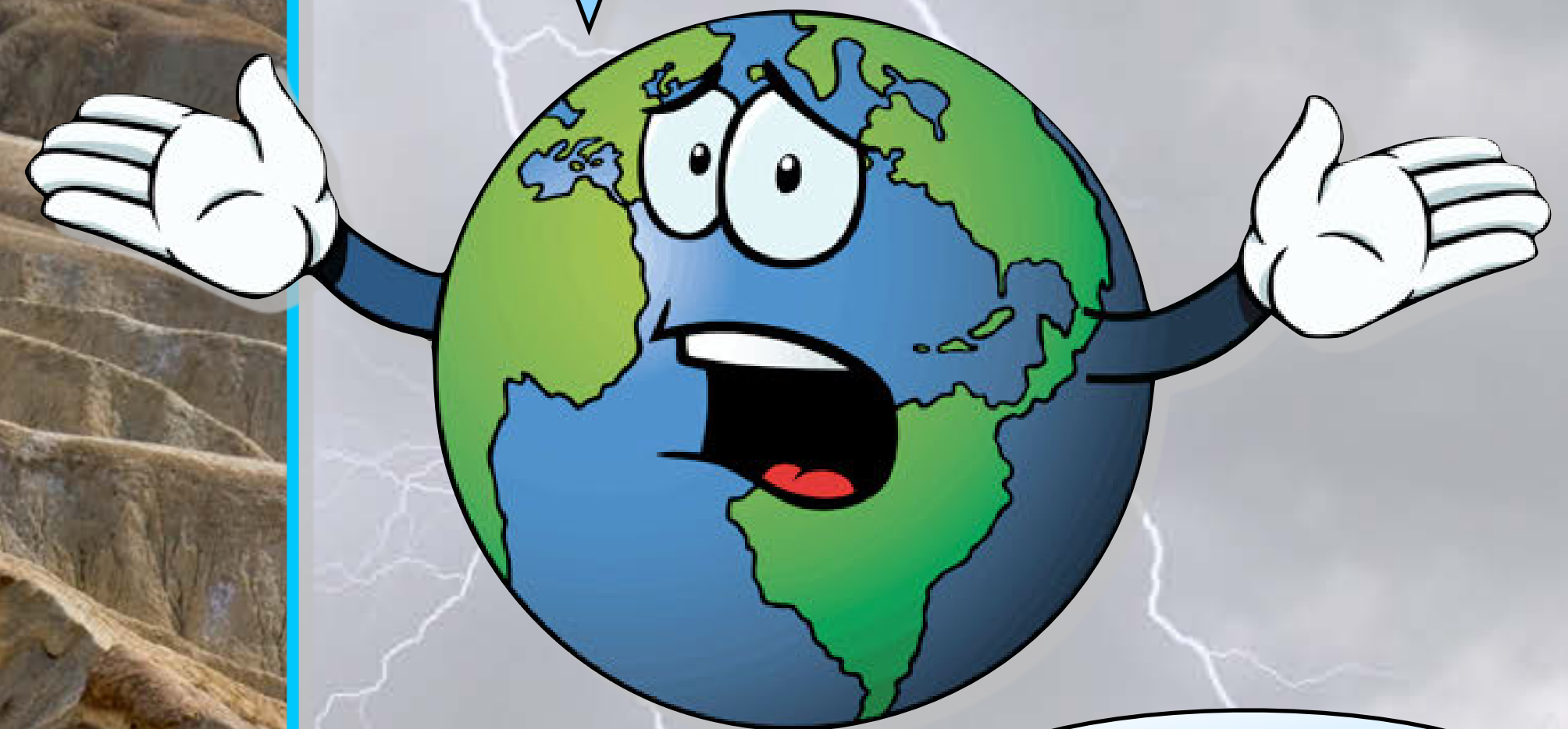
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The hottest ever recorded temperature on Earth was recorded in 1913 in Death Valley, California, USA. The temperature recorded was a scorching 56.7°C!

Death Valley



Why do you think it is called 'Death Valley'?



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The coldest temperature ever recorded on Earth was in Antarctica. Antarctica is so inhospitable that no one lives there permanently. The only people who go to Antarctica are researchers who want to find out more about the area.

The coldest temperature recorded is -94.7°C !



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The coldest inhabited place on Earth is a village in Russia called Oymyakon. Temperatures rarely go above freezing and are regularly as low as -40°C .



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It is not only temperature that causes extreme weather conditions on Earth. Some places have extreme amounts of rainfall. Mawsynram in India is reportedly the wettest place on Earth with an average rainfall of 11,873 millimetres of rain a year.

Compare this to the wettest parts of the UK which get around 4,500 millimetres of rain a year and you start to understand how wet this is!



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The driest place on Earth is the Atacama Desert in Chile. This desert is so dry that rain is a very rare occurrence. In 1971, it rained for the first time in 400 years!



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Tornado Alley in the USA is the place in the world that gets more tornadoes than anywhere else in the world. Hundreds of tornadoes happen here every year.

Tornadoes are also known as twisters!



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Next time you complain about the weather, think back to some of the places we have learnt about today.
It could be worse!



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