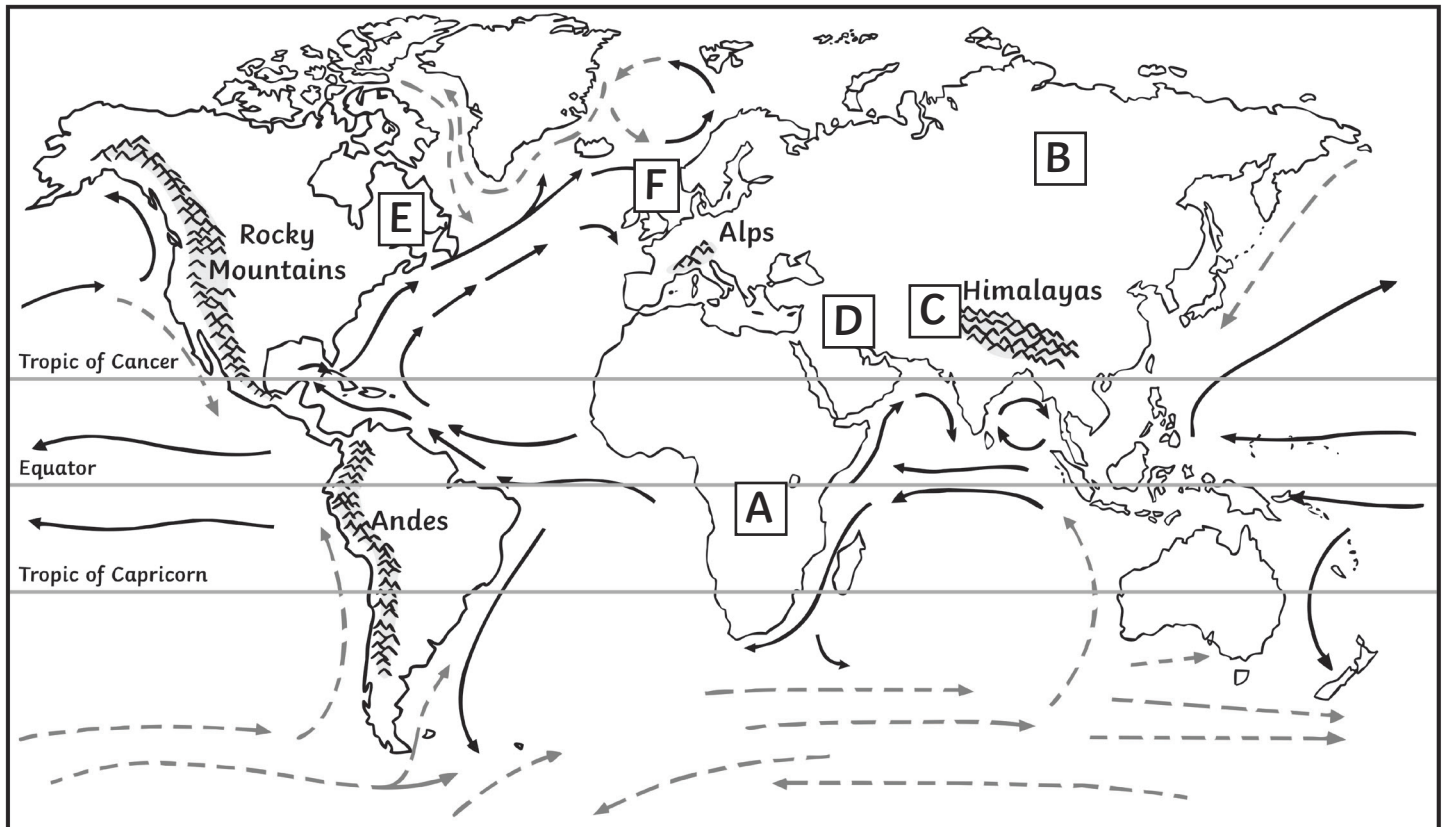


Climate Detectives

Can you explain why the places on the map have different climates?



Key

- cold ocean current
- warm ocean current
- Mountain range

1.

Explain why it is cooler at location A than at location B.

2.

Explain why it is warmer at location D than at location C.

3.

Location E and F are at the same latitude, but F is warmer than E. Can you explain why?

4.

Explain why location F would be wetter than location B.

5.

Can you name four other places which are affected by warm ocean currents?

For example, the east coast of the USA.



Answers

1. Explain why it is cooler at location A than at location B.
Location A is nearer the equator. The Sun's rays heat a smaller area at the equator so this area is warmer. Location B is at a higher latitude nearer the polar region. The Sun's rays have to heat a larger area of land here as they hit the curve of the Earth. These areas will be cooler.
2. Explain why it is warmer at location D than at location C.
Location C is in the Himalayas. As temperature falls by 1 C for every 100m, this area will be much cooler.
3. Location E and F are at the same latitude, but F is warmer than E. Can you explain why?
Location F is affected by a warm ocean current called the North Atlantic Drift. This brings warm water to location F (the UK) and raises temperatures there. Location E is affected by a cool ocean current, which will lower temperatures.
4. Explain why location F would be wetter than location B.
4. Location F is a coastal area so it will be affected by the prevailing winds bringing moist air and rain. Location B is inland so it will be drier.
5. Can you name four other places which are affected by warm ocean currents?
For example, the east coast of the USA.
The west coast of Canada
The east coast of South America
The east coast of Africa and South Africa
India
The east coast of Australia
New Zealand
Indonesia