

# Weather and Climate

What is the difference between weather and climate?



# What is the weather like on my school grounds?



**Key question we will answer:**

**What is the difference between weather and climate?**

**Key geographical knowledge we will use:** Physical Geography and Locational Knowledge

**Key geographical concepts we will use:** Space and Physical Processes

**Key question we will answer:**

**How can we record and present weather data?**

**Key geographical knowledge we will use:** Physical Geography, Geography Skills and Fieldwork

**Key geographical concepts we will use:** Physical Processes



# Key vocabulary for this lesson:

**weather** – the daily changes in the conditions outside

**climate** – the usual weather over a long period

**climate zones** – large areas that have similar climates

**meteorologist** – a type of scientist that studies weather

**temperature** – how hot or cold something is

**mild** – of limited severity, not extreme

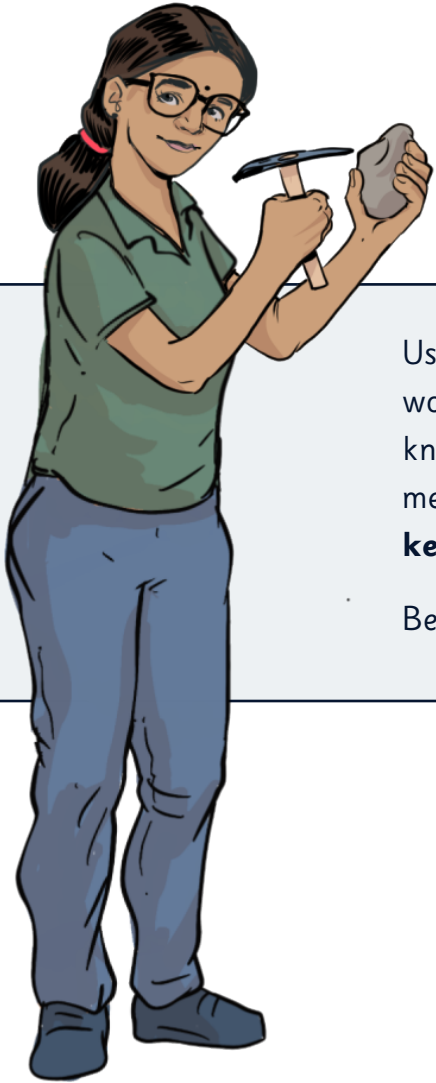
**temperate** – a type of climate which does not have extreme weather and has four seasons

**equator** – an imaginary circle around the Earth that divides it into two equal parts or hemispheres

**poles** – the southernmost and northernmost points of the Earth



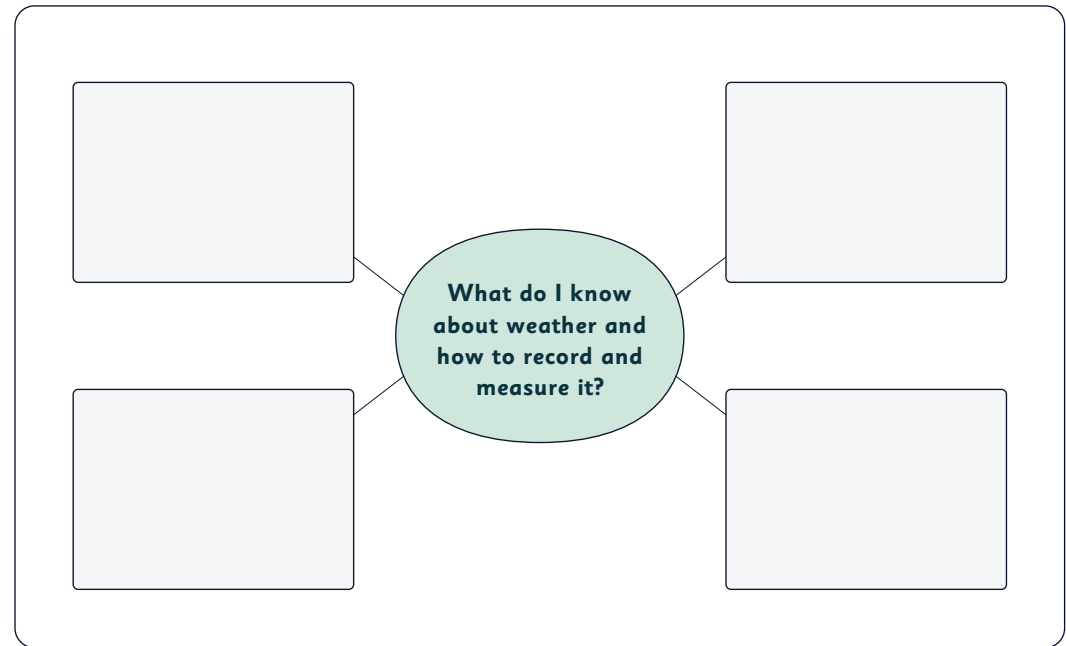
# Pre-assessment mind map



Use the **mind map** on your pre-assessment worksheet to write down everything you already know about the weather and how to record and measure it. You can write **facts, sentences, and keywords** or draw **pictures and diagrams**.

Be ready to **share your feedback** with the class.

## Pre-assessment mind map



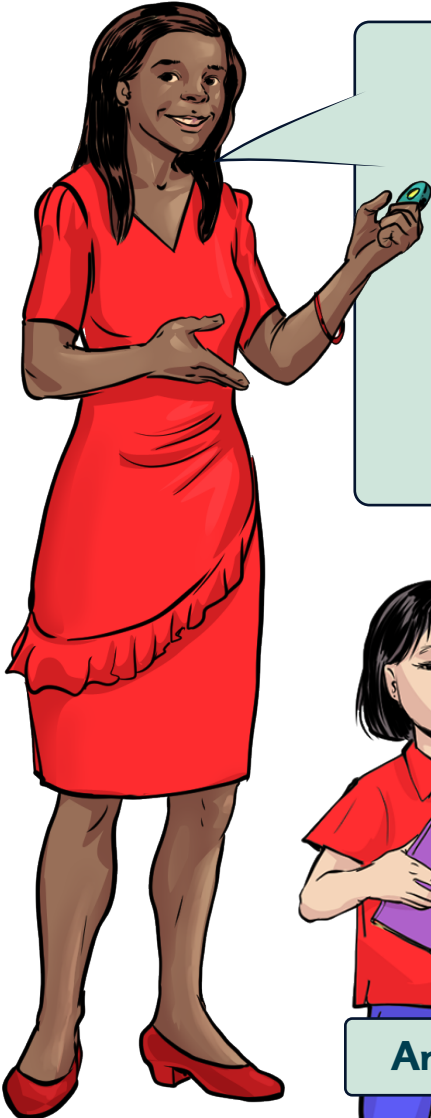
 [www.grammarsaurus.co.uk](http://www.grammarsaurus.co.uk)



[www.grammarsaurus.co.uk](http://www.grammarsaurus.co.uk)



# Climate or weather?



Hi, my name is **Jada**. I am a **meteorologist**. I collect and study geographical data to make weather forecasts and conduct research.

Using your previous knowledge, read what **Angie and Elijah say about climate and weather**. Who is **correct**? **Discuss this question** with your learning partner. Be ready to **share your feedback** with the class.



**Angie**

Weather and climate are the **same thing**. They both describe the **sky** and how **hot or cold** it is outside.

Weather is the **conditions** outside daily, like if it's **sunny, rainy, or cloudy**. Climate refers to the normal **weather in a specific place over a long period**.



**Elijah**



Elijah is **correct!**

The **climate** is the usual weather over a long period. The **weather** is the daily changes in the conditions outside. There are **different climates** in large areas of the world. These areas are called **climate zones**. Where a place is on the planet will affect its **weather and climate**.



# Weather



Weather is the **state and conditions of the atmosphere** and how it **feels** around us.

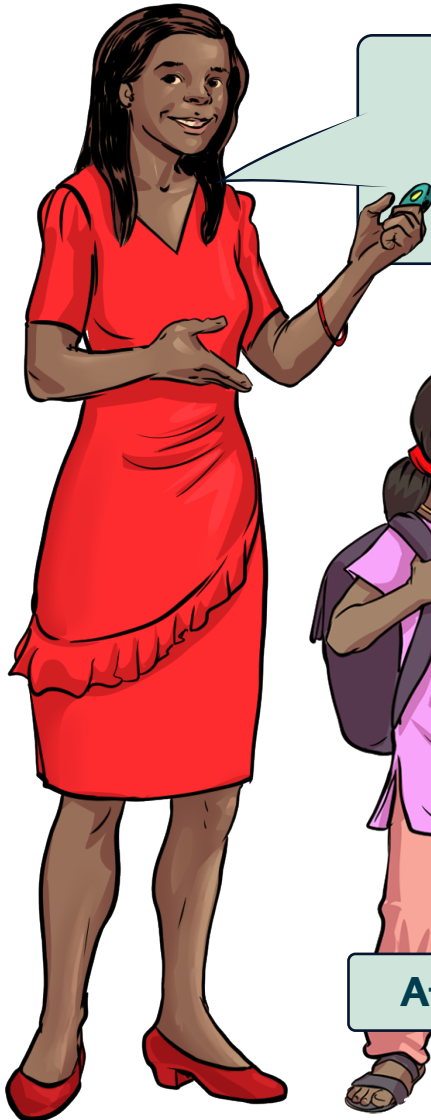
It includes things like the **temperature, how strong the wind is**, and whether it's **raining, sunny, snowing, or foggy**. The weather can change significantly, often differently in **different seasons** and places worldwide. So, looking out the window, you may see the **weather change daily or even throughout the day!**





# Why are there different climate zones?

Can you remember why there are **different climate zones**? Using your previous knowledge, read what **Attia and Jamie** say about climate zones and decide who is **correct**.



Attia

Some places are **closer to the equator** and get more **heat and sunlight**, so they have **hotter climates**. Other places are **farther away** and receive **less heat and sunlight**, so they have **cooler climates**. The **tilt of the Earth's axis** also plays a part in creating these different climate zones.

The Earth has **different climate zones** because invisible walls divide the planet. These walls **keep the weather in each zone separate**. So, if you cross one of these invisible walls, you'll suddenly find yourself in a completely **different climate zone with different weather**.

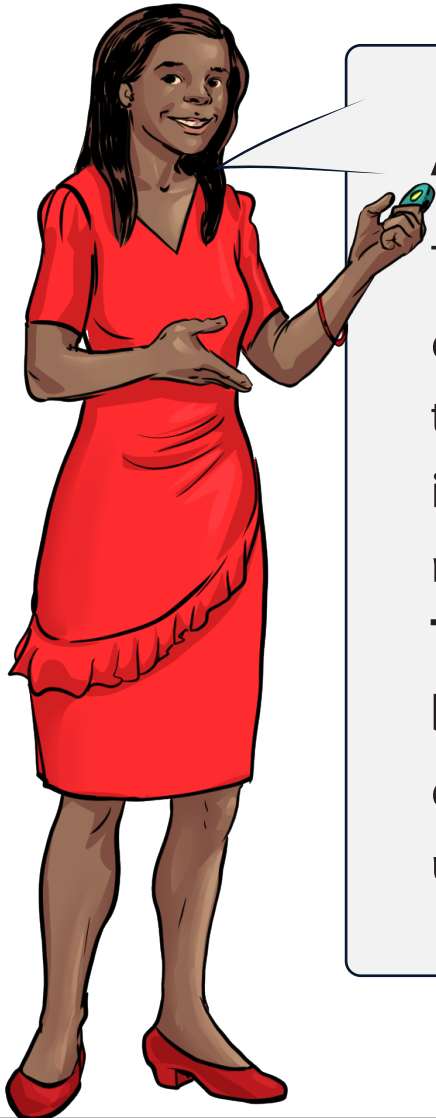


Jamie



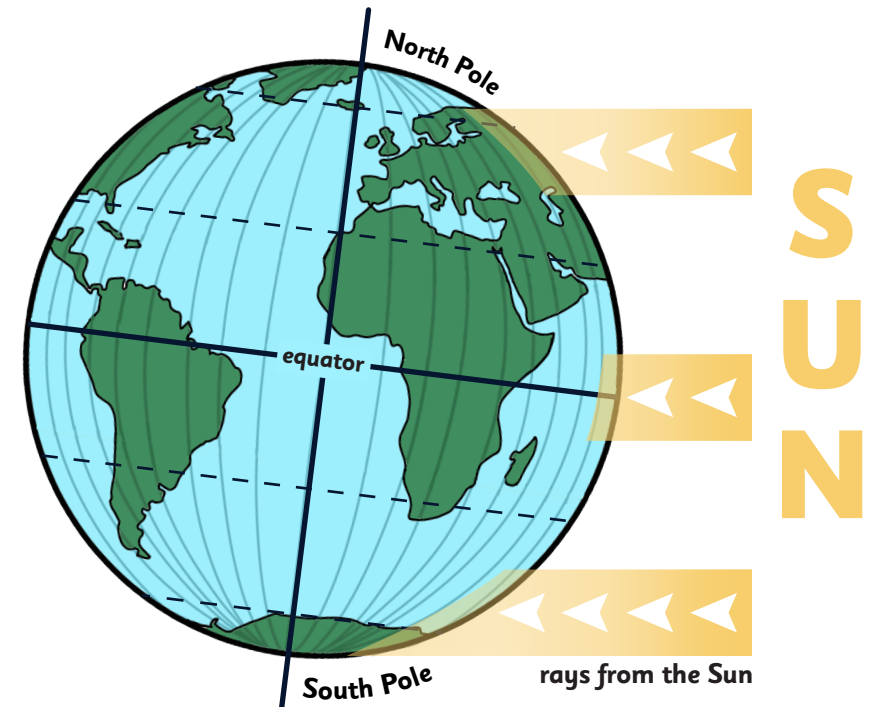
# Why are there different climate zones?

answers



Attia is **correct!**

The Earth is **round and tilted at an angle on an axis**, causing the Sun's rays to **hit different places at different intensity levels**. The **equator** gets the **most direct sunshine**, making it **hotter**. **The North and South Poles are colder** because the Sun shines on them at an angle. Look at the diagram for a better understanding.





# Climate zones

Remember that **climate** is the usual **weather over a long period**.

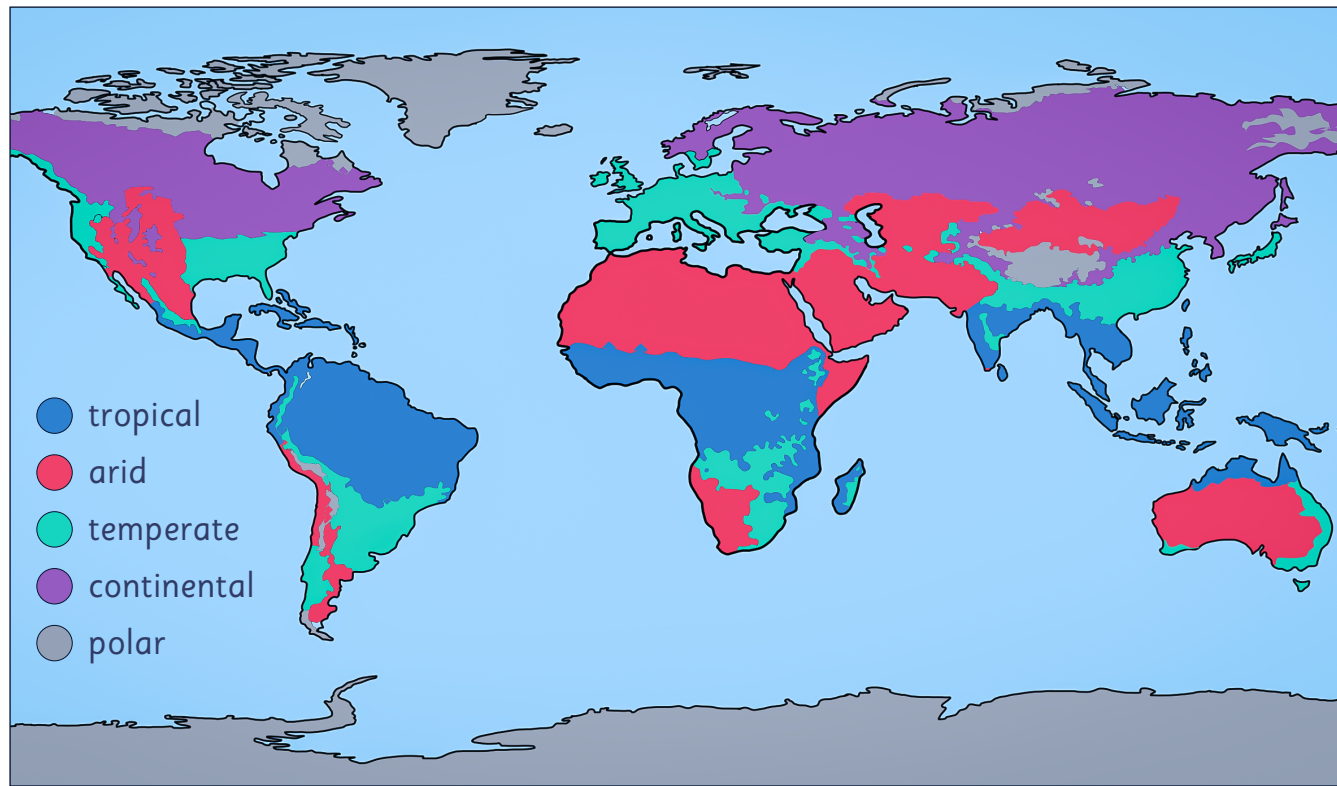
**Climate zones** are different areas on Earth that have their own **special weather**. Imagine Earth like a big puzzle, and each piece of the puzzle has its own type of climate.

Each zone has its own **special characteristics and weather patterns**.



# World climate zones

This map shows the **different climate zones around the world.**



- **tropical climate zone** – constant high temperatures and generally high rainfall
- **arid (desert) climate zone** – low rainfall and generally high temperatures
- **temperate climate zone** – generally warm summers and cool winters with moderate rainfall
- **continental climate zone** – generally cool summers and very cold winters
- **polar climate zone** – very cold temperatures all year



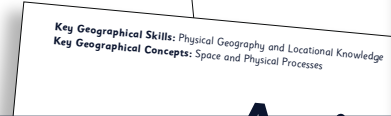
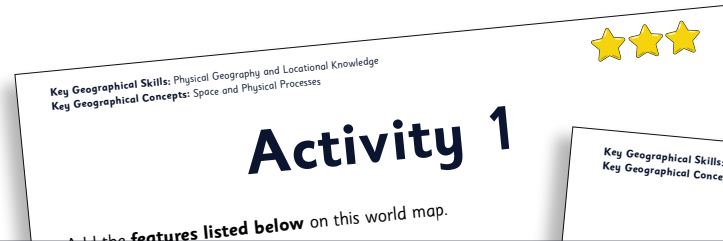
# Activity 1

11



**Follow the instructions** on your activity 1 worksheet to **label the following features** on the world map:

- continents
- equator
- compass rose
- key
- climate zones



**Activity 1**

Key Geographical Skills: Physical Geography and Locational Knowledge  
Key Geographical Concepts: Space and Physical Processes

Add the **features listed below** on this world map.

- Label the continents using the following list: Africa, Antarctica, Asia, Europe, North America, Oceania, and South America.
- Complete the key with different colours for each climate zone.
- Colour in the climate zones on the map.
- Label the equator.
- Complete the compass rose.

**Key:**

- tropical
- arid
- temperate
- continental
- polar

www.grammarsaurus.co.uk



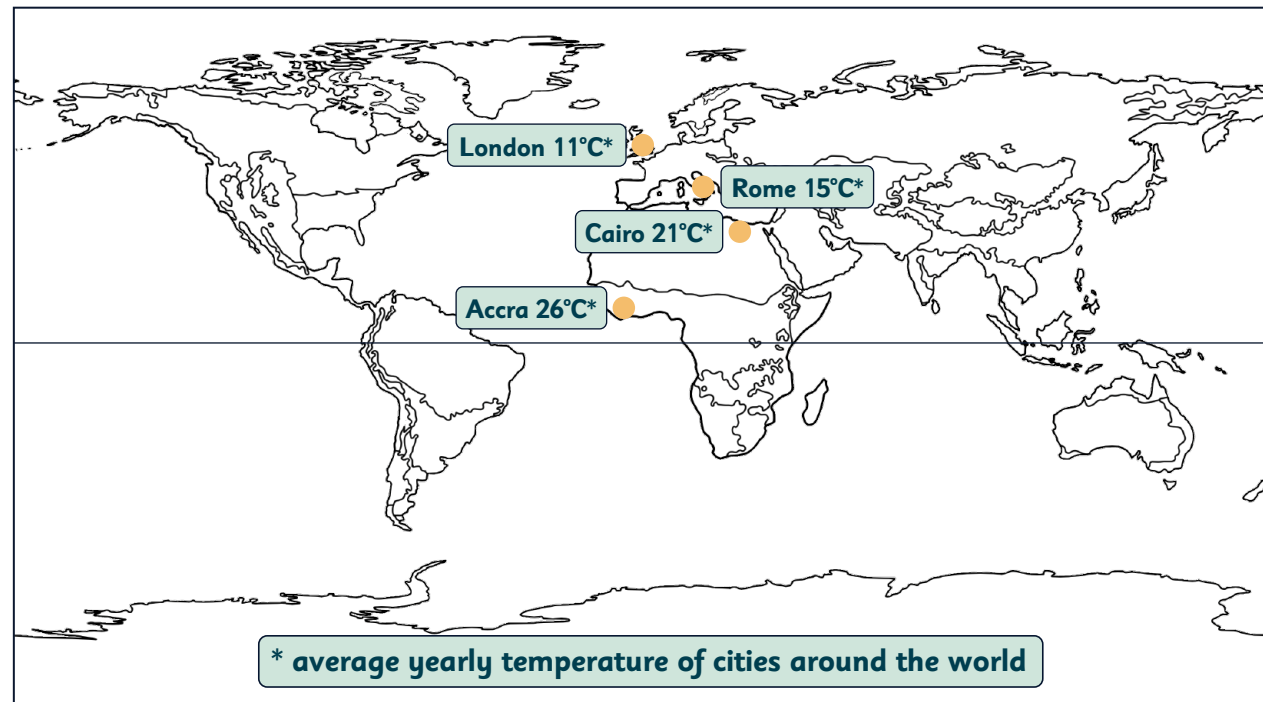
## Let's discuss



The **average temperature** will change according to **where you are** in the world and your **climate zone**.

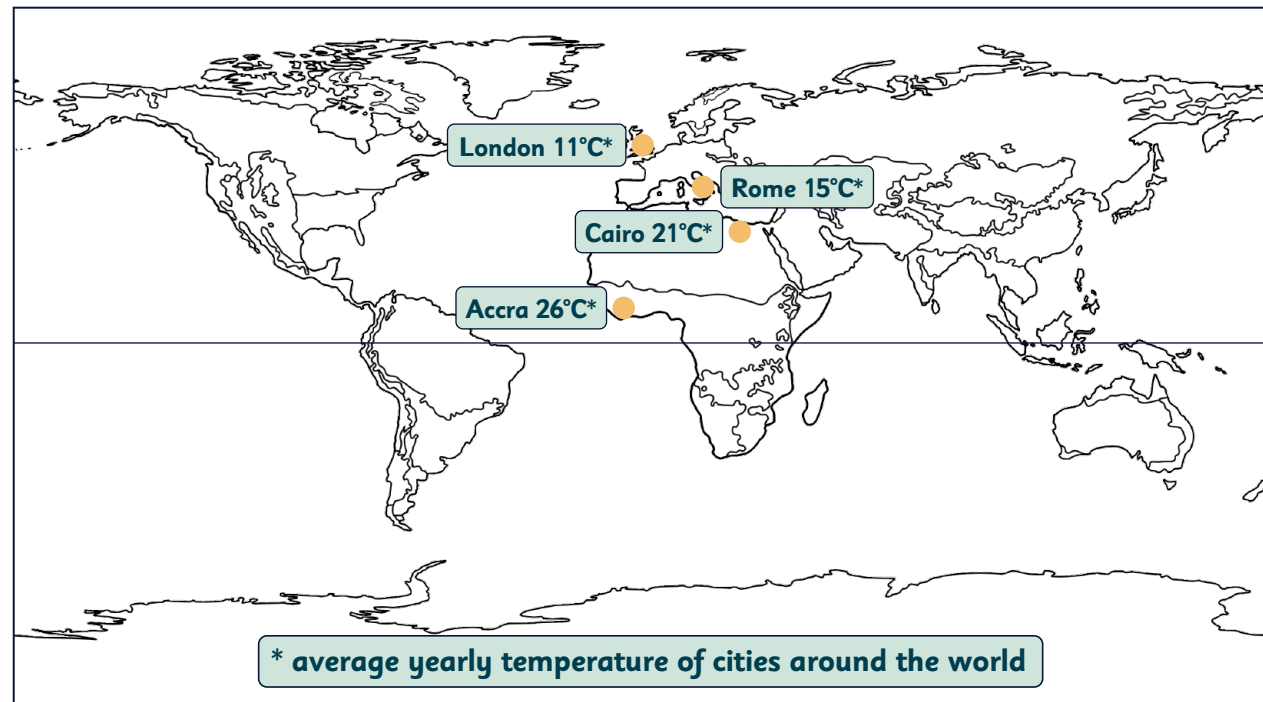
What do you notice about the **temperatures of these different cities** on the map below?

**Discuss this question** with your learning partner. Be ready to **share your feedback** with the class before the **answer is revealed**.



# Let's discuss answers

Remember, the **closer a place** is to the **equator**, the **closer** it is to **the Sun**. This will mean, on average, the **temperature is higher**. London is the **furthest city away from the equator**, so it has the **lowest average yearly temperature**. **Accra** is the **closest city to the equator**, so it has the **highest average yearly temperature**.





# How can information about weather and climate zones be used?



Hi! My name is **Florence**. I am a **countryside ranger**. I maintain and develop areas of land and green space by planting vegetation.

**Weather and climate zones** can be used to help with **gardening and farming**. Plants grow best in climate conditions that they are adapted for. For example, if a farmer wants to grow apples, they need a **wet climate with cold winters followed by cool springs**. Apples also need lots of **sunlight and mild temperatures**. Therefore, apples grow best in a **temperate climate**. The climate is one of the biggest influences on farming. It informs what the farm grows and impacts **how successful the farm is**.



# How can information about weather and climate zones be used?

**Modern technology** can be used to help grow crops in lots of different places today. However, this map shows where **crops were originally grown** due to favourable **climate and weather**.



# Activity 2



Explain the **difference between weather and climate** on your activity 2 worksheet.

Choose **three plants** and explain in which **climate and weather** they are best suited to grow. You can use an **atlas and the internet** to help you.

Use the **map of where crops are grown** and **map of climate zones** on your activity 1 worksheet to help you.

Key Geographical Skills: Physical Geography and Locational Knowledge  
Key Geographical Concepts: Space and Physical Processes



**What is the difference between weather and climate?**

Write a summary of the **difference between weather and climate**.

Key Geographical Skills: Physical Geography and Locational Knowledge  
Key Geographical Concepts: Space and Physical Processes

**What is the difference between**

Write a summary of the **difference between**

Key Geographical Skills: Physical Geography and Locational Knowledge  
Key Geographical Concepts: Space and Physical Processes



**What is the difference between weather and climate?**

What is '**weather**'?

---

---

---

What is '**climate**'?

---

---

---

Use the map of where crops are grown and the climate zone map to help you. Choose **two plants** and explain in which **climate and weather** they are best suited to grow. You can use an **atlas and the internet** to help you.

## word bank

temperate	polar	tropical	continental	average	altitude	
summer	spring	autumn	winter	conditions	temperature	
temperate	weather	climate	dry	hot	cold	mild

## Example

**Crop:**  
olives

**Which countries it grows in:**  
Italy, Spain and Greece

**Climate and weather conditions:**

Olives grow best in a warmer temperate climate. They prefer long and warm summers and mild winters. They should be grown in temperatures no lower than 10°C.



www.grammarsaurus.co.uk





# Challenge



Use your **atlas** to **locate the cities** on your challenge worksheet, then **predict the climate** of each one.

## Challenge

Predict whether the **climate** of the different cities will be **warmer or colder than the UK**, and give a **reason**.

Use the **sentence** below to help:

"I predict \_\_\_\_\_ will be \_\_\_\_\_ than the UK because \_\_\_\_\_."

**Athens, Greece**

---

---

**Delhi, India**

---

---

**Lilongwe, Malawi**

---

---

**Stockholm, Sweden**

---

---

