

STUDENTS' ACTIVITIES


UNIT 1

UNIT 2

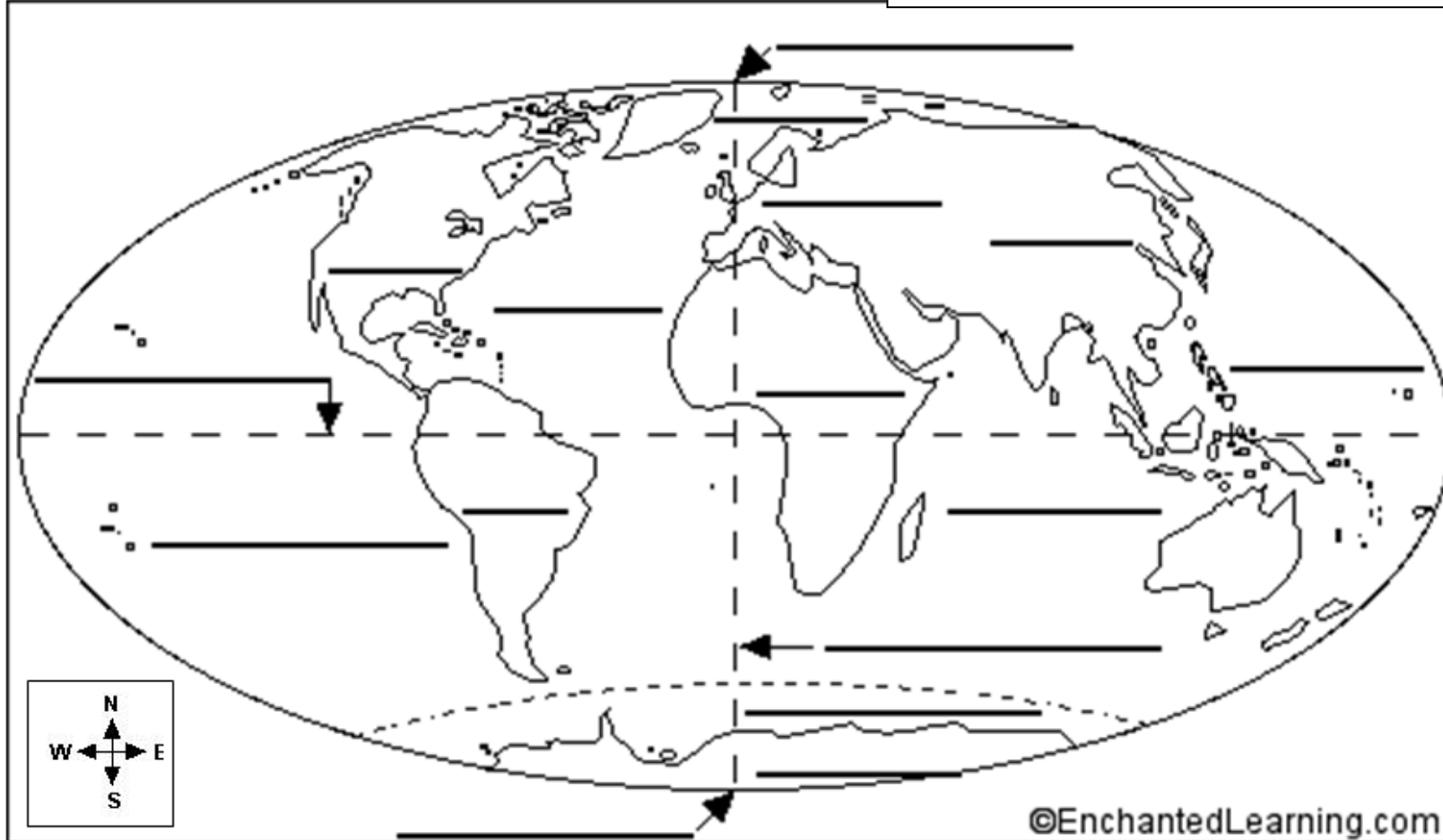
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UNIT 1 THE EARTH

1. CONTINENTS AND OCEANS

1.  Label the world map using the words

Arctic Ocean	Africa	Europe	Equator
Atlantic Ocean	Antarctica	North America	North Pole
Indian Ocean	Asia	America	South Pole
Pacific Ocean	Australia	South America	Prime Meridian
Southern Ocean			Northern Hemisphere
			Southern Hemisphere



2.  Check your answer with the map key

3. Where do you live?

1. Mark where you live on the map with an "X".
2. Do you live in the Northern Hemisphere or the Southern Hemisphere?
3. What is the name of the continent in which you live?
4. What is the name of the country in which you live?
5. What is the name of the continent in which your family was born?

4. Work in pairs and fill the gaps with the words below

America	Asia	land
temperature	Europe	five
largest	Everest	Mountains
seven	8,848	Mediterranean
sea	parts	water


The continents are the great land masses of the earth. There are _____ continents on Earth now: Africa, Antarctica, _____, Australia, Europe, North America, and South _____. Asia and _____ are not separate land masses; they are divided by the Ural _____.

The continent with the _____ land area is Asia; Africa is the second largest continent. The continent with the smallest _____ area is Australia.

The coldest recorded _____ was on the continent of Antarctica. The hottest recorded temperature was on the continent of Africa.

The highest point on Earth, Mt. Everest is in Asia; Mt. _____ is _____ m tall. The lowest point on Earth is on Antarctica. It is covered with ice and is 2,538 m below _____ level.


The oceans are the large bodies of _____ that cover most of the earth's surface. There are _____ oceans. There are also many seas which are smaller _____ of an ocean; they are often partly enclosed by land. The largest seas are the South China Sea, the Caribbean Sea, and the _____ Sea.

5.  Work in pairs. Look at the map and make sentences.

Asia is located in the north-east

Antarctica is a southern continent

X	is	situated located	in the to the	north / north-east / north-west south / south-east / south-west east west
			on the near the	equator
	a	northern southern eastern western central	continent	

 Write 5 sentences

-
-
-
-
-

Extension: Describe the location of the countries next to Spain


-
-
-
-

Support: Classify the words below in 3 different groups.

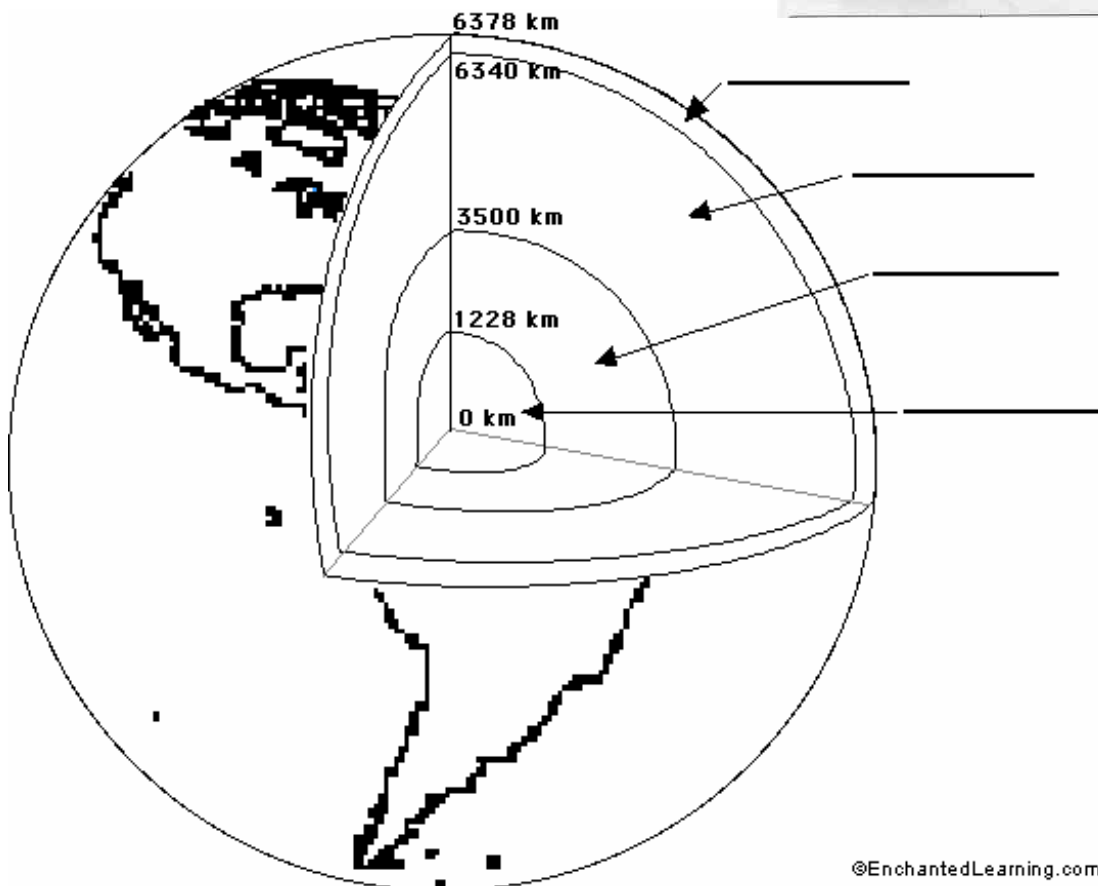
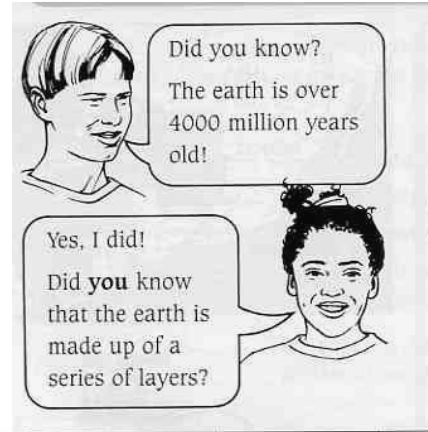
Arctic Ocean	Africa	Southern Hemisphere
Asia	Northern Hemisphere	Pacific Ocean
Atlantic Ocean	Europe	Antarctica
Indian Ocean	North America	Australia
South America	Southern Ocean	

2. THE EARTH'S RELIEF


2.1 THE STRUCTURE OF THE EARTH

1.  Use the information in the table to complete the labels on the diagram

Name of layer	Thickness	Temperature	Made of
Crust	40 km	Up to 600° C	Solid rock
Mantle	2.800km	3000° C	Melted rock
Outer core	2.250 km	4000° C	Melted metals
Inner core	1.230 km	5000° C	Heavy metals



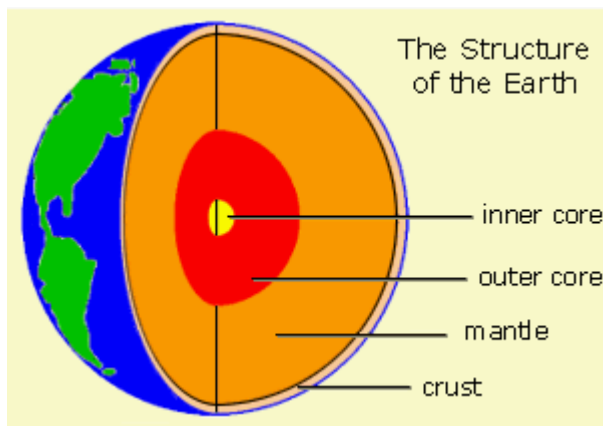
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2.  On the diagram, colour: the **crust** in blue and green, the mantle in orange, the liquid **core** in red, and the **solid core** in yellow.

The structure of the Earth¹

The Earth is almost a sphere and it is made up of four layers:

1. **The crust** is the outer layer. This comprises the continents and ocean basins. The crust has a variable thickness, being 35-70 km thick in the continents and 5-10 km thick in the ocean basins
2. **The mantle** is the region just below the crust. It is the largest layer of the Earth and it is where most of the internal heat of the Earth is located.
3. **The core** is the last layer, which is separated into the liquid **outer core** and the solid **inner core**.



3.  Read the text and the table on page 5, then answer the questions.

Which is the largest layer of the Earth?

Where are continents and oceans located?

What is the difference between the outer core and the inner core?

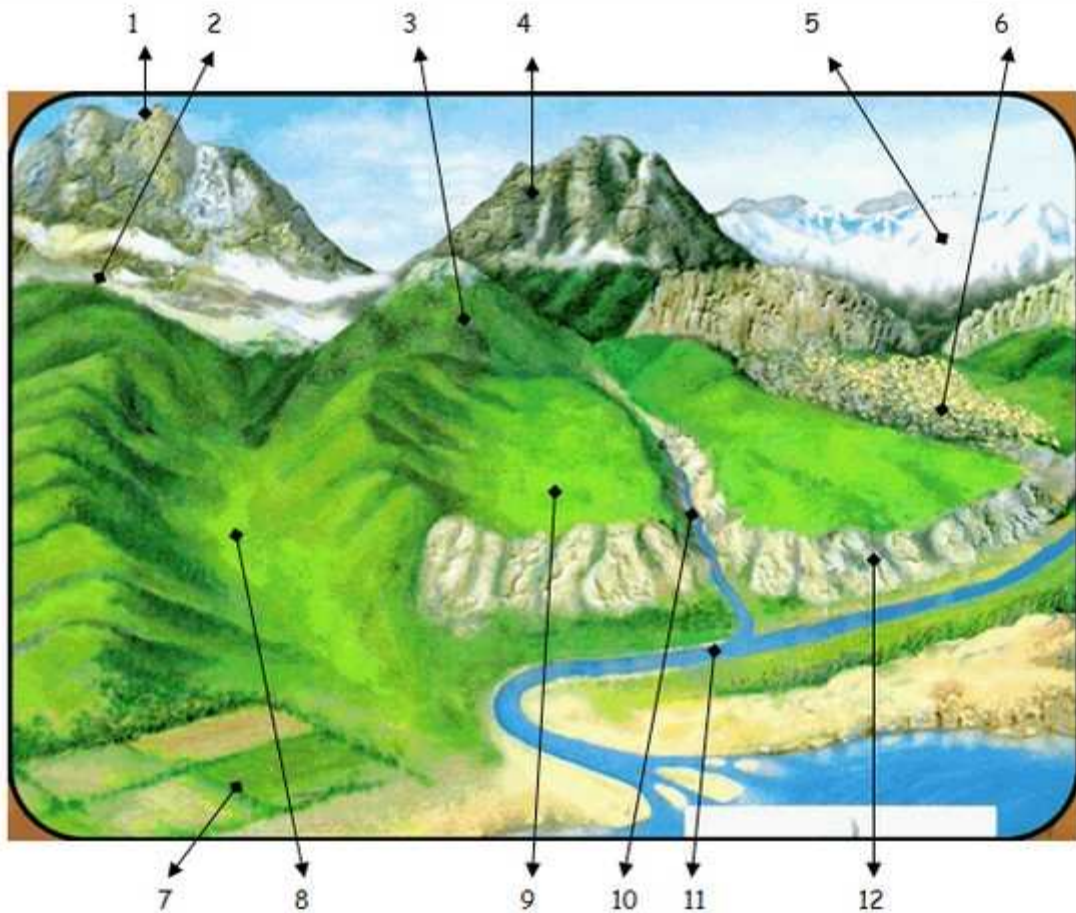
Which is the hottest layer?

¹ <<http://www.bbc.co.uk/schools/gcsebitesize/science/aqa/oils/changesrev2.shtml>> [3 February 2008]

2.2 FEATURES OF RELIEF

1.  Work in pairs. Which features of relief can you identify in this diagram?


Features of relief²




1.	2. slope	3.
4.	5.	6. scree
7.	8.	9.
10.	11.	12.

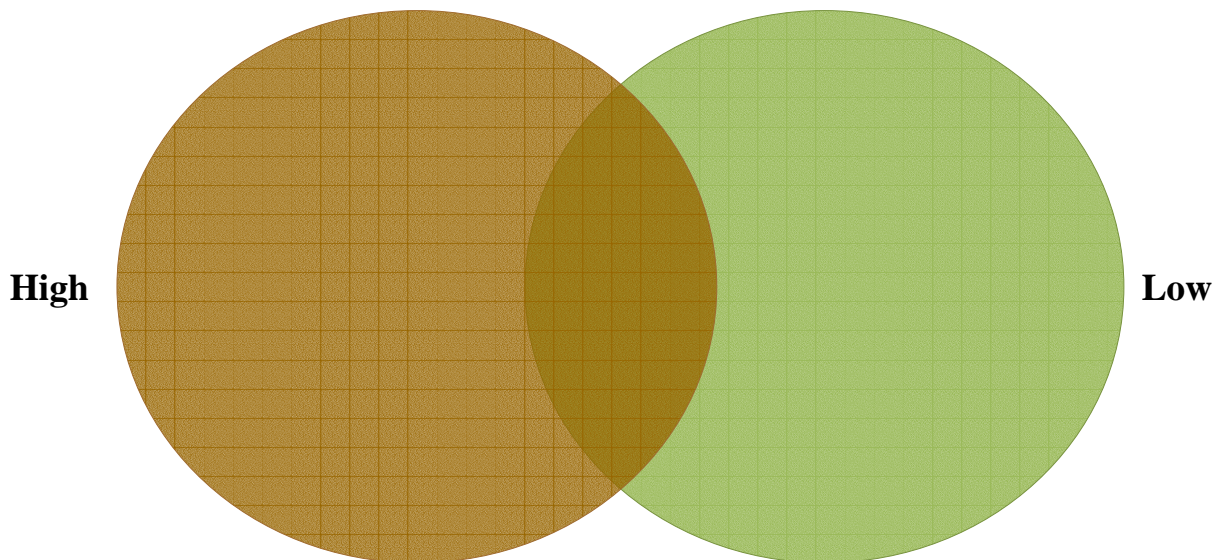
 Check your answer with the key.

² Diagram of earth's relief adapted from Ciències Socials, Geografia I Història. CD Proposta Didàctica i Recursos d'aula. Editorial Barcanova. Barcelona 2007


2.  Draw a line to link the words on the left to the definitions of the right.

mountain	A broad and flat area that usually has low elevation.
valley	A row of connected mountains.
river	Low land between hills and mountains
peak	A large stream of water that flows along a certain path.
mountain chain	A high, raised part of the earth's surface with a pointed top.
plain	The pointed top of a mountain.

3.  Work in pairs and classify the features from the table and put them in the Venn diagram.



 Which features are in both categories?

4.  Identify features of relief on the postcard.



1. _____
2. _____
3. _____
4. _____

Could this picture come from Catalonia? Why or why not?

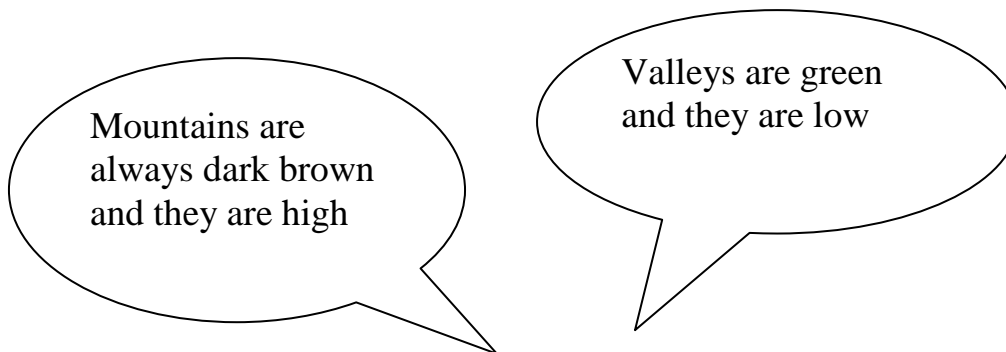
2.3 PHYSICAL MAP

1.  Work in pairs. Use an Atlas and look for the Catalonia physical map and then follow the instructions:

- Look at the colours of the map
- Try to find out the meaning of the colour and complete the table

Colour	Feature	Higher/ Lower
White	High peak	
Dark brown		
Light brown		
Green	Plain, valley	
Dark blue		
Light blue		

- Check your answer with another group and all together draw some conclusions orally.

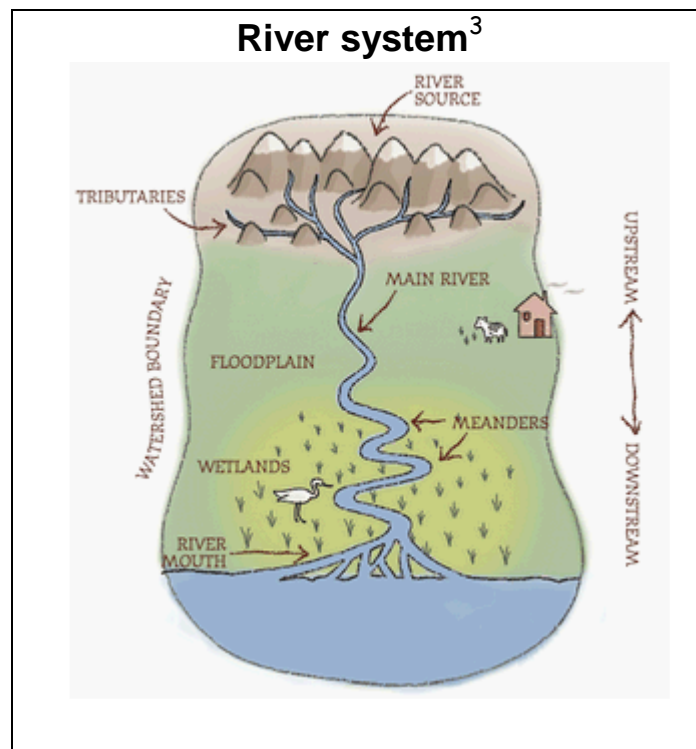



Extension: Which are the main mountains, mountain chains, rivers, valleys and plains in your country? Use a map and look for the highest and lowest features.

Support: What physical features of relief are these?

- a) Everest m _ _ _ _ _
- b) The Nile r _ _ _ _
- c) The Alps m _ _ _ _ _ _ _ _ _ _
- d) The Meseta p _ _ _ _ _
- e) Vall d'Aran v _ _ _ _ _


2 RIVERS AND LAKES



1.  Work in pairs, look at river system diagram. Read the sentences below and say which four are false.
- The river source is the beginning of a river.
 - The main river is made up of salt water.
 - A tributary is a smaller stream or river that joins a larger stream or a main river.
 - The river mouth is the place where a river flows into a large body of water, such as a river, a lake or an ocean.
 - Upstream is in the direction of the mouth of a river.
 - A meander is a loop in a river.

³ <http://www.nationalgeographic.com/geographyaction/rivers/> [13 February 2008]

- g) Downstream is in the direction of the source of a river.
- h) A watershed is the land that drains water into a particular stream, lake, or river.
- i) A floodplain is quite flat land stretching from either side of a river which may flood during heavy rain or snowmelt.
- j) Wetlands are high areas with vegetation and animals.


2.  Check your answer with the key and correct the false sentences.

— _____

— _____

— _____

— _____


3.  Work in groups of three. Use an Atlas and look at the physical map of Catalonia and find three rivers. Talk about them using the sentences as examples below.

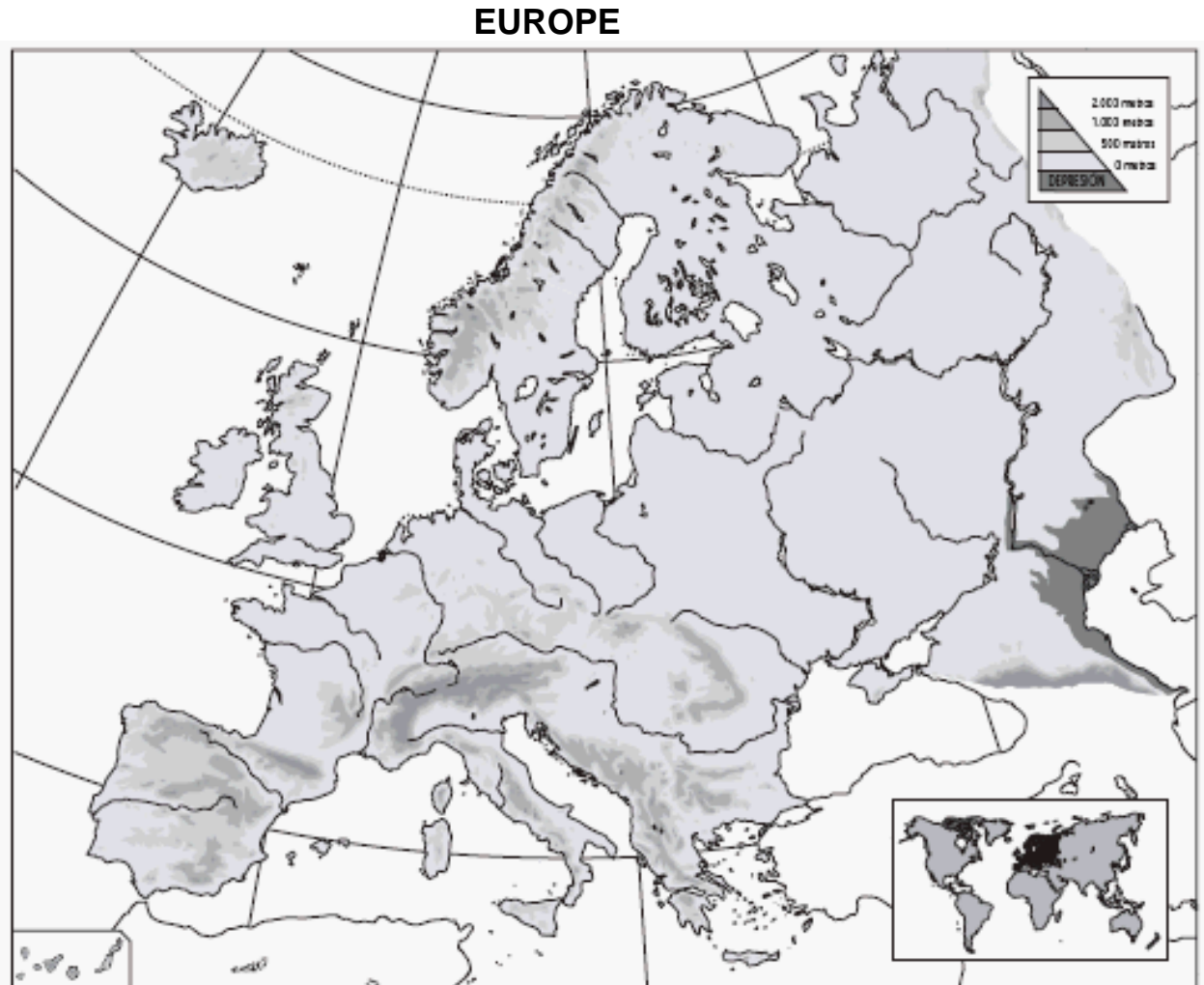
The source of the Llobregat river is in The Pyrenees.
 The middle course of the Llobregat goes through The Central Depression.
 The Cardener river is a tributary of the Llobregat.
 The mouth of the Llobregat is at The Mediterranean sea.

Extension: Complete the table with the information you found out.

River	River source	River middle course	River mouth

3 MOUNTAINS AND RIVERS OF THE WORLD

1.  Work in pairs. Label the map with the rivers and mountain below.



European Rivers

Tagus	Oder	Danube
Loire	Vistula	Po
Seine	Volga	Rhone
Rhine	Dnieper	Ebro

European Mountain chains

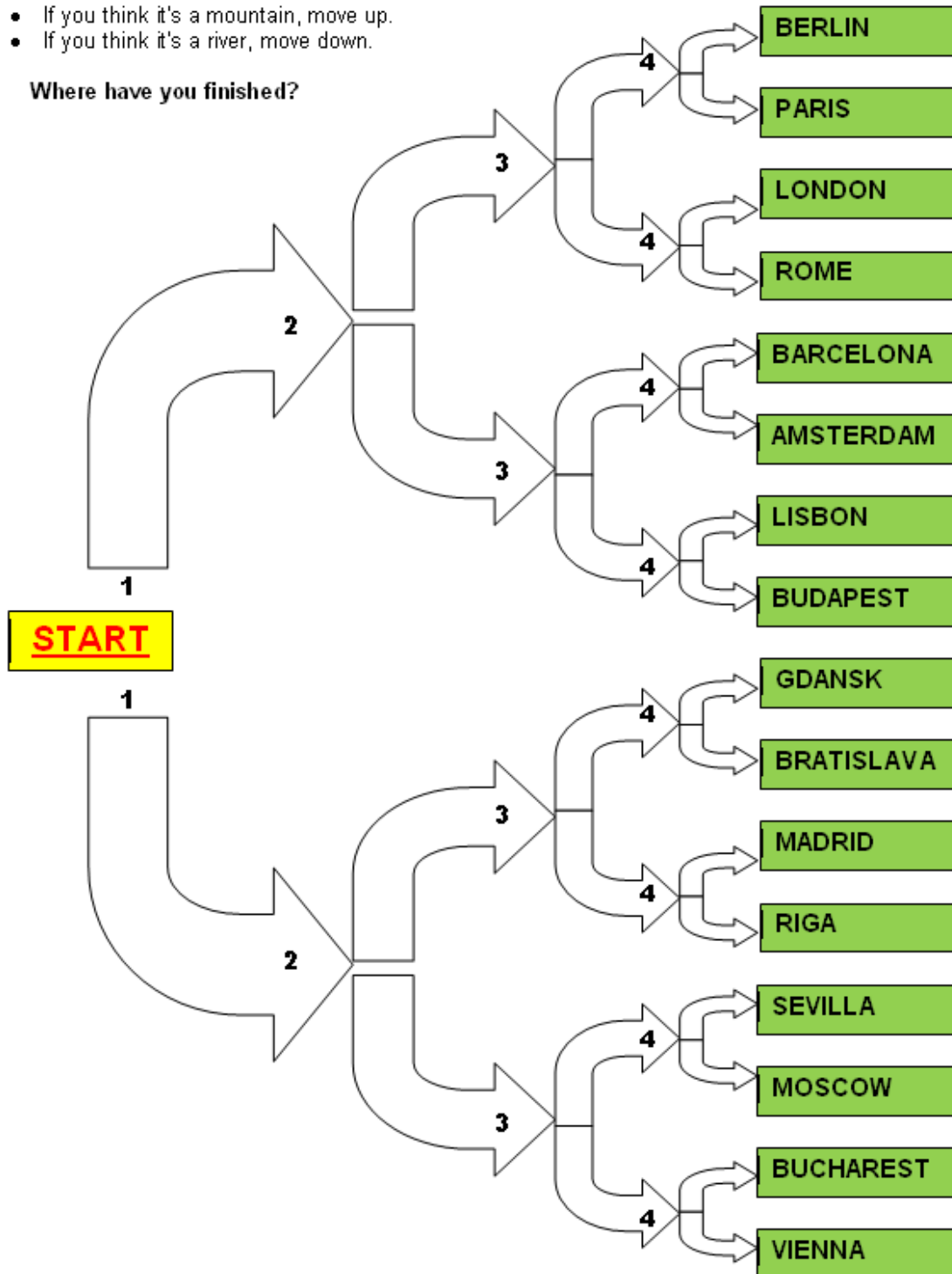
Pyrenees	Balkans	Scandinavian Mountains
Alps	Carpathian	
Apennines	Caucasus	


2.  Check your map with an Atlas.

3. Journey Game

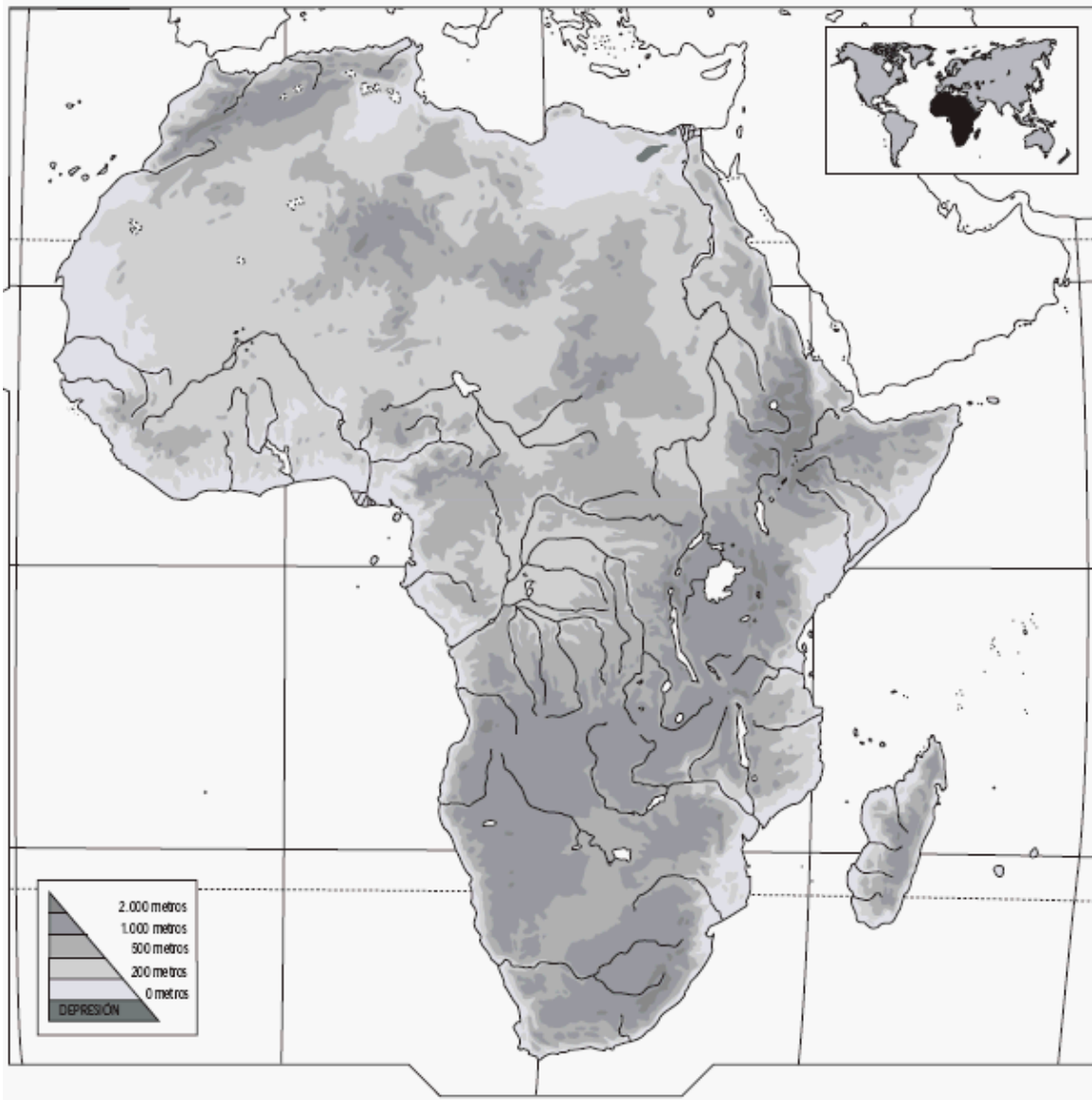
- Begin this tree on **START** and follow the sentences in order.
- If you think it's a mountain, move up.
- If you think it's a river, move down.

Where have you finished?



4.  Work in groups of 6. Use an Atlas and find the rivers or mountains in the box below the map.

AFRICA



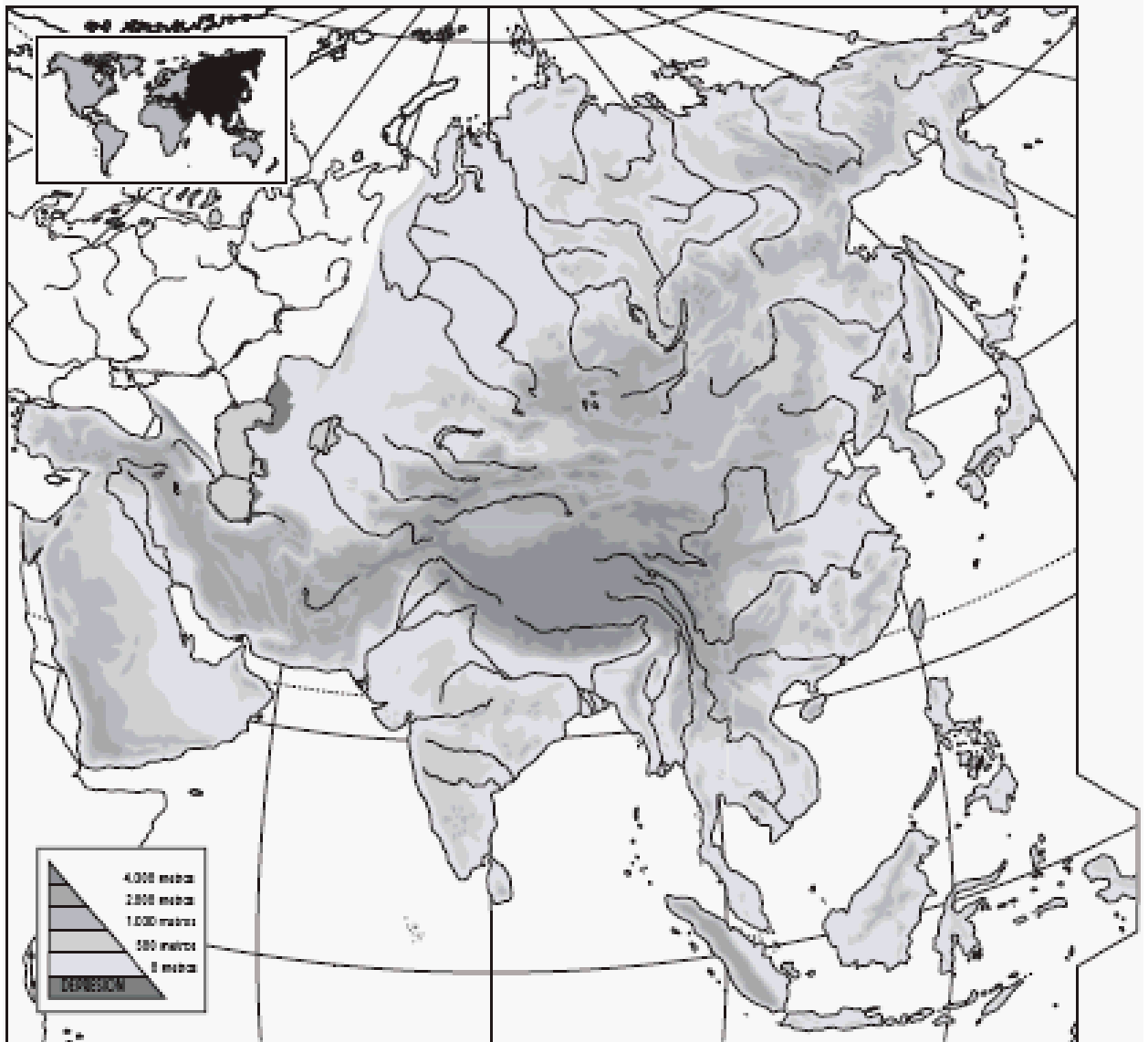
Rivers	Mountains and Deserts
1. Nile	A. Atlas Mountain
2. Niger	B. Sahara Desert
3. Congo	C. Kilimanjaro
4. Zambezi	D. Kalahari Desert

AMERICA



Rivers	Mountains
5. Mississippi	E. Appalachian
6. Rio Grande	F. Rocky Mountains
7. Amazon	G. Andes
8. Paraná	

ASIA



Rivers	Mountains and Deserts
9. Indus	H. Caucasus
10. Ganges	I. Himalaya
11. Mekong	J. Ural
12. Yangtze	K. Gobi Desert

5.  In groups of 3 use your maps to complete the table below


River	Mountain/ Desert	Continent
1.		A.
2.		B.
3.		C.
4.		D.
5.		E.
6.		F.
7.		G.
8.		--
9.		H.
10.		I.
11.		J.
12.		K.

UNIT 2 CLIMATE


1. CLIMATE AND WEATHER

1.1  What's the weather like today?

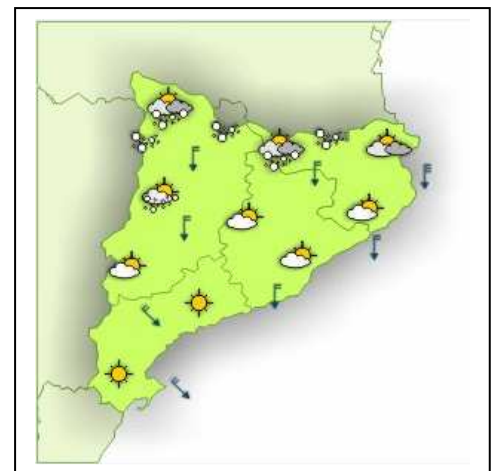
Which different kinds of weather do you know?

1.2  Work in pairs. Complete the table with the words above

Temperature	Wind	Precipitation
cold	calm	rain

1.3  Work in pairs. Look at the Catalonia forecast⁴ map and make 5 sentences about the weather

- 1) _____
 - 2) _____
 - 3) _____
 - 4) _____
 - 5) _____
-



⁴ <http://tiempo.meteored.com/weather/weather-Europa-3-Espana-Cataluna.html> [3 March 2008]

1.4  Read the text and underline the correct answers, a, b or c.

Weather and climate⁵

Weather is the state of the atmosphere at a particular place and time. Look out of the window and see what the weather is like today. It might be sunny, hot, windy or cloudy, raining or snowing.

The weather involves the **temperature, precipitation, humidity, pressure** and **winds** of the part of atmosphere closest to the surface of the earth.

The weather is constantly changing as temperature and humidity change in the atmosphere. Landmasses, such as Spain, experience constantly changing weather condition.

Climate is the average weather conditions – temperature, precipitation, humidity, pressure and winds- expected for a certain place. Climate is based on the average weather experienced over 30 years or more.

Climate is what is expected to happen in the atmosphere, not the actual conditions. So it is possible for the weather today to be different from that of the climate.

Climatic conditions in an area can be affected by the landscape, relief and human and natural activities. Climate can change over time and space.

Within a climate region, the climate may change from place to place, e.g. top of the hill, sunny side of the hill, shaded side of the hill and bottom of the hill. These areas with their small variations are called **microclimates**.

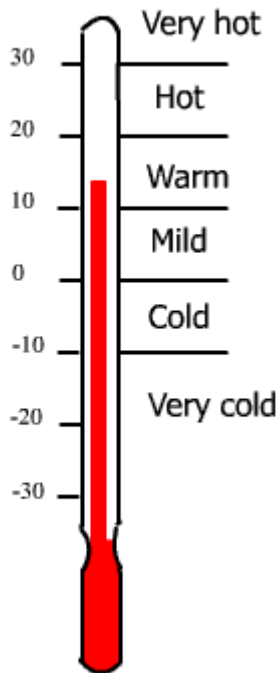
1. Weather is the state of the atmosphere at a particular
 - a) country and time
 - b) continent and year
 - c) place and time
2. Weather involves pressure, humidity, wind and
 - a) atmosphere and surface
 - b) precipitation and temperature
 - c) earth and precipitation
3. Climate is the average weather condition experienced
 - a) one year
 - b) over 20 years
 - c) over 30 years
4. Climate conditions in an area can be affected by the landscape, relief and
 - a) animals activities
 - b) hills and mountains
 - c) human and natural activities
5. Microclimate is the weather of
 - a) Catalonia
 - b) a region
 - c) the world

⁵<http://www.bbc.co.uk/schools/gcsebitesize/geography/weather/elementsofweatherrev2.shtml>
[22 February 2008]

2. ELEMENTS OF THE CLIMATE.

The elements involved in the configuration of climate are the temperature, precipitation, humidity and atmospheric pressure.

Describing Temperature (°C)



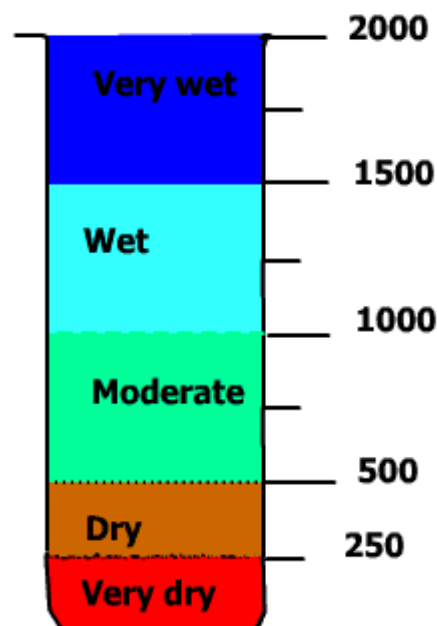
The temperature is how hot or cold something is, for example the atmosphere. Use a thermometer to see how many degrees Celsius/centigrade it is above or below freezing (0°C).

To be able to identify a climate you need to describe the temperature of the hottest and de coldest months and the temperature range

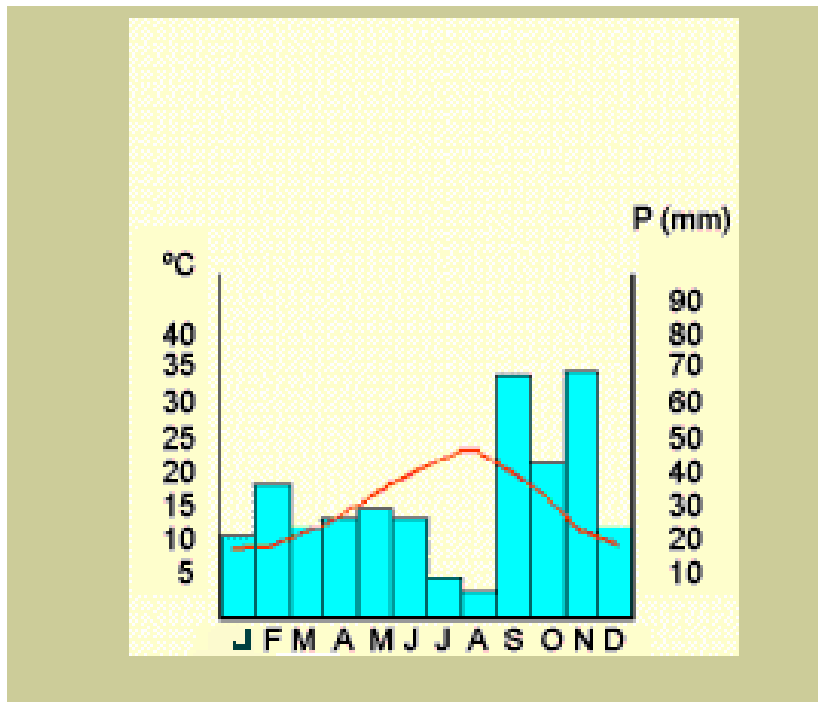
Precipitation is the moisture that falls from the air to the ground. The most common form of precipitation is rain snow or hail.

To identify a climate you also need to describe the total amount of annual rainfall that is how many millimetres fall in a year.


Describing Precipitation (mm)



CLIMOGRAPH 1




A **climograph** shows the **temperatures** (line—) and the amount of **precipitation** (bars) for the months of one year.

2.1  Work in pairs. Look at the climograph and make sentences

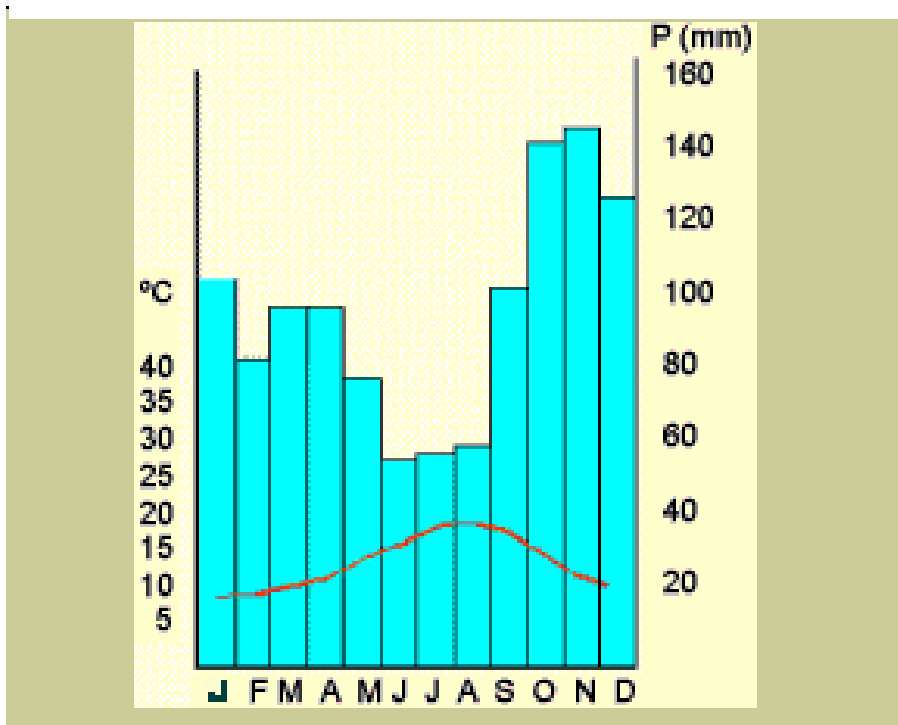
The X axis	represents	the months of the year
The Y axis on the left		temperature in °C
The Y axis on the right		shows precipitation in mm

2.2  Look at the climograph and answer the questions

- What is the temperature in May? _____
- What is the amount of precipitation in December? _____
- What is the hottest month? _____
- What is the coldest month? _____
- What is the wettest month? _____
- What is the driest month? _____
- The data in the climograph is taken from which hemisphere?

2.3  Work in pairs. Write 4 characteristics of this climate.

CLIMOGRAPH 2

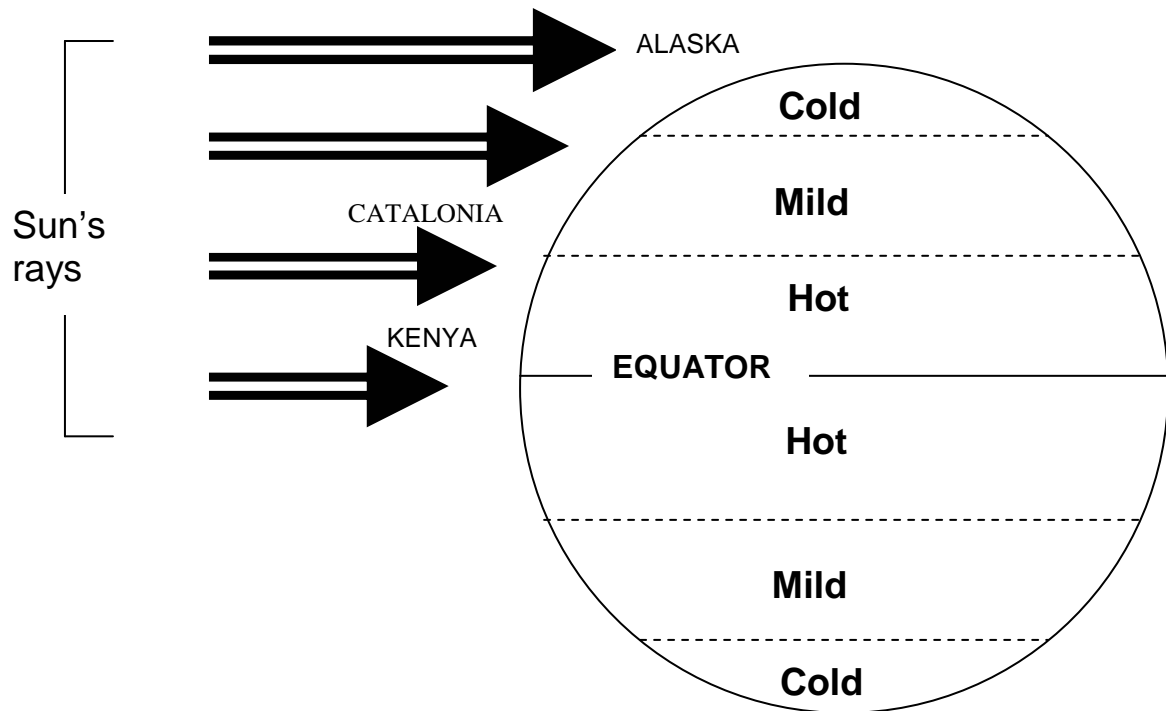



1. _____
2. _____
3. _____
4. _____


3. FACTORS INVOLVED IN CLIMATE

Several factors affect climate. Four of these factors are **latitude, altitude, distance from the sea and prevailing winds.**

- **Latitude**



3.1  On the diagram of the earth, colour the **sun's rays** in **yellow**. Colour the **hot** part of the world in **red**, the **mild** parts in **green**, and the **cold** parts in **blue**.

3.2  Use words from the diagram and complete the sentences

In Kenya it is _____ because the sun shines straight down in the middle of the day.

In Alaska it is _____ because the sun shines down at an angle.

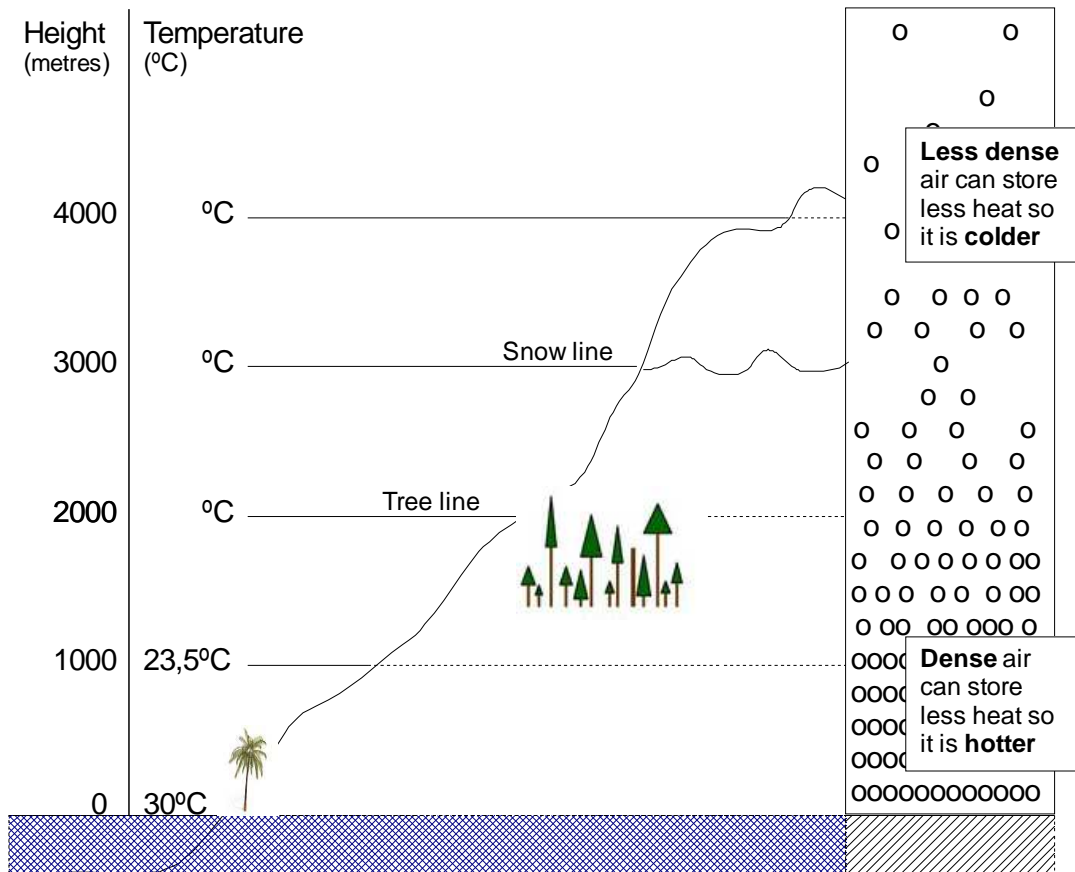
In Catalonia it is _____ because the sun shines tangentially.

It is hot near the _____ because the sun shines straight down. It is _____ near the earth _____ because the sun shines down at an angle

• **Altitude**

It is the height above sea level.

Places which are high up and in **mountains** have **lower temperatures** and **more rainfall** than places which are lower down.



3.3 Complete the temperature column.

Colour the mountain to show the temperature:

- red for 23,5-30 °C
- green for 17-23,5 °C
- blue for 10,5-17 °C

3.4 Complete the following paragraph


As you go up a mountain the air is less d_____. The air can store less of the sun's h_____ so it gets c_____. At 1000 m it is ____ °C colder than at 0 metres, so it gets colder by ____ °C for every _____ metres you go up.

Temperature is affected by h_____. It gets 6.5 °C colder for every _____ metres in height.

- Distance from the sea

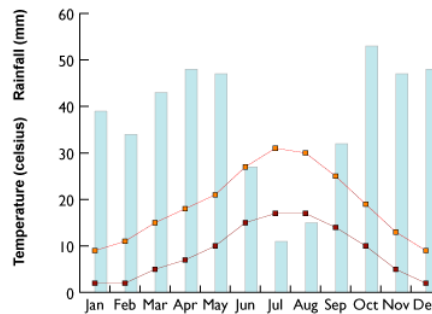
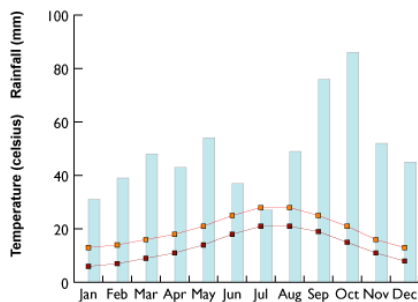
Distance from the sea affects temperature and precipitation. Areas close to the sea have a maritime climate. The sea keeps coastal areas warmer in winter and cooler in summer. This means that they have a small annual **temperature range**, which is the difference between the January and July temperatures.

Inland areas are not influenced by the sea and they have a continental climate. It can be very hot in summer, and very cold in winter. They have a large annual temperature range.

3.5  Read the text above and decide which graph shows Madrid's climate and which one shows Barcelona's climate.

A) _____

B) _____




rainfall
 average daily temperature (max)
 average daily temperature (min)

rainfall
 average daily temperature (max)
 average daily temperature (min)



Why?

• Prevailing winds


3.6  Complete the following sentences with the words below

dry polar tropical blow oceans

Prevailing winds are the winds that _____ most frequently in an area. Winds can affect temperature and precipitation.

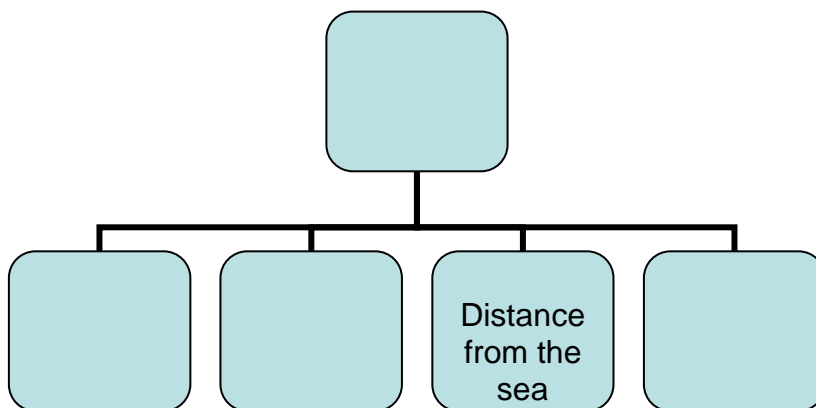
Winds blowing from _____ areas bring warm weather, while winds blowing from _____ areas bring cold weather.

Winds blowing over _____ cause precipitation, while winds blowing from land are _____.

3.7  With a partner, discuss which factor affecting climate is described in the following sentences.

- a. Mountain areas have lower temperatures and more rainfall than coastal areas.
- b. Near the Poles it is cold because the sun shines at an angle.
- c. Inland areas are not influenced by the sea. It can be very hot in summer and very cold in winter.
- d. Land winds bring dry weather.


3.8  Complete the tree diagram



Write an example for each of the factors in the tree diagram
 Example: *Madrid is colder in winter than Barcelona because it is inland.*

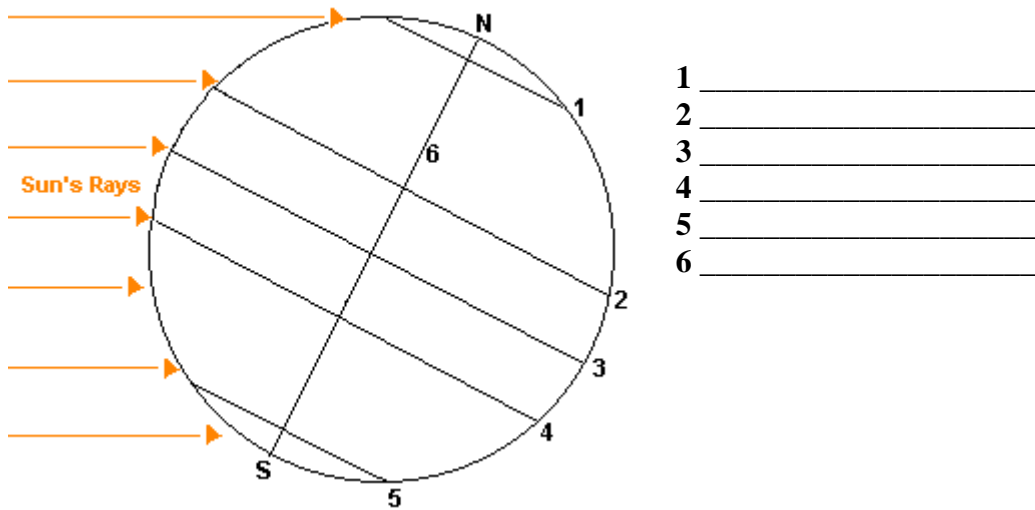
4. CLIMATES OF THE WORLD

There are five great climatic zones: one **hot** zone, two **cold** zones and two **temperate** zones.

4.1  Name the locations marked by numbers on the diagram of the earth using the words below.

Antarctic Circle	Arctic Circle	Axis of Rotation
Equator	Tropic of Cancer	Tropic of Capricorn

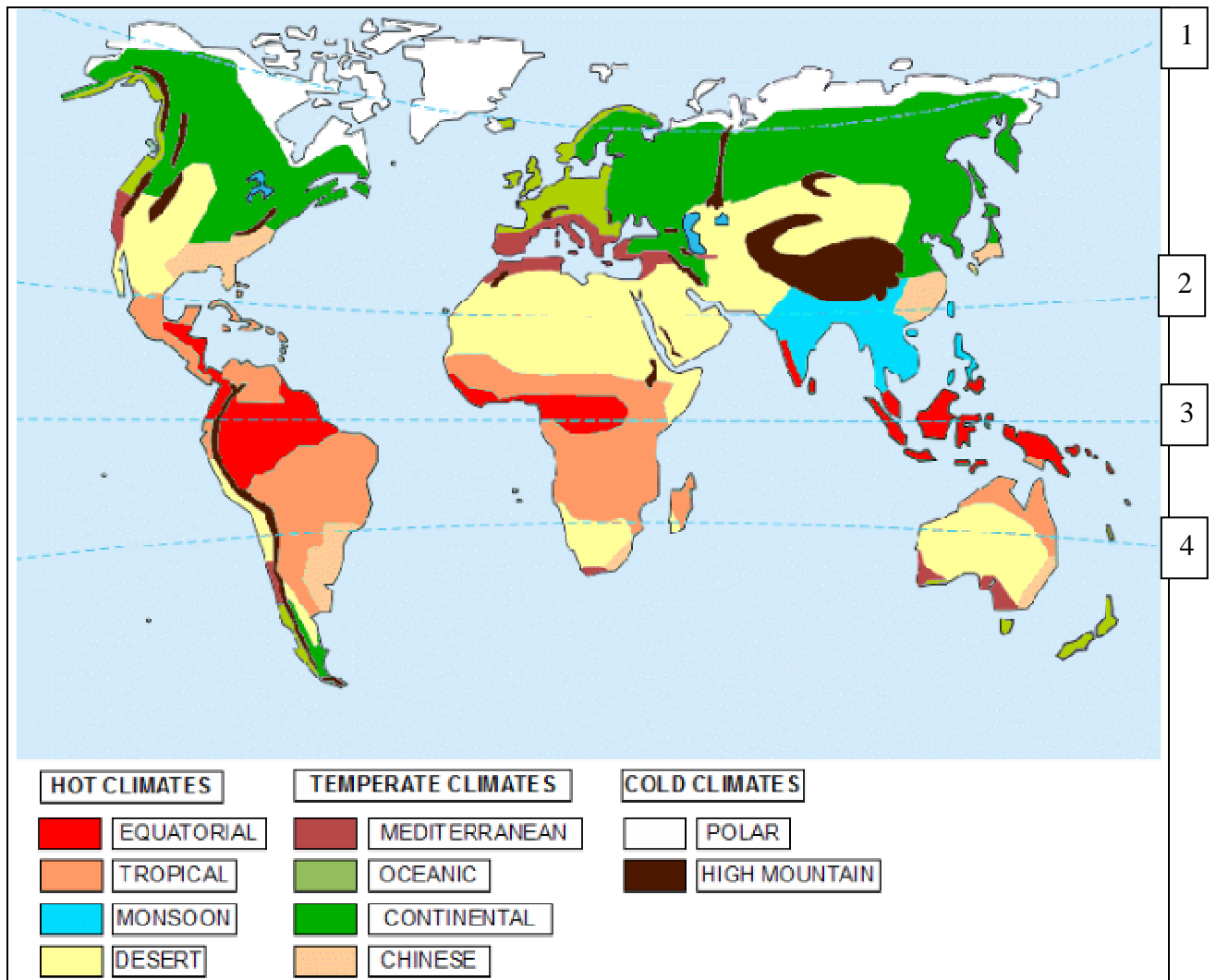
THE CLIMATIC ZONES OF THE EARTH




Colour the five climatic zones: hot zone in red, temperate zone in yellow and cold zone in blue.

Which factor is involved in the division into zones?
 With your partner, describe the location of each climatic zone.

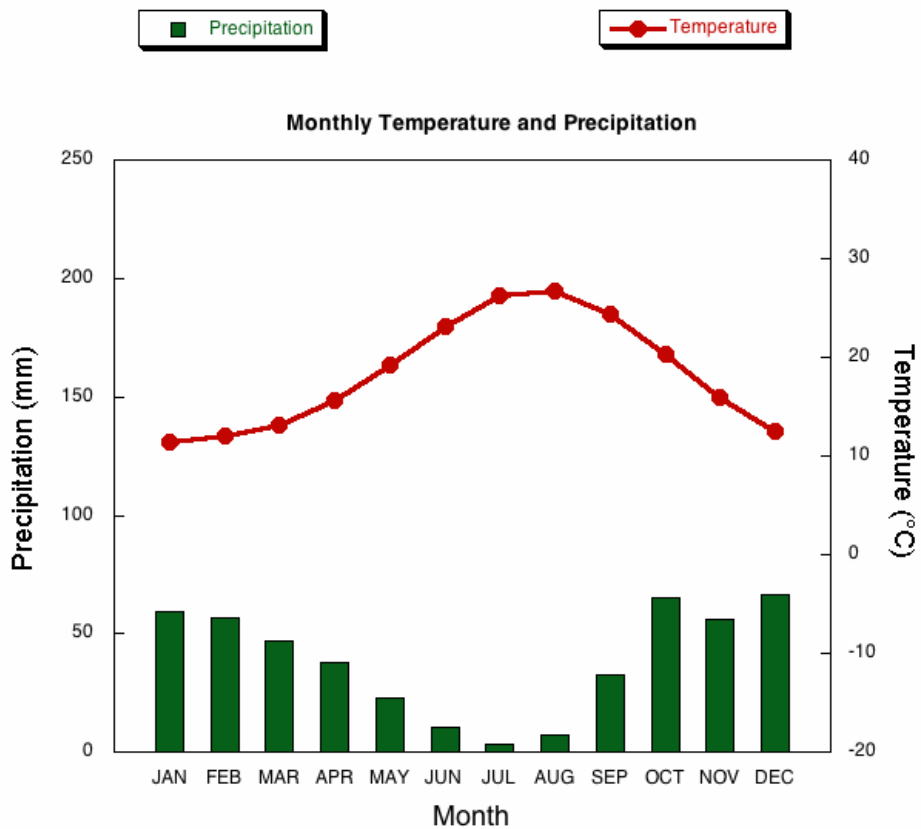
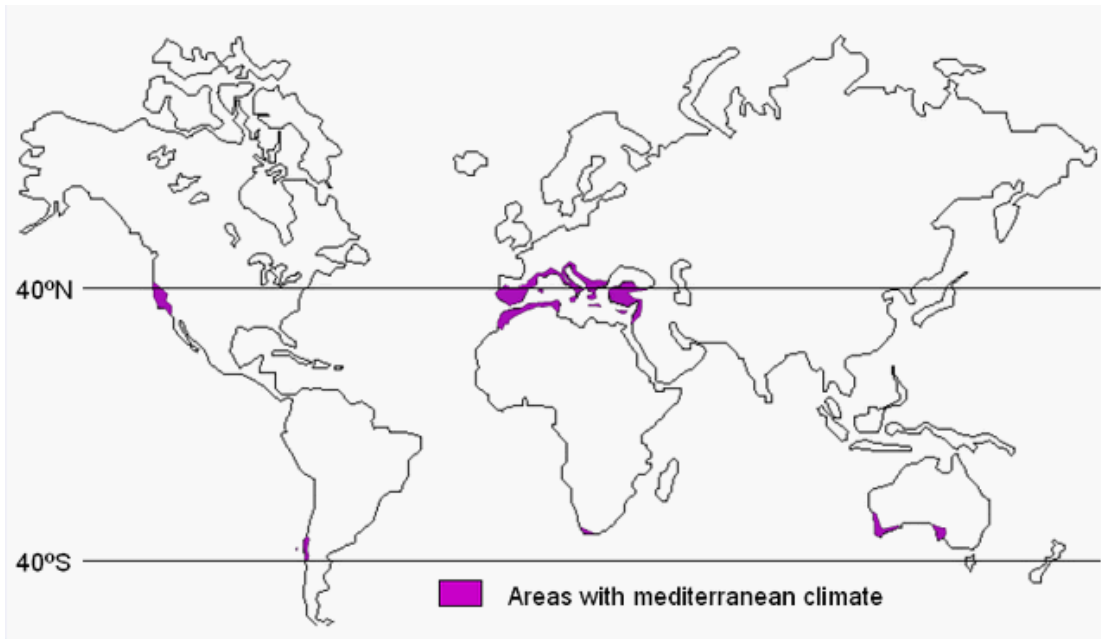
MAP OF THE PRINCIPAL CLIMATES IN THE WORLD




- 4.2  In pairs, choose a colour from the map above and try to:
- Explain where the climatic zone is found.
 - Name a country or countries that have the same colour
 - Describe some characteristics
 - Identify other colours in the same zone
 - Say something about the colours.

Explain to the other groups your answers and reach an agreement about the map.

MEDITERRANEAN CLIMATE





4.3  Work in groups of three. Look at the images from page 30 and 31 and complete the table.

MEDITERRANEAN CLIMATE

Location	
Countries	
Hottest season	
Average temperature in winter	
Driest season	
Amount of rainfall per year	
Natural vegetation	
Human activities	

4.4 Making climate fact files

Questions:

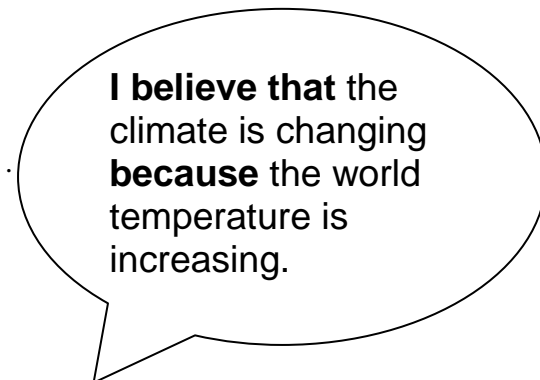
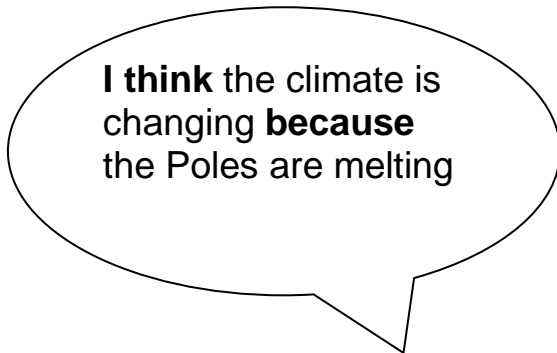
- a) Where is the climate areas located?
- b) In which countries do you find this climate?
- c) Is there a hottest season? **If yes**, what is the hottest season?
- d) **If not**, what happens with the temperature during the year?
- e) Is there a coldest season? **If yes**, what is the coldest season?
- f) **If not**, question d)
- g) Is there a driest season? **If yes**, what is the driest season?
- h) **If not**, what happens with rainfall during the year?
- i) Is there a wettest season? **If yes**, what is the wettest season?
- j) **If not**, question h)
- k) What is the amount of rainfall per year?
- l) What is the main characteristic of the climate?
- m) Which kind of natural vegetation do you find in this climate area?
- n) What human activity is shown in this climate area?
- o) Which kind of climate is it?


Table:

Name	
Location	
Countries	
Hottest / Coldest season	
Driest / Wettest season	
Amount of rainfall per year	
Main characteristic	
Natural vegetation	
Human activities	

5. CLIMATE CHANGE

Is the Climate Changing?



5.1  The text below describes the greenhouse effect. Read it through and then look at the diagram of the greenhouse effect.

Complete the diagram using the text boxes provided.⁶

Have you ever seen a greenhouse? Most greenhouses look like a small glass house. Greenhouses are used to grow plants, especially in the winter. Greenhouses work by trapping heat from the sun. The glass panels of the greenhouse let in light but keep heat from escaping. This causes the greenhouse to heat up, much like the inside of a car parked in sunlight, and keeps the plants warm enough to live in the winter.

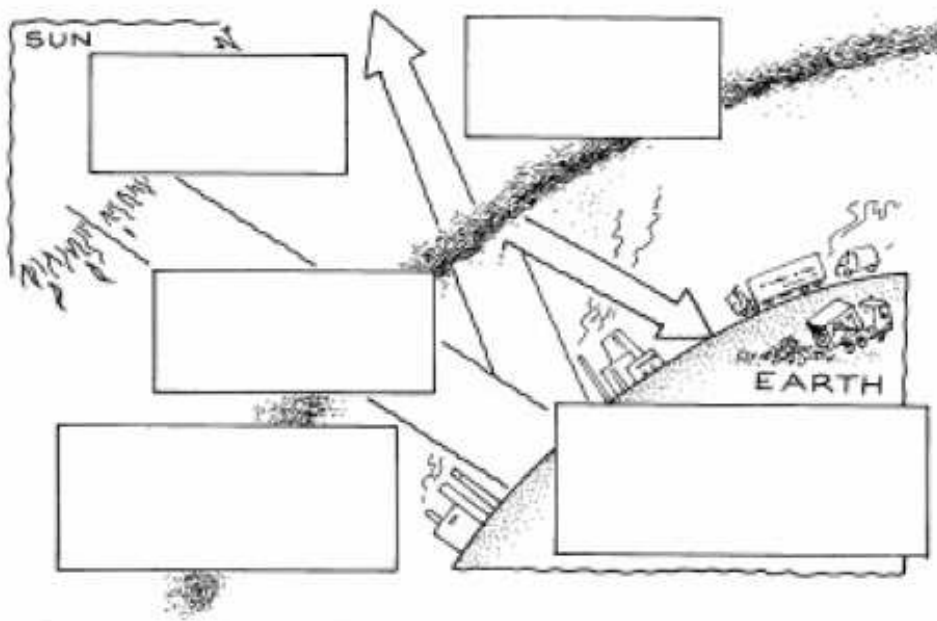
The Earth's atmosphere is all around us. It is the air that we breathe. Greenhouse gases in the atmosphere behave like the glass panes in a greenhouse. Sunlight enters the Earth's atmosphere, passing through the blanket of greenhouse gases. As it reaches the Earth's surface, land, water, and biosphere absorb the sunlight's energy. Once absorbed, this energy is sent back into the atmosphere. Some of the energy passes back into space, but much of it remains trapped in the atmosphere by the greenhouse gases, causing our world to heat up.

The greenhouse effect is important. Without the greenhouse effect, the Earth would not be warm enough for humans to live. But if the greenhouse effect becomes stronger, it could make the Earth warmer than usual. Even a little extra warming may cause problems for humans, plants, and animals.

Source: US EPA www.epa.gov


⁶ DAWSON, R.; KELLY, K.. *Speak Up on Climate. Classroom materials for secondary school teachers.* British Council Poland, 2007

GREENHOUSE EFFECT



Unfortunately, the labels for the diagram were forgotten. Here they are. Put them in the right boxes:

- The Sun's rays pass through the blanket of gases
- Some heat escapes back into space
- Heat from the Sun shines on the Earth
- More heat than before is trapped by the blanket of gases. The Earth is getting warmer
- A blanket of gases, including CO₂, made thicker by burning fossil fuels

- 5.2  What do you think the effects of the greenhouse effect might be? Complete the table below with your ideas, and then share your ideas with your classmates.

EFFECTS
1.
2.
3.
4.
5.
6.