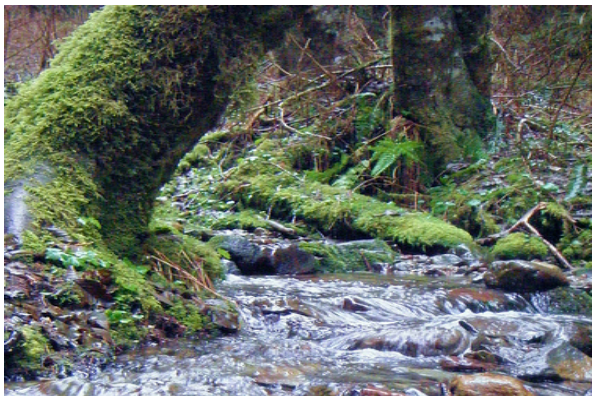
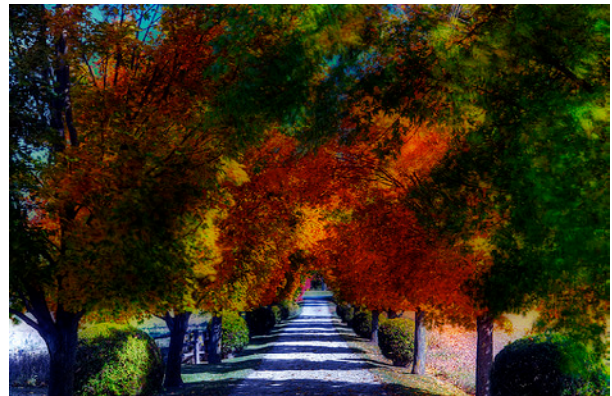


WEATHER AND CLIMATE. CLIMATES AND LANDSCAPES AROUND THE WORLD



WARMING-UP ACTIVITY. LOOK AND THINK.

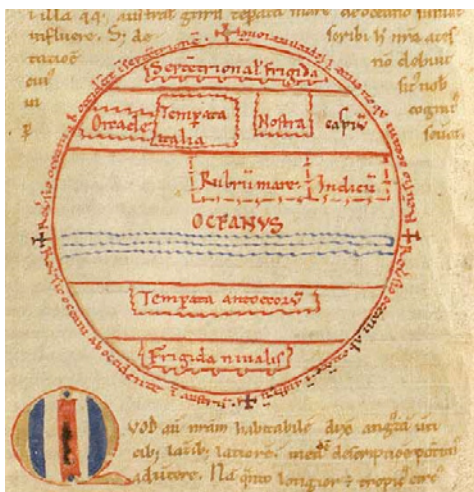
WHY DO YOU THINK THESE LANDSCAPES ARE SO DIFFERENT?

WHAT ARE THE MAIN DIFFERENCES BETWEEN THEM?

DID YOU KNOW?

In ancient times, during the Roman Empire, there were scholars who studied the climate. One of them was Macrobius, one of the last pagan philosophers, who wrote about Cicero's 'Dream of Scipio'. In Cicero's book the Earth appeared as a spherical globe (centuries before Columbus!). Climates from the Equator to the Poles were described, and they were very similar to our modern scientific classification!

Look at these pictures from a manuscript from 1150 A.D.



Sketch showing the inhabited northern region separated from the Antipodes by an imaginary ocean at the equator.

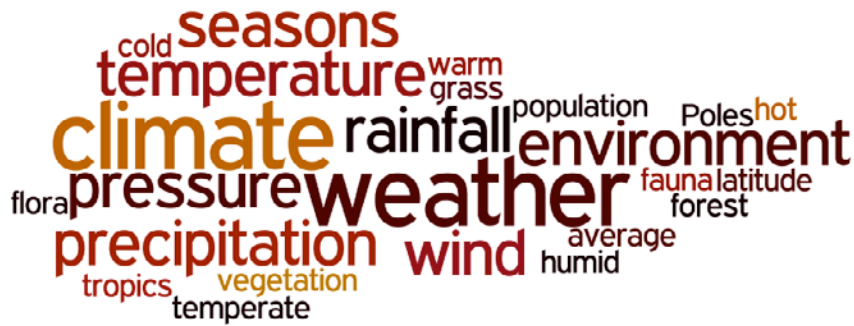


The five climes of the Earth. Frozen climes in yellow; Temperate climes in blue; Torrid climes in red.

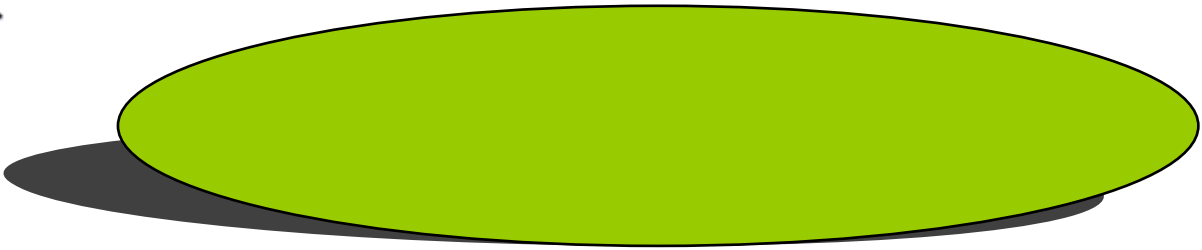
SESSION 1. INTRODUCING WEATHER AND CLIMATE. PRE-TASK.

1. Vocabulary activation.

Listen to your teacher or assistant reading the vocabulary. Repeat the words.



2. Write the words you already know in the circle.



3. True or False?

Sentence

Precipitation is the fall of water to the surface.

Climate describes what is happening in a given place at a given time.

Weather changes a lot in a very short time.

The desert climate is located around the tropics and it has very little rainfall.

Seville has a temperate climate.

True or False

4. Listen to your teacher reading a text. Underline the words you hear in the list below.

seasons temperature precipitation weather climate hot
cold temperate pressure wind warm grass forest
flora fauna latitude average vegetation rainfall tropics
environment humid poles

5. Listen to the same text again. Summarize the text in the following box.



6. Look at the following pictures. Match words from activity 1 with the pictures.



7. Look at this paragraph. What do the red words have in common? And the blue words?

The climate is temperate, with warm wet summers and cool wet winters. Weather varies from day to day. The west coast and mountainous areas receive **the most rain**; the east coast, particularly in the north, is **colder** and **windier**. The southeast is **sunnier** than the north with less rain and a climate approaching the continental. The southwest has **the mildest** climate overall. Occasional cold snaps with heavy snow can cause problems with transport and infrastructure.



8. Can you transform these words like you see in the text?

easy easier funny warm
easy the easiest funny warm

9. Read the following description of a natural environment.
Look at the words in blue (all about frequency).



It is a equatorial landscape. It rains **everyday**. It is **always** hot. **Sometimes** it is so hot that it is difficult to breathe. It is **never** cold there. **Sometimes** there are heavy storms. We reach 35°C very **often**.



Put the blue words in order.



Never

10. What is the weather like in your town/city?

Write a short description using the vocabulary from activities 1, 6 and 7.

MY TOWN CLIMATE.



11. Work in pairs. Ask your partner about the climate where both of you live.
Do you agree? Write down your answers.

| | We agree | We don't agree |
|-------------------------------------|----------|----------------|
| Seasons Temperatures Rainfall | | |

SESSION 2. WEATHER AND CLIMATE.

TASK 1. THE DIFFERENCE BETWEEN WEATHER AND CLIMATE.



1. Read the definitions in the boxes.

Weather describes what is happening in a given place at a given time. Weather changes a lot in a very short time. We hear about weather on television everyday. We hear about precipitation, temperature, winds, etc in a place for a short period of time.

Climate describes all the weather occurring over a period of years in a given place. This includes average weather conditions, seasonal variation, temperatures, precipitation, etc. Climate tells us what the weather is usually like in different places. London has a wet and mild climate, Almeria has a dry and mild climate...



2. Are the following sentences right or wrong?

Today the climate is hot. It is 40° C.

Today the weather is cold. It is 5° C.

Mediterranean weather is always irregular.

Last summer, we had very wet weather in England.



2. Write a short text explaining the differences between weather and climate. You can use words like 'but', 'however', or 'while'.

While weather occurs over short periods of time...

TASK 2. ANALYSING CLIMATIC ELEMENTS: TEMPERATURES, PRECIPITATION, PRESSURE AND WINDS.

READING. Listen to your teacher reading these four definitions.



TEMPERATURE.

It is the amount of heat in the air. It varies with latitude, altitude and proximity to the coast. They are higher at the Equator and colder at the Pole, colder in high places, and milder inside continents.

PRECIPITATION.

It is the fall of water to the surface. It comes from the condensation of water vapour in the air. It varies with latitude, altitude and proximity to the coast. It rains more in areas near the Equator, in mountain areas, and near the coast.

PRESSURE.

It is the force made by the weight of air on the Earth's surface.

It decreases with altitude.

We represent it by lines called isobars ('iso' means 'equal'). High pressure means stability, and low pressure means instability.

WINDS.

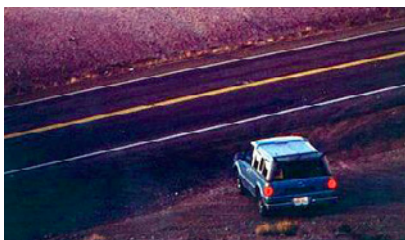
Wind is the movement of the air from high pressure areas to low pressure areas. The anemometer is used to measure its speed.



1. Have a look at the pictures below. What is the weather like? Describe winds, temperature and precipitation. Use the information above.



Mississippi river.



Arizona Desert

2. Listen to the description of the climate in a mystery local
You will hear the text twice. Fill in the table below.



| | TRUE | FALSE | NOT GIVEN |
|---|------|-------|-----------|
| This climate is cool, with warm summers. | | | |
| The weather doesn't vary very often. | | | |
| The west coast of the country receives the most rain | | | |
| The southeast of the country has mild weather. | | | |
| Sometimes, snow can cause problems with transport. | | | |
| Between May and August people can enjoy sunnier days. | | | |



Listen again – which place is it?

A. ENGLAND

B. SAUDI ARABIA

C. GREECE



3. Team work. Groups of four.

Write a short description about a place you have visited during your holidays.
Write about the sun and clouds, wind, temperature, rainfall, etc. Compare the place with your town or village (use 'more than' or '-er than')

I went to _____
The weather was _____



Read the description to the people in your group. Each person must draw a small picture from your description.

| Student 1 | Student 2 | Student 3 | Student 4 |
|-----------|-----------|-----------|-----------|
| | | | |



One of you will be the spokesperson. Choose one of the pictures and describe it to the teacher and the class. They must try to guess which place the spokesperson is talking about.

WHAT I HAVE LEARNED.

1. Write true or false after the following sentences.

The most significant climate elements are insulation, altitude, and latitude.

_____ Pressure is the force made by the weight of air on the Earth's surface.

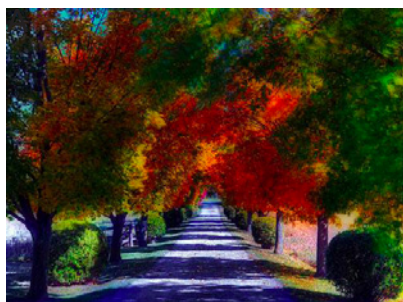
_____ Temperature varies with latitude but not with altitude. _____

Precipitation varies with latitude and longitude. _____

Winds are the movement of the air from the sea to the continental surface.



2. Look at the pictures. Read the text and find the mistakes. Underline them.



In picture A the weather is warmer than in picture B. Picture B is closer to the equator than picture A. B is usually colder than A. In picture B precipitations are snow. There are no seasons in picture A. The climate in picture A is hot and in picture B, where it is always cloudy, the climate is cold.

SESSION 3. CLIMATE AROUND THE WORLD. CLIMATIC ZONES.

TASK. ANALYSING CLIMATIC ZONES.

Reading.



Have you ever wondered why one area of the world is a desert, another a grassland, and another a rainforest? Why are there different forests and deserts, and why are there different types of life in each area? The answer is climate. Climate is the characteristic condition of the atmosphere near the earth's surface at a certain place on earth. It is the long-term weather of that area (at least 30 years).

Basically there are three climatic zones on the Earth: the hot zone, the cold zone and the temperate zone - according to the latitude and because insulation decreases towards the Poles.

The hot zone is located between the two tropics. Insulation is high because the sun's rays fall vertically on this area. Temperatures are over 18° C all year.

The temperate zone is actually divided into two zones, one in each hemisphere, between tropics and polar circles. Insulation is still enough to keep this zone warm. In these zones year is divided into four seasons, a hot summer, a cold winter, and two transitional periods, spring and autumn (or fall).

The cold zone is also divided into two zones, located inside the North and the South polar circles. The insulation is very low because the sun's rays fall almost tangentially on the surface. They have no summers.

TEXT ATTACK!

1. Fill in the table using the information from the text above.



| ZONE | LOCATION | TEMPERATURE | SEASONS |
|-----------|----------|-------------|---------|
| HOT | | | |
| TEMPERATE | | | |
| COLD | | | |

2. Read the following sentences and write questions for the answers.

| SENTENCE | QUESTION |
|---|---|
| There are three main climatic zones in the world. | How many climatic zones are there in the world? |
| Climate is the characteristic condition of the atmosphere near the earth's surface at a certain place on earth. | |
| The hot zone is located between the two tropics. | |
| Insulation is high because the sun's rays fall vertically on this area. | |
| The cold zones are located inside the Polar circles. | |



3. Look at the map below. Can you mark the three main climatic zones? Use red for the hot zone, blue for the cold zones and orange/brown for the temperate zones?



4. Group work. What are the facts?

Work in a group of 3. Each person in the group needs a number: 1, 2 or 3. Write a description of the zone on your card. Then read your card aloud. The other group members will complete their cards with the information you provide.

CARD 1. _____ ZONE



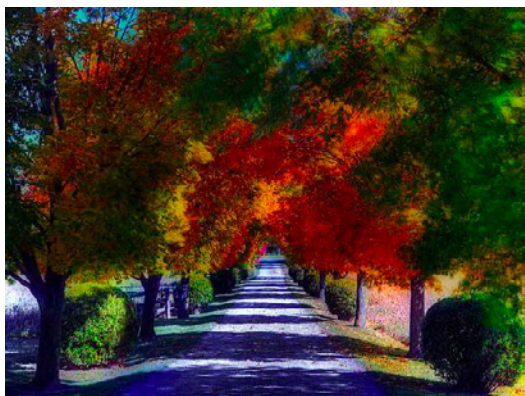
This picture shows the ____ zone.

Location

Temperatures

Seasons

CARD 2. _____ ZONE



This picture shows the ____ zone

Location

Temperatures

Seasons

CARD 3. _____ ZONE



This picture shows ____ zone.

Location

Temperatures

Seasons



ANSWERS CHART. CLIMATIC ZONES IN THE WORLD.

| CARD 1 | CARD 2 | CARD 3 |
|-------------|-------------|-------------|
| ZONE | ZONE | ZONE |
| LOCATION | LOCATION | LOCATION |
| TEMPERATURE | TEMPERATURE | TEMPERATURE |
| SEASONS | SEASONS | SEASONS |

WHAT I HAVE LEARNED.



1. Use what you have learned in this session to describe this picture from a medieval book written by Macrobius in the 4th century A.D.



The world is...
There are

'The five climes of the Earth. Frozen climes in yellow;
Temperate climes in blue; Torrid clime in red.'



2. Odd One Out. Circle the word which does not go with the others.

| | | | |
|------------|---------------|------------|----------|
| Hot | Zone | Summer | Location |
| Temperate | Area | Season | North |
| Cold | Precipitation | Insulation | Surface |
| Average | Landscape | Winter | South |
| Tropic | | Forest | |
| Pole | | Grassland | |
| Hemisphere | | Pole | |
| Forest | | Desert | |

SESSION 4. CLIMATES AROUND THE WORLD.

TASK. CLASSIFYING CLIMATIC REGIONS IN THE WORLD.

READING.

Hot climates:

Hot climates are found in the intertropical zone. In this zone, the average temperature of the coldest month is at least 15 °C.

- The Equatorial Climate is characterised by constant, very hot temperatures and frequent, heavy rainfall.
- The tropical climate has constant, very hot temperatures and heavy rainfall but it has a dry season that lasts two to three months.
- The desert climate has very hot temperatures and very little rainfall.

Mild climates:

Mild climates are found between the tropics and the polar circles. These climates are characterised by the succession of four seasons: spring, summer, autumn and winter.

- The oceanic climate or Atlantic climate has mild temperatures and heavy rainfall all year long.
- The continental climate has very cold winters and very hot, humid summers.
- The Mediterranean climate is characterised by mild winters and hot, dry summers. Most rainfall occurs in the spring and autumn.

Cold climates:

Cold climates are found above the polar circles and in high mountainous areas.

- The polar climate has the Earth's lowest temperatures. Summer does not exist: no month has an average temperature above 10 °C. Rainfall is almost non-existent.
- The high mountain climate has cold temperatures and heavy rainfall, usually in the form of snow.

TEXT ATTACK!

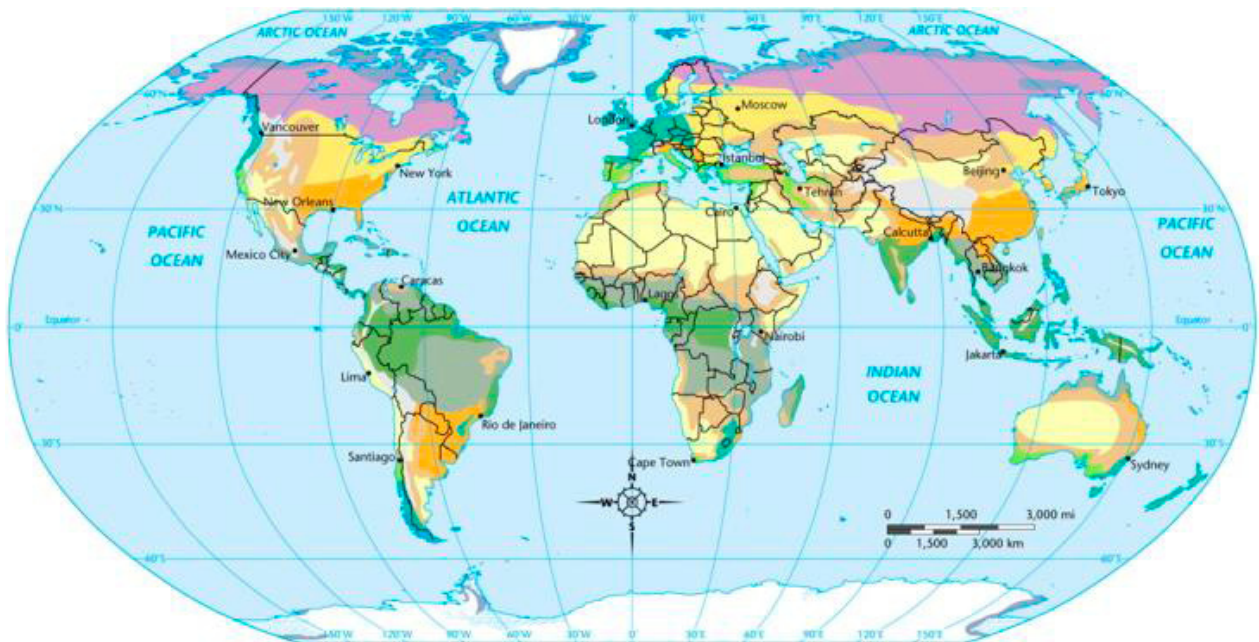
1. What are the common features of...?














Cold climates:

Temperate climates:

Hot climates:

2. In the map below, you can see an alternative classification of global climate. Match the climate type on the map with the types in the table below the map.



| Tropical | | Dry | | Moderate | | Continental | | Polar | | | |
|---|----------------------|---|----------|---|-------------------|---|-------------------|---|-----------|---|-------------------|
|  | Tropical wet |  | Semiarid |  | Mediterranean |  | Humid continental |  | Tundra |  | Non-permanent ice |
|  | Tropical wet and dry |  | Arid |  | Humid subtropical |  | Subarctic |  | Ice cap | | |
| | | | |  | Marine west coast | | |  | Highlands | | |

| CLIMATE TYPE | SUBTYPES |
|---------------|--------------------|
| Equatorial | Tropical wet. |
| Tropical | |
| Desert | Semiarid, |
| Oceanic | |
| Continental | |
| Mediterranean | Humid subtropical, |
| Polar | |
| High mountain | |



3. Sorting and grouping. Work in groups of four. Read the sentences and group them into climate types.

1. This climate is between the tropics of Cancer and Capricorn.
2. These cold climates are next to temperate zones in the North and South.
3. Precipitation is over 2,000 mm a year.
4. It is always very hot and dry.
5. It rains a lot all year and temperatures are mild.
6. Precipitations are mainly in form of snow.
7. There is no summer.

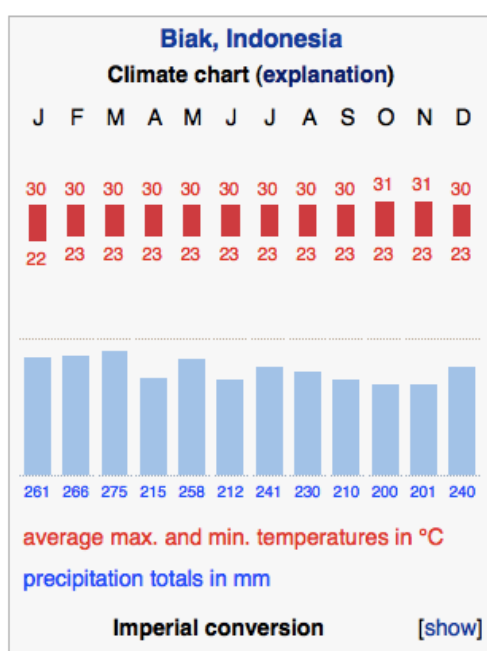
8. It is hot all year.
9. There is a very dry and hot summer, but it is a temperate climate.
10. It has cold winters and hot summers.
11. It rains a lot, but concentrated in one season, like the monsoon in India.
12. Temperatures are always below 10 degrees C.
13. It doesn't rain much, below 250 mm a year.
14. It is the coldest climate in the world.
15. Winters are mild, summers are hot.
16. It is located on the west coast of the continents.
17. It is located around the equator.
18. It is located in different regions on the Earth.



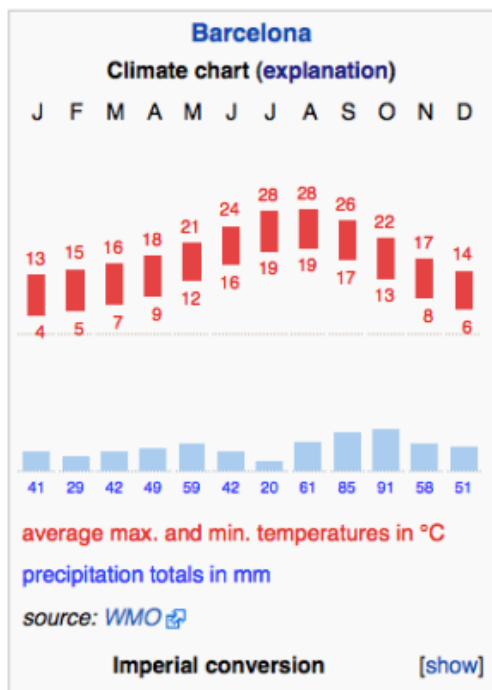
| CLIMATE TYPES | SENTENCES |
|---------------|-----------|
| Equatorial | |
| Tropical | |
| Desert | |
| Oceanic | |
| Continental | |
| Mediterranean | |
| Polar | 2 |
| High mountain | 18 |



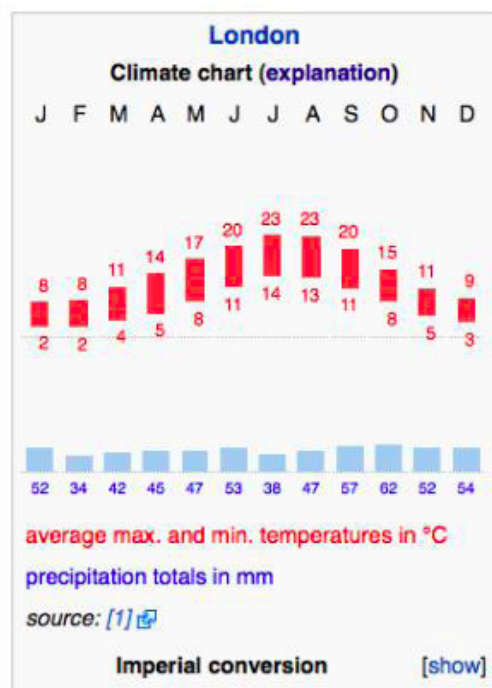
4. Look at the pictures. Each one describes a different climate. Make notes in the boxes.



It is a _____ climate.
Temperatures are...
Rainfall is
Seasons



It is a _____ climate.
Temperatures are...
Rainfall is
Seasons



It is a _____ climate.
Temperatures are...
Rainfall is
Seasons

WHAT I HAVE LEARNED.

1. Imagine you are travelling around the world. Choose one of the pictures below and write a postcard to a friend describing the climate. Remember you can use 'normally' 'usually', 'often', 'sometimes', 'never' and similar words.



✍

| | |
|---|--|
| <p>Dear _____</p> <p>I'm writing from...</p> <p>Best wishes,</p> | <div data-bbox="1220 1370 1364 1523" style="border: 1px solid black; width: 80px; height: 68px; margin: 20px auto;"></div> <div data-bbox="933 1713 1316 1825" style="border-top: 1px solid black; margin: 20px auto; width: 240px;"> <div style="border-top: 1px solid black; margin-top: 2px;"></div> <div style="border-top: 1px solid black; margin-top: 2px;"></div> <div style="border-top: 1px solid black; margin-top: 2px;"></div> </div> |
|---|--|



SESSION 5. WORLD DIVERSITY. NATURAL ENVIRONMENTS AROUND THE WORLD.



READING. NATURAL ENVIRONMENTS AROUND THE WORLD.

THE EQUATORIAL ENVIRONMENT. THE JUNGLE.

An Equatorial climate is humid and warm all year. It has a permanent forest called jungle. Jungle is a very dense rainforest, where sunlight cannot reach the ground and where there is rich fauna. There are often lots of monkeys, snakes and insects. There are not many humans. Ecological problems like deforestation are threatening life in the equatorial regions.

THE DESERT ENVIRONMENT. HOT DESERTS.

The desert climate is located around the tropics and it has very little rainfall. Temperatures are hot during the day all year round. Vegetation is very scarce. The fauna is not very rich, only reptiles, insects and some birds live there. Nomadic people live in oases where they can find water and grow plants.

THE MEDITERRANEAN ENVIRONMENT. THE MEDITERRANEAN FOREST.

The Mediterranean climate is basically located around the Mediterranean sea. Its primary characteristic is hot and dry summers. Mediterranean forests include bushes and Holm oaks. Reptiles and birds are very common. Human settlements are very old and agriculture has invaded most of the natural landscapes.

THE TROPICAL ENVIRONMENT. THE TROPICAL RAINFOREST AND THE SAVANNAH.

Tropical climates are found north and south of the equatorial zone. They are very similar, but there is a dry season. Tropical rainforest is similar to jungle, but less dense. Savannah - areas of grass and trees like the baobab, are found in the drier areas. The fauna is very rich, full of herbivores animals like giraffes, zebras, etc. Human populations live in the valleys of rivers. Desertification is growing.

THE OCEANIC ENVIRONMENT. THE ATLANTIC FORESTS.

The oceanic climate is located on the west coast of continents between the tropics and the polar circles. Precipitation is regular all year and temperatures are mild. Atlantic forests of oaks and fields of green grass are the most common landscapes. Deer, bears, wolves, insects and birds provide a varied fauna. Most of the areas are very densely populated and the natural environment is in danger.

THE CONTINENTAL ENVIRONMENT. GRASSLAND, STEPPE AND TAIGA.

The continental climate is located in the interior of the continents between the tropics and the polar circles. Precipitation is irregular, mostly in summer. Winters are extremely cold and summers are warm. Flora changes from the south to the north. Grassland is located in the temperate zone. It is covered in grass, because there is not enough precipitation for the growth of trees. The Steppe is located near the deserts and is covered with short grass. The Taiga, located in the northern areas, is a coniferous forest. Fauna includes deer and bears. The human population is dense in European continental environments.

THE POLAR ENVIRONMENT. THE TUNDRA.

The polar climate is located inside the polar circles. It has very low temperatures all year round. Precipitation falls as snow. Tundra is the polar flora. It is a herbaceous formation of moss and lichen. Fauna includes seals and penguins. The population is low.

THE MOUNTAINOUS ENVIRONMENT.

The mountainous climate is located everywhere around the world over high mountains. Flora changes with altitude, starting from forests and grasslands and ending in moss and lichen on top. The fauna includes goats and birds. There are few humans.



1. Fill in the following chart using the information above.

| NATURAL ENVIRONMENT | CLIMATE TYPE | FLORA | FAUNA | HUMAN POPULATION |
|----------------------|--------------|-------|-------|------------------|
| JUNGLE | | | | |
| TROPICAL RAINFOREST | | | | |
| SAVANNAH | | | | |
| DESERT | | | | |
| ATLANTIC FOREST | | | | |
| MEDITERRANEAN FOREST | | | | |
| GRASSLAND | | | | |
| STEPPE | | | | |
| TAIGA | | | | |
| TUNDRA | | | | |
| MOUNTAINOUS | | | | |



2. Guessing game. Pair work.

Students are divided into two pairs A and B. You each have some pictures. Take it in turns to describe your pictures to each other. When A is describing, B must guess which environment it is.

Here are some model sentences to help you:

| | | | |
|-------|---------------|------------------------------|------------|
| There | is | a/an | trees |
| | are | some, many, a lot of, a few, | bushes |
| | isn't /aren't | any | plants |
| | | | birds |
| | | | grasslands |
| | | | snow |
| | | | rivers |
| | | | lakes |
| | | | mountains |
| | | | --- |

| | | |
|----|-------|--------|
| It | looks | humid |
| | | dry |
| | | cold |
| | | green |
| | | dark |
| | | bright |
| | | --- |



3. Writing. Natural environment report. Choose one of the pictures and write a report about the environment using what you can see and the information from the previous texts.

REPORT. NATURAL ENVIRONMENT:

Description of the picture:

Fauna:

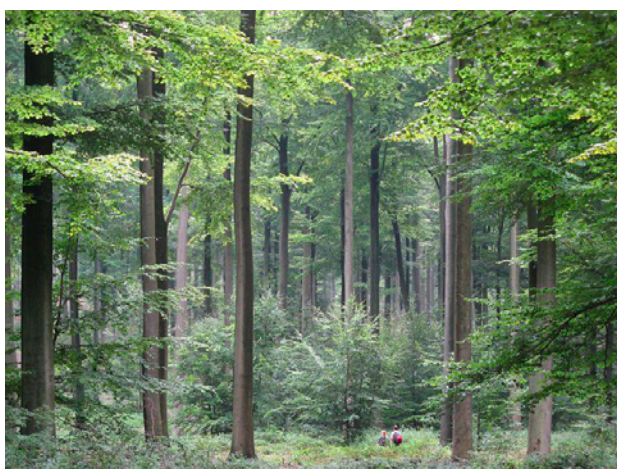
Flora:

Location:

I like...

I don't like...

STUDENT A



STUDENT B



SESSION 6 . FINAL PROJECT. A TRAVEL BROCHURE.



TEAM WORK.

TASK. Creating a brochure for a travel agency.



1. Introducing different places in the world where people can enjoy sports, sunbathe, skiing ... in wonderful natural environments.

2. Matching activities and places. If you like... you must go to...

3. Making a short presentation to the class.

Team roles. Groups of four.

A spokesperson: will speak to the class

A scribe: will write down short texts

2 artists: will look for pictures and design the travel brochure.



Procedure.

Step 1. Look for pictures of natural environments. Click on these links to get some pictures. Copy and paste them into a word document.

<http://search.creativecommons.org/>

<http://compfight.com/>

<http://www.google.es/imghp>

Step 2. Choose the best pictures for the brochure.



Make sure they show the natural environments from this unit.



Step 3. Write the text about the environment and the things people can do there.

Use the document where you pasted the pictures.

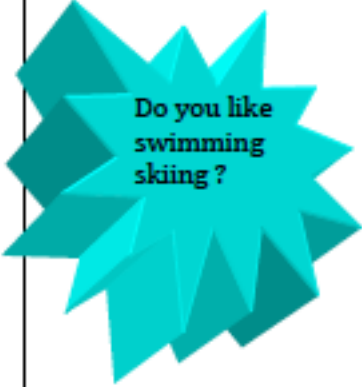

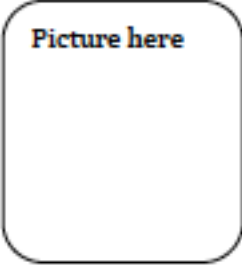



Step 4. Design the brochure. Copy and paste the pictures and the texts.

Step 5. Make the presentation. (See the next page).

Draft for the brochure.

Look at this draft below. This will give you some ideas.

| | | |
|---|--|---|
| <p>Travel agency name</p> <p>Hobbies</p>  |  <p>Picture here</p>  | <p>Description here</p> <p>What can you do in _____!</p> <p>Picture here</p>  |
|---|--|---|

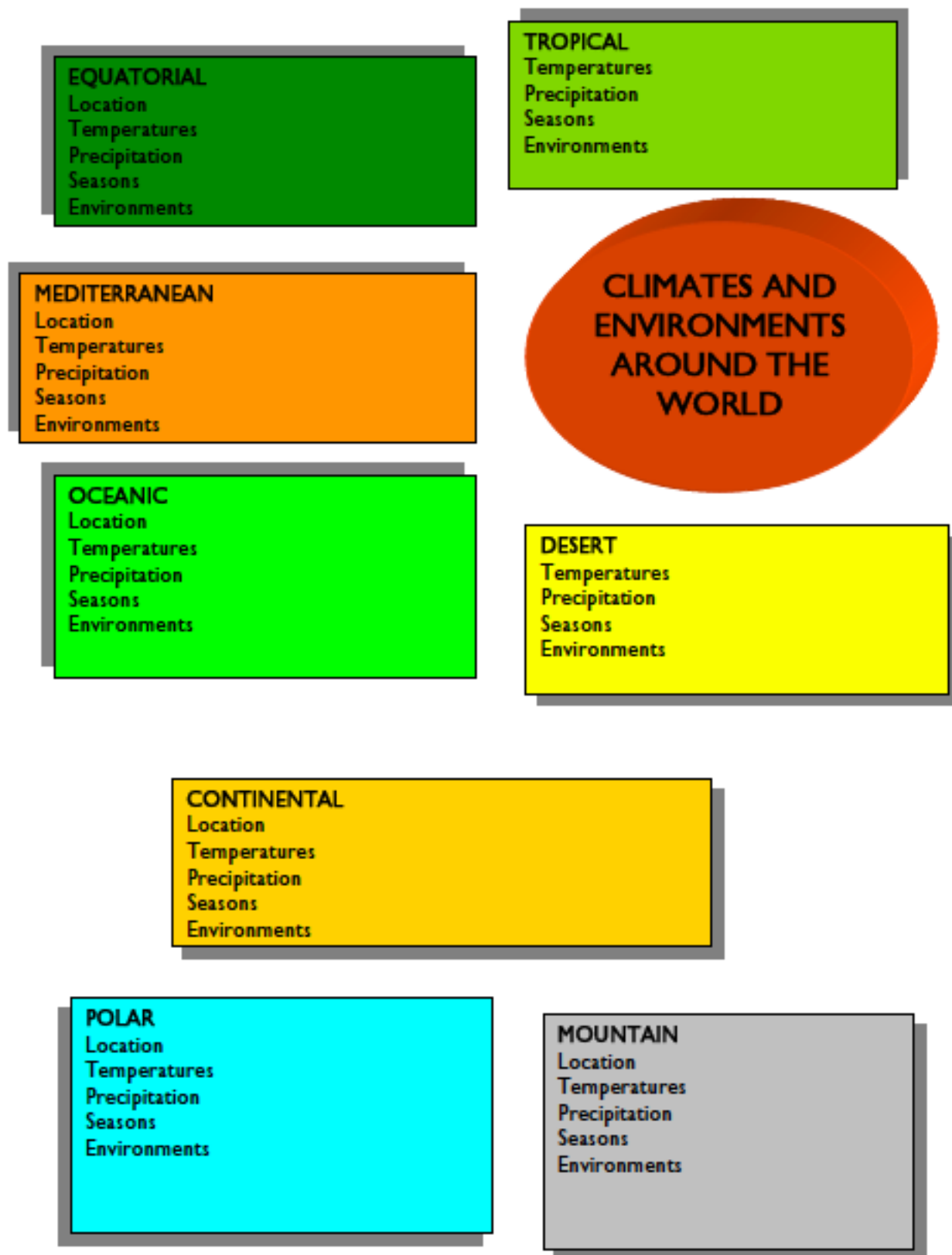
Useful phrases for the presentation.

| | | |
|--------|--|---|
| If you | like | skiing dancing swimming sunbathing hunting going on safari driving ... |
| come | to | Kenya The Alps the Sahara Desert the Himalayas the Caribbean ... |
| and | enjoy practice visit do go | the snow the sun swimming hiking an oasis ... |

SUMMARIZING. CLIMATES AND ENVIRONMENTS AROUND THE WORLD.



Fill in the following diagram.



ASSESSMENT WORKSHEET.



What have I learned? Read the following statements about skills and knowledge you have learned during the project. Circle one of these options:

YES NO NOT YET

Self-assessment chart

| | | | | |
|----------|---|-----|----|---------|
| I CAN... | Organize vocabulary into categories | YES | NO | NOT YET |
| | Predict a topic by listening to a reader | YES | NO | NOT YET |
| | Recognize different kinds of landscapes | YES | NO | NOT YET |
| | Get valuable information from different sources | YES | NO | NOT YET |
| | Describe images and pictures | YES | NO | NOT YET |
| | Summarize the main ideas from a text | YES | NO | NOT YET |
| | Speak to a partner and in a group about weather | YES | NO | NOT YET |
| | Write a text after analyzing a picture | YES | NO | NOT YET |
| | Be involved in a group project and participate | YES | NO | NOT YET |

| | | | | |
|--------|--|-----|----|---------|
| I KNOW | The difference between weather and climate | YES | NO | NOT YET |
| | The elements of climate | YES | NO | NOT YET |
| | The three main climate zones in the world | YES | NO | NOT YET |
| | The different types of climates in the world | YES | NO | NOT YET |
| | The diverse natural environments of the earth | YES | NO | NOT YET |
| | Some ecological risks for the natural environments | YES | NO | NOT YET |



2. FEEDBACK

| | |
|------------------|--|
| Contents | |
| Developed skills | |
| Advice | |