



PHYSICAL ENVIRONMENT OF SPAIN: RELIEF AND HYDROGRAPHY

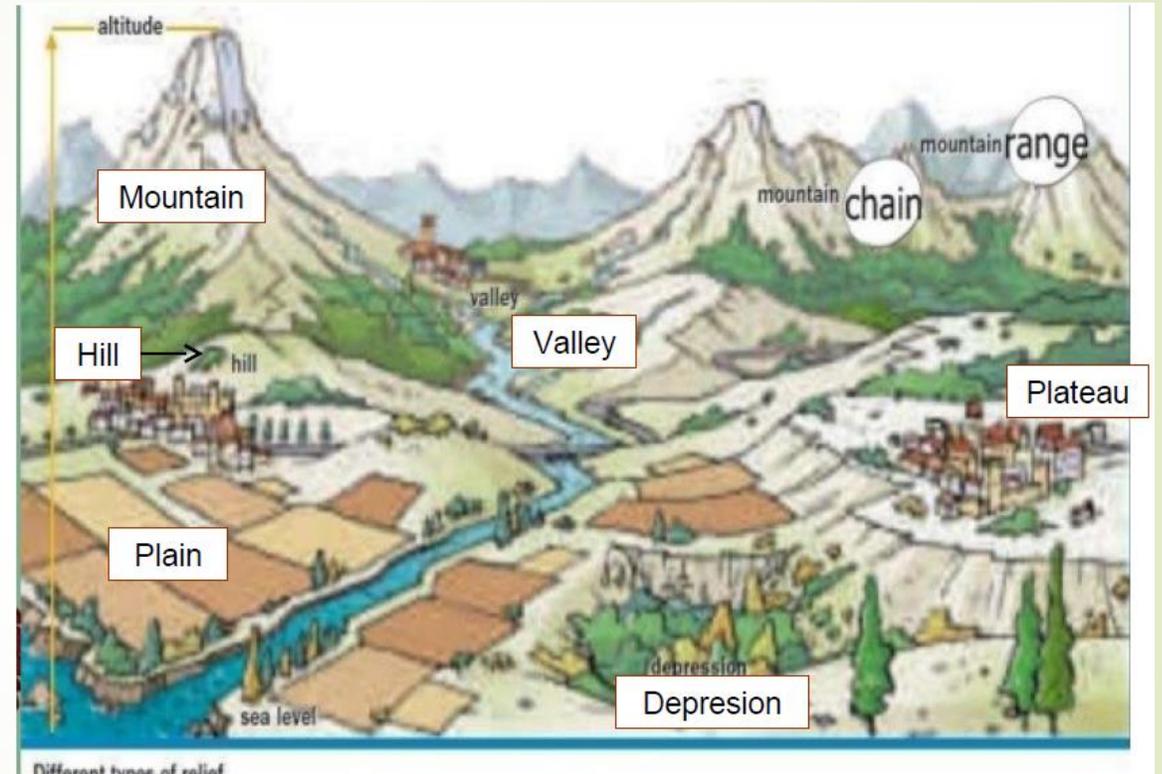
UNIT 1

RELIEF

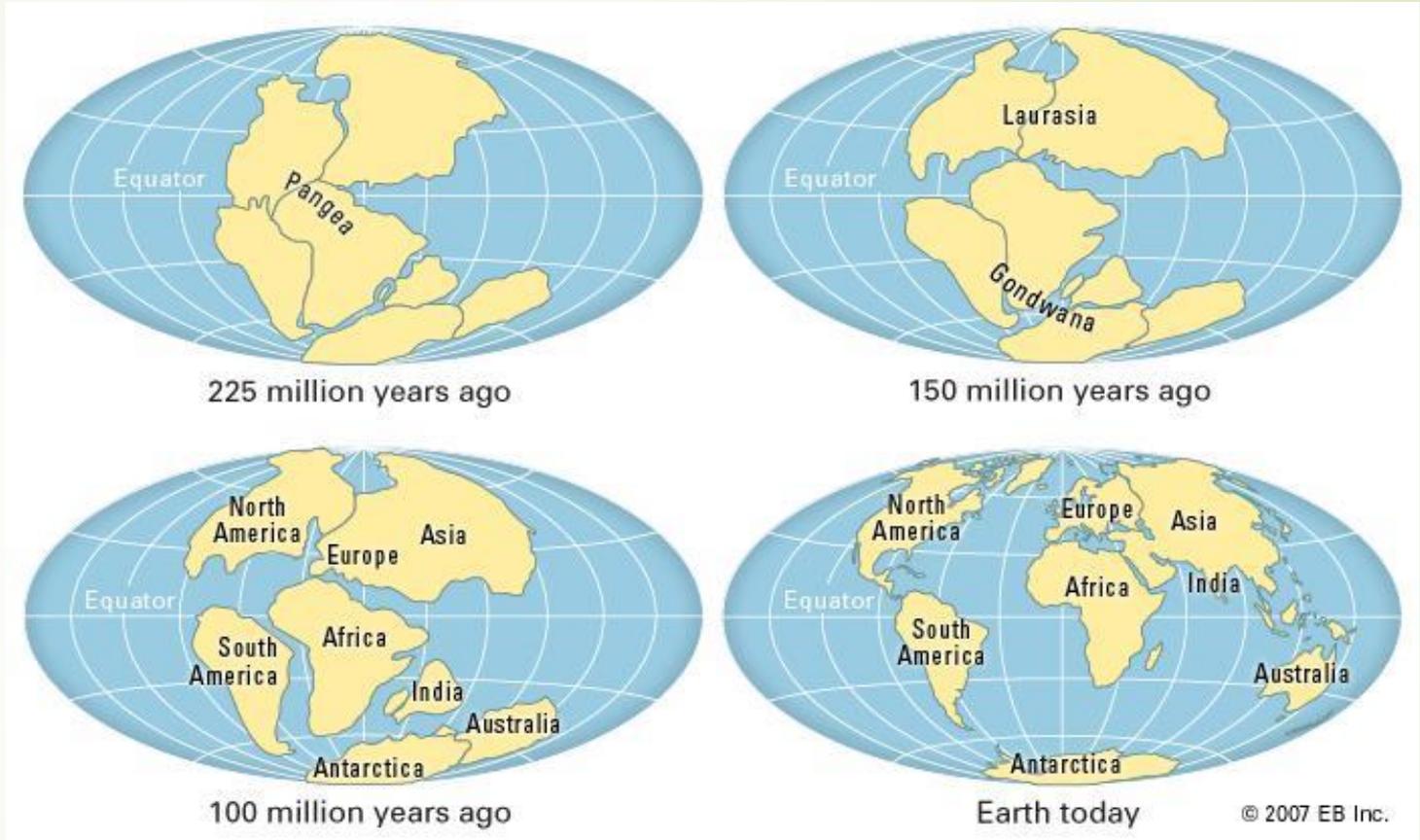


VOCABULARY

- **Plains** are large areas of flat land with no hills or slopes.
- **Plateau** is a plain at a high altitude.
- **Depressions** are plains which are lower than the surrounding land.
- **Hill** are small elevation in the ground. They have lower altitude than mountains.
- **Mountain** is a big elevation in the ground.
- Several mountains grouped together are called a **mountain range**.
- A long line of mountain ranges is called a **mountain chain**.
- **Valleys** are low areas between mountains. Rivers are often found in valleys.

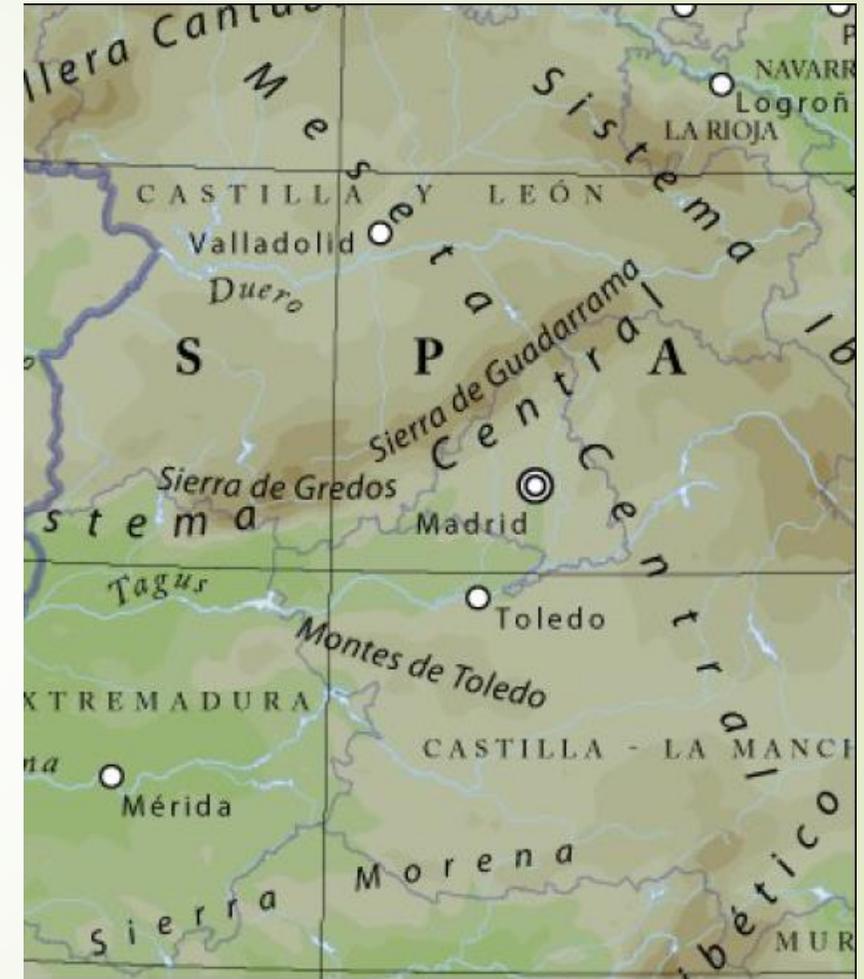


CONTINENTAL DRIFT



THE INNER PLATEAU

- A very extensive plain covers the centre of the Iberian Peninsula. It is called the Inner Plateau. It has an average height of 600 metres above sea level.
- The Inner Plateau covers the Autonomous Communities of Castile-Leon, Castile-La Mancha, Madrid and Extremadura. Extensive farmland dominates the Inner Plateau. The largest towns are near the main rivers.



THE RELIEF IN SPAIN IS COMPOSED OF

- The *Central Plateau*: It is a big plain in the Iberian Peninsula.
- **Central System** (Sistema Central) divide the Plateau into two parts:
 - The North Subplateau.
 - The South Subplateau
- **Toledo Mountains** (Montes de Toledo)
- The *Mountains that go around the plateau* are:
 - **The Lion Mountains** (Montes de Leon) with **Telno** as one of its highest peaks.
 - **The Cantabrian Range** (Cordillera Cantabrica) where we find **Picos de Europa** and **Torre Cerredo** as one of the highest peaks.
 - **The Iberian System** (Sistema Iberico) – **Moncayo** is one of its highest peaks.
 - **Sierra Morena – Bañuelas and Despeñaperros.**



- The Mountains that are far from the plateau are:
- **The Galizian Massif** (Mazizo Galaico) – **Cabeza de Manzaneda** is one of the highest peaks.
- **The Pyrenees**, (Pirineos) that separate Spain from France and where we can find important peaks like **Aneto** and **Monte Perdido**.
- **The Basque Mountains** (Montes Vascos) – **Peña Gorbea**
- **The Catalanian Range** (Cordilleras Costeras Catalanas) where we can find **Turó de L'Home**.
- **The Betic Chain** (Cordilleras Beticas) are divided into:
 - Cordillera Penibetica – The highest peak is **Mulhacén**.
 - Cordillera Subbetica – The highest peak is **Sagra**.
- The most important depressions in the peninsula are:
 - **The Ebro depression**: located among the Pyrenees, The Iberian System, The Catalanian Coast and the Mediterranean Sea.
 - **The Guadalquivir depression**: located among Sierra Morena, The Betic Chain and the Atlantic Ocean.

CO DE ESPAÑA



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- ▶ The **Meseta Central** is a high wide plain divided by the Sistema Central.
 - ▶ **Depressions** or low areas are located between mountain ranges. The largest are the Ebro and Guadalquivir depressions.
 - ▶ **Interior mountain ranges** form a rim around the Meseta, with the exception of its western area. They include the Montes de León, the Cordillera Cantábrica, the Sistema Ibérico and the Sierra Morena.
 - ▶ **Exterior mountain ranges** are located at the extremes of the peninsula. They include the Macizo Galaico, the Montes Vascos, the Pyrenees, the Cordillera Costero-Catalana and the Sistema Bético.



TEST YOURSELF!!!

- ▶ <https://mapasinteractivos.didactalia.net/en/community/mapasflashinteractivos/resource/physical-relief-of-spain/296eba0e-1f64-464c-bac4-806894448ade>
- ▶ <https://mapasinteractivos.didactalia.net/en/community/mapasflashinteractivos/resource/physical-relief-of-spain/b08c36e5-ed54-46e1-995f-354b59d8dd08>



RIVERS



- Rivers are continuous currents of water. There are several different terms related to rivers:
- a **tributary** is a minor river or stream that flows into a main river.
- the **course** is the route that a river follows from its source to the mouth.
- the **channel** is the river bed or space occupied by a river.
- **volume** is the amount of water that a river transports in a particular place
- the **watershed** is the area covering all the different rivers that flow into the same sea

SPANISH RIVERS

➤ CANTABRIAN WATERSHED

The rivers that flow into the Cantabrian Sea are short with abundant water volume. They include the Bidasoa, Nervión and Nalón rivers.

➤ ATLANTIC WATERSHED

The rivers that flow into the Atlantic Ocean are longer with variable water volume throughout the year. They include the Miño, Duero, Tajo, Guadiana and Guadalquivir rivers.

➤ MEDITERRANEAN WATERSHED

The rivers that flow into the Mediterranean Sea are short with low water volume, such as the Turia, Júcar and Segura rivers. An exception is the River Ebro, which runs through a long depression.





TEST YOURSELF!!!

- ▶ https://www.huffingtonpost.es/2015/08/07/rios-espanoles_n_7955058.html
- ▶ <https://mapasinteractivos.didactalia.net/comunidad/mapasflashinteractivos/recurso/rios-de-espaa/6b90cb5d-8084-4d44-9cc6-990fe7068e38>

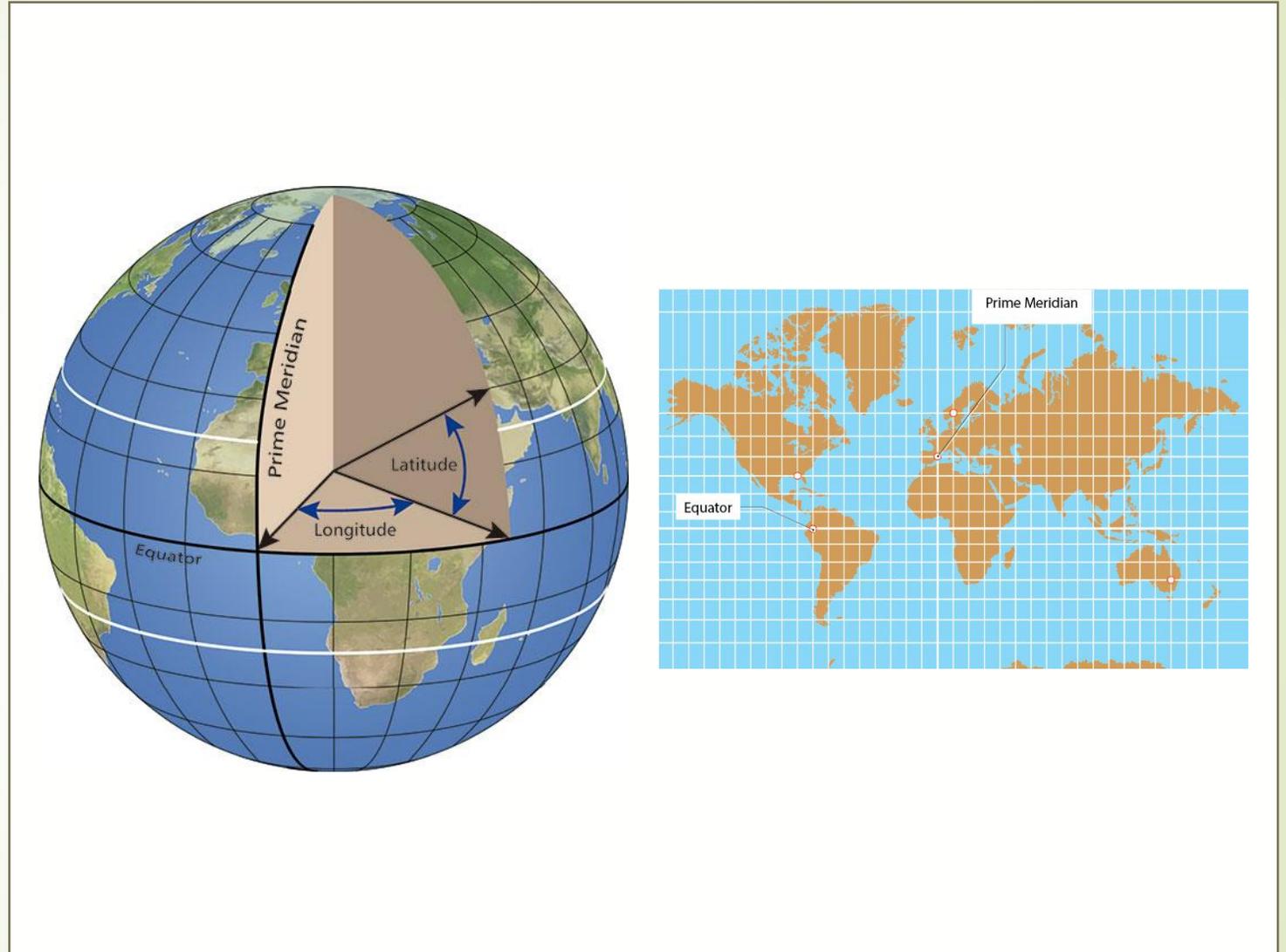
TYPES OF CLIMATE AND NATURAL LANDSCAPES IN SPAIN

- Climatic conditions are one of the most decisive factors in natural processes as they influence, amongst other things, the **vegetation** and **human activities** in a certain region. Therefore, they condition the **landscape**.
- In the case of the Iberian Peninsula, climatic characteristics, which are determined by factors like **latitude**, **altitude** and **proximity** to the **sea**, have created five distinct climate types in Spain.



GEOGRAPHICAL LOCATION

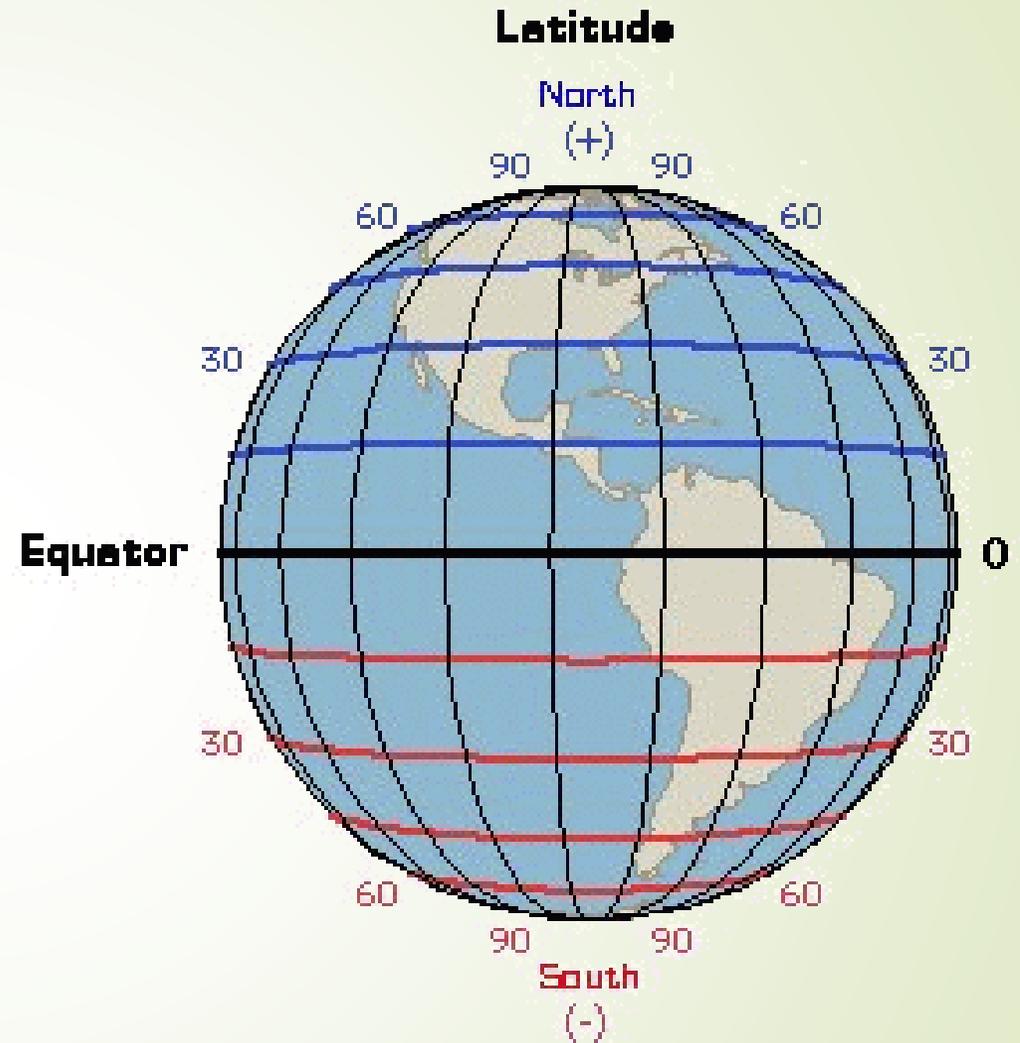
- ▶ Planet Earth can be **represented** by a **globe** or different types of **maps**. To locate a point on Earth, geography uses imaginary lines that organise the Earth's surface into grids.
- ▶ These lines are called **meridians** and **parallels**, and they are used to form geographical coordinates: **latitude** and **longitude**.



LATITUDE AND LONGITUDE

► LATITUDE

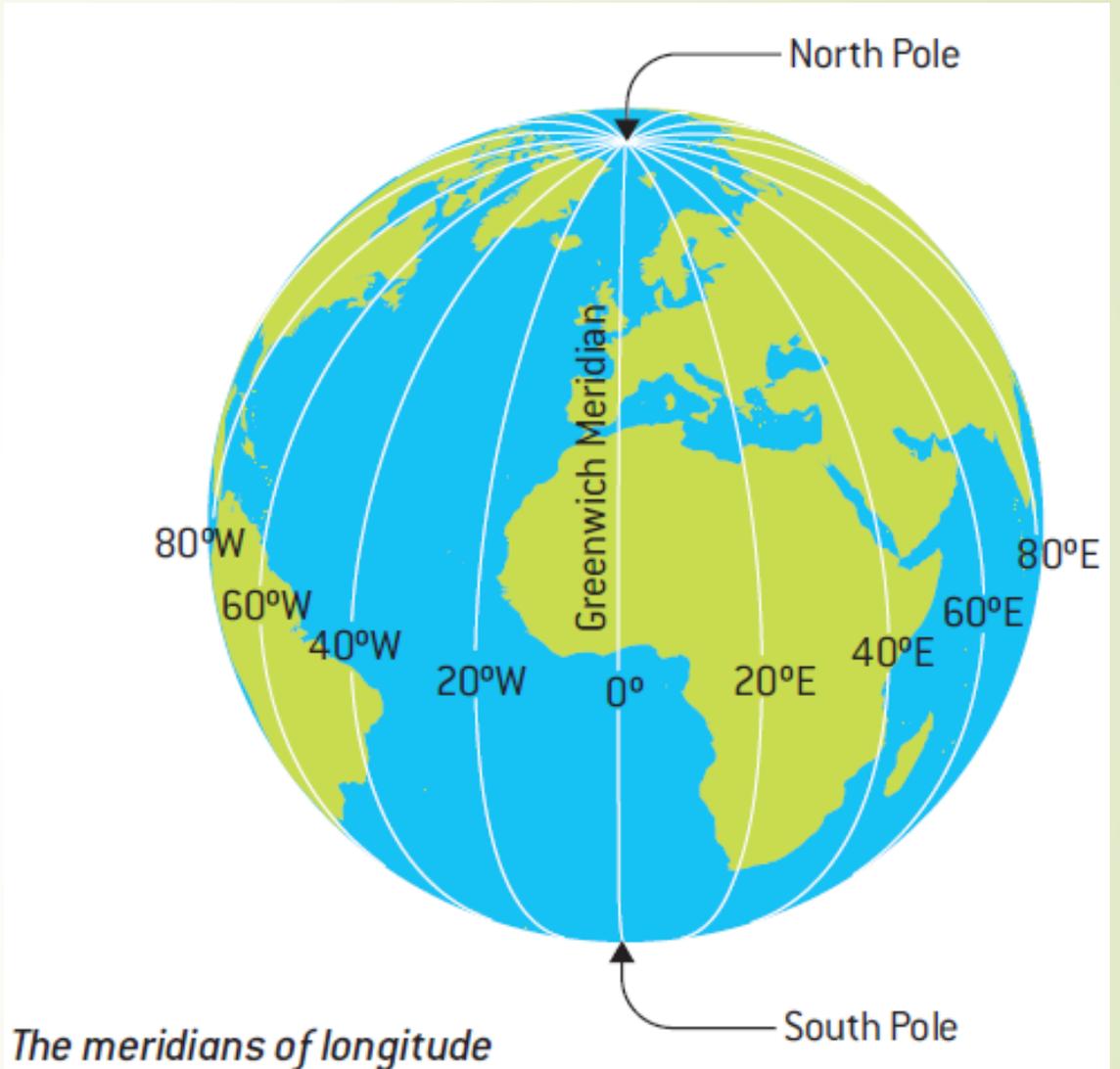
Latitude is the angular distance between any point on the planet and the Equator. If the point is located on the Equator, the latitude is 0° and it increases towards the Poles, following the lines of the parallels, until it reaches 90° north or south.



➤ **LONGITUDE**

Longitude is the angular distance between any point on the Earth's surface and the meridian 0° or Prime Meridian. If the point to be located is found on this meridian, the longitude is 0° , and it increases until it reaches 180° east or west.

➤ **HOW TO READ THE COORDINATES?**





TEST YOURSELF!

- ▶ <https://es.educaplay.com/es/coleccion/3861/1/planisferio.htm>
- ▶ https://es.educaplay.com/es/recursoseducativos/39015/latitud_longitud.htm

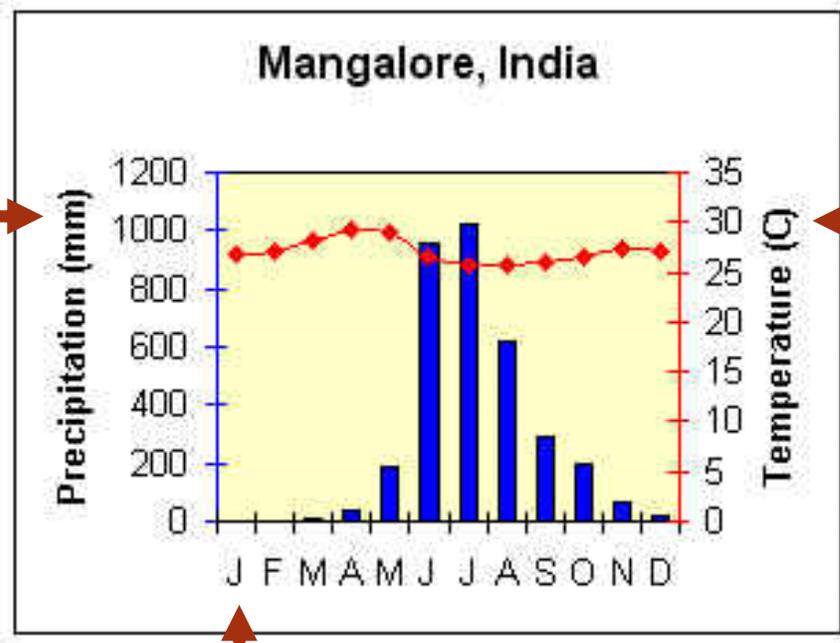


HOW TO READ A CLIMOGRAPH

- ▶ Climate is the average of daily weather conditions at a particular location. A climograph or climate graph is a visual representation of average monthly conditions at a location over the course of a year. It focuses on average monthly temperature and average monthly precipitation.
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- Look at the title to see what location's climate is being described by the graph.

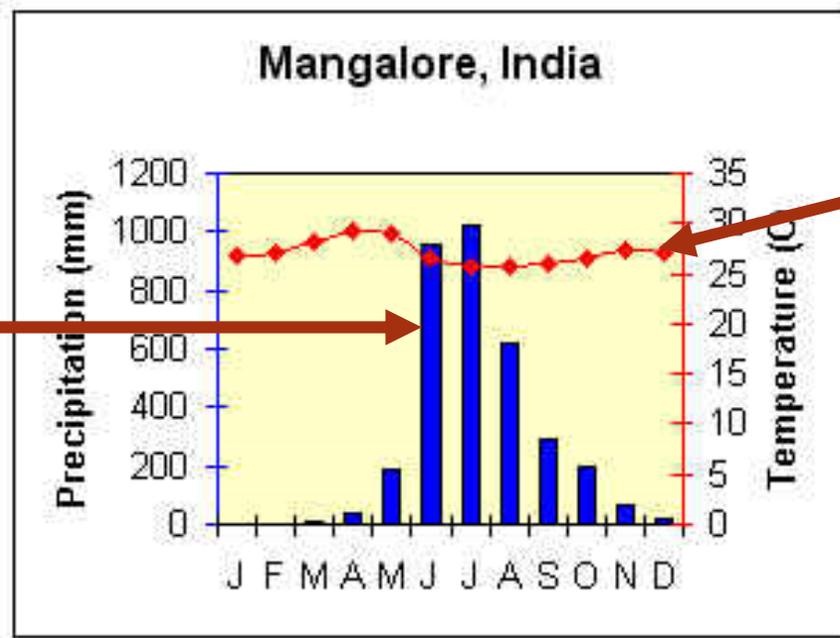
The numbers on the left show you the amount of precipitation. Make sure you check to see if the precipitation is measured in millimeters.



The numbers on the right show you the temperature. Make sure you check to see if the temperature is measured in degrees Celsius.

The letters at the bottom show you the months of the year.

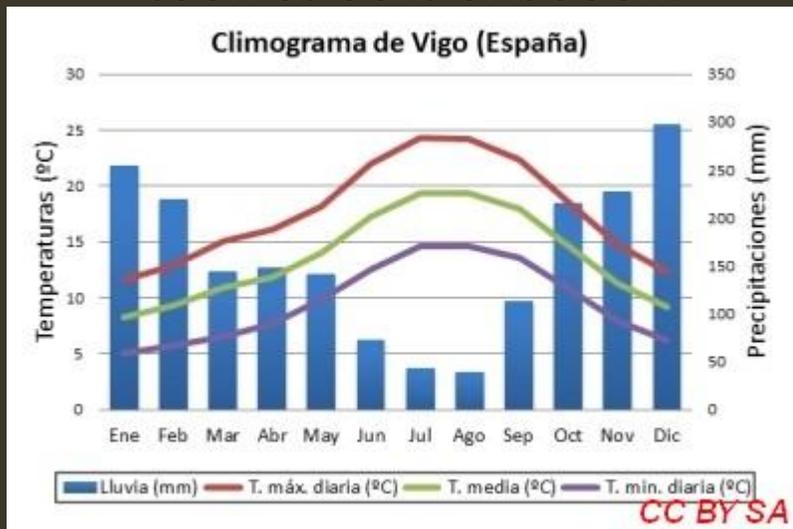
The bar graph measures the average precipitation for each month. The numbers that measure it are on the left side of the graph.



The line graph shows you the average temperature for each month. The numbers that measure it are on the right side of the graph.

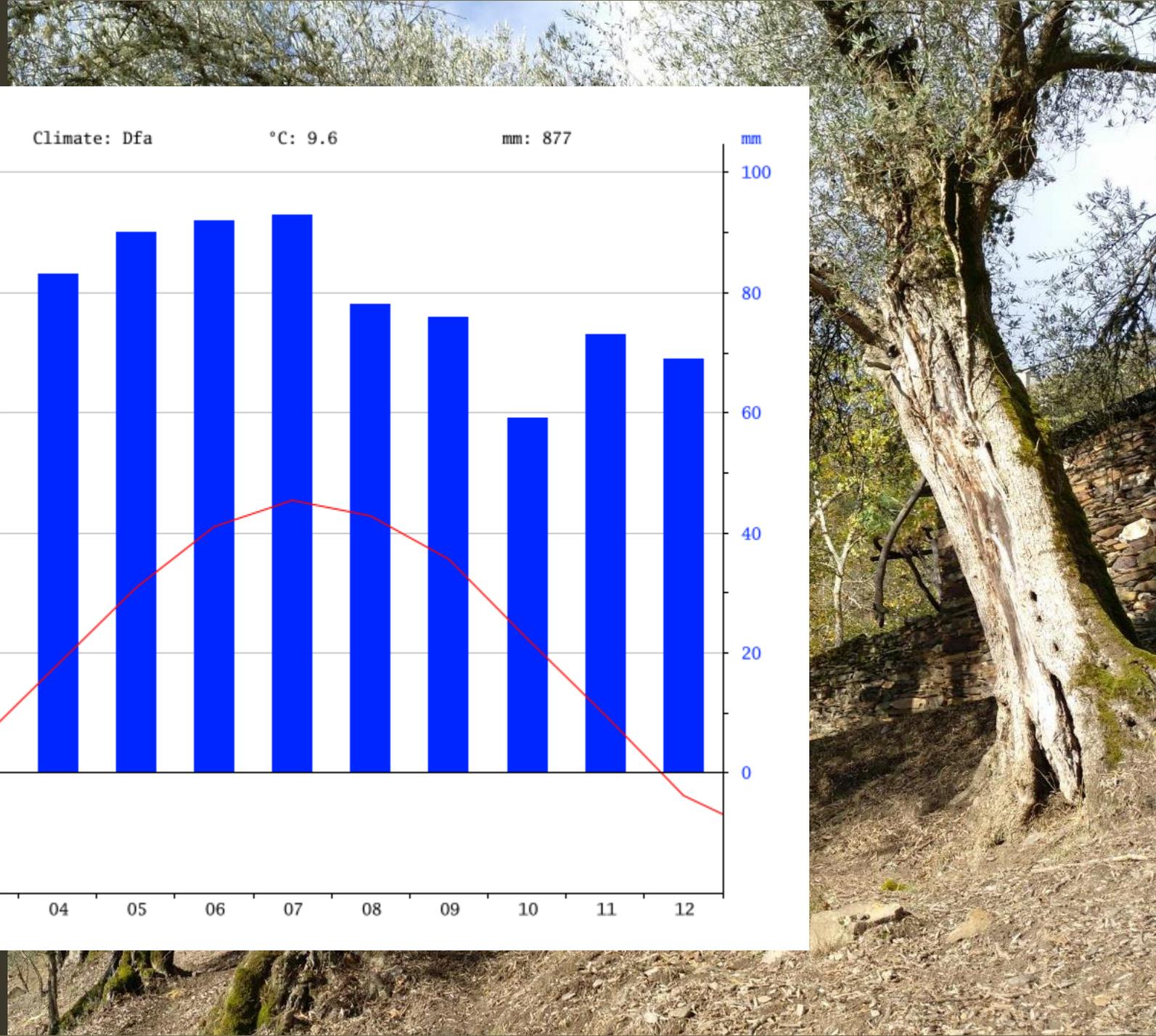
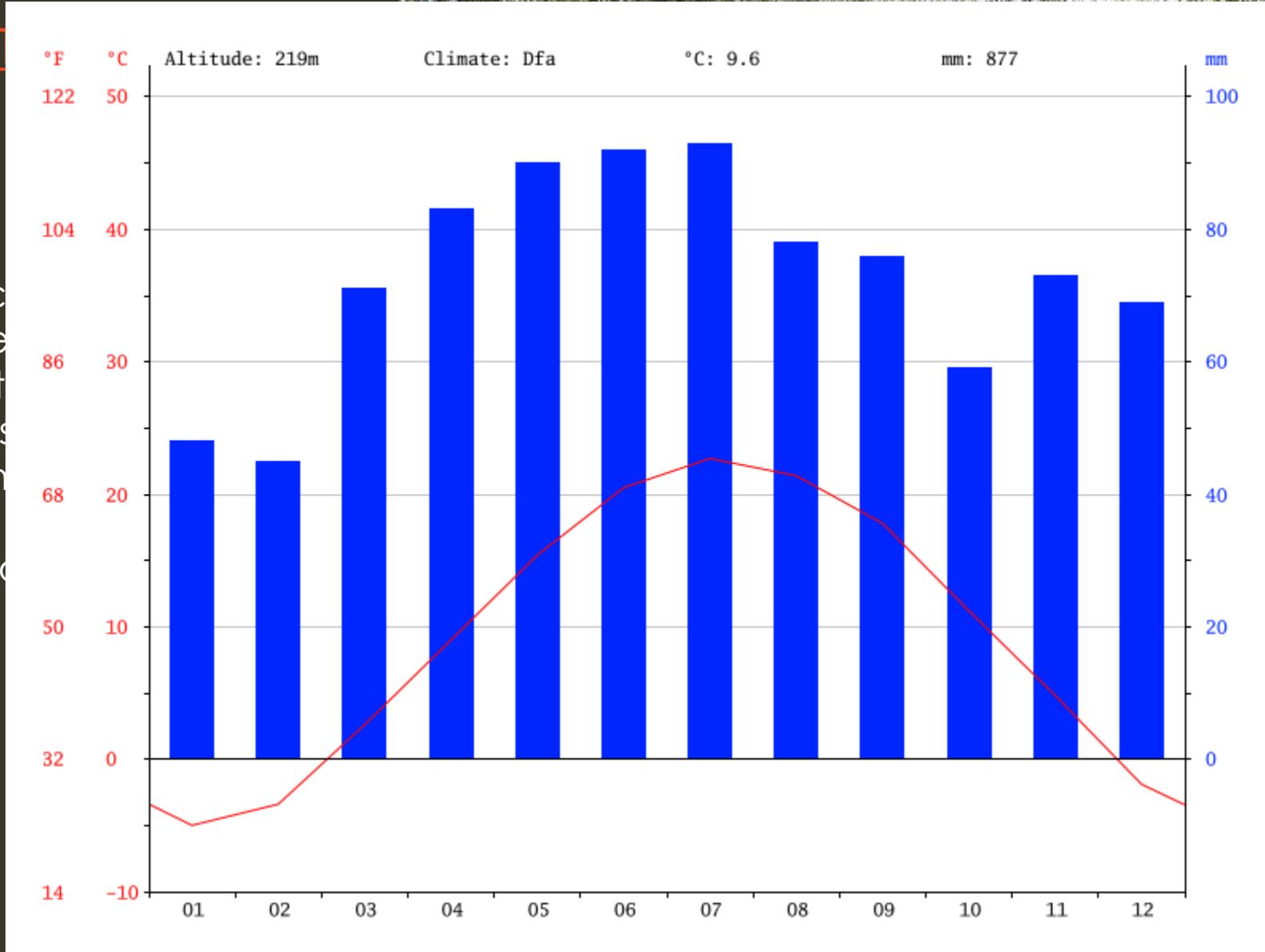
OCEANIC CLIMATE

- It is characterized by very mild temperatures and high annual rainfall.
- The characteristic vegetation is oceanic forest, with deciduous trees such as oaks or beech.



CONTINENT

It is characterised by hot summers and mild winters, with characteristic Mediterranean evergreen trees such as holm oak, cork oak, and olive.



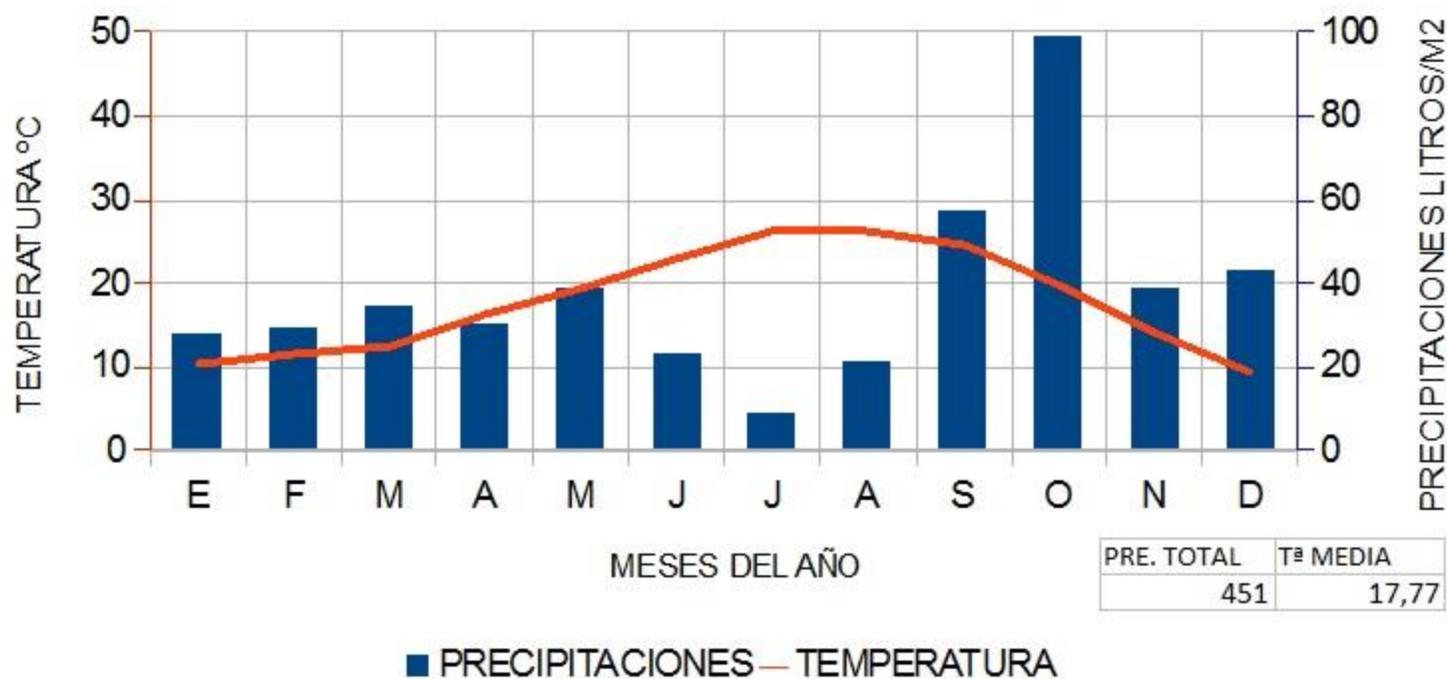
MEDITERRANEAN CLIMATE

- In coastal areas, temperature is influenced by the sea, trees like holm oak and pine can

AUTORES:
TAO Y DARÍO

CLIMA MEDITERRÁNEO

Sagunto (Comunidad Valenciana) 39°41'N, 0°16'E; altitud 46m

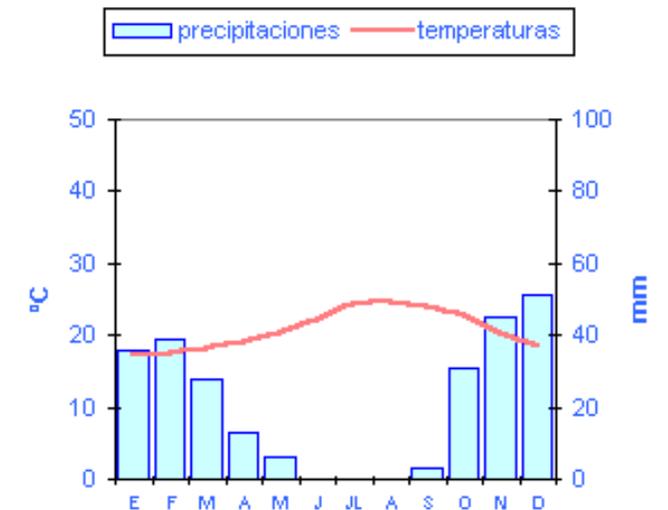


SUBTROPICAL CLIMATE

- It has hot temperatures throughout the year, and low rainfall.
- Its vegetation is adapted to altitude and includes native varieties such as the dragon tree or laurel forest.

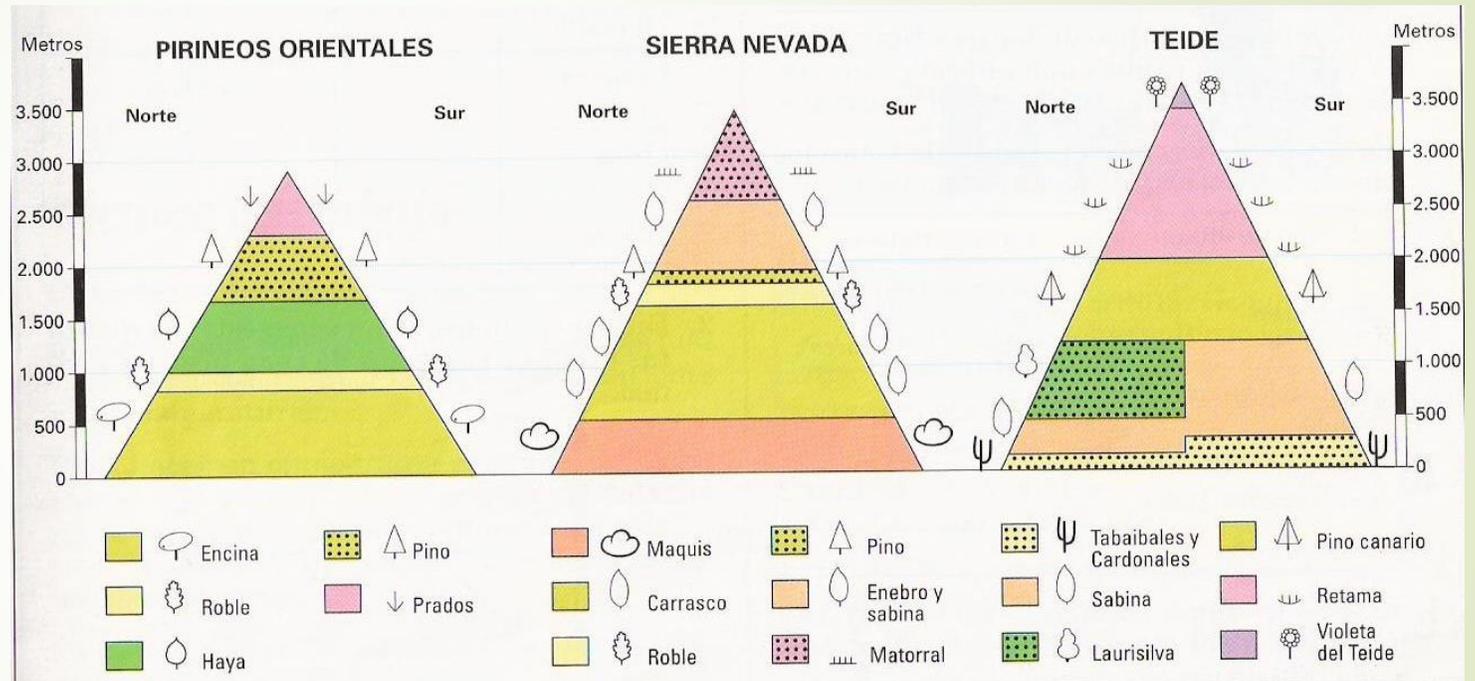


Clima Subtropical



ALPINE CLIMATE

- It is conditioned by altitude, and has cool summers and very cold winters, with very high rainfall.
- Its vegetation varies with altitude.

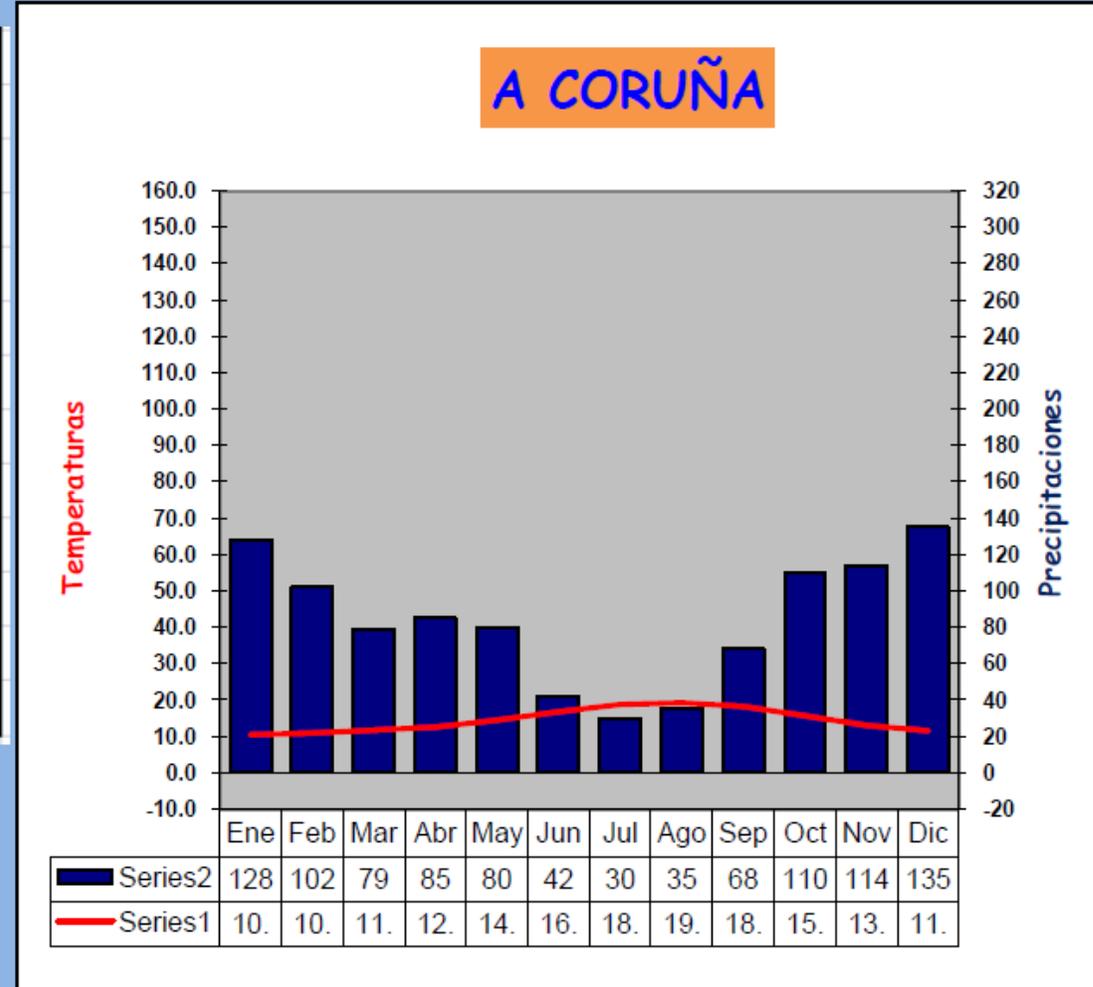


A CORUÑA

	Temperatura	Precipitación
Ene	10,4	128
Feb	10,9	102
Mar	11,7	79
Abr	12,5	85
May	14,4	80
Jun	16,7	42
Jul	18,7	30
Ago	19,2	35
Sep	18,2	68
Oct	15,6	110
Nov	13,0	114
Dic	11,5	135

Temperatura media:	14,40
Total precipitaciones:	1008

ALTITUD 58



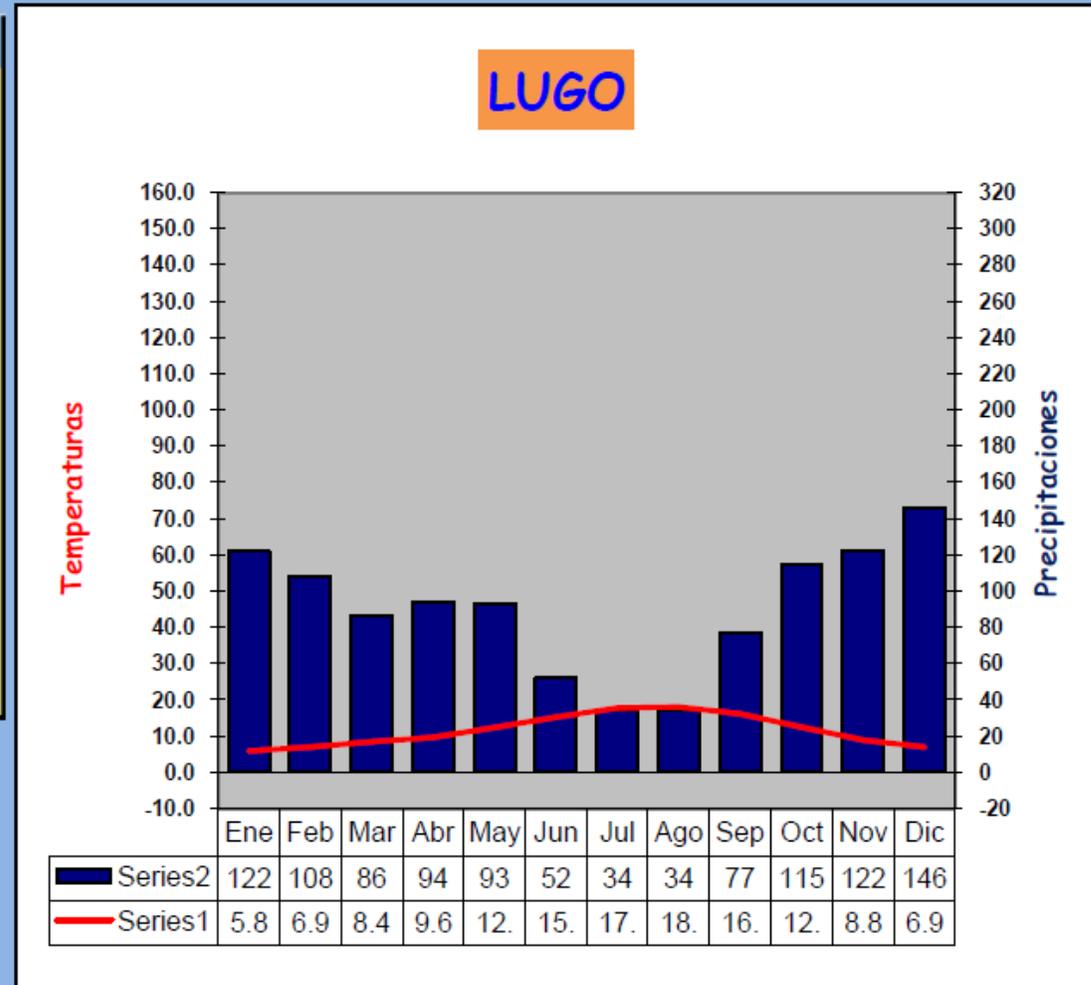
LUGO

	Temperatura	Precipitación
Ene	5,8	122
Feb	6,9	108
Mar	8,4	86
Abr	9,6	94
May	12,3	93
Jun	15,2	52
Jul	17,7	34
Ago	18,0	34
Sep	16,1	77
Oct	12,4	115
Nov	8,8	122
Dic	6,9	146

Temperatura media: **11,51**

Total precipitaciones: **1083**

ALTITUD 445



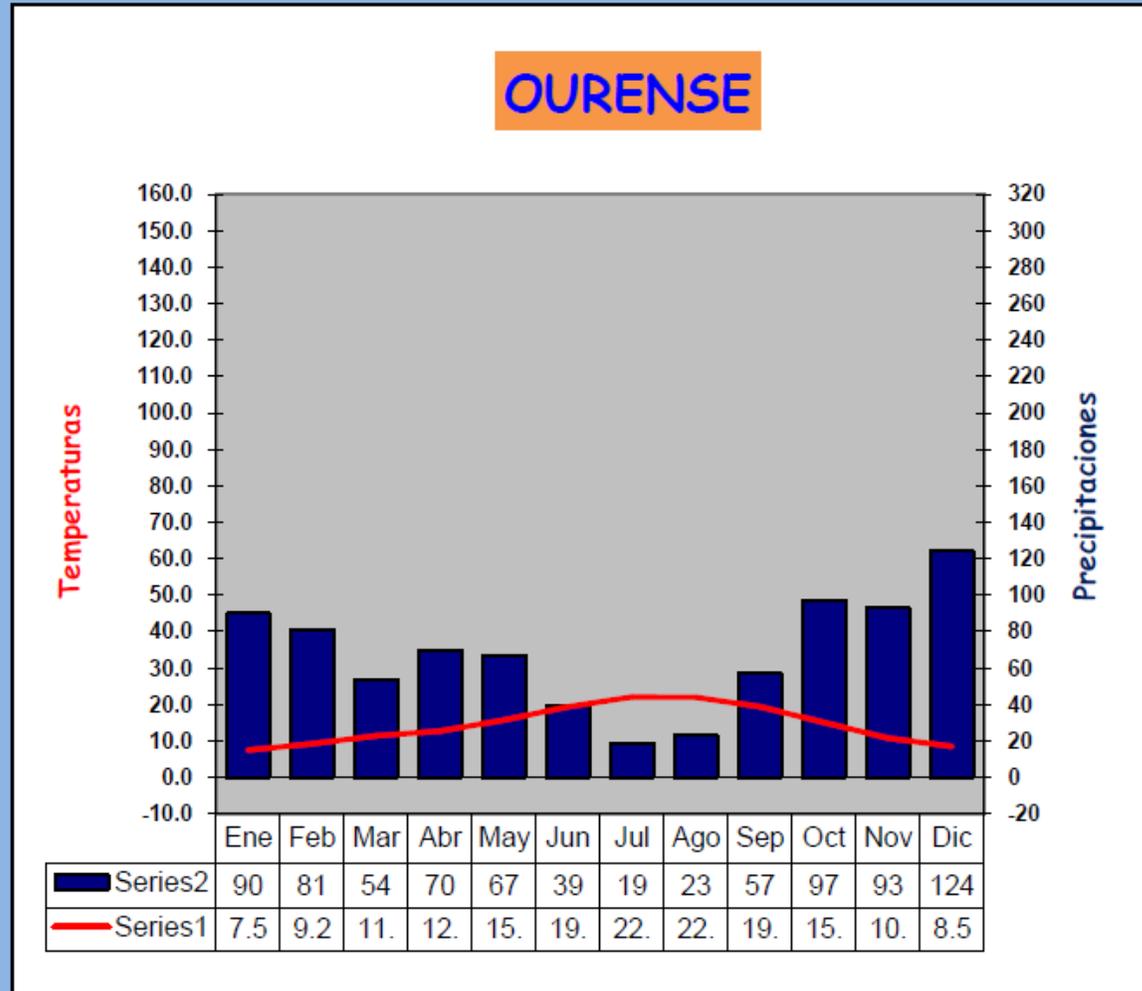
OURENSE

	Temperatura	Precipitación
Ene	7,5	90
Feb	9,2	81
Mar	11,4	54
Abr	12,7	70
May	15,7	67
Jun	19,4	39
Jul	22,1	19
Ago	22,0	23
Sep	19,4	57
Oct	15,1	97
Nov	10,8	93
Dic	8,5	124

Temperatura media: 14,48

Total precipitaciones: 814

ALTITUD 143



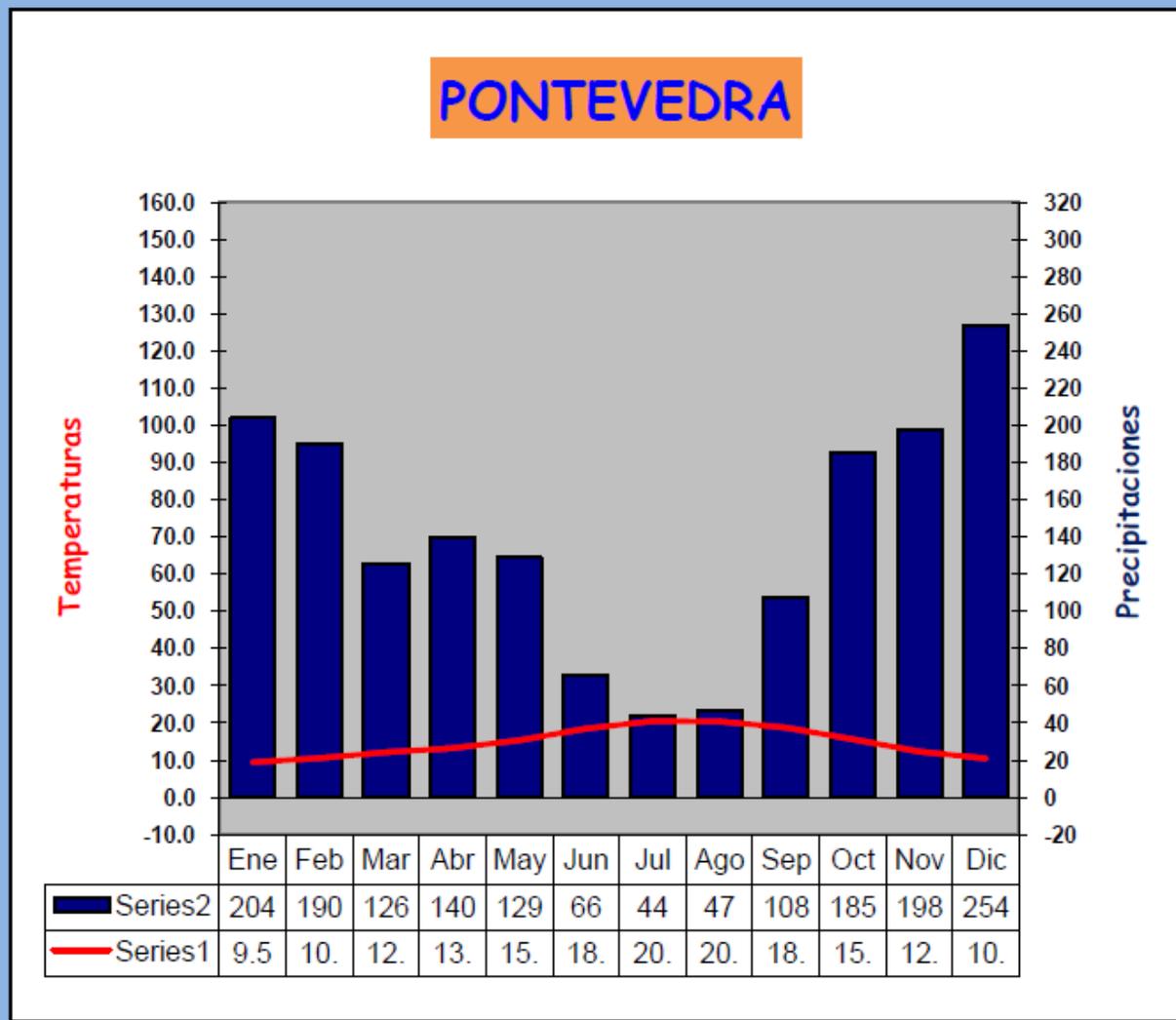
PONTEVEDRA

	Temperatura	Precipitación
Ene	9,5	204
Feb	10,6	190
Mar	12,1	126
Abr	13,2	140
May	15,4	129
Jun	18,5	66
Jul	20,5	44
Ago	20,4	47
Sep	18,8	108
Oct	15,6	185
Nov	12,3	198
Dic	10,5	254

Temperatura media: 14,78

Total precipitaciones: 1691

ALTITUD 108



SANTIAGO DE COMPOSTELA

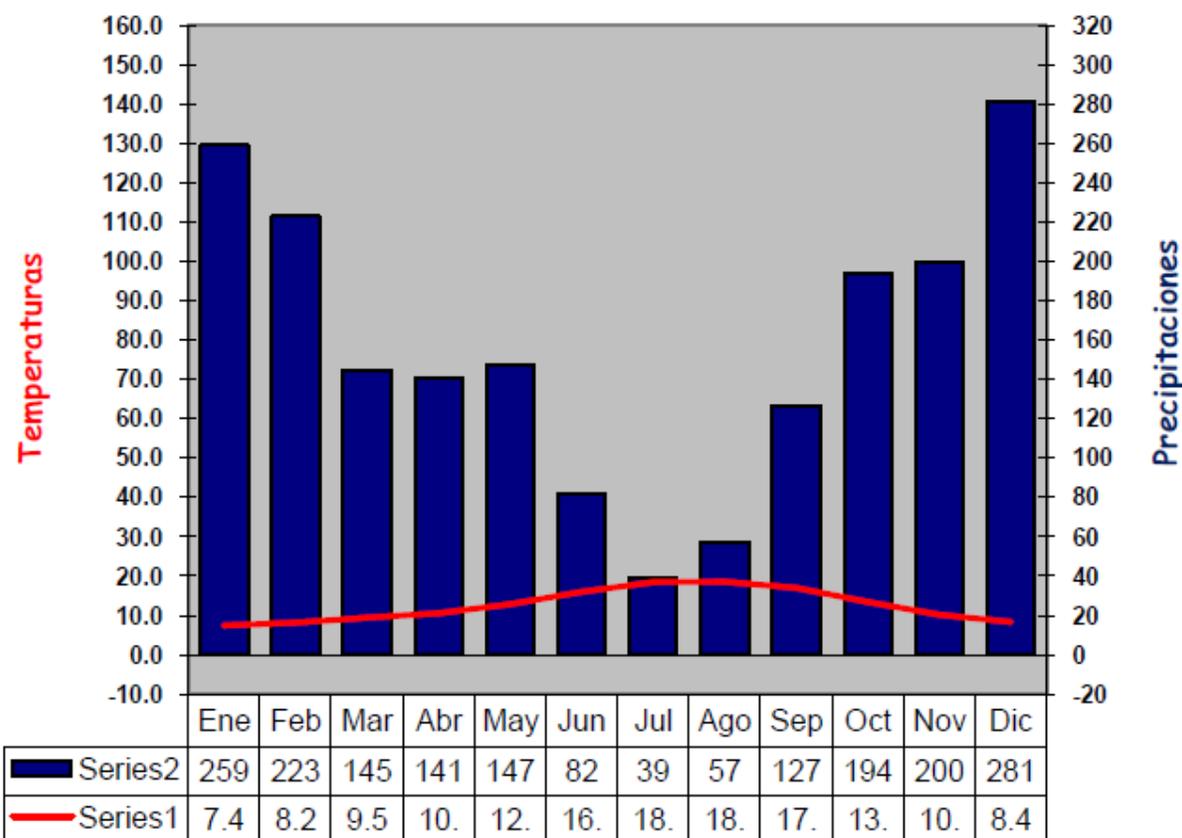
	Temperatura	Precipitación
Ene	9,5	204
Feb	10,6	190
Mar	12,1	126
Abr	13,2	140
May	15,4	129
Jun	18,5	66
Jul	20,5	44
Ago	20,4	47
Sep	18,8	108
Oct	15,6	185
Nov	12,3	198
Dic	10,5	254

Temperatura media: **12,56**

Total precipitaciones: **1895**

ALTITUD 370

SANTIAGO DE COMPOSTELA

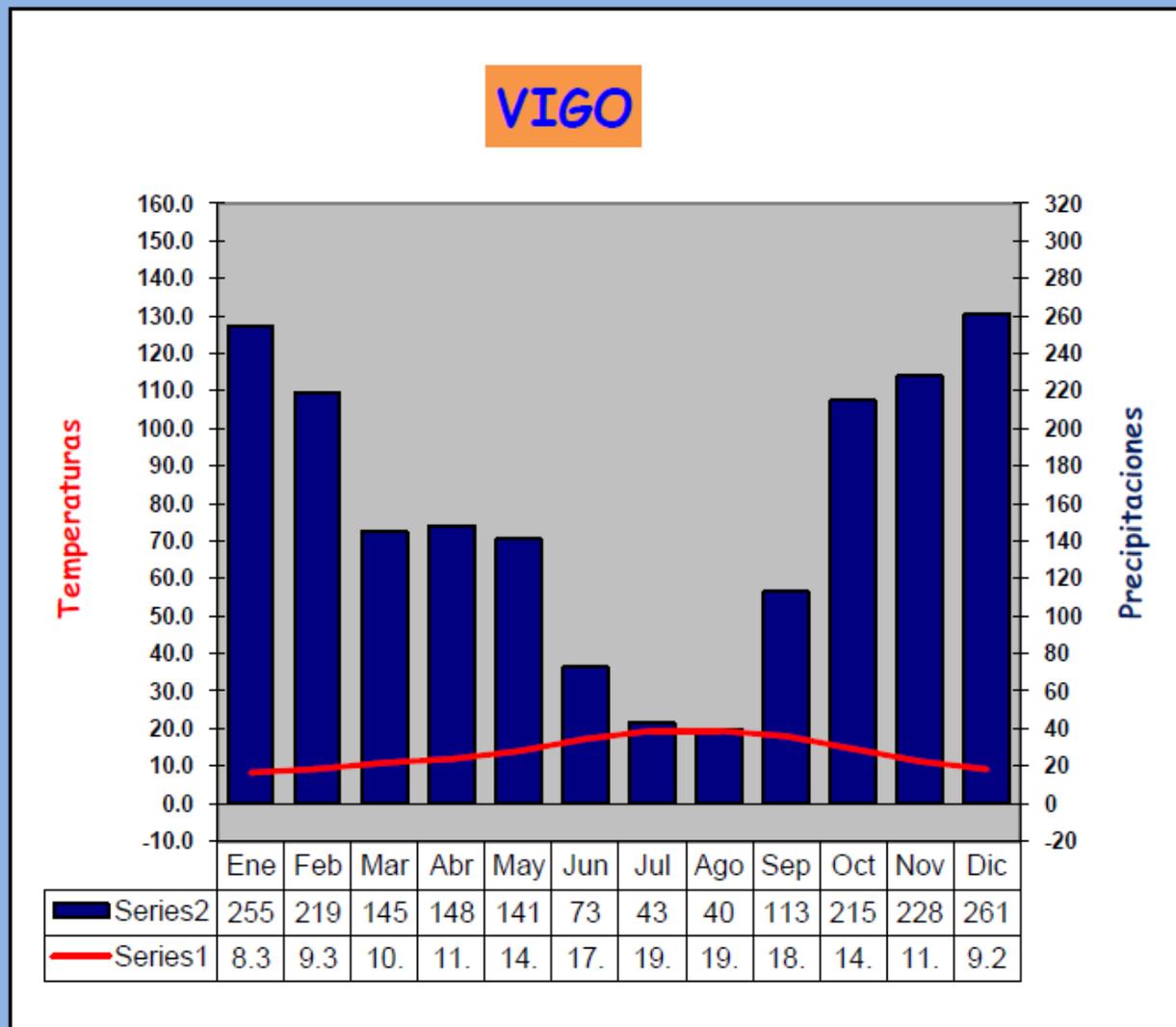


VIGO

	Temperatura	Precipitación
Ene	8,3	255
Feb	9,3	219
Mar	10,9	145
Abr	11,9	148
May	14,0	141
Jun	17,3	73
Jul	19,4	43
Ago	19,4	40
Sep	18,0	113
Oct	14,6	215
Nov	11,3	228
Dic	9,2	261

Temperatura media:	13,63
Total precipitaciones:	1881

ALTITUD 261





HOW TO DO A CLIMOGRAPH

- ▶ <https://www.cerebriti.com/juegos-de-geografia/los-climas-de-espana#.W7o75WgzZPY>
- ▶ <https://www.cerebriti.com/juegos-de-geografia/ies-sol-de-puertocarrero-5#.W7o8R2gzZPY>
- ▶ <http://www.claseshistoria.com/bilingue/1eso/exercices/climate/climate-classification/quiz.html>