DEPARTMENT OF SOCIAL SCIENCES, GEOGRAPHY AND HISTORY
3º ESO

UNIT ONE: PLANET EARTH
6. The climate

WEATHER AND CLIMATE

The weather is a group of **characteristics** that present the *atmosphere* in an established **time** and **place**.

The climate is the **habitual** and **periodic succession** of different types of weather over the years. Because of this, it is necessary to analyze a region in **30 years** intervals to establish the climate of a region.

THE ATMOSPHERE

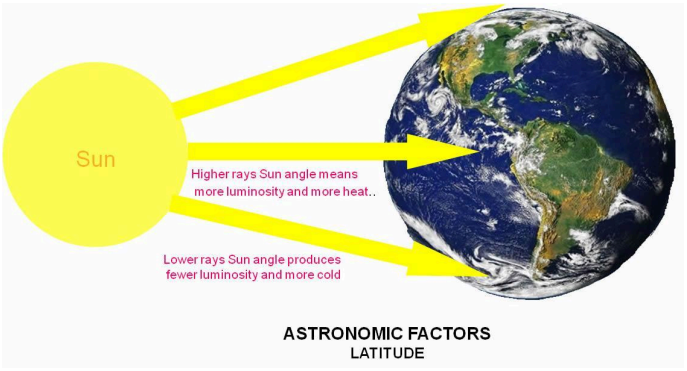
The atmosphere is divided into layers**:** *Troposphere*, *Stratosphere*, *Mesosphere, Thermosphere* (or *Ionosphere*) and *Exosphere*. The closest layer, the **Troposphere**, is where the different types of weather occur.

http://earthguide.ucsd.edu/earthguide/diagrams/atmosphere/index.html

ELEMENTS OF THE CLIMATE

The elements of climate are those aspects or **phenomena** that appear in the **atmosphere** and that are observable and quantifiable. They are temperature, precipitation, atmospheric pressure and wind

TEMPERATURE: It is the degree of heat that the air has. Temperature depends on different factors



a. **The latitude** determines climates. As we get farther away from parallel zero, temperature decreases. Distancing from parallel zero also creates seasonal differences**.**

b. **Relief**

- By the height: as the **altitude increases**, the **temperature decreases** with a degree of 0'60 each 100m.
- By the orientation: There are temperature differences between the **sunny zone** (the side directly exposed to the rays of the sun) and the **shady zone** (the shaded side).

c. **Proximity to sea**. The **sea** acts as a **thermal regulator**. It heats up and cools more slowly. So, the temperature changes are less extreme on the coast than inland.

d. **Sea currents**. The coastal zones exposed to warm or cold currents give rise to **higher** or **lower** temperatures, respectively, than the rest of the regions.

Adapted from http://www.claseshistoria.com/bilingue/1eso/climate/

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ACTIVITIES:

1. Where do we find higher temperatures: at the base of a mountain or on its peak? Why?
2. Peninsulas of Scandinavia and Kamchatka are in the same latitude, but they have different temperatures. Why?
3. Make a chart about the climate zones and the following aspect:

	HOT ZONE	TEMPERATE ZONEs	COLD ZONEs
Location			
Sun rays			
Average annual temperature			
Seasons.			