



GIMNASIO SABIO CALDAS

WORKSHEET "HOME ACTIVITIES"

NINTH GRADE

FIRST WEEK

Climate change

1. Read the text

Climate encompasses the statistics of temperature, humidity, atmospheric pressure, wind, rainfall, atmospheric particle count and other meteorological elements in a given region over a long period of time. Climate can be contrasted to weather, which is the present condition of these same elements and their variations over shorter time periods.

Climate may be inherently variable as evidenced by the irregularity of the seasons from one year to another. This variability is normal and may remain partially understood. It is related to changes in ocean currents, volcanic eruptions, solar radiation and other components of the climate system. In addition, our climate also has its extremes (such as floods, droughts, hail, tornadoes and hurricanes), which can be devastating. However, in recent decades, a number of indicators and studies show more and more evidence of climate warming across the globe. A disturbing phenomenon that challenges human habits and activities which are responsible for greenhouse gas emissions.

The green house effect

The greenhouse effect is the process by which absorption and emission of infrared radiation by gases in the atmosphere warm a planet's lower atmosphere and surface. It was proposed by Joseph Fourier in 1824 and was first investigated quantitatively by Svante Arrhenius in 1896.

Naturally occurring greenhouse gases have a mean warming effect of about 33 C (59 F). But Human activity since the Industrial Revolution has increased the amount of greenhouse gases in the atmosphere, leading to increased radiative forcing from CO₂, methane, tropospheric ozone, CFCs (chlorofluorocarbon) and nitrous oxide. The concentrations of CO₂ and methane have increased by 36% and 148% respectively since 1750. These levels are much higher than at any time during the last 650,000 years, the period for which reliable data has been extracted from ice cores. Over the last three decades of the 20th century, GDP (Gross Domestic Product) per capita and population growth were the main drivers of increases in greenhouse gas emissions. CO₂ emissions are continuing to rise due to the burning of fossil fuels and land-use change.

Consequences of global warming

There are two major effects of global warming: the increase of temperature on the earth by about 3° to 5° C (5.4° to 9° Fahrenheit) by the year 2100 and Rise of sea levels by at least 25 meters (82 feet) by the year 2100. Other consequences are listed below:

- Sea levels are rising due to thermal expansion of the ocean, in addition to melting of land ice.
- Amounts and patterns of precipitation are changing.
- The total annual power of hurricanes has already increased markedly since 1975 because their average intensity and average duration have increased.
- Changes in temperature and precipitation patterns increase the frequency, duration, and intensity of other extreme weather events, such as floods, droughts, heat waves, and tornadoes.
- Higher or lower agricultural yields, further glacial retreat, reduced summer stream flows, species extinctions.
- Diseases like malaria are returning into areas where they have been extinguished earlier.

Tomado de: https://www.myenglishpages.com/site_php_files/reading-climate-change.php

1. **Create 10 sentences using the passive voice taking into account the text.** Watch the video about simple present passive
<https://www.youtube.com/watch?v=VUzVrjr3pFM>

Example: the climate change is evidenced by global warming
Time: 50 minutes

2. **According to the text, write if the argument it's true or false and justify your answer.**
 - Climate is by definition variable.
 - Climate change observed in the last decades is natural.
 - Global warming is caused by industrialization.
 - Greenhouse effects have no impacts on our health.Time: 30 minutes

3. **Complete the chart taking into account the following question**

How do you think that human beings could have avoided these consequences?

Consequences	Possible solution
<ul style="list-style-type: none"> Sea levels are rising due to thermal expansion of the ocean, in addition to melting of land ice. 	
<ul style="list-style-type: none"> Amounts and patterns of precipitation are changing. 	
<ul style="list-style-type: none"> The total annual power of hurricanes has already increased markedly since 1975 because their average intensity and average duration have increased. Changes in temperature and precipitation patterns increase the frequency, duration, and intensity of other extreme weather events, such as floods, droughts, heat waves, and tornadoes. 	
<ul style="list-style-type: none"> Higher or lower agricultural yields, further glacial retreat, reduced summer stream flows, species extinctions. 	
<ul style="list-style-type: none"> Diseases like malaria are returning into areas where they have been extinguished earlier. 	

Time: 40 minutes

4. *Game simple present passive: before starting watch the video*
<https://www.youtube.com/watch?v=VUzVrjr3pFM>

Game: copy this link

https://kahoot.it/challenge/0522950?challenge-id=7396060b-c109-4e52-8610-d7dcf2f7ca80_1584381426134

Write your nickname and start:

Example: **Carlos Castro**

Time: 15-20 minutes

Para la presentación de las actividades los estudiantes tendrán dos opciones:

- Enviar al Gmail: ivan.calderon@sabiocaldas.edu.co
Antes de la fecha límite.
- Traer de manera física el trabajo en la fecha y horario establecido.

Nota importante: estaré realizando el debido acompañamiento durante las horas en las que se tenga clase por medio del chat de gmail.