

Directions: Write the answer to the questions below **in your notebook**.

STATION 1: Carbon Emissions and your Carbon Footprint

- I. Define Carbon footprint:
- II. About the Carbon Cycle (from website)
 - A. Dead plants can turn into _____. This takes _____ years.
 - B. Carbon is found as _____ gas in the atmosphere.
 - C. CO₂ is a _____ gas which traps heat in the atmosphere. Without this effect, the world would be _____, but with the excess of CO₂ in our atmosphere, it is warming.
 - D. There is _____% more CO₂ in the atmosphere today than 150 years ago.

STATION 2: Acid Rain

(Acid Rain reading & Video: Read first and answer as many of the questions as possible. Then watch the video and fill in the rest!)

- III. Acid Rain
 - A. Acid rain is _____ containing harmful substances such as _____.
 - B. Sources of the harmful substances
 - C. Effects of acid rain:
 - D. Solutions to reduce acid rain

STATION 3: Deforestation & Heat Islands

(**Video 1:** Deforestation: **ONLY WATCH through 1:30!**)

- IV. Deforestation
 - A. _____ and _____ contribute to the increase of greenhouse gases.
 - B. Causes of deforestation (give 2)
 - C. The growth of _____ (cities) called _____ causes the area to be significantly _____ than its surrounding rural areas due to _____.
- (**Video 2:** What is an impervious surface (synonymous with impermeable!)?)
- D. _____ % of the world's' population will live in an urban area in the next 50 years. This is important because (give three reasons)

STATION 4: Agriculture, species diversity & ecosystem balance

V. Agriculture

- A. Define agriculture
- B. Are agricultural lands expanding or becoming smaller? Why?

(**Video: Global Warming Affects Crops, Food Supply**)

- C. Example: Strawberries
 - I. Impact of global climate change?
 - II. How will the farmer adjust? Will his crops increase or decrease?
 - III. What is the impact on farmers that live closest to the equator?
 - IV. Why are farmers concerned about the increase of temperature and CO₂. Give two things.

STATION 5: Ocean acidification

VI. Ocean Acidification

- A. How does an increase in CO₂ impact Oceans?
- B. Explain the impact on animals
- C. The ocean's role in global warming
 - a. Oceans are known as "carbon _____"
 - b. The oceans absorbs _____% of carbon
- D. Explain the impact on humans
- E. Can ecosystems adapt to this change? Is this a good solution?

STATION 6: Sea Level Rise

(NOTE: this video is 7mins long, work efficiently! You only have 8 mins!)

VII. Sea Level Rise

- A. What 2 things cause sea level rise to increase quickly?
 - 1.
 - 2.
- B. Sea levels could rise by _____ by the end of the century.
- C. _____ percent of people in the US live on coastlines
- D. Identify the cities that will be affected

STATION 7: Greenhouse Effect

VIII. Greenhouse Effect

- A. What is the greenhouse effect?
- B. If the greenhouse gasses were not there, temperatures would _____
- C. How the greenhouse effect works (Draw a diagram in your notes)

- D. List the greenhouse gases. Put a star (*) next to the one we focus on the most
- E. Human's role in increasing CO₂ in the atmosphere
- F. Human's role in slowing climate change.