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Earth Science
Topic 6 Laboratory

Levels of Carbon Dioxide in the Earth's Atmosphere

Table I: Emissions levels of carbon dioxide in the atmosphere in PPM from the United States.

Month	2010	2011	2012	2013	2014
Jan	387	391	393	395	397
Feb	390	392	394	396	397
Mar	391	392	394	397	400
Apr	392	393	396	398	401
May	393	394	397	399	402
Jun	392	393	396	398	401
Jul	390	392	394	397	399
Aug	388	390	392	395	397
Sep	387	389	391	393	395
Oct	387	388	391	393	396
Nov	389	390	392	395	397
Dec	390	391	394	397	398

Part I

Directions:

A) On the special Graph paper, on the back page of this lab graph the information in the table above.

- On the vertical axis (dependent variable) start with the lowest number for the data and go up the scale by ones.
- The years go on the bottom axis (independent variable).

Results:

The graph shows two patterns of change in carbon dioxide concentration.

a) The increase and decrease that occurs within each year. The peaks are called maximums and the bottom of the valleys are called minimums

b) The increase in the peak value (maximums) each year.

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Graph analysis questions:

1. During which month of the year is the carbon dioxide concentration of the air highest? (may be more than one)

2. During which month is the carbon dioxide the lowest? (maybe more than one)

3. What does a plant take form the air to manufacture sugars and starches in the process of photosynthesis?

4. What causes carbon dioxide concentration to decrease during the summer months?

5. What effect does the burning of fossil fuels (gas, oil, and coal) have on the carbon dioxide concentration of the air?

6. Give two reasons why carbon dioxide concentration increases during the winter months?

7. What effect is the destruction of forest likely to have on the carbon dioxide concentration of the air? Why?

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Conclusion Questions:

1. Identify three changes that are expected to result from an increase in carbon dioxide in the atmosphere?

a)

b)

c)

11. List two ways in which the rate of atmospheric carbon dioxide concentration increased could be reduced? Please be thorough in your answers!

a)

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_____

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_____

b)

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_____

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