

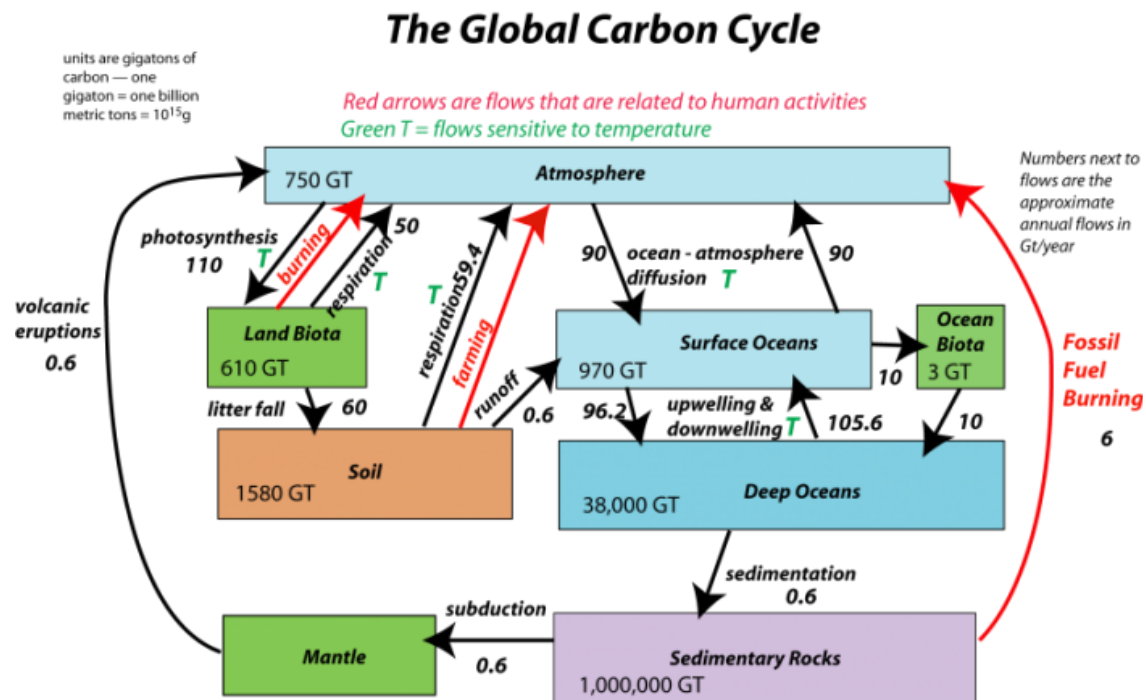
Carbon Cycle

Name _____

Phenomenon: Observe the phenomenon. Ask three questions about what you see.

- 1.
- 2.
- 3.

Scientists have measured (and estimated) the amount of carbon held in reservoirs on Earth. Some carbon is always moving from reservoir to reservoir. The atmosphere is a reservoir for 750 gigatonnes (Gt) of carbon dioxide. 1 Gt is equal to 1,000,000,000 metric tons. A metric ton is exactly **1000 kilograms**. This makes 1 Gt equal to 1,000,000,000,000 kilograms. Natural and human activities add and subtract carbon dioxide from the atmosphere.



Data:

| Source | Add (in Gt) | Reduce |
|---|-------------|--------|
| Fossil Fuel Burning | 6 | |
| Ocean (ocean water absorbs CO ₂ and releases it) | 90 | 90 |
| Plants (photosynthesis absorbs, | 50 | 110 |

| | | |
|---------------------------------|------|----|
| decay, respiration releases it) | | |
| Soil Decomposition | 59.4 | |
| Volcanoes | .6 | |
| Farming | 59.4 | |
| Burning Land Biota | 50 | |
| Soil formation (plant decay) | | 59 |

Develop a model of the Carbon Cycle using the data from the table.

1. Based on this data, what is the net flow of carbon dioxide into the atmosphere?

2. Choose one of the following to state a **claim**. Research how changes to the carbon cycle affect:
- a. air.
 - b. water.
 - c. living things.
 - d. people.

Support your claim with **evidence** from your research. Describe your **reasoning**.