

EarthViewer App activity

Please follow along step by step and complete the activity by sections. Do not move onto the next section until the entire class does. If you are finished ahead of others - explore.

Part I

A. Note the top left box where it lists **Time** and **Atmosphere**.

- I. **Time** = 0 MYA (that is today in millions of years).
- II. **Atmosphere** - the level of molecular Oxygen (**O₂**, what we breath) as _____ %
- III. **Atmosphere** - the level of Carbon Dioxide (**CO₂**) as _____ %

B. Use the sidebar (silver disk on timeline) to **scroll down to 200 MYA** (million years ago).

- I. **Atmosphere** - the level of molecular Oxygen (**O₂**, what we breath) as _____ %
- II. **Atmosphere** - the level of Carbon Dioxide (**CO₂**) as _____ %

C. Use the sidebar (silver disk on timeline) to **scroll down to 500 MYA** (million years ago).

- I. **Atmosphere** - the level of molecular Oxygen (**O₂**, what we breath) as _____ %
- II. **Atmosphere** - the level of Carbon Dioxide (**CO₂**) as _____ %

D. Scrolling up and down on the timeline and observing the rise and drops in Carbon Dioxide levels from **500 million years to today**, you will notice two distinct rise and fall periods.

- I. What times were CO₂ levels at their lowest? _____ & _____
- II. What do you think would account for this? Spin the globe around and look at the land masses during the peaks and lows? Also note the name of the geologic period during one of the big drops in global CO₂ levels.

Part 2

- A. Click on the **Charts** tab on the bottom left. Select **Two Charts**. You should see **Carbon Dioxide** and **Temperature**.
- B. Carbon Dioxide has PPM (parts per million) on the Y axis and time in MYA on the X axis.
- C. What is the **dependent variable** on temperature graph? _____
- D. What is the **independent variable** on the temperature graph? _____
- E. Over time, you can see a correlation (a relationship) between temperature and carbon dioxide levels.
- I. Give **two examples** to explain this relationship and *cite your examples with evidence*.

Part 3

- A. On the bottom chart select the **Biodiversity** tab. *Biodiversity is the number of species in that exist on the planet, and this does change with time as some species go extinct and new ones evolve. Note the measure they are using in this data set is the "Number of genera of Marine Animals" and not land animals (more things live in the ocean and they end up making a much more intact fossil record because things in water get buried in mud at a steady rate).*
- B. What is the correlation (relationship) you see here between these two graphs?
- _____
- _____
- C. What is the **trend** you see happening in the past **100 million years**?
- _____
- D. There are **two distinctly sharp declines** (drops) in **biodiversity** on this graph.
- I. At what **times** do these drops occur? _____ & _____
- II. What **geologic periods** on the sidebar to they fall between?
