

b. What was the change in diversity for each group of animals?

c. When did each group of animals originate?

4. Potential Causes:

Refer to *peer-reviewed primary (journal) literature* (i.e. no websites, no Wikipedia!) to generate a listing of hypothesized causes for your mass extinction event. *You must cite any source you use*. Be sure that your list includes specifics for the time period of your mass extinction, e.g., if a meteor impact is thought to be a cause of your extinction, what specific meteor impact is it?, where is it?, and who discovered/proposed it originally? Or if glaciation has been proposed, where are the glacial deposits located?, who described them first? etc.

• **Submit a listing of *specific* potential causes of your mass extinction with references in your report.**

5. Observing Your Data:

a. What ecological significance is shared by these animals, or how are they different?

b. Do all animals respond equally to the mass extinction in terms of magnitude (% change) or absolute (number) change across the boundary?

****Be creative and quantitative!**

- **Submit your observations on the changes in diversity and ecology across your mass extinction in your report.**

6. Argue A Cause:

Take a position! Pick one (or a couple) of your listed potential causes of mass extinction and argue how this cause(s) of extinction is supported by your diversity data. You must *only* use *your* data in this argument: after all you are using *the* primary diversity data that all paleontologists use!

- **Submit a persuasive argument supporting a cause for your mass extinction that is based on your primary graphing data in your report.**

TO HAND-IN

- A brief introductory paragraph
(i.e. The Ordovician–Silurian mass extinction occurred roughly 443 million years ago and ...)
- A description of specific potential causes for the extinctions
- A description of your observations generated from your graphs
- An argument for the likely cause(s) of your mass extinction based on your observations
- A reference section listing all sources of data used in your report, using the GSA format
- An appendix of hardcopy print-outs of your graphs