

## Lesson Nine

# Extinction of the Non-Avian Dinosaurs?

There have been many mass extinctions throughout Earth history. One occurred at the end of the Paleozoic Era 251 million years ago when nearly 95% of plant and animal life in the seas disappeared. Another mass extinction may be happening today. Evidence from the fossil record shows that, on average, only 10–100 species become extinct per year (background extinction rate) however, some estimates show that current rates of extinction are as high as 27,000 species per year.

Probably the most famous mass extinction happened ~66 million years ago when the non-avian dinosaurs disappeared. Many other plants and animals became extinct at the same time. Whatever triggered the extinction of the non-avian dinosaurs also caused the death of nearly 70% of all the other species on Earth.

So what caused this mass extinction? Clues can be found in the rocks that date from ~66 million years ago.

Your job is to sort through the clues and propose a hypothesis to explain the extinction of the dinosaurs. **Your hypothesis must be supported by evidence.** At the same time, all evidence does not support just one hypothesis. Some pieces of evidence will not be used. Some pieces of evidence contradict one another. Sometimes, the same evidence can support very different hypotheses. Some pieces of evidence may be more conclusive than others. It is up to you to come up with a hypothesis that makes sense and is well supported by the evidence.

To come up with your hypothesis:

1. Carefully read each evidence card you are given.
2. Organize the evidence cards into groups that seem to be related to each other.
3. Brainstorm ALL of the possible hypotheses that are suggested by the evidence below.
4. Decide which of the possible hypotheses you think is most likely to be correct based on the evidence you have.
5. Fill in the worksheet on the back of the page, listing the evidence that supports your theory as well as the evidence that does not support your idea.

You will present your hypothesis to the class at the end of the period.

Name \_\_\_\_\_

Grade \_\_\_\_\_

Possible hypotheses:

Our hypothesis:

List the evidence that supports your hypothesis.

Is there any evidence that goes against your hypothesis? List those pieces of evidence below.