Plausibility of Models about the Use of Fossil in Interpreting Earth's Past Environments

Name: _____ **Date:** _____ **Teacher:** _____ **Period:** _____

Please work on this individually and read the following information carefully.

Humans create *models* to help explain things.

Below are three models. These provide different ideas about if and how fossils can be used to interpret Earth's past environments.

Model A: When people interpret fossils, they often make mistakes. It is misleading to make conclusions about how Earth's surface has changed from fossils.

A person who supports this model makes the following argument:

Fossil evidence is not scientific because people make mistakes when examining fossils. In the past, people realized they misinterpreted fossil form and structure when they consider new evidence.

Model B: Many organisms' fossils are missing from the fossil record. We cannot make any conclusions about Earth's past environments from fossils.

A person who supports this model makes the following argument:

Some past organisms did not have hard shells or bones. Therefore, fossils cannot show all organisms that lived on Earth. Because of incomplete, we should not use fossils to make conclusions about the past.

Model C: Fossils provide evidence for Earth's changing surface. Understanding past life forms tells us about past environments.

A person who supports this model makes the following argument:

Many fossils are buried beneath Earth's surface. By examining rock layers containing fossils, and analyzing fossil structure, scientists better understand Earth's changing surface and environments.

Plausibility is a judgment we make about the potential truthfulness of one explanatory model compared to another. The judgment may be tentative (not certain). You do not have to be committed to that decision.

Circle the plausibility of each model. [Make three circles, one for each model.]

	Greatly implausible (or even impossible)									Highly plausible
Model A	1	2	3	4	5	6	7	8	9	10
Model B	1	2	3	4	5	6	7	8	9	10
Model C	1	2	3	4	5	6	7	8	9	10