

Plausibility of Models Explaining How Our Moon Formed

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

Please work on this individually.

Read the following information carefully.

Humans create *models* to help explain things.

Below are two models. These provide different explanations for how the Moon formed.

Model A: The Moon was an object that came from elsewhere in the solar system and was captured by Earth's gravity.

A person who supports this model makes the following argument:

The early solar system contained a lot of material that was moving around the Sun. Gravity from a nearby planet could pull a large chunk into orbit around it instead. The Moon was caught by Earth's gravity. Now the Moon orbits Earth.

Model B: The Moon formed after a large object collided with Earth and material from both combined to create the Moon.

A person who supports this model makes the following argument:

The early solar system contained a lot of material orbiting the Sun. Rocks would run into each other. These stuck together to make bigger chunks. When a big object crashed into Earth, some material was ejected and formed the Moon.

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

Circle the plausibility of each model. [Make two 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