Name:	**Date:**
Teacher:	**Period:**
Group members, if any:	

1. **Please work on this <u>individually</u>:**

Are aquatic dead zones relevant? Is the topic of aquatic dead zones important to you personally? Is the topic important to your community?

Please circle the choice below that best matches how you feel about the topic's relevance.

Aquatic dead zones are **not important** to me *and* are **not important** to my community	Aquatic dead zones are **not important** to me, *but* are **important** to my community
Aquatic dead zones are **important** to me, *but* are **not important** to my community	Aquatic dead zones are **important** to me *and* are **important** to my community

When instructed, flip over to Page 2.

2. Please work on this <u>individually</u> and read the following information carefully.

*Humans create **models** to help explain things.*
Below are three models. These provide different ideas about whether and how aquatic dead zones may be repaired. A dead zone is an area of water that is low in oxygen. Aquatic life cannot survive in a dead zone.

Model A: We should balance the use of nutrients in agriculture and communities. It is important to eliminate dead zones and the damage they cause.

A person who supports this model makes the following argument:
Too much nitrogen and phosphorus can cause pollution in bodies of water. They cause eutrophication and dead zones. Dead zones are complex problems that require changes in human behavior to prevent.

Model B: Agricultural science and engineering solutions can reduce the damage caused by nutrient use. This can reduce the impacts caused by dead zones.

A person who supports this model makes the following argument:
A combination of strategies can repair and reverse the effects of dead zones. New technologies are being developed that can mix oxygen into bodies of water.

Model C: The use of nutrients that create dead zones can provide benefits that make up for the harm they cause.

A person who supports this model makes the following argument:
The nutrients that are responsible for creating dead zones provide important ecological services that offset the damage they cause. These benefits outweigh the impact that dead zones create.

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