

“Why are the fish dying at Sunrise Farm Pond?” Rubric for Student Models

Element	0	1	2	3
Organisms	There are no organisms pictured in the model.	Model includes organisms but not those mentioned in the story.	Model includes some, but not all, organisms mentioned in the story.	Model includes all organisms mentioned in the story.
<p>Teacher Guidance:</p> <p>0 or 1: Ask students what plants or animals live in the pond. Depending on how far along in the pathway students are, reread the most recent version of the story.</p> <p>2: Ask students about the trophic relationships of organisms that are pictured. Prompting students to think about what eats, or gets eaten by, a particular organism may help them to determine what other organisms are important to include.</p> <p>3: Ask students how they determined which organisms were important to include. If their model includes additional organisms (beyond those mentioned in the story), ask students how including those organisms helps them to explain the mystery.</p>				
Connections among organisms	There are no connections indicated in the model.	There are connections indicated in the model, but they are incomplete or inaccurate.	All connections are accurately indicated in the model, but they lack directionality (either absent completely or inaccurate).	All connections are indicated, and directionality is explicit and accurate.
<p>Teacher Guidance:</p> <p>0: If students do not include connections in their model, ask students to think about ways that the organisms in their model are important to each other.</p> <p>1: Ask students how they determined where to indicate connections and what those connections mean.</p> <p>2: Ask students how they could show who consumes who. If students are using an arrow, ask what organism the arrow should point to and what the direction it is pointing means.</p> <p>3: Ask students why it is important to have the arrow pointing in the correct direction.</p>				
Impacts	There are no impacts indicated in the model.	There are impacts indicated in the model, but they are incomplete or inaccurate.	All impacts are accurately indicated in the model, but the order of events is unclear.	All impacts are accurately indicated, and the order of events is explicit.
<p>Teacher Guidance:</p> <p>0: If students do not include impacts (either through labels, descriptions, or drawing) in their model, ask them to think about what the story says has happened to the organisms.</p> <p>1: Ask students for evidence that supports the impact they’ve indicated. Probe students for impacts on specific organisms if model is incomplete.</p> <p>2: Ask students to describe what happened first, followed by what happened after that, and so on. As students describe, ask them to think about how they could show the order of events in their model so that it is clear what has happened.</p> <p>3: Ask students if there is something that could have been done to lessen any one of these impacts.</p>				