

## Classification Systems

The following organisms live in and around a pond:

bullfrog	minnow	snapping turtle	raccoon
deer	snail	dragonfly	mosquito
bacteria	lily pad	heron	mushroom
cattail plants	large fish (bass)	algae	worms

You will be asked to group and regroup these organisms from different perspectives.



**Part A.** First, imagine that you are a frog and think about the categories that you, as a frog, might use to sort the organisms listed above.

- ❖ Describe this sorting or classification system and list the organisms that belong in each group.
- ❖ Explain why each organism is present in your list.
- ❖ Make sure you include at least 8 of the organisms from the list above.

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**Part B.** Now, imagine you are a biologist (a scientist who studies living things). Think about categories you, as a biologist, might use to group the organisms given on the previous page. List the organisms that belong in each category and explain why you classified them this way.

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**Part C.** Compare the frog's system of classification with the biologist's. Explain how the two systems are similar to and different from one another. Give at least 2 examples of similarities and differences.

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## Classification System Scoring Guide

**Standard: Students will understand that there are similarities and differences within the diversity of all living things.**

<b>Maine Learning Result</b>	<b>1 Doesn't meet</b>	<b>2 Partially Meets</b>	<b>3 Meets</b>	<b>4 Exceeds</b>
A.1 Compare systems of classifying organisms including systems used by scientists.	The student uses a basic or invented system for both frog and biologist and there is minimal distinction between the two systems.	The student uses a basic or invented system for the frog and a partially scientific system for the biologist that may consist of only 2 mutually exclusive scientific categories (e.g. plants and animals) or biological groups used for other purposes (e.g. carnivores, omnivores, herbivores, producers, consumers, decomposers, habitat) and generally describes the similarities and differences in the 2 systems (there is partial evidence of distinction between the 2).	The student uses a basic or invented system for the frog and a scientific system for the biologist that consists of more than 2 mutually exclusive scientific categories that may include a mix of kingdoms, phyla, and classes (e.g. plant animal, fungi, insect vertebrate, mammal, amphibian, mollusk, etc.) and describes at least two similarities and differences in the 2 systems.	The student uses a basic or invented system for the frog and a scientific system for the biologist with more sophisticated taxonomic groupings (e.g. 6 kingdom approach) and/or a more sophisticated comparison of the two systems.