

Name:

Date:

Class:

## Student Worksheet

### **Prior Knowledge of Algae**

1. Define the word “algae.” Try to include several characteristics of algae, and some examples of algae (if you can think of any). DO NOT use any outside resources (in other words, no textbook, internet, etc.)

### **Got Algae?**

2. Using the provided cards, assign each organism to either “algae” or “not algae” in the table below:

Organism Name	Algae? Y/N	Reason?

[**Stop here.** Instructor will discuss list with entire class].

3. Circle or otherwise indicate which organisms you correctly identified as algae. Can you revise your definition of “algae” to include some general statements of what algae are and are not?

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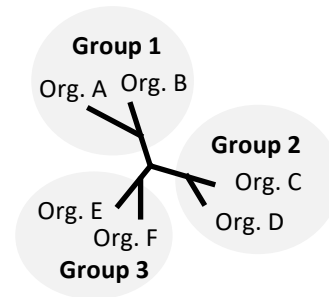
Class:

### ***Algae and the Tree of Eukaryotes***

4. Using the information provided, draw a phylogenetic tree of relatedness for all of your organisms, algae and non-algae, and assign organisms to groups. An example is given below.

Make your tree “unrooted” at the base. In other words, you may know certain organisms (e.g, Org. A and Org. B) are closely related to each other, but you don’t know how larger groups (Group 1, Group 2, and Group 3) are related to each other.

**Example of a tree where relationships at the base of the tree are unknown**



5. Do all algae share a single common ancestor and belong to a group that excludes all non-algae groups (e.g., like mammals or flowering plants)? Explain how you know, using evidence from your phylogenetic tree.