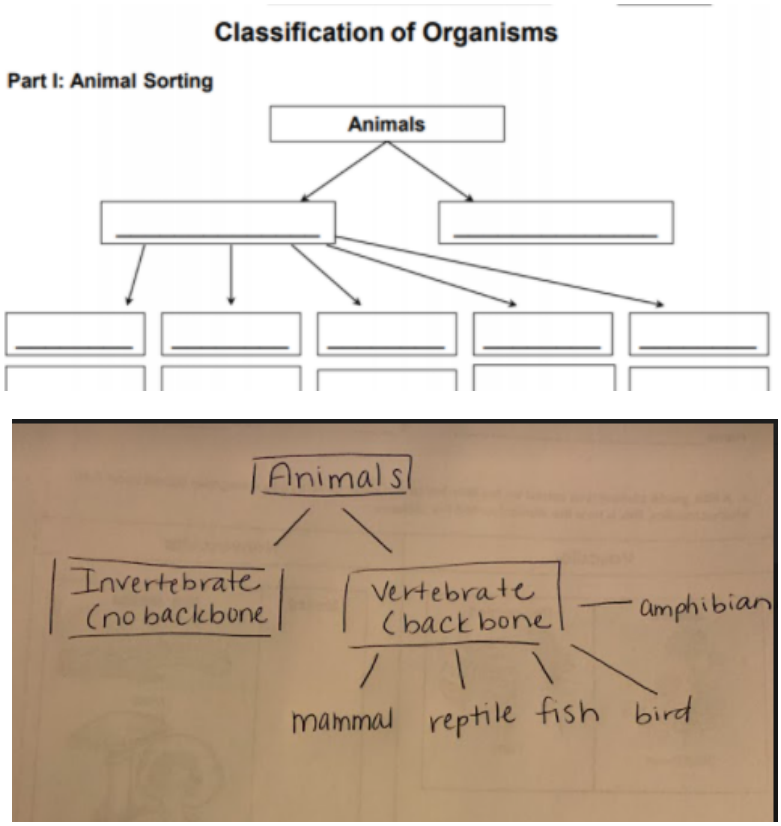
Name:_____ Classification Study Guide

Part One: Animal Classification

Students need to know the following information in the charts



Mammal	Bird	Fish	Reptile	Amphibian
Gives live birth	Hard Shell Eggs	Soft eggs (lay hundreds)	Soft shelled eggs	Soft eggs
Warm-blooded	warm-blooded	cold-blooded	cold-blooded	cold-blooded
Lungs	Lungs	Gills	Lungs	Gills at birth Lungs as an adult
Fur	Feathers	Colorful scales	scales	Slimy skin
Ex: Dolphin Bat Human	Robin, Blue Jay	Shark Pufferfish	Snake Turtle lizard	Frog salamander

Students will use the information in the chart to answer questions about how to best sort the animals.

Task 2

A scientist collected data on 8 different animals. Which of the following student explanations best describes how to sort these animals?

Species Number	Warm-blooded or cold-blooded?	Body Covering	Backbone?	Other special characteristics?
1B	Warm	Thick white fur	Yes	Lives in the arctic
2B	Warm	Red feathers	Yes	A beak is present
3B	Cold	Colorful scales	Yes	Lays thousands of tiny eggs under water
4B	Cold	Beige shell	No	Exoskeleton is present for protection
5B	Cold	Slimy green skin	Yes	Born with gills, but develops lungs later in life
6B	Warm	Hair	Yes	Gives birth to live young
7B	Cold	Green scales	Yes	Has soft, rubbery eggs
8B	Warm	White and black feathers	Yes	Has two feet made for gripping branches

a. Student 1: First I would separate vertebrates and invertebrates. The only invertebrate in the table is species 4B because it does not have a backbone. The rest are vertebrates. Species 1B, 2B, and 6B are all mammals because they are warm blooded. Species 3B is a fish because of its colorful scales. Species 4B is a reptile because it has dry scaly skin. Species 5B and 7B are both amphibians because they have green body coverings.

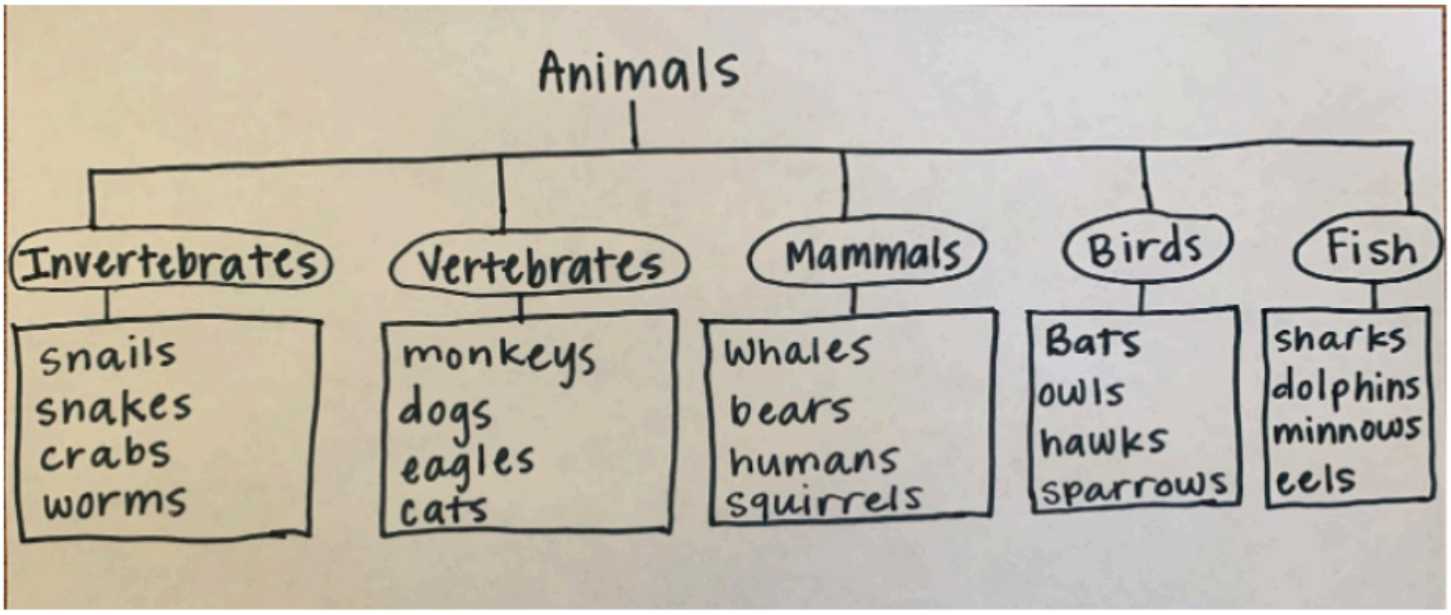
b. Student 2: First I would separate vertebrates and invertebrates. The only invertebrate in the table is species 4B because it does not have a backbone. The rest are vertebrates. Species 1B and 6B are all mammals because they are warm blooded. Species 2B and 8B are both birds because they have feathers as a body-covering. Species 3B and 7B are all reptiles because they have scales. Species 5B is an amphibian because it is born with gills but develops lungs later in life.

c. Student 3: First I would separate vertebrates and invertebrates. The only invertebrate in the table is species 4B because it does not have a backbone. The rest are vertebrates. Species 1B and 6B are all mammals because they have hair or fur as a body covering. Species 2B and 8B are both birds because they have feathers as a body covering. Species 3B is a fish because it is covered in colorful scales and lays a large number of eggs under water. Species 7B is a reptile because it lays rubbery eggs. Species 5B is an amphibian because it is born with gills but develops lungs later in life.

Correct the model below:

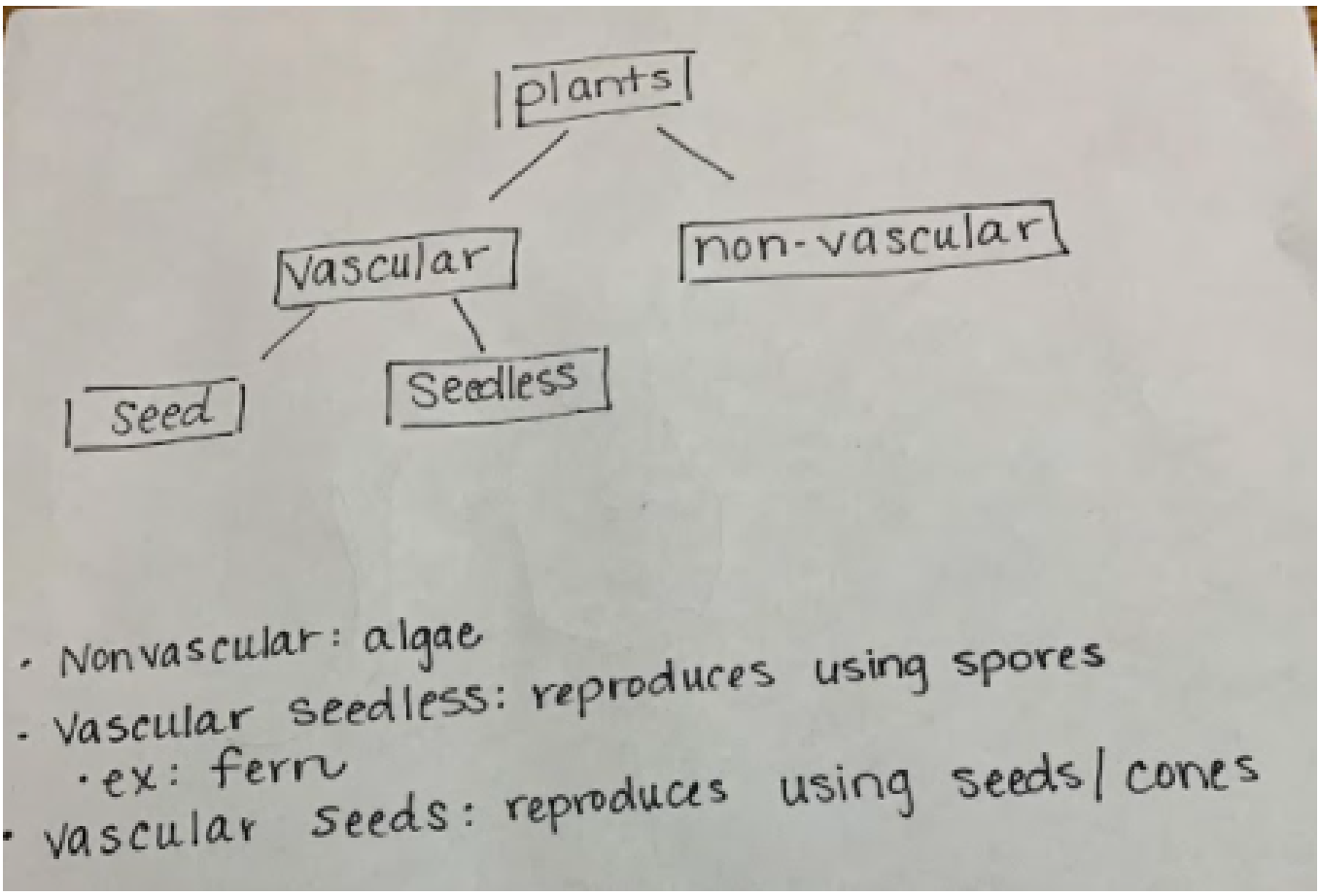
Task 4- Distinguished

Student 1 created the model seen below. Using what you have learned about animal classification, what changes should student 1 make in order to improve upon their model? How do you know?



Plant Classification

Students need to know the information from the chart



Create a model based on the information below. How can the student improve their model.

Plant Data

Plant 1	- has seeds that come from flowers - has roots, leaves, and stems
Plant 2	- has seeds that come from cones - has roots, leaves, and stems
Plant 3	- does not have seeds - has roots, leaves, and stems
Plant 4	- does not have seeds - does not have roots, leaves, and stems

Student Model

Student # 2

Plants	
Vascular (plants 1, 2, 3)	Nonvascular (plant 4)