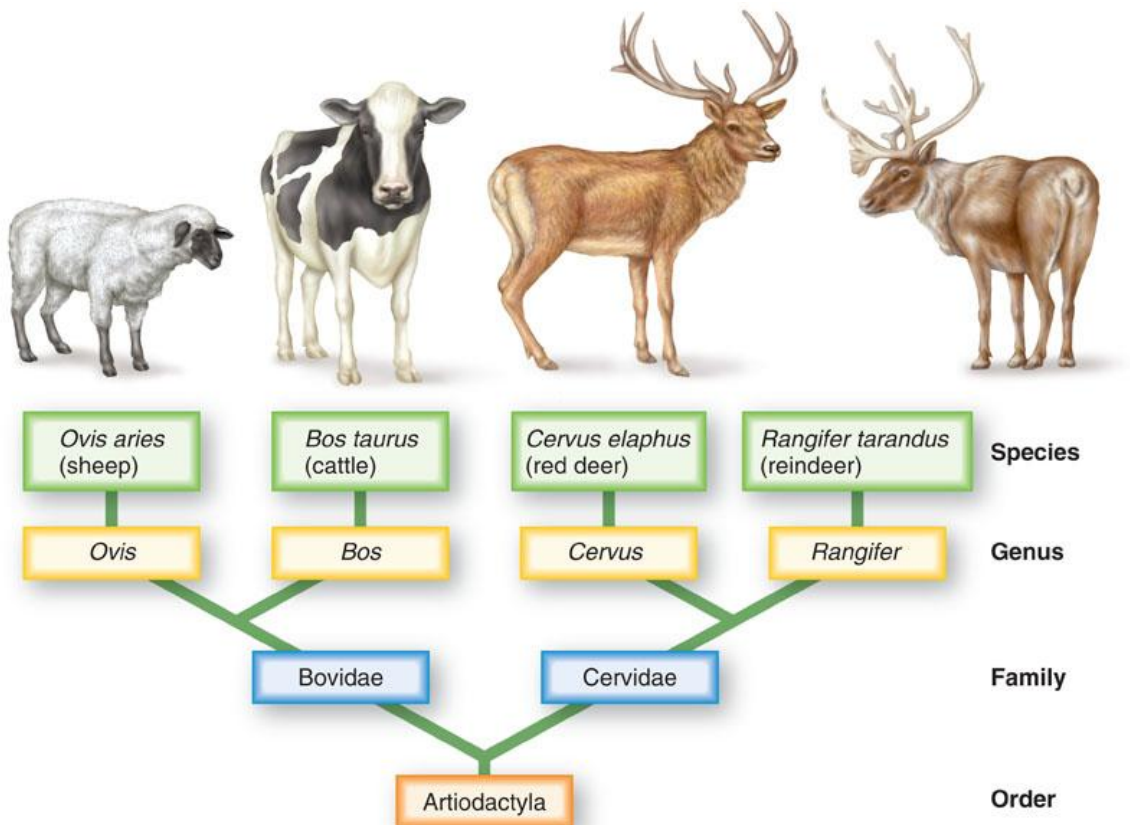


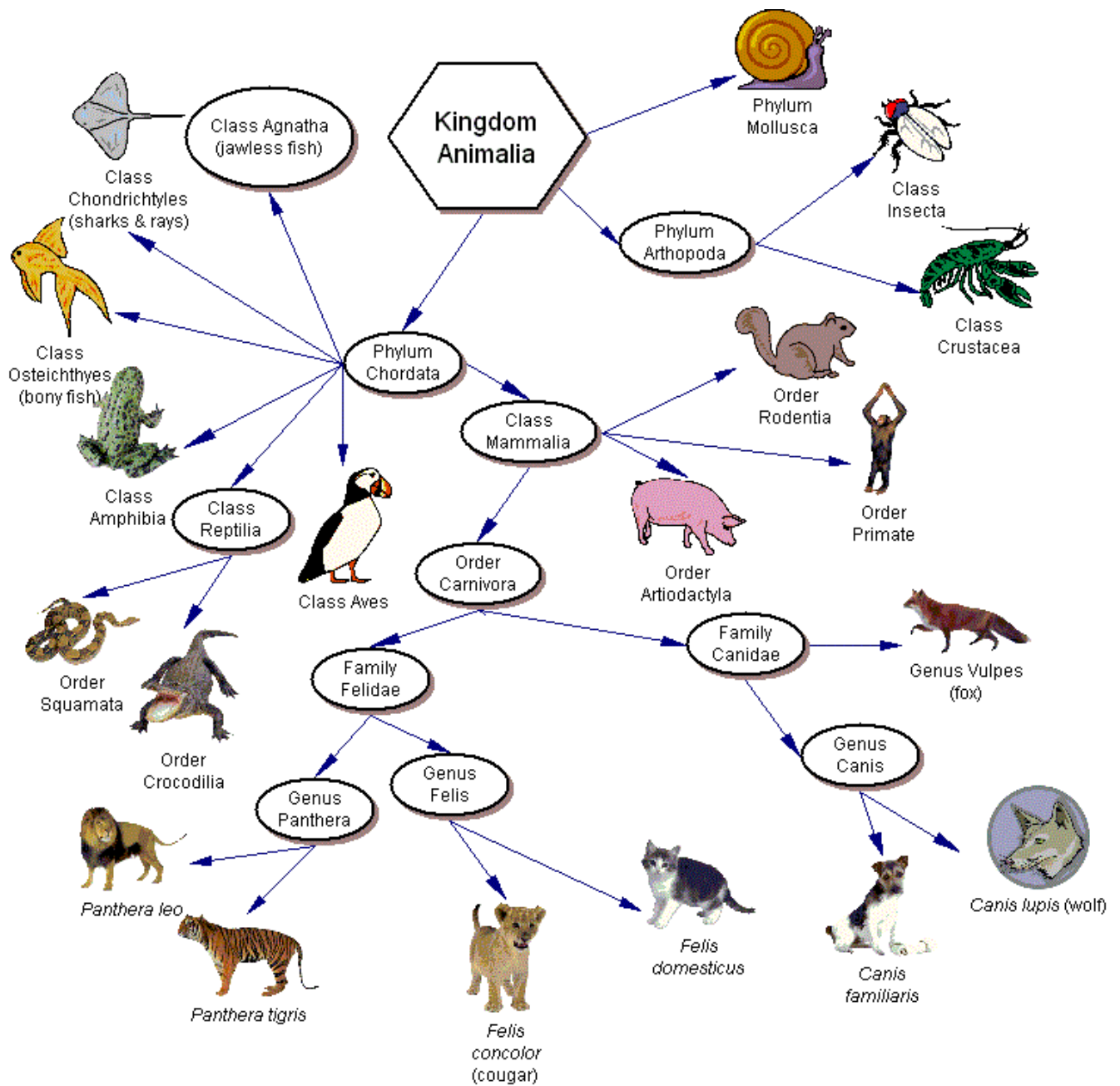
Understanding Classification

Name: _____

Date: _____

Per: _____





I: Interpreting Graphics - Taxonomy

Answer true or false to the following statements. Use the graphic to determine the answers.

1. _____ Dogs belong to the order Felidae.
2. _____ A fox belongs to the phylum Arthropoda.
3. _____ Snakes belong to the phylum Reptilia.
4. _____ Lions belong to the class mammalia
5. _____ All arthropods belong to the Class Insecta
6. _____ All rodents belong to the phylum chordata.
7. _____ All amphibians belong to the class reptilia.
8. _____ All primates are mammals.
9. _____ The class mammalia includes dogs, cats and rats.
10. _____ A lion belongs to the genus Felis.
11. _____ All mammals are primates.
12. _____ Insects and lobsters are arthropods.



In each set, circle the pair that is most closely related.

13. snakes & crocodiles | snakes & frogs
14. rats & cats | cats & dogs
15. insects & lobsters | insects & birds
16. lions & tigers | lions & cougars
17. foxes & rats | foxes & dogs
18. cats & dogs | cats & lions

19. List (use species name) all the animals pictured that belong in the Felidae family.

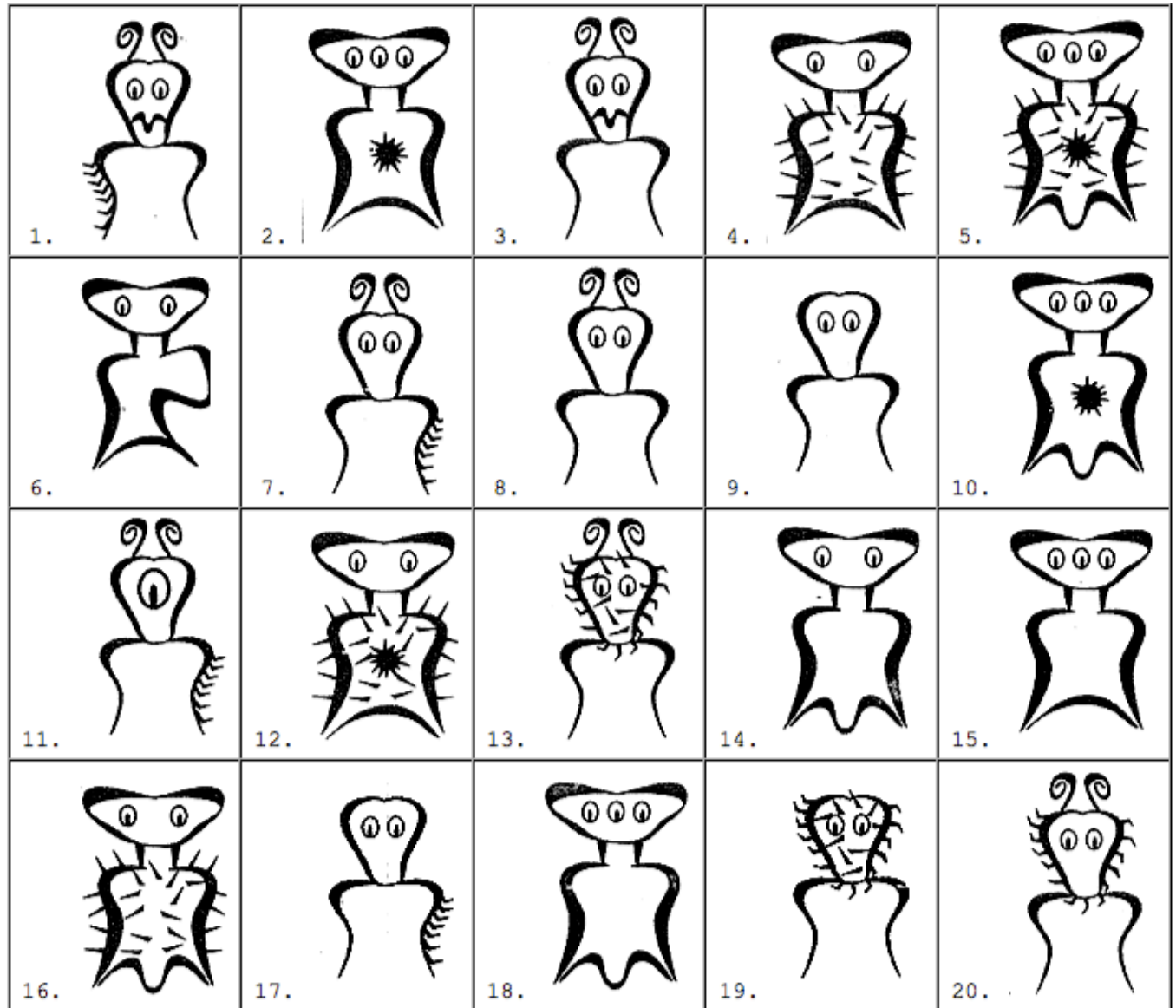
20. The image does not show orders of insects. Suggest three categories of insects that would likely be grouped into orders. Hint: think about what kind of insects there are. Add your three categories to the image.

21. Create an addition to the image given the following information.

- Mollusks are divided into three classes: Class Cephalopoda (squids), Class Gastropoda (snails), Class Bivalve (clams and oysters)
- Cephalapods have a few orders, one of which is Octopoda (octopus) and another is Teuthida (squids)
- The scientific name for the common octopus is *Octopus vulgaris*.
- The scientific name for the common european squid is *Loligo vulgaris*.

II: Taxonomy, Classification, and Dichotomous Keys

Help! Scientists have discovered quite a few new creatures on planet Pamishan. They need your help to identify and classify them. Use the dichotomous key on the next page to identify these creatures.



A Key to New Pamishan

1. a. The creature has a large wide head.....go to 2
b. The creature has a small narrow head.....go to 11
2. a. It has 3 eyesgo to 3
b. It has 2 eyesgo to 7
3. a. There is a star in the middle of its chest.....go to 4
b. There is no star in the middle of its chestgo to 6
4. a. The creature has hair spikes*Broadus hairus*
b. The creature has no hair spikes.....go to 5
5. a. The bottom of the creature is arch-shaped*Broadus archus*
b. The bottom of the creature is M-shaped*Broadus emmus*
6. a. The creature has an arch-shaped bottom*Broadus plainus*
b. The creature has an M-shaped bottom.....*Broadus tritops*
7. a. The creature has hairy spikesgo to 8
b. The creature has no spikes.....go to 10
8. a. There is a star in the middle of its body*Broadus hairystarus*
b. There is no star in the middle of its bodygo to 9
9. a. The creature has an arch shaped bottom*Broadus hairyemmus*
b. The creature has an M shaped bottom*Broadus kiferus*
10. a. The body is symmetrical*Broadus walter*
b. The body is not symmetrical.....*Broadus anderson*
11. a. The creature has no antennaego to 12
b. The creature has antennaego to 14
12. a. There are spikes on the face*Narrowus wolfus*
b. There are no spikes on the facego to 13
13. a. The creature has no spike anywhere*Narrowus blankus*
b. There are spikes on the right leg*Narrowus starboardus*
14. a. The creature has 2 eyes.....go to 15
b. The creature has 1 eye.....*Narrowus cyclops*
15. a. The creature has a mouth.....go to 16
b. The creature has no mouth.....go to 17
16. a. There are spikes on the left leg*Narrowus portus*
b. There are no spikes at all*Narrowus plainus*
17. a. The creature has spikesgo to 18
b. The creature has no spikes*Narrowus georgia*
18. a. There are spikes on the headgo to 19
b. There are spikes on the right leg.....*Narrowus montanian*
19. a. There are spikes covering the face*Narrowus beardus*
b. There are spikes only on the outside edge of head*Narrowus fuzzus*

III: Dichotomous Key on Norns

Norns belong to the **genus Norno** and can be divided into eight species that are generally located in specific regions of the world. Use the dichotomous key to identify the norns below. Write their complete scientific name (genus + species) in the blank.

1. Has pointed ears go to 3
Has rounded earsgo to 2
2. Has no tail Kentuckyus
Has tail Dakotus
3. Ears point upward go to 5
Ears point downwardgo to 4
4. Engages in waving behavior Dallus
Has hairy tufts on earsCalifornius
5. Engages in waving behavior WalaWala
Does not engage in waving behavior.....go to 6
6. Has hair on head Beverlus
Has no hair on head (may have ear tufts)go to 7
7. Has a tail Yorkio
Has no tail, aggressive Rajus



A _____



B _____



C _____



D _____



E _____



F _____



G _____



H _____

IV: Alien Taxonomy

You are an alien taxonomist. Your job is to classify the aliens found on the planet Bizarro-World. You have noted that there are two main groups of organisms on this planet: a group of humanoid like organisms that live on the land, and a group of fish like organisms that live in the water.

The fish like organisms are photosynthetic and get their food from Bizarro-Sun, the humanoids eat the fish-like organisms.

Because there are so few species, your taxonomic scheme will only use Kingdom, Phylum, Genus and Species. Create a flow chart showing the organisms taxonomic structure, and make up names for the taxa. Give all of the aliens a scientific name. The aliens on Bizarro-World are pictured below, cut them out to help you organize the groups.

