

Directions: Answer true or false

1. ____ Dogs belong to the order Felidae.
2. ____ Lions belong to the class mammalia
3. ____ All arthropods belong to the Class Insecta
4. ____ All amphibians belong to the class reptilia.
5. ____ A lion belongs to the genus Felis.
6. ____ All mammals are primates.
7. ____ Insects and lobsters are arthropods.

Directions: In each set, indicate which pair is most closely related.

8. snakes & crocodiles | snakes & frogs
9. rats & cats | cats & dogs
10. insects & lobsters | insects & birds
11. lions & tigers | lions & cougars
12. foxes & rats | foxes & dogs
13. cats & dogs | cats & lions

Activity 1: Introduction to Dichotomous Keys

Example 1:

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 behaviorgo 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



1 _____



2 _____



3 _____



4 _____



5 _____



6 _____

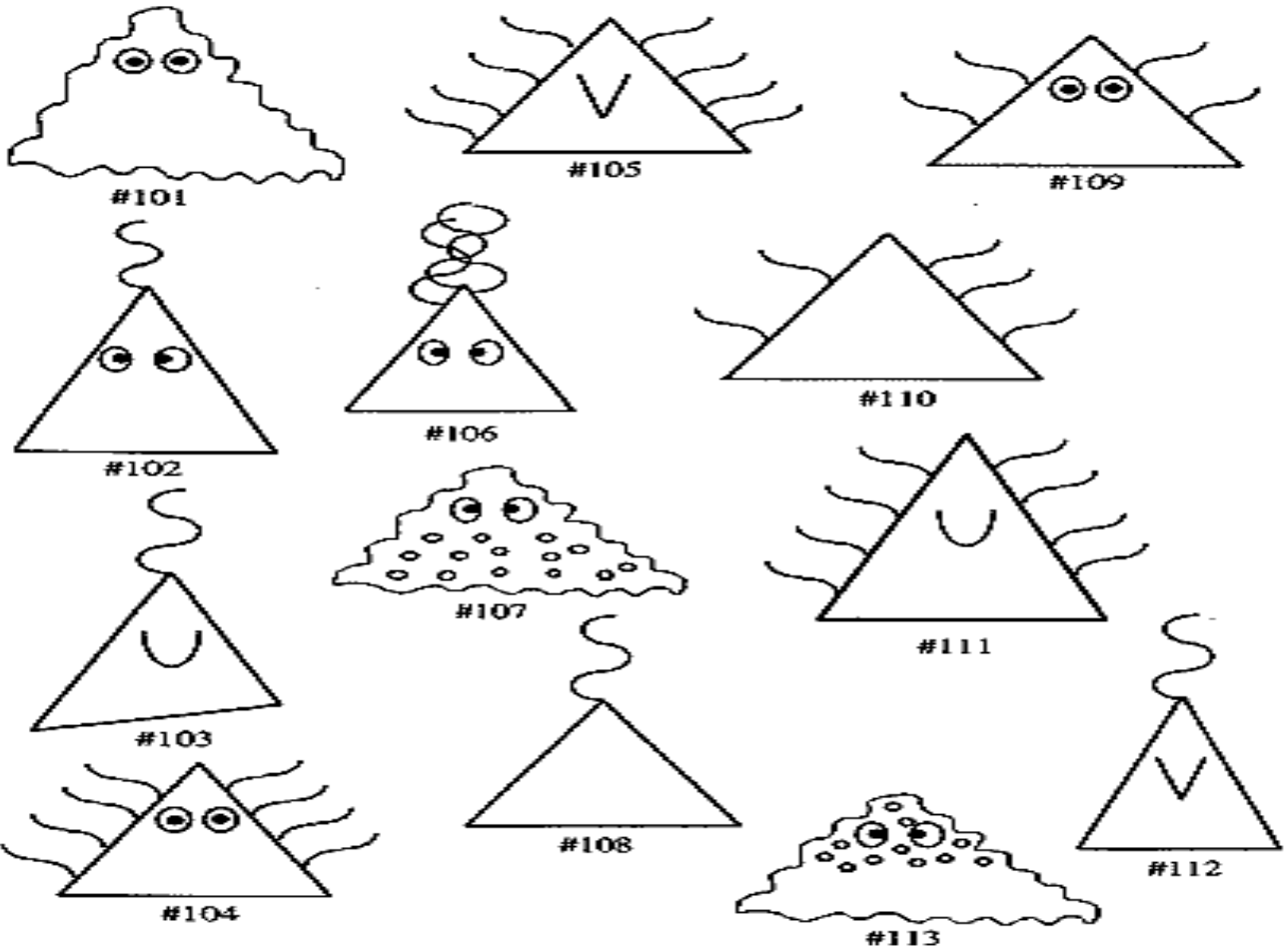


7 _____



8 _____

Example 2: Trianges



Directions: Use the dichotomous key on the opposite page to write the scientific name for each of the creatures above

- #101: _____ #108: _____
- #102: _____ #109: _____
- #103: _____ #110: _____
- #104: _____ #111: _____
- #105: _____ #112: _____
- #106: _____ #113: _____
- #107: _____ #114: _____

1. A. Sides are straight lines Go to 2
B. Sides are wavy lines Go to 10

2. A. Has no eyes Go to 3
B. Has eyes Go to 5

3. A. Has flagella (whip-like tail) for movement Go to 4
B. Has cilia (short hairs) for movement Go to 7

4. A. The three sides are of equal length *T. equalius*
B. The three sides are not of equal length Go to 12

5. A. Has crossed eyes Go to 6
B. Eyes not crossed Go to 9

6. A. Has a single flagellum (whip-like tail) for movement *T. monoflagelleum*
B. Has two or more flagella (whip-like tail) for movement *T. polyflagelleum*

7. A. Total number of cilia (hairs) for movement are odd *T. oddcilius*
B. Total number of cilia (hairs) for movement are even Go to 8

8. A. Has a pointed nose *T. pointiatus*
B. Has a rounded nose *T. roundiatus*

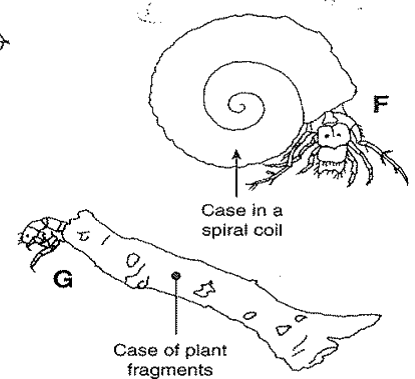
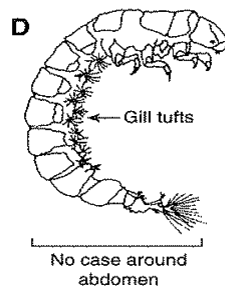
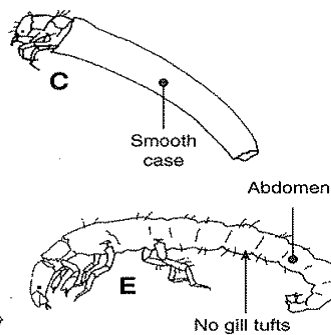
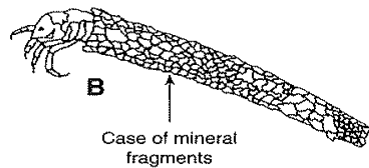
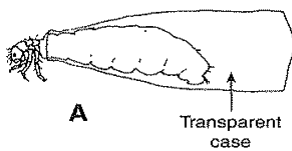
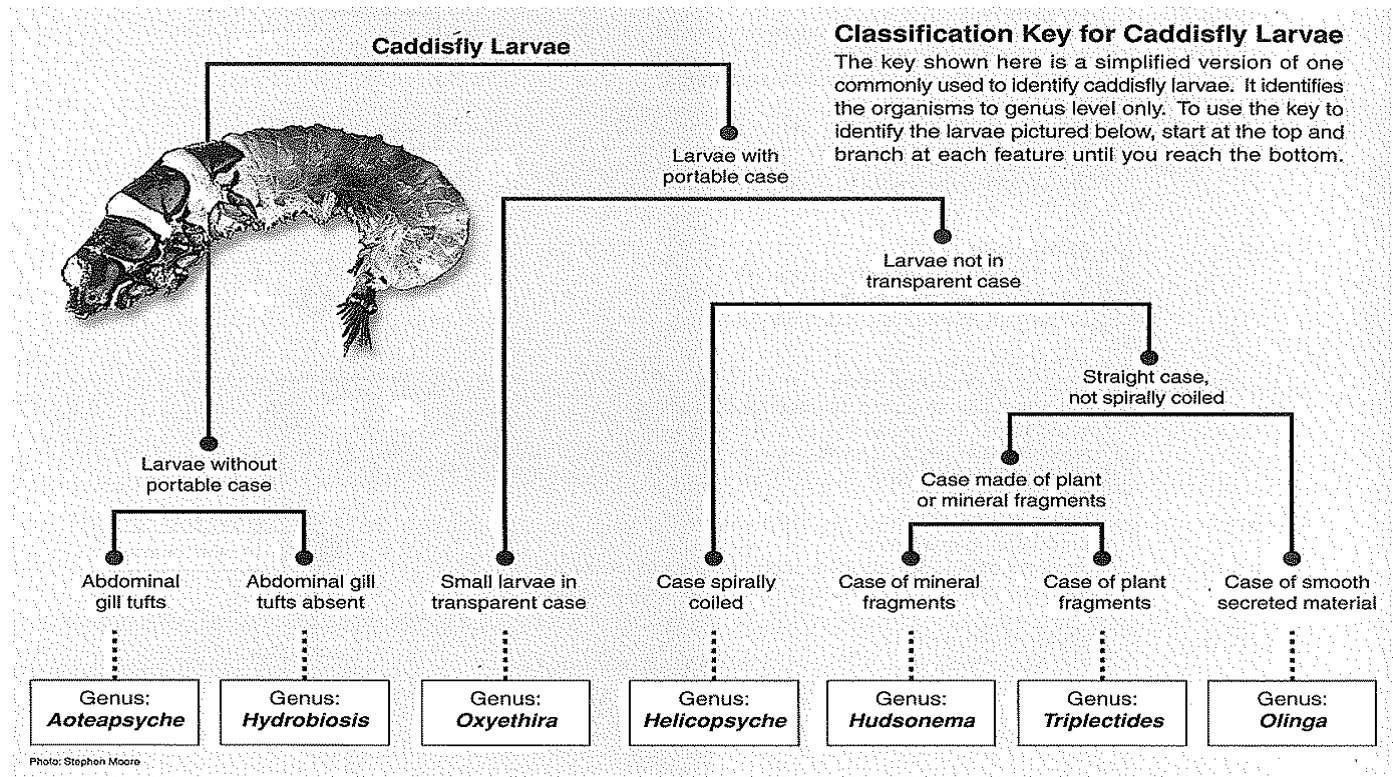
9. A. Has two cilia (hairs) on each side for movement *T. biciliatus*
B. Has more than two cilia (hairs) on each side *T. Polycilius*

10. A. Has crossed-eyes Go to 11
B. Eyes not crossed *T. waveus*

11. A. Lower half of the body has a dot pattern *T. ventrodotteus*
B. Upper half of the body has a dot pattern *T. dorsalidotteus*

12. A. Has a pointed nose *T. pointiflagelleum*
B. Has a rounded nose *T. roundiflagelleum*

Activity 2: More Dichotomous Key Practice



1. What is the main feature being used for the contrasting character? _____

2. Use the key to determine the genus of each of the larvae.

A. _____

B. _____

C. _____

D. _____

E. _____

F. _____

G. _____

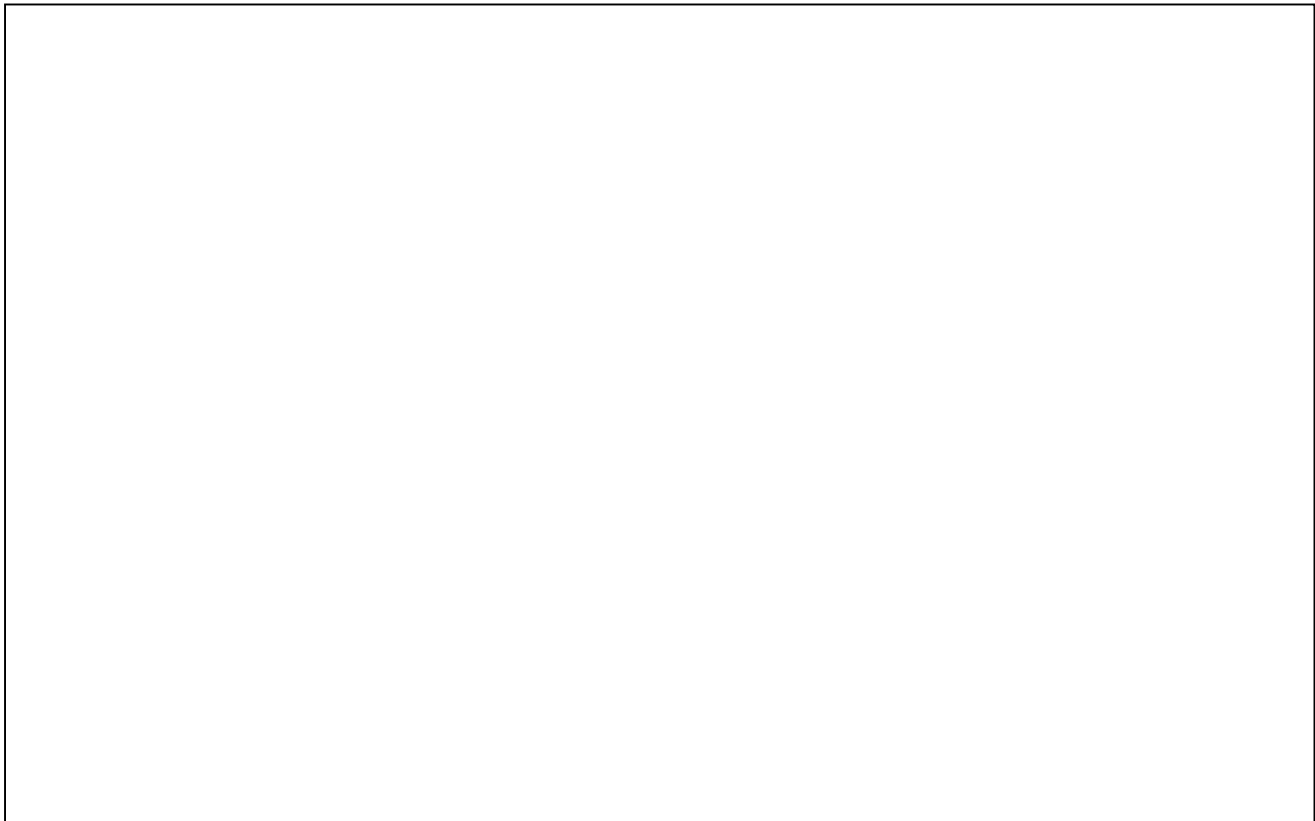
Activity 3: Designing and Classifying Your Own Organism!

Directions: Design your own organism by answering the questions in the space below.

1. What kind of environment does your organism live in? _____
2. What adaptations does your organism have? _____

3. Is your organism a eukaryote or a prokaryote? _____
4. Is your organism multicellular or unicellular? _____
5. How does your organism get energy? _____
6. Can your organism move? _____ If so, how? _____

Directions: Draw a picture of your organism in the space below. Color your organism. Then use the key on the opposite page to classify your organism into one of the 6 kingdoms of life!



MY ORGANISM IS IN THE KINGDOM _____

Dichotomous Key to the Kingdoms of Life

1a. Prokaryotic.....go to 2

1b. Eukaryotic.....go to 3

2a. Lives in extreme environments.....Archaeobacteria

2b. Does not live in extreme environments.....Eubacteria

3a. Unicellular.....Protista

3b. Multicellular.....go to 4

4a. Autotrophic.....Plantae

4b. Heterotrophic.....go to 5

5a. Feeds by absorption.....Fungi

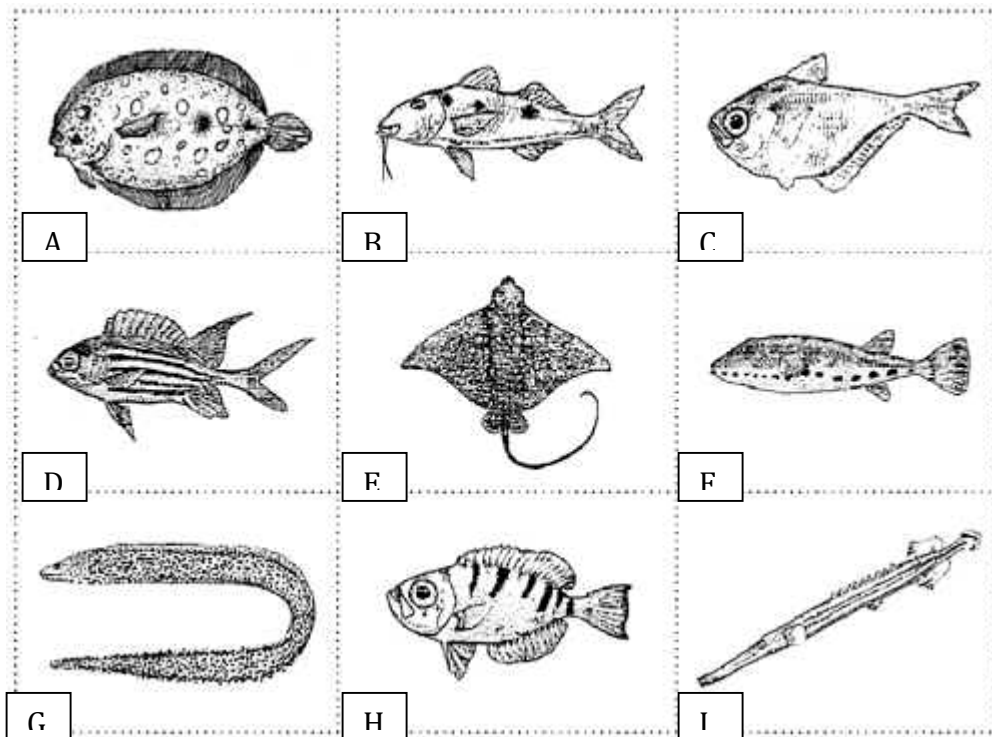
5b. Feeds by internal digestion; motile.....Animalia

Name: _____

Date: _____

Fishy Classification

Directions: Find the name of each fish using the dichotomous key below. Write the name of the fish above or below it.



Fish Dichotomous Key

<p>Step 1 If fish shape is long and skinny then go to step 2 If fish shape is not long and skinny, then go to step 3</p>	<p>Step 5 If fish has spots, then go to step 6 If fish does not have spots, then go to step 7</p>
<p>Step 2 If fish has pointed fins, it is a trumpet fish If fish has smooth fins, it is a spotted moray eel</p>	<p>Step 6 If fish has chin "whiskers," it is a spotted goat fish If fish does not have chin "whiskers," it is a band-tail puffer</p>
<p>Step 3 If fish has both eyes on top of the head, then go to step 4 If fish has one eye on each side of the head, then go to step 5</p>	<p>Step 7 If fish has stripes, then go to step 8 If fish does not have stripes, it is a glassy sweeper</p>
<p>Step 4 If fish has long whip-like tail, it is a spotted eagle ray If fish has short, blunt tail, it is a peacock flounder</p>	<p>Step 8 If fish has a v-shaped tail, it is a squirrel fish If fish has a blunt tail, it is a glass-eye snapper</p>