

Name: _____

Period: _____

Characteristics of Life and Classification Study Guide

Directions: Identify which characteristic of living things is being described in each of the statements below. Some may be used more than once!

A. All living things have organization.

D. All living things respond to stimuli.

B. All living things obtain and use energy.

E. All living things maintain an internal balance (homeostasis).

C. All living things reproduce.

F. All living things grow and develop

_____ 1. An amoeba is a unicellular organism.

_____ 2. When a human steps out into the cold air, the body begins to shiver in order to keep its temperature at 98.6 degrees Fahrenheit.

_____ 3. Green plants produce their own food through the process of photosynthesis.

_____ 4. An adult hydra is producing its offspring through budding.

_____ 5. The roots of a plant grow towards a source of ground water.

_____ 6. Over three years, Tim's height has increased from 5'4" to 5'11".

_____ 7. A pill bug eats a carrot.

_____ 8. A baby songbird hatches from its egg with both parent songbirds watching.

_____ 9. A tulip opens up in the morning at sunrise and closes up in the evening at sunset.

_____ 10. Identical twins have 99.999% of the same genes.

_____ 11. A caterpillar hibernates in a cocoon, and emerges as a butterfly.

_____ 13. A beaver is an organism composed of many different types of cells.

_____ 14. A sea worm drops its tail and the tail becomes a new worm.

_____ 15. As a sea worm is placed in fresh water, the pulse slows down in order for the worm to conserve energy.

16. List the three domains of life:

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-
-

17. List the six kingdoms of life:

-
-
-
-
-
-

18. Name two characteristics that are used to place an organism in the domain Archaea:

-
-

20. Name two characteristics that can be used to distinguish the Animalia kingdom from the kingdom Plantae

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-

21. Put the classification taxa in the correct order from largest (most kinds of organisms) to smallest (one kind of organism)

CLASS, DOMAIN, GENUS, FAMILY, KINGDOM, ORDER, PHYLUM, SPECIES

22. Members of the same _____ can mate and produce fertile offspring.

23. A group of related species are in the same _____

24. A group of related families are in the same _____

25. A group of related phyla are in the same _____

26. Write your first and last name _____

27. If your name were a scientific name, which part would be the genus?

28. Which part would be the species identifier?

Examine the table showing the classification of four organisms. Then answer questions #29-33.

Taxon	House Cat	Mountain Lion	Domestic Dog	Human
Kingdom	Animalia	Animalia	Animalia	Animalia
Phylum	Chordata	Chordata	Chordata	Chordata
Class	Mammalia	Mammalia	Mammalia	Mammalia
Order	Carnivora	Carnivora	Carnivora	Primates
Family	Felidae	Felidae	Canidae	Hominidae
Genus	<i>Felis</i>	<i>Felis</i>	<i>Canis</i>	<i>Homo</i>
Species	<i>domesticus</i>	<i>concolor</i>	<i>familiaris</i>	<i>sapiens</i>

29. Which two organisms are most closely related? _____

30. What three taxa do all four organisms have in common? _____

31. Which taxon includes organisms that have hair or fur and produce milk? _____

32. Write the scientific name for a house cat _____

33. Write the scientific name for a domestic dog _____

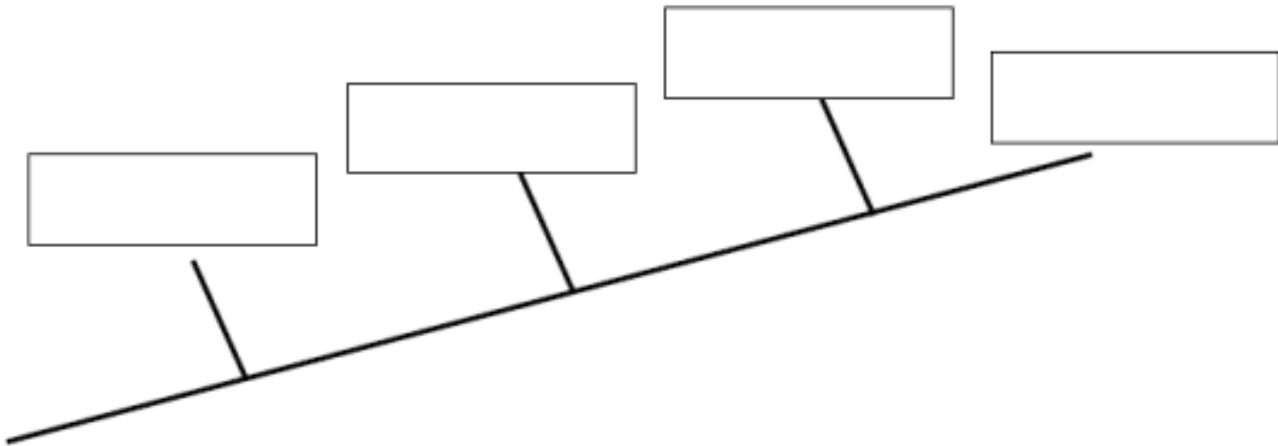
34. Why is binomial nomenclature used? _____



35. Fill in the following table based on the diagram above. Mark an "X" if an organism has the trait.

	Cells	Legs	6 legs	wings
Worm				
Spider				
Carpenter ant (black)				
Fly				

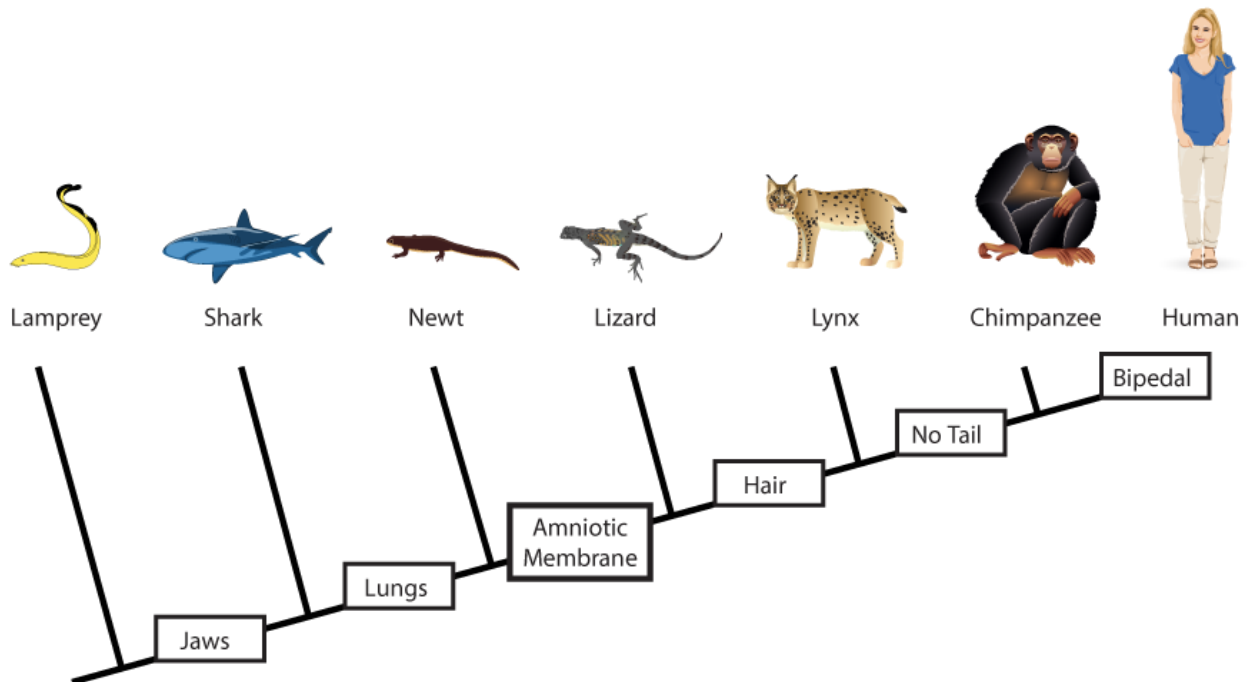
36. Add each of these organisms to the cladogram below: worm, spider, ant, fly



37. Annotate the cladogram above by **adding traits** that make the organisms different from each other.

38. According to your cladogram, which two species are more closely related: worms and spiders or worms and ants? **How do you know?**

Use the diagram below to answer questions 39 & 40.



39. What characteristic separates a chimpanzee from a human? _____

40. What characteristics do lizards and lynxes have in common? _____

Use the dichotomous key below to identify the monster organisms on the last page.

1. Does it have wheels?
 - A.) Yes -----go to 2
 - B.) No-----go to 4

2. Does it have 4 wheels?
 - A.) Yes-----*Stanley raye*
 - B.) No-----go to 3

3. Does it have 2 arms?
 - A.) Yes-----*Agnes stover*
 - B.) No-----*Maud podvin*

4. Does it have feet with toes?
 - A.) Yes-----go to 5
 - B.) No-----go to 6

5. Does it have ears?
 - A.) Yes-----*Elmer nugent*
 - B.) No-----*Bob richey*

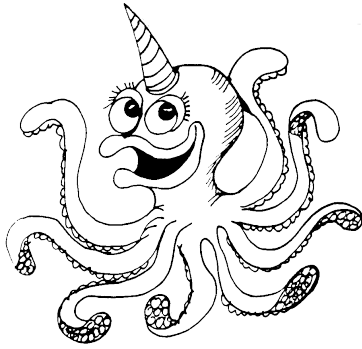
6. Does it have tentacles like an octopus?
 - A.) Yes-----*Ruth ormond*
 - B.) No-----go to 7

7. Does it have webbed feet like a duck?
 - A.) Yes-----go to 8
 - B.) No-----go to 9

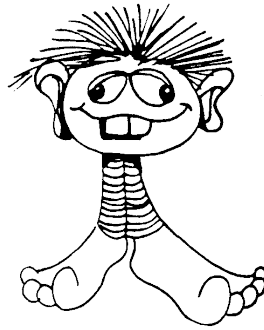
8. Does it have feathers on its butt?
 - A.) Yes-----*Myrtle lethlean*
 - B.) No-----*Walter allen*

9. Does it have teeth?
 - A.) Yes-----*Elton ashmun*
 - B.) No-----*Nora outfleet*

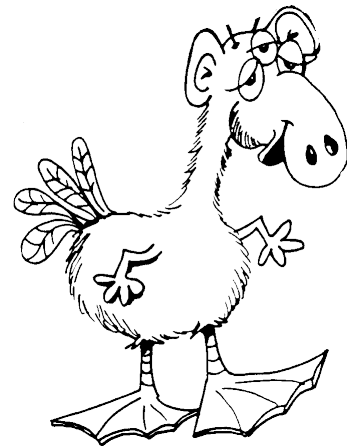
Find each of the following creatures' name using the dichotomous key descriptions on the previous page and write their correct scientific name.



1. _____



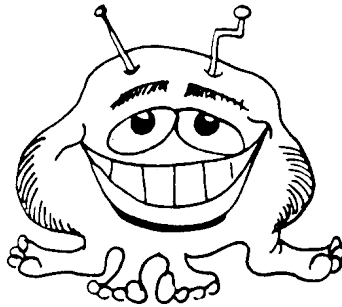
2. _____



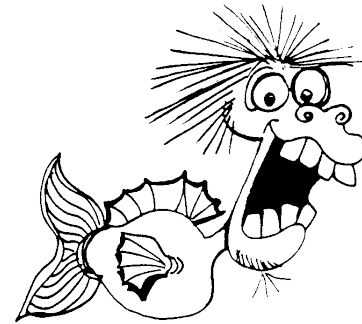
3. _____



5. _____



4. _____



7. _____



8. _____



6. _____



9. _____



10. _____