

Due Date: _____

Name: _____
Date: _____ Blk: _____

Vertebrate Assignment

Your topic: _____

Format

- neatly typed
- notes, assignment and multiple choice questions MUST be ALL on a SINGLE piece of letter sized paper
- full name on the top left corner of the paper
- title at the top of the paper
- notes, assignments and multiple choice questions will be Xeroxed for other students IF your assignment was completed.
- no LATE assignments

Criteria

1. Notes /5 marks
 - a summary of the IMPORTANT points for the assigned section (8 - 15 points)
2. Assignment /5 marks
 - an activity to practice the information about the assigned section
 - minimum of 5 questions
3. Multiple Choice Questions /5 marks
 - 5 multiple choice questions about the assigned section
 - must be information in the Miller and Levine textbook
 - questions need to be an appropriate level
 - need 5 choices for each question
 - all multiple choice questions from all sections will be Xeroxed for you as review
 - teacher will choose 50 of these questions for the Vertebrate Unit Test
4. Answer Key /5 marks
 - prove the answers for the assignment and the multiple choice questions
 - write on the BACK side of the assignment for the teacher

Vertebrate Worksheet

Name: _____

1. In what phylum & kingdom are the vertebrates found?
2. List the classes of vertebrates.
3. Discuss the characteristics of chordates & vertebrates.
4. Sketch a lamprey & describe the characteristics of this fish. Where are they found? (pg. 686)
5. Describe a hagfish.
6. In what group are lampreys & hagfish found & why?
7. What are the 2 classes of jawed fish?
8. What is in the class Chondrichthyes & what traits do they have in common.
9. Sketch & describe sharks.
10. Name the class for bony fish.
11. Name the 2 groups of bony fish.
12. Give two examples of ray-finned fish & describe them.

13. Name 1 lobe-finned fish & describe it.

14. What was the 1st group of vertebrates to move onto land? What is in this group?

15. Describe characteristics of amphibians.

16. Amphibians are ectotherms. What does this mean?

17. How are amphibians still linked to water?

18. What is in the class Reptilia?



19. Reptiles do not need water for reproduction. Explain why this is true.

20. Describe the amniotic egg of reptiles. Include a labeled sketch of the egg.

21. What reptile group is thought to be the ancestors of mammals?

22. What is a transition fossil?

23. What 3 groups of reptiles are still alive today?

24. Describe characteristics of the reptiles.

25. How can snakes swallow such large prey?
26. What is the purpose of the Jacobson's organ in snakes?
27. What two parts does a turtle shell consist of?
28. Describe crocodiles & alligators & tell some of their habits.
29. What class contains birds?
30. From what did birds probably evolve?
31. What are the distinguishing features of birds?
32. Sketch & label the parts of a feather. What three types of feathers are there?
33. Birds are endotherms. What does this mean?
34. Name a flightless bird and a bird that swims.
35. The bones in a bird's wing are homologous to the bones in a human's arms. What does this mean?
36. What are the 3 main characteristics of all mammals?
37. What in female mammals produces milk?
38. How are mammals adapted to save heat?



39. Name a flying mammal.
40. Give examples of mammals that are herbivores.
41. Give examples of mammals that are carnivores.
42. Name 7 adaptations of mammals.
43. Give examples of monotremes & tell their characteristics. Tell where they are found.
44. Give examples of marsupials & tell their characteristics. Tell where most of them are found.
45. Most mammals are placentals. What does this mean?
46. What is gestation? Do all mammals have the same gestation period?
47. What is the purpose of the placenta?
48. Name the 12 orders of placental mammals & give an example of an animal in each order.

Vertebrates

Name _____

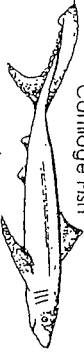
Vertebrates, animals with backbones, can be grouped into several classes.

List at least three characteristics for each of the classes below.



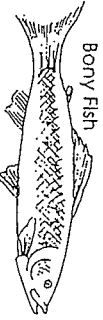
Jawless Fish

1. _____
2. _____
3. _____



Cartilage Fish

1. _____
2. _____
3. _____



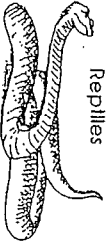
Bony Fish

1. _____
2. _____
3. _____



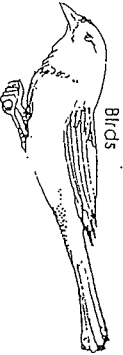
Amphibians

1. _____
2. _____
3. _____



Reptiles

1. _____
2. _____
3. _____



Birds

1. _____
2. _____
3. _____



Mammals

1. _____
2. _____
3. _____

Classy Vertebrates

Name _____

The vertebrates (chordates) are sometimes divided into several different classes. Name the class for each vertebrate.



Tadpole



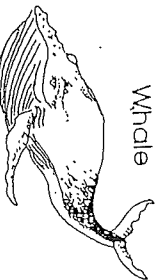
Lizard



Penguin



Frog



Whale



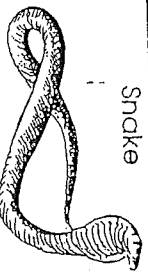
Shark



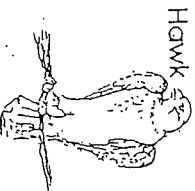
Trout



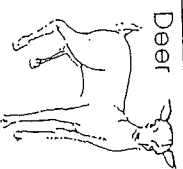
Bear



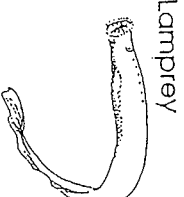
Snake



Hawk



Deer



Lamprey

Word Bank

jawless fish
cartilage fish
bony fish
amphibians
reptiles
birds
mammals

LOOD THAT'S WARM

You're not the only species with warm blood. Thousands of other animals have warm blood, too. Some of them are not even in your phylum. Tell what it means to be warm-blooded. Then fill in the missing information about the two warm-blooded classes.

Explain "warm-blooded."

_____ are covered with _____. These are lightweight, flexible, strong coverings which protect the animal from _____. All of these animals have front limbs called _____. Many, but not all, use these structures to fly. The fertilization of eggs takes place _____ the female's body, but eggs are laid to hatch _____. They breathe with _____ and have a _____-chambered heart. Different birds have different kinds of _____ which are adapted to the kinds of food they eat. Two examples of animals in this class are _____ and _____.



Label each animal shown as B (bird) or M (mammal).



_____ have hair to help maintain constant body temperature. Females produce _____ to feed to their young. Their hearts have _____ chambers. They also have glands that produce _____ to cool them off when their bodies get too hot. The young of this class develop completely _____ the mother's body before they are born, except in a few cases. Two examples of this class of animals are _____ and _____.

Name _____

BLOOD THAT'S COLD

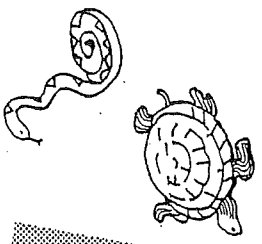
Besides a skeleton, blood is the major thing that an eel, a turtle, and a toad have in common. Tell what it means to be cold-blooded. Then fill in the missing information about these cold-blooded classes of animals—fish, reptiles, and amphibians. Explain "cold-blooded."

Label each animal pictured as F (fish), R (reptile), or A (amphibian).

_____ are cold-blooded vertebrates which live in _____. They use _____ to get oxygen from water and have 4-chambered hearts. There are _____ different kinds of animals in this class. Those with sucker-like mouths, such as lampreys, are called _____ fish. Sharks are _____ fish because their skeletons are made of cartilage. _____ fish have skeletons made of bones and have hinged jaws and fins. Young fish hatch from _____. Two examples of this class are _____ and _____.

_____ live part of their lives on _____ and part in _____. They return to _____ to reproduce and lay eggs, but as adults, they live mostly on _____. They have _____ skin with no scales. They breathe _____; though some have _____ for breathing in water. Some change appearance as they _____. The young _____ from eggs. Their hearts have _____ chambers. Two examples of this class are _____ and _____.

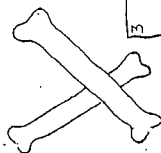
_____ breathe _____ and live mostly on _____. Most have long bodies and four legs. Their bodies are covered with _____. They have _____-chambered hearts. The _____ young are hatched from _____. Two examples of this class are _____ and _____.



Name _____

BACKBONE REQUIRED

You have to have a backbone to be able to solve this puzzle. (And, incidentally, all the words in it have something to do with animals that have a backbone of some kind.) Solve the puzzle.

Across

- 1. bird covering
- 3. backbone material that is not bone
- 6. vertebrate class with hair
- 8. attaches to brain: spinal
- 10. lives partly in water, partly on land
- 13. system having spinal cord and brain
- 14. fish egg fertilization is
- 17. class with 3-chambered heart
- 18. reptile covering

Down

- 1. chambers in a bird's heart
- 2. blood of birds and mammals
- 3. system with heart and vessels
- 4. breathe with gills
- 5. bone system in a vertebrate
- 7. animal group having backbone
- 9. system which processes food
- 11. mammal reproduction is
- 12. phylum having backbones
- 15. heart chambers in fish
- 16. has hollow bones

Name _____

Classifying Backboned Animals

The vertebrates, animals with backbones, can be divided into five classes. The chart below summarizes the distinguishing characteristics of these classes. Use the chart to identify each animal listed as fish, amphibian, reptile, bird, or mammal.

Fish	<ul style="list-style-type: none"> • lives in water • breathes by means of gills
Amphibian	<ul style="list-style-type: none"> • has scaleless skin • lives part of its life in water and part on land
Reptile	<ul style="list-style-type: none"> • has dry, scaly skin • breathes by means of lungs
Bird	<ul style="list-style-type: none"> • has feathers • has wings
Mammal	<ul style="list-style-type: none"> • feeds its offspring with milk from the mother • has hair, at least at some time in its life

- | | |
|---------------------|-------------------|
| 1. Crocodile _____ | 11. Duck _____ |
| 2. Salamander _____ | 12. Dolphin _____ |
| 3. Ostrich _____ | 13. Frog _____ |
| 4. Rat _____ | 14. Bat _____ |
| 5. Sea lion _____ | 15. Turtle _____ |
| 6. Snake _____ | 16. Penguin _____ |
| 7. Owl _____ | 17. Whale _____ |
| 8. Alligator _____ | 18. Lizard _____ |
| 9. Giraffe _____ | 19. Shark _____ |
| 10. Sea horse _____ | 20. Chicken _____ |