Sec.: _____ Name: _____

Experiment: Some Vertebrate Characteristics
(B. Science 10-V-6)

Purpose: To observe and discover some vertebrate characteristics.

Materials: eel shark fish frog
turtle snake bird mouse

Methods & Results: (use materials list of animals to answer the following questions).

1. Is body shape a specialization for the environment?

a) What general environments are occupied by the specimens? eel: _____
shark: _____ fish: _____
frog: _____ turtle: _____
snake: _____ bird: _____
mouse: _____

b) What does it mean for a body to be streamlined? _____
c) Which animals appear to be very streamlined? _____
d) Which are somewhat streamlined? _____
e) Which animals do not have any apparent streamlining? _____
f) Why is streamlining not important for the animals in (e) ? _____
g) How does streamlining relate to the habitat of the animals ? _____

2. How appendages adapt vertebrates to an environment.

a) What is an appendage? _____
b) How many appendages may be observed? _____
c) Do any of the specimens lack appendages? _____
d) Which ones? _____
e) How do they move? _____
f) Why does the snake not have appendages (Gen. 3:14)? _____
g) What is a digit? _____
h) Which animals have digits on their appendages? _____
i) How many? _____
j) Which animals have claws or nails on their digits? _____
k) Of what use are digits and claws or nails? claws _____
nails: _____

3. Head Structures and Associated Organs

a) On what animals do the heads appear to "blend" with the rest of the body?
_____
b) On what animals is it possible to observe a distinct head? _____
c) What term applies to the head region of a bilaterally symmetrical animal?
_____

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d) Why is it important to the animal that sense organs be located at this end ?

_____

4. The Body Covering

a) Which specimens apparently have no outgrowths such as hair or scales?

_____

b) Which specimens have scales ? _____

c) How do scales differ? _____

d) For what function are feathers a specialization? _____

e) Which animals has hair? _____

f) What functions do hair serve? _____

Conclusions:

1. For each animal we observed record the class to which it belongs.

eel:	shark:	fish:	frog:
turtle:	snake:	bird:	mouse:

Discussion:

1. What is meant when we say that body shape is a specialization for the environment?

2. What three specializations did God create in the class Osteichthyes? And for each specialization explain why it was necessary for God to create that.

a.
b.
c.

3. What is meant when we say that appendages adapt vertebrates to an environment?

4. Evolutionists suggest that adaptations only occur as a result of some mutation which enabled the animal to have an advantage, so it was more likely to survive. How would creationists explain what an adaptation is?

5. Even though scientists classify us (humans) just as a mammal (animal) what should we keep in mind (Gen. 1:26, Ps 8: 4 - 8)?