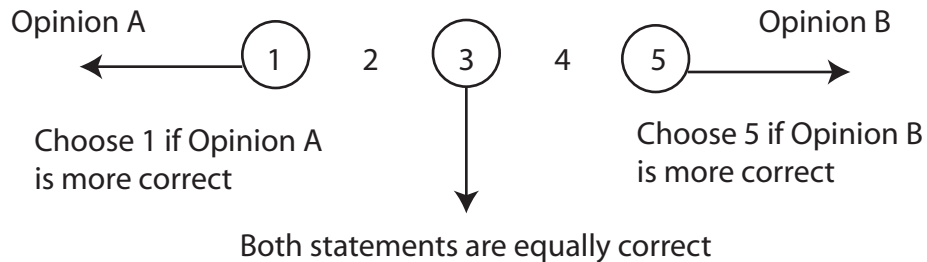


Knowledge Survey (Please answer on separate sheet of paper to turn in!)

1. Cheetahs are able to run faster than 60 m.p.h. when chasing prey. How would a scientist explain how the ability to run fast evolved in Cheetahs, assuming their ancestors could only run 20 m.p.h.?
2. Cave Salamanders are blind, having eyes which are non-functional. How would a scientist explain how blind cave salamanders evolved from sighted salamanders?

For the following questions Rank your degree of agreement with both pairs of the following statements, where:

- 1 = Opinion A is more correct;
- 5 = Opinion B is more correct;
- 3 = Both statements are equally correct



3a. THE TRAIT OF WEBBED FEET IN DUCKS:

- |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|
| A) appeared in ancestral ducks because they lived in water and needed webbed feet to swim | 1 | 2 | 3 | 4 | 5 | B) appeared in ducks because of chance mutation |
|---|---|---|---|---|---|---|

3b. WHILE DUCKS WERE EVOLVING WEBBED FEET:

- |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|
| A) with each generation, most ducks had about the same amount of webbing on their feet as their parents | 1 | 2 | 3 | 4 | 5 | B) with each generation most ducks had a tiny bit more webbing on their feet than their parents |
|---|---|---|---|---|---|---|

3c. IF A POPULATION OF DUCKS WERE FORCED TO LIVE IN AN ENVIRONMENT WHERE WATER FOR SWIMMING WAS NOT AVAILABLE:

- |  |   |   |   |   |   |  |
|--|---|---|---|---|---|--|
| A) many ducks would die because their feet were poorly adapted to this environment | 1 | 2 | 3 | 4 | 5 | B) the ducks would gradually develop non-webbed feet |
|--|---|---|---|---|---|--|

3d. THE POPULATION OF DUCKS EVOLVED WEBBED FEET BECAUSE:

- |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|
| A) the more successful ducks adapted to their aquatic environment | 1 | 2 | 3 | 4 | 5 | B) the less successful ducks died without offspring |
|---|---|---|---|---|---|---|

Figure 1. Web Module Knowledge Survey. Knowledge surveys provide a means to assess changes in specific content learning and intellectual development. They promote student learning by improving course organization and planning. Beyond increasing success of individual courses, knowledge surveys inform curriculum development to better achieve, improve and document program success.