

**Variation and Selection in the Egyptian Origami Bird (*Avis papyrus*):  
Sample Answers**

1. Did your experiment result in better flying birds?

**Most students will answer “yes.”**

2. Evolution is the result of two processes: variation and selection. .

a. How did your experiment produce variation among the offspring?

**Mutation of wing length, width, and position cause variation among babies.**

b. How did your experiment select offspring to breed the next generation?

**Only the best fliers had opportunity to breed, offspring's characteristics are similar to selected parents.**

3. Compare your youngest bird with your neighbor's youngest bird.

a. Compare and contrast the wings of of other birds with your own.

**Best fliers usually have narrow wings. Often front wing shorter than very long back wing.**

b. Explain why some aspects of the birds are similar.

**Similar selection conditions for all birds.  
Only birds who flew longest distance had opportunity to breed.**

c Explain why some aspects of the birds are different.

**Mutations are random. Nobody chose which mutations happened.**

4. Predict the appearance of your youngest bird's descendants if.

a. the selection conditions remain the same, the longest flying bird survives and reproduces.

**Bird flight distance continues to improve.**

b. the selection conditions change the worst flying bird survives to produce the most offspring.

**Birds which fall out of the sky the way bricks do will breed more often. Eventually, have mostly broad-winged, poor flying offspring.**

c. the selection conditions change and the bird whose color blends with its environment survives to produce the most offspring.

**More blending parents escape predators and live to reproduce. More blending babies hatch. Selection for long distance fliers continues.**