

Name: \_\_\_\_\_

Date: \_\_\_\_\_

### Variation in Traits Student Pre- or Posttest (Answer Key)

1. Circle all of the traits.

- a. The number of spots on a dog
- b. The clothes a person is wearing
- c. The six legs on a ladybug
- d. The length of a sunflower's stem

2. Look at the picture of a plant on the slide.

a. What are three traits of the plant?

**Ideal response (Many answers are possible.):**

Leaves \_\_\_\_\_

Petals \_\_\_\_\_

Stems \_\_\_\_\_

b. Now think about 10 more plants of the same kind. What three trait variations might you see?

**Ideal response (Many answers are possible.):**

Plant height \_\_\_\_\_

Leaf shape \_\_\_\_\_

Leaf size \_\_\_\_\_

3. Maria found a grasshopper on the sidewalk. She wants to put the grasshopper where it has the best chance of surviving. She sees three areas nearby: a green meadow, a brown desert, and a black parking lot.

Where should Maria put the grasshopper so it will have the best chance of surviving? Why?

**Ideal response:**

Maria should put the grasshopper in the green meadow because this is the grasshopper's environment. The grasshopper blends in with the green grass, and there's plenty of food for it to eat.

4. Carla loves fish. In a small pond near her house, she noticed some small fish with long, sharp spines and other small fish with short spines. Carla saw bigger fish in the pond chasing and eating the small fish. The bigger fish chased the small fish with short spines 10 times, but they chased the small fish with long spines only one time.
  - a. Which small fish have a better chance of surviving—the fish with short spines or long spines? What evidence supports your answer?

**Ideal response:**

The fish with long spines have a better chance of surviving because the big fish only chased them once. The big fish chased the fish with small spines 10 times, so they'll catch and eat more of them. This means that more of the fish with long spines will survive.

b. If Carla came back to the pond many years later, what would she see?

1. Most of the fish would have long spines.
2. Most of the fish would have short spines.
3. There would be no change from today.

Why did you choose this answer?

**Ideal response:**

Years later, I think most of the small fish will have long spines because the big fish would have eaten most of the fish with short spines, and the long-spined fish would have babies with long spines.

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