



## ANSWER KEY

### Exercise: 1

**Instructions:** Bruneau Sand Dunes contains the largest single-structured sand dune in North America. Geologists believe the dunes started forming 15,000 years ago. By doing this exercise, you will become much more familiar with the geology and ecology of this area. Use your knowledge to answer the following questions completely and accurately:

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1. How does the formation of a wind shadow help the formation of sand dunes?

Wind blows quickly at the base of the dune and picks up sand grains. As the wind moves up the slope it loses power and begins to drop some of the sand it is carrying. As the wind passes the top of the dune it reaches the wind shadow which causes a decrease of air speed and the sand particles are deposited directly on the other side of the dune. The other side of the dune is steep compared to the side facing the wind. This process is what causes the formation of the sand dunes.

2. Would you expect the steep side of a sand dune slope to be facing the wind or away from the wind?

The steep side of the dunes should be facing away from the wind. The side with the gentle slope should be facing the wind.

3. What three things were required in order for the Bruneau Sand Dunes to form?

Three things required are a constant wind, a large amount of sand, and a trap for the sand where it can begin to collect.

4. In looking at the pictures, what types of wildlife and vegetation would you expect to find in this area?

The majority of the area is desert. One would expect to see life forms that are adapted for a desert environment including lizards, raptors, and rabbits. However, there are also lakes and one could expect to see waterfowl.

5. If wind is constantly reshaping the sand dunes, why do these sand dunes never move very far?

The sand dunes are always moving, but the reason the dunes never move very far is because the wind blows from different directions. Because of this, the sand dunes never move far from their origin.

6. Would you want to visit the Bruneau Sand Dunes? Why or why not?

Answers can vary based on opinion.