

Sand cats have amazing adaptations to help them survive in the desert, even sand kittens like Layla! Test your desert knowledge with these True or False questions and then do the sponge test.



### True or False Test:

1. The Sahara Desert is the largest desert in the world.
2. Sand cats, like many desert animals avoid the heat by being more active at night.
3. Fish cannot live in the desert.
4. Kangaroo rats can go their whole lives without drinking any water.
5. Many mammals that live in the desert have very small ears.
6. A camel's hump stores water.
7. A Gila monster may spend as much as 50% of their life underground avoiding the heat.
8. The sidewinder snake moves in a S-shaped motion to keep most of its body from touching the hot sand.
9. The desert toad can live underground 10 months of the year.
10. Roadrunners have solar panels on their back.

This test will show the different ways desert animals avoid the heat.

You will need the following materials:

- 2-4 sponges (you can use 4 whole sponges or cut 2 in half to make 4 pieces)
- Marker
- Plastic baggie
- Sand or any non-absorbent material
- Cookie sheet or any waterproof surface
- Scale



## Sponge Test:

1. Label each sponge:

S = to represent animals that hide in the shade

B = to represent animals that burrow underground

W = to represent animals that have thick, waterproof skin

C = to represent the control (no treatments)

2. Wet each sponge so they are just saturated with water.

3. Weigh and record the weight of each sponge.

4. Place the W sponge in a plastic baggie and seal.

5. Pour 2-3" of sand into a small container and bury the B sponge 1" deep in the sand.

6. Place the W sponge, the container with the B sponge and the C sponge onto a cookie sheet and place in a sunny location.

7. Place the S sponge in a shady location as close to the other sponges as possible.

8. Let them sit for at least 24hrs.

9. Weigh all four sponges after the 24hrs.

10. Compare the weights of each sponge for each treatment. Which was the heaviest (kept the most water) after 24hrs? Which one was the lightest (lost the most water)? Which, if any, kept more water than the C sponge?

**True or False Answers:**

1. **False** – The Antarctic Desert (Antarctica!) is the largest desert! Deserts can be hot or cold, it's the amount of precipitation (less than 10"/year) that makes it a desert.
2. **True** – Many animals choose to be more active during the night (nocturnal) when it's cooler and a little more humid.
3. **False** – Desert pupfish can live in desert streams/springs and can tolerate water that can reach 100 degrees!
4. **True** – A Kangaroo rat's body is designed to pull all water out of the food it eats and keep it in their body.
5. **False** – Most mammals' ears are large and act as air conditioning units to help keep the animal cool.
6. **False** – The hump stores fat, not water. The fat is a source of energy for long journeys and water is a by-product as the body breaks down the fat.
7. **False** – Gila monsters can actually spend 98% of their life underground avoiding the heat!
8. **True** – This type of movement works as only a couple parts of their body is touching the hot sand as it moves sideways across it!
9. **True** – The desert toad seals itself underground surrounded by a gelatinous secretion to keep it moist and only comes out when it rains!
10. **True** – During the cold desert nights, roadrunners go into a torpor to conserve energy. When the sun rises, they expose their dark back and feathers to absorb the heat of the sun so they can speed through their day!