

Animals of the Chihuahuan Desert

How High Can You Jump?



One interesting characteristic of some animals in the Chihuahuan desert is their jumping skills.

Scientists calculate an animal's jump in two ways: vertically and horizontally. How high an animal can jump is vertical while how far they can jump is horizontal.

In this activity, your students will compare their vertical jump to the jump of some of the animals discussed in this lesson plan, including the mountain lion and roadrunner. They will then compare their horizontal jumps. Comparing horizontal jumps will require more space to execute than the vertical jump activity so it is recommended to do the horizontal activity outdoors if possible.

Materials Needed

- Measuring tape
- Painters tape
- Butcher or poster paper
- Masking tape
- pencils

Discussion

One interesting skill many animals have is the ability to jump high and long distances. Why do you think they can do this? *[Give students the space to answer]*

- Rattlesnakes don't jump, they strike. This horizontal "jump" can be anywhere from one third to one half the snake's body length.
- Desert cottontails can jump up to two feet high when startled.
- Javelinas don't jump. But they can run up to 20 feet in a dash.
- Coyote have a vertical jump of 5 feet.
- Gambel's quail don't jump either. However, when startled they can be known to jump a few inches off the ground.
- Roadrunner use their wings to help increase their vertical jump. When stalking airborne prey (such as insects or hummingbirds) roadrunners will jump into the air and use their wings to help lift them to reach their prey, snatching the insect or hummingbird from mid-air before gliding back down to the ground.
- Mountain lions have a horizontal jump of 40-45 feet and a vertical jump of 18 feet.
- White-tailed deer have a vertical jump of up to 8 feet. However they don't have the horizontal jump to match it. They can jump high, but not far!

Vertical Jumping Set Up

Using measuring tape and butcher or poster paper, create a vertical jump sheet on the wall. This vertical jump sheet should reach 10 feet high, or as high as the wall of your classroom reaches. A ladder will likely be needed to do this.

Tell students: A mountain lion can jump 20 feet vertically. How high can you jump?

Activity

1. Invite your students, one at a time, to walk up to the wall and do a standing vertical jump, as high as they can go.
2. Mark on the jump sheets approximately the height each student reached.
3. You can measure either the approximate height the students' heads reach or they can reach up with their hands and the jump can be measured to where their fingertips can reach.
4. Compare the heights they reach to the heights of some of the animals in this lesson plan.

Horizontal Jumping Set Up

Using the masking tape, mark a starting point on the floor that the students can use for their horizontal jumping.

Tell students: A mountain lion can jump a distance up to 45 feet.

Activity

1. Invite your students, one at a time, to approach the masking tape starting line and jump as far as they can.
2. Once each student lands, mark that spot on the ground and measure how far their horizontal jump was.
3. Compare the distances they reach to the distances of some of the animals in this lesson plan.