



## **WATER RETENTION EXPERIMENT**

To understand how cacti retain water in harsh, hot deserts, (without the excellent air-conditioning of our Jeep models) here's an experiment that will help your little explorers understand:

1. Wet three paper towels until they are soaked, but not dripping.
2. Lay one of the paper towels flat on a window sill or other flat surface.
3. Roll up the second paper towel, paper clip it to keep it rolled up, and put it on same surface as the first.
4. Put the third paper towel on a piece of waxed paper that's around the same size. Roll up the waxed paper and the paper towel together, and paperclip them together. Place this next to the other two.
5. Leave all three paper towels on the windowsill for 24 hours, then check them.

You should find that the flat one will be dry. The rolled one will be dry or mostly dry. But the paper towel that is rolled up with the waxed paper will still be wet.

This is essentially how cacti and other desert plants keep themselves from drying out – their outsides are waxy, helping to keep the moisture inside from evaporating into the dry desert air. That's part of the reason they can survive on the little water they get in the desert.

(If you don't have any waxed paper, you can make some using crayons or candles and an iron, but this is probably a job for an adult, as irons aren't really safe for young explorers.)