



# Drink Like a Thorny Devil

## **Audience**

Activity designed for ages 8 years old and up.

## **Goal**

Students will understand capillary action and how it is important to the Thorny devil's survival.

## **Objective**

- To learn about Thorny devils and their adaptations.
- To learn about capillary action and how it works.

## **Conservation Message**

The main diet for Thorny devils is ants. They are ant eating specialists! These lizards eat a huge number of ants thus keeping their populations from growing too large. Since they also live in an extremely arid habitat, they have many unique adaptations to survive in their desert environment. It is important that we continue to make sure this species thrives in its very specialization habitat.

## **Background Information**

Thorny devils are found in the Great Sandy Desert of Northwest Australia. Since they live in an environment with very little water, they need to utilize of all the water they can- like rainwater, standing water, soil moisture and dew. They do this by taking advantage of the grooves on their skin which channel water to their mouths through capillary action! Thorny devils have extremely textured scales to direct water to their mouths for drinking. The base of each spine is surrounded by a deep groove that effectively collects water and these grooves interconnect to enable capillary movement of water along the body, even against the pull of gravity. These grooves continue onto the head and empty into the angle of the mouth for drinking.

## **Materials Needed**

- 2 cups of equal size
- 1 napkin

- Observations sheet
- Food coloring (optional)
- Pen/Pencil

**Length of Activity**

20-30 minutes

**Procedure**

- Before beginning your experiment, make a hypothesis or educated guess about what will happen with the napkin and water. Write your hypothesis on the Observations sheet.
- Completely open your napkin. Twist it into a long, tight rope.
- Fill one cup with water, nearly full and add desired amount of food coloring (The brighter the water the easier it will be to see).
- Place the second cup, empty, next to the first cup.
- Put one end of the napkin rope into the empty cup and the other end of the napkin in the cup with water.
- Observe what is happening with the water. Leave your experiment to continue.
- Observe your experiment after 5 minutes. Write down your observations.
- Observe your experiment after 10 minutes. Write down your observations.
- Leave your experiment for a longer amount of time, perhaps an hour or two. Did anything change?
- Determine if your hypothesis was correct.



# Observations

Hypothesis:

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Starting Observations:

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Observations after 5 minutes:

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Observations after 10 minutes:

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Was my hypothesis correct? (Circle one)

Yes

No