DO TRY THIS AT HOME: a Jump Series

STEAM
HOME EXPERIMENT

The most important scientific tools are not expensive or fancy. And they are something you already possess! We're talking about your natural curiosity, your sense of exploration and your love for the unknown. With these tools, you can turn your world into your very own science lab every day. To get you started, Jump Simulation has created mini-lessons you can do at home based on the popular Jump STEAM Mini-Med program. Have fun and make sure to ask your parents for help if you need to.

WATER

QUESTION: **Why do doctors say it is so important for me to drink water every day?**

ANSWER: Every organ system in your body depends on water. In fact, your body is made up of about 60% water. Water plays many important roles in your body like helping to regulate your body temperature and providing cellular support.

1. Regulating body temperature: What happens when you get too hot? You sweat. How does this help cool you off? When you sweat, the water in your perspiration starts to rise in temperature as it absorbs and pulls heat away from your body. Eventually, the water will get so hot, it will evaporate and make you feel cooler.

2. Cellular support: Water also helps keep your cells healthy and strong by providing cellular support. Try this mini experiment at home to see how:

- Take a full, plastic water bottle and try to squeeze it. What happens? Can you crush it? Now dump out the water and try to crush it again. What happens now? It is a lot easier to crush an empty water bottle than a full water bottle. This is similar to what happens in your cells.

WHAT YOU'LL NEED:

Hot dog, baking soda, airtight container

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1 OBSERVE: *Water provides support to cells.*

2 QUESTION: *What happens if the water is removed from cells?*

3 HYPOTHESIS: *We can use baking soda to remove all the water from the cells in a hot dog and dry it out.*

4 EXPERIMENT:

a. Observe the hot dog. Measure and record its length, diameter and mass if possible. Make a note of the texture and appearance of the hot dog.

b. Add a layer of baking soda to the air tight container (approx. 1 in deep).

c. Place the hot dog in the container.

d. Add another layer of baking soda onto the hot dog (approx. 1 in deep).

e. Place the lid on the container.

f. Leave the hot dog to sit at room temperature for 1 week.

g. Remove the hot dog and make observations.

h. Bury the hot dog in fresh baking soda and leave it for 1 week again.

i. Remove the hot dog and make observations.

5 COLLECT, ANALYZE AND REPORT DATA

a. How did the hot dog change over time?

SOMETHING TO CONSIDER

When a flower is healthy it stands up tall. What happens if the flower doesn't get enough water?

WANT MORE? *Take a look at all of the Jump STEAM courses we have coming up at jumpsimulation.org/STEAM*

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