

MUMMIES

OF THE WORLD

THE EXHIBITION



Materials:

- Baking Soda
- Construction Paper
- Datasheet
- Fruit Cocktail Cup
- Markers
- Plastic Spoons
- Plastic Jar
- Plastic Snack bags
- Play-Doh
- Scissors
- Table Salt
- Tape
- White Vinegar

Canopic Jar Activity Instructions:

- Have you ever wondered how to stop food from rotting? Let's preserve fruit with different materials. First, make a prediction about which you think works best—salt, baking soda, or vinegar?
- Now, open your **fruit cup**. Using a **spoon**, place a couple of pieces of fruit in both the **baking soda** and **table salt** jars. Put their caps back on and make sure to seal them nice and tight. Then, shake them gently to make sure your fruit gets completely covered.
- Place fruit in the empty **jar** and pour in **vinegar** to cover everything. Then, put the cap back on.
- Put fruit in the **plastic snack bag** and seal it for your *control*. Because this fruit is unchanged, we can compare it to the fruit mixed with baking soda, vinegar, and salt to see if those ingredients make a difference.
- Once you have finished prepping your jars, it is time to decorate! Using **scissors**, cut strips of **construction paper** to **tape** around the jar and use **markers** to add creative designs. Be careful, though—you'll want to make sure that your strips are short enough to leave a gap on your jars so you can observe changes to the fruit without having to open them.
- You can also use **Play-Doh** to make a top for your canopic jar. Traditionally, Ancient Egyptians carved animals or humans to represent gods and protect each organ.
- Continue to check your jars over time and record your observations on the **datasheet**!

This experiment is inspired by StudentSavvy.org.

*STEM in a Box is supported by LEGO Community Fund U.S.
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What is the science?

Ancient Egyptians believed that a dead person's body needed to be saved, or preserved, from rotting for that person to live well in the afterlife. They used a process called mummification to preserve their dead. During mummification, Ancient Egyptians washed the body, removed the organs, and dried everything with a chemical called natron – which we now know is a mix of hydrated soda, ash, baking soda, and salt. Once the organs were dried, they were stored in Canopic Jars inside the tomb and the body was wrapped and stored in a sarcophagus.

We tested three different materials to preserve fruit with our experiment! Baking soda and salt are both a part of the natron that Ancient Egyptians used. They can preserve the fruit by removing water from the fruit. Without any water around, molds and bacteria that rot fruit can't grow! We also tested vinegar, which is used to preserve a lot of food that we eat. If you like to eat pickles, you've eaten a cucumber that is preserved in vinegar! Vinegar is a weak acid, which means it stops molds and bacteria from growing and rotting our food, but it isn't such a strong acid that it hurts us when we eat it.

As your young scientists:

- How can we tell if something is rotting?
- How often do you plan to check on your experiment?
- Your datasheet has space for weekly observations. How does the fruit look on days 1-6?
- Why doesn't fruit rot inside fruit cups (like the one we sent home to you)?

More to explore:

- How many preserved foods can you find in your house? Can you find anything that is dried or pickled?
- Watch our Sand Drag Science Sunday: <https://ctsciencecenter.org/blog/science-sunday-sand-drag/>
- Read a blog post about Archaeology: <https://ctsciencecenter.org/blog/stem-career-spotlight-archaeology/>

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