

Teacher Prep

Each group of students will need three 1/8 apple slices.

- Use a sharp knife to cut an apple evenly into eight pieces.
- To do this:
 - Cut the apple in half.
 - Cut each of these pieces in half so you have fourths.
 - Cut each of the fourths in half so you have eighths.



Egyptian Tombs

Ancient Egyptians honored their dead with elaborate tombs and burials. The more elaborate the tomb, the more important the person was in life. Kings and queens had the biggest and most expensive tombs

When an important ancient Egyptian died, his or her body was mummified. Mummification is a process of preserving the body so it decomposes as little as possible.



Mummies were often placed in a fancy coffin called a sarcophagus. The sarcophagus was often created to look like the person buried inside.



The mummy and the sarcophagus were then placed in a tomb. The tombs could be filled with gold and personal belongings. The Egyptian pyramids are some very fancy tombs!



Experiment Set Up

Follow the instructions to figure out how to best preserve an apple.

Experiment Set-Up:

- Use a permanent marker to label your baggies.
 - Label for Bag #1: Just Apple
 - Label for Bag #2: Apple with Natron
 - Label for Bag #3: Apple with Soda Ash



- Add chemicals to the each bag as follows:
 - Just Apple: None
 - Apple with Natron: Add 1/8 cup soda ash, 1/8 cup baking soda, and 1/8 cup salt
 - Apple with Soda Ash: Add 1/4 cup soda ash
- Add a slice of apple to each bag.



- Seal the bags. Do not squeeze extra air out of the bag before you seal it. This could cause the chemicals to leave the bag!
- Gently shake each bag so that the apple is coated with the chemicals.
- Ask your teacher where to place your bags. You will leave your bags in a safe spot for 5 days.

Making Observations

- Get 3 paper plates, 2 pieces of paper towel, and a pair of disposable gloves from your teacher.
- Use a pencil, pen, or sharpie to write a name on the top of each plate.
- Your plates should say:
 - Name for plate #1: Just Apple
 - Name for plate #2: Apple with Natron
 - Name for plate #3: Apple with Soda Ash
- Put your disposable gloves on.
- Take each apple slice out of the bag and place it on the correct plate.
- Brush off the chemicals on the apple with a dry paper towel.
- Make observations of each apple and fill out the table below. Then, answer the question at the bottom of the page.

	Size of Apple	Color of Apple	Moisture Presence
Just Apple			
Apple with Natron			
Apple with Soda Ash			

Which apple was mummified the best?

Teacher Key

	Size of Apple	Color of Apple	Moisture Presence
Just Apple	no change	brown spots	Very wet/moist
Apple with Natron	apple and apple peel are shrunk	apple is very brown, peel is very dark	Dry and wrinkled
Apple with Soda Ash	apple and apple peel are shrunk but not as much as control	apple is very brown, peel is very dark	Wrinkled and wet/moist

Which apple was mummified the best?

The apple with natron.