Ancient Egyptians believed that, after dying, a person passed through the Underworld to the Afterlife. For this reason, it was important to preserve the body so that it would not decompose. They developed a long and elaborate method of mummification. Part of the process involved removing the internal organs, drying them, and placing them in canopic jars. The body and the organs were dried using natron, a naturally occurring carbonate salt which was found in Egypt in a place called Wadi Al Natrun. It can also be found at other locations throughout the world. For detailed information about Ancient Egypt and mummification, try [http://www.ancientegypt.co.uk/menu.html](http://www.ancientegypt.co.uk/menu.html).

The ancient Egyptians mummified many things including alligators, birds, cats, and foods. Below are the instructions you need to mummify an apple slice. Since natron is not readily available in the grocery store, you will be using salt instead, which acts in a very similar manner. Remember to ask an adult for help with this experiment!

1. Buy a pound container of plain uniodized salt. The least expensive is fine (it will cost about 60 cents), but any kind of salt will work.
2. Cut two similar slices of apple (wedge) about a half an inch thick. Pick one for the mummification experiment below, and set the other one aside. On a sheet of paper record the date and write down what the slice looks like and feels like. Is it moist? What color are the skin and the flesh of the slice? Measure the length and thickness of the slice at its widest part and record the measurements.
3. Weigh the apple slice. Use a kitchen scale, or you can make a scale: lay a ruler cross-ways across a ball point pen. Place the slice of apple on one end of the ruler and paper clips (or pennies) on the other end. Record the number of paper clips (or pennies) it takes to balance the ruler.
4. Pour some salt in the middle of a small paper or plastic plate and place the slice of apple on the salt.
5. Cover the apple slice with a generous pile of salt.
6. Set the dish out of the way so that it will not be disturbed and wait 2 weeks (14 days). Set the unaltered slice of apple nearby.
7. Observe the unaltered slice over the course of the 2 weeks. Jot down how it changes, but if the unaltered apple slice gets unpleasant, you can throw it away. The important part about this one is that it is the “control” – it allows you to see what happens when no mummification process is followed.
8. After two weeks, observe the salt pile. Why do you think the surface of the pile of salt is crusty?
9. Uncover the mummified slice of apple and carefully brush all the salt off of it. Measure the length and thickness of the slice at its widest part. Compare the measurements with the original ones. Describe how and why the measurements are different.

Do you think the slice is heavier or lighter than it was when you started this experiment? Using the same technique as you did in step #3 above, weigh the slice of apple. Does it take more or fewer paper clips (or pennies) to balance the ruler? Why do you think this is?

The salt has absorbed the moisture from the apple, thus preserving it. The mummified apple is darker, but not moldy. This is similar to what would happen when the Ancient Egyptians mummified a body. If you wish, you may now wrap your apple slice mummy in a band of cloth. Congratulations – you are now promoted to Senior Apprentice Fruit Embalmer!

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