

Weighing Apples

Standards of Learning

Math: 3.9, 4.6, 5.8

Science: 3.1, 4.1, 5.1

Objective

Students will:

- Make observations, create inferences, and draw conclusions about apples
- Observe and find the weight of apple slices before and after drying

Materials

- Apples (cut into slices – one slice per student)
- String
- A place to hang string (to allow apple slices to hang dry)
- Scales

Background Knowledge

Virginia growers produce an average of 8 to 10 million bushels of apples a year, making apples the state's 17th largest agricultural commodity. The majority of Virginia apple orchards are in the Shenandoah Valley.

Apples are one of the many fruits that contain water, which contributes to the weight of the fruit. As apple slices are dried, their weight decreases due to the release of the water. This investigation will allow the students to make distinctions among observations, inferences and conclusions; make notes of their observations; and appropriately measure and record their data.

Procedure

1. Ask students to think about what an apple tastes like. As they share their descriptions, make a list on the board. See if students will come up with the fact that apples taste juicy/watery.
2. Ask the students to get out their science notebooks so they can write down observations and data.
3. Distribute an apple slice and small piece of string to each student.
4. Ask the student to write observations of their apple slice down in their science notebooks. They can also draw a picture to help detail what the apple slice currently looks like.
5. After the students have completed their observations, have them tie their strings around their apple slices.
6. Have the students take turns finding the weight of their apple slices (including the strings) using the scales.
7. The date and the weight should be written in their science notebooks.
8. After all the data has been collected and recorded, hang the apple slices to dry.
9. Ask the students to make a prediction/hypothesis about what will happen to the apple slice as they are hung to dry.
10. About three days later, have the students take down their apple slices and record their observations in their science notebooks. Again, they should draw pictures to help detail what the apple slices now look like.
11. After recording their observations, ask the students to make a hypothesis regarding



- whether they think the apple slices' weight will have changed in comparison to the first time the slices were weighed.
12. After predictions have been made, have the students take turns finding the new weight of their apple slices (including the strings) using the scales.
 13. The date and the new weights should be written in their science notebooks and compared to the first weights.
 14. After the data has been collected and recorded, hang the apple slices back up to dry.
 15. About three days later, have the students take down their apple slices and record their observations in their science notebooks.
 16. Repeat steps 11-14 to finish the investigation.
 17. After all the data has been collected, discuss with the students why the apple slices' weight decreased over a period of time. Lead the discussion to the fact that, as the slices dried, they lost water and, therefore, the weight decreased due to the decrease in water weight.

Extension

Create a line graph using the weights of the apple slices.

References

<http://urbanext.illinois.edu/apples/projects.cfm>

