

# ***What happens to food when it is not preserved?***

## **Science Experiment**

**Grade:** 4-7

**Purpose/Objective:** Students will understand why we need to preserve food and the various methods we use to preserve food. Students will understand how food was preserved in 1917.

**Activity:**

**Introduction Discussion:** Start the activity with a discussion on why preservation of food is important. The activity will show different methods and ways to preserve food. What are the components of healthy eating? Discuss that we need fresh fruits and vegetables for a healthy diet. We can get these foods fresh all year around in our grocery stores, but it wasn't that easy in 1917. People had to *preserve* their food so they could have it during the winter months. What does preserve mean?

If you left your lunch in the fridge, would you take it to school for lunch the next day? If you left your lunch on the windowsill at home on a hot day, would you take it to school for lunch the next day? What happens to food when it is left out at room temperature? The following activity will help us determine what will happen and which method is the best for preserving food.

**Observation/Experiment:** Investigating methods of preserving food

- label five test tubes A - E and use forceps to put three frozen peas in each tube
- put tube A in a fridge
- leave tube B at room temperature
- place 5 cm<sup>3</sup> of one of the following solutions in each of tubes C - E (a different solution in each tube)

**Suggested solutions:**

- distilled water
- dilute salt solution
- concentrated salt solution
- alcohol
- sugar solution
- vinegar
- sodium nitrate solution

■ plug each tube with cotton wool and leave with test tube B at room temperature until next lesson which will ideally be at least three days away. **Possible extension activity:** Students could look at different foods at

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**Harvest Time**  
**Pre/Post Visit Activities**



home or in the grocery store to see which have the longest and shortest sell-by dates. They can record what the food is and how they think it has been preserved.

**Post Discussion:** How do we preserve food today? (Talk about refrigeration, freezing, canning, etc.) How do you think food was food preserved in 1917?

[See Teacher Resource Information: Food Preservation] Discuss how the methods used in 1917 relate to the ways the peas were preserved in the various solutions. You can use the Jensen Farm CD-ROM to show a map of the farm and where different buildings are as you talk about them as they relate to food preservation.

[Parts of this activity were modified from Seeing Science with CCLRC—  
<http://www.seeingscience.cclrc.ac.uk/Home/>]

**Use in Classroom:** Science

## ***Drying apples for preservation***

**Grade:** Elementary

**Purpose/Objective:** Students will see a simple example of how much longer dried fruit would last as opposed to fresh fruit just left out.

**Activity:**

1. Have each student bring in an apple, or have some apples available. Leave one apple out on the windowsill. With the rest of the apples, have them sliced in thin round slices (not wedges).
2. Have students use thread and needle to string them up so they can hang and dry. Let the apples dry. As a class, observe each apple to see which one lasts longer before going bad, the apple on the windowsill or the dried apples.
3. Discuss that this process is the same that families may have followed in 1917. Families would have to preserve food on the farm from the summer months so that they could have food in the winter months. Families would preserve their food with the following methods: drying, bottling, smoking meat, and/or using the root cellar. [See Teacher Resource Information: Food Preservation].

**Use in Classroom:** Science