

University of Pittsburgh

School of Education

Lesson Plan

Prekindergarten Practicum / Fall Term

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What is the big idea that includes your lesson?

Apples turn brown due to oxygen. Lemon preserves the apple and prevents it from turning brown because it protects the apple from the oxygen.

Lesson Objective(s)

The student will be able to understand the importance of a hypothesis by making a prediction about which apple will turn brown faster. Will it be the apple with or without the lemon juice?

The students will be able to correctly answer the apple question by allowing the students to observe the apples during small group time and having them circle the correct answer on their apple recording ticket.

The student will be able to explain why the apple without the lemon turned faster by helping the teacher conduct a simulation.

Standards

Standard 3.1.K.A9 : Plan and conduct a simple investigation and understand that different questions require different kinds of investigations.

Use data/evidence to construct explanations and understand that scientists develop explanations based on their evidence and compare them with their current scientific knowledge.

Materials needed

- Picture of apple with lemon and apple without lemon
- Apple recording tickets
- A hypothesis chart to tally how many children thought it was the apple with lemon and how many thought it would be the apple without the lemon
- A book entitled: Applesauce
- Five apples cut up into pieces
- One jug of lemon juice for the experiment
- Pencils and crayons

Lesson Launch

The teacher brings over a tray of apples and a bottle of lemon juice. The teacher asks the students about their applesauce making experience that happened the day before. What kind of ingredients did they use? What was the first step in the applesauce making process and the last step? The teacher will read “Applesauce Making Season” in order to activate the student’s prior knowledge regarding the apple making process that happened the previous day.

Content to be taught and/or discussed

The teacher will explain to the students that they will be conducting a very important apple experiment during their small group activity time. The teacher will tell the students that before they begin, she wants the students to make a special prediction. The teacher explains that she decided to put six apple slices on a tray. Three of these apple slices she covered in lemon juice and three of these apple slices have no lemon juice on them. The question of the day is: ***Which set of apples will turn brown faster. Will it be the apples with the lemon juice or will it be the apples without the lemon juice?*** During this time, the teacher will ask the students to raise their hand if they think it will be the apples with the lemon juice and teacher will tally this on her prediction chart. Again, she will ask the friends to raise their hand if they think it will be the apples without the lemon juice and will tally this on her observation chart.

During the small group activity the teacher will be working with a group of four students as they observe which set of apples is turning brown the fastest. The teacher will have a worksheet for the students to write their name on and fill out. If they see that the apple with the lemon juice is turning brown faster they will circle this choice on their paper. If they think it is the apple without the lemon juice that is turning brown the fastest they will circle the picture of the apple without the lemon juice.

Lesson Close

After lesson time the teacher will ask the students if they remember which apple seemed to turn brown the fastest (apple without the lemon juice.) The teacher will then explain to the students that the reason why the apples without the lemon juice turned brown fastest is because they were exposed to the open air and the oxygen made it brown. The teacher will be simulating this with a very vibrant visual. The teacher will then explain that the apple with the lemon juice stayed fresh for so long because the lemon juice protected the apple from the oxygen like a blanket. Thus, the apple slice was not exposed as much to the oxygen.

Adaptations

During the circle time activity, the teacher should make sure that every student who has their hand raised is able contribute to the conversation. The teacher may prompt some students with specific questions such as

“Can you tell me more about what you saw when you observed the apples?” Adaptations will be made for students who need to sit closer or farther away on the rug depending on their attention level. In addition, the teacher will have an example of a pair book page already made for those who need to look at an example before they begin.

Extensions

For the students who are familiar with this experiment, the teacher will ask them to hypothesize as to why it might be that the apple without the lemon juice turned brown. Why is it that the lemon juice preserves the apple? Can you show me how the lemon juice was being a blanket to the apple?