

Day 1-Air is There

Student Teacher Aimee Snyder

Date 2/3/12

Grade Level 2nd Subject Science

Supervisor Dr. Shugar

PRELIMINARY PLANNING

PA Standards:

S4.A.2.1.1: Generate questions about objects, organisms, or events that can be answered through scientific investigations.

S4.A.2.2.1: Identify appropriate tools or instruments for specific tasks and describe the information they can provide (e.g., measuring: length - ruler, mass - balance scale, volume - beaker, temperature - thermometer; making observations: hand lens, binoculars, telescope).

Pre-assessment: Overview of air: (5 minutes)

- **What is air?**
 - Air is a gas that is all around us. Without it, we would not be able to live.
- **How do we use air?**
 - We use it to breathe in order to live.
- **Can we see air?**
 - No
- **How do we know it is there?**
 - Because we are in fact breathing, we can feel it.
- **Fan example:** Turn the fan on and have the students feel the air that is being blown on them. Explain that **fans are used to move the air around a room.**
- **Windy Day example:** We can feel air (& sometimes see it) on a windy day. The trees, leaves, and our hair can blow in the air.

*This science unit we will be learning about air and weather and experimenting to learn more about these topics.

Objectives: The students will experiment with different materials in order to learn about air. They will be able to make a list of ways that air was used during the experiment and talk about what they have learned about air.

Individual Modifications: The students will be working in groups of four. The investigation will be done as a group so they can use each others' ideas to help the learning process. The list will be created with the entire class so each student can understand how air was used.

- Antonio will need to be told the directions more than once and I will need to closely monitor him. If not, he will not partake in the experiment.
- Marcellus will need to be reminded of the rules and what not to do with the materials.

Materials:

- 1 zip bag, 1 liter
- 1 feather
- 1 plastic foam ball
- 1 half flex straw (flexible end)
- 1 cotton ball

For Each Student

- 1 balloon, round
- 1 piece of scratch paper
- 1 teacher sheet no. 1- *Letter to Parents*
- 2 balloon pumps
- 2 sheets of chart paper
- 2 pens
- Scissors
- Air weather journals



For the Class

LEARNING SEQUENCE

Description

Time 5 minutes

INTO

Introduction/Motivation/Focus Attention

- Today we will be investigating air. You each will be receiving a bag full of materials. Let's take a look and see if we know what some of them are.
 - I will show the bag full of materials to the students and see if the students can identify them one at a time.
 - When the last item is out of the bag and it is empty I will ask **“Is there anything else in the bag?”**
 - Some students should reply that there is **air in the bag.**
 - **How can we tell when there is air in a bag or another container?**
 - Show bag example.
 - One bag will have air in it the other will not. Compare and contrast.
 - I will tell the students that we will be using these objects to explore air and learn more about it.
- I will go over some rules that the students need to know before starting:
 - **Do not use straws to blow on neighbors**
 - **Do not blow up balloons and then release them around the room.**

Description

Time 10 minutes

THROUGH

Learning Activities (Input, Modeling, Checking for Understanding, Guided Practice, Independent Practice)

- I will have number ones go to the back table and pick up **four** bags for each of their group members.
- The students will begin exploring the objects in their bags.
 - I will encourage them to describe and talk about what they are doing.
 - The straw can be used to blow other objects around (feather, ball, paper)
 - Some objects will be released in the air and fall to the ground.
 - All activities that are safe and do not bother other students should be accepted.
 - The students will have ten minutes to explore their materials and I will be circulating the room to observe and give encouragement.

- I will use clapping patterns to get the attention of the students if I need to talk/tell them about something in the experiment.

Description

Time 10 minutes

BEYOND

Closure (Review, Check for Understanding, Summarize, Future Forecast, Transition)

- When the students no longer have new ideas, I will begin to ask them to clean up. They will put all of their materials in their bag. They will write their name on the paper so they know which bag to take home.
- We will then turn to the Promethean board:
 - I will ask the students to give me ways in which they used the materials and air.
 - We will make a list on the board to be saved for tomorrow's lesson.
 - I will require that each group try to give me one way their group used the materials.
- We will discuss anything new that the students have learned about air through this experiment. Once there are no more ideas, I will tell the students that tomorrow we will be learning some new vocabulary that has to deal with air.