# Lesson 2- Day 3

Student Teacher _____Aimee Snyder_____ Date __4/12/12___
Grade Level ___6th___ Subject ___Science_____ Supervisor __Dr. Shugar___

---

PRELIMINARY PLANNING

---

**PA Standards:**
**S6.A.3.2.1:** Describe how scientists use models to explore relationships and make predictions about natural systems (e.g., weather conditions, the solar system).
**S6.D.2.1.1:** Describe cloud types and measurable factors (i.e., wind direction, temperature, barometric pressure, moisture, and precipitation) that are associated with various weather patterns.
**S6.D.2.1.2:** Interpret weather data to develop a weather forecast.

**Pre-assessment:** The students will have taken their notes on this lesson and will know about certain conditions that can change the weather and climate.

**Objectives:** The students will be able to make predictions about what will happen during the experiments. They will be able to experiment with some materials with their partners.

**Individual Modifications:** The students will be able to see some of the experiments done for them, and then they can try themselves (if time).

**Materials:**
- Hot plate
- Empty Soda can
- Tongs
- Shallow pan
- Water
- Hard boiled egg
- Matches
- Glass bottle
- Paper
- Balloons
- Suction cups
- Deer park water bottles
- Vacuum tube

---

LEARNING SEQUENCE

Description_____Time__10 minutes___

INTO
Introduction/Motivation/Focus Attention

- We will do our Question of the Day and Mad Gab examples.
    - The students will listen and try to solve them.
- I will ask the students to identify what we have been learning about.

    - Air pressure
    - Types of clouds
    - Forms of precipitation
    - Humidity
    - Etc.
- We will briefly go over last night's homework/class work. I will ask the students to answer each question. This will also help them review for their quiz coming up.
- I will then explain to the students that today is a fun day. We have been working hard, taking notes, and reading the past two days, so today we will be doing experiments.
- I will show the students the different stations around the room.

Description Time 25 minutes

THROUGH

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

- I will tell the students that I will be showing them a couple of different experiments and activities and I want them to guess what will happen when I do them. They should make predictions before each experiment is completed.
- Balloon twins-
    - In this experiment two balloons are put next to each other with minimal space in between. The student will blow through the two balloons.
    - What will happen? How will the balloons move?
        - Move together. There is already air between these balloons so when air is blown through, it is gone. The balloons are trying to replace the air that is missing. When blowing stops, the balloons go back to their regular positions with air in between.
- Water bottle race-
    - The class is divided up into two teams.
    - A representative from each team will attempt to blow a piece of paper sitting on the lip of the bottle backward into the bottle (It's a race).
    - When they blow air in, the paper will pop back out in their face. The bottle is already full of air so when air is blown in, there is no room for it.
    - Have multiple students try.
- Funky tube-
    - Students will take turns spinning the tube in the air.
    - Show what happens when you cover one end with your hand (nothing) and then when both end are open (hear noise).
    - Because both ends are open, the air is traveling through the tube and as it passes through, it vibrates along the rigid tube.
- Suction cups-
    - Have students try to pull apart the cups.
    - Air pressure is a lot because there is no air in between them. When you have them separate, it is easy to pull them apart.
- "Eggselent"-
    - Peel hard boiled egg

    - Place on mouth of bottle
    - Light a piece of paper towel on fire and throw it in the bottle and recover the top with the egg so no air can get in it.
    - Because the fire needs air, it sucks the egg inward.
    - Now, similar to water bottle race. How do we get the egg out?
        - Blow air into the bottle. Air needs to escape because the bottle is already full. Egg pops out just as the paper did.
- "Crush"
    - The hot pad should be heated prior to this experiment.
    - Place a soda can on the hot pad and heat it. Use the tongs to pick it up and place in the cool water upside down (with the drinking hole) in the water.
    - What will happen?
        - Since the molecules are very spread out in the can when it's on the hot pad, there are not many. When the cool water is introduced, the molecules have to come back together. The can is crushed when these molecules come back together.

Description Time 7 minutes

BEYOND

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

- I will give the students a chance to try the funky tube experiment.
- I will ask the students to give their favorite experiment we did.
- If time, I will give the students a review of their quiz. This will be written down and can be studied before taking their quiz on lesson 2.