How Do We Measure Weather?

Objective/Purpose:

This activity teaches students about the different ways we measure and observe the weather. Students make their own rain gauges so that they can measure the weather themselves. Students also make weather journals which can be used over a long period of time.

Materials/Time Required:

1.) Clear plastic cups which aren’t tapered
2.) Rulers
3.) Crayons
4.) Permanent marker/paint pen
5.) Water
6.) Materials for making journals (i.e. paper, writing utensils, yarn, staples, etc.)

Activity time: ~50 minutes

Background Information:

Prior to this lesson the class had learned about the different types of weather and what causes it. This is a good follow up lesson since the students actually learn how we interpret the weather. Relate the topic to the students on their level by talking about the weather channel or seeing the weather in the newspaper. Ask them several questions to get them thinking about what they already know about weather predictions.

I then used the classroom computer to show the students www.weather.com, The Weather Channel’s official webpage. On the webpage, I showed the students the different ways that the weather was described: temperature, wind, precipitation, etc. We then talked about what each one of those measurements meant. I also explained what a meteorologist was and explained how even meteorologists don’t know exactly what the weather will be like.

Preparation:

In order to save time I went ahead and folded and punched holes in the paper for the journals. All the students had to do was simply tie the yarn to keep them together. Also, make sure ahead of time that the classroom internet is working properly.

Safety Issues:

There are no safety issues other than the normal issues that come along with second graders and rulers.

Activity Outline/Teacher Procedure:

As a class, each student made his or her own weather journal. The point of the weather journal is to compare the students’ predictions with that of the official meteorologist’s. Have the students date one of the pages with the date of the day prior to the next time you will work on your journals (ex: we worked on ours every Wednesday, so the next Tuesday’s date was used.) Look on weather.com to see the predicted weather for that day. Have the students write this down as “Meteorologist’s Guess.” Then have them make their own prediction about what they think the weather will be like. List this as “My Guess.” Then take up the journals so that no one can cheat. The next day that you choose to work on the journals, check
back on weather.com to see what the actual weather was like for that day. Have the students list this as “Actual Weather.” Who ever guessed the closest wins a prize and is the “Meteorologist of the Week.” This activity is fun and can last for the duration of the semester.

As a class we also made rain gauges. Have the students measure off inch marks or half-inch marks (depending on their skill level) with a ruler and mark them with a crayon on the side of a clear plastic cup. To cut down on mess, you or the teacher can trace over the crayon marks with a permanent marker for the kids. Explain to the kids that when we talk about rainfall we measure it in inches. You can also pour water into a rain gauge to demonstrate how to use them. I let my students take them home, but you can leave them at school to measure the rainfall there if you like.

Possible Questions:

1.) How to meteorologists know what the weather will be like?
2.) Can you think of other ways to measure the weather? Using just your senses?
3.) Why aren’t the meteorologists always right?
4.) Where would be the best place to keep a rain gauge and why?

Assessment/Evaluation:

Since the weather journal is an ongoing activity, progress can be seen over a longer period of time. My students actually got better at predicting what the weather would be like as the semester went on. Also, every night it looked like rain I would tell my students to put out their rain gauges and report back their measurements. We then compared every one’s numbers and tried to figure reasons why they could be different. We would then average the numbers and compare them to the measurement given on weather.com. My students loved the fact that they got to be little meteorologists and some even said that’s what they wanted to be when they grew up!