

**Project FOCUS
Best Lessons
FIFTH GRADE**

Title of Lesson: Weather Instruments

Theme: Earth/Space Science

Unit Number: **Unit Title:**

Performance Standard(s) Covered (enter codes):

S5E1

Enduring Standards (objectives of activity):

Habits of Mind

- Asks questions
- Uses numbers to quantify
- Works in a group
- Uses tools to measure and view
- Looks at how parts of things are needed
- Describes and compares using physical attributes
- Observes using senses
- Draws and describes observations

Content (key terms and topics covered):

thermometer, Anemometer, weather vane, Barometer, Hygrometer and rain gauge.

Learning Activity (Description in Steps)

Abstract (limit 100 characters): Students will explore the function of instruments that measure weather and craft a weather vane.

Details: This lesson comes after several lessons on weather patterns and clouds. We had previously spent several days recording weather values for each day on a class chart. I started of the discussion by asking the students how they thought the scientist collected the information we had been recording on our chart. This led us into our discussion of the weather instruments listed in the GPS section S4E4. I started off with a simple power point presentation on the most basic weather instruments. This included a thermometer, Anemometer, weather vane, Barometer, Hygrometer and rain gauge. As we went through the slides we discussed the way each instrument functions and the information in provides us. The final slide was a chart that listed the name of the instrument, what it tells us, and the units of measurement. The students had to record this chart in their science notebooks for later study. We then began the activity part of the lesson once the students were done recording the chart.

(Preparation) Before class you will have to cut the poster board in rectangles the right size for the arrows. Also you will need to make several pattern arrows for the students to trace for their own arrows.

(Activity Procedure)

After the students had recorded the chart in their science notebooks, I showed them the weather vane that I had made before class. Next, I passed out the poster board rectangles that I had

previously cut out along with several patterns. I then gave them several minutes to trace and cut out their arrows from the patterns. After most of the students were done cutting out their arrows, I handed out the cups, pen tops, and wooden dowels. Next, each student began a hole on the top of their cup with a pencil. I went around and taped one of their arrows on the pen top and the students had to glue the other arrow onto the taped arrow so that the pen top was in between the two arrows. This was a good time to check on their work and point out any changes that needed to be made or answer any questions. Next we assembled all the pieces by passing the dowel through the hole in the cup and putting the pen top on the end of the dowel. Next I asked the students to think how an instrument like this could be used. Eventually we came around that it wasn't much good because we didn't have any directional markers on our weather vane. I then had the students write the compass rose on the top of their cups and then on the sides. We then discussed how our weather vanes worked and what information it would provide us with.

Materials Needed (Type and Quantity):

1. Medium size Styrofoam Cup
2. Wooden Dowels
3. Plastic Pen Top
4. Poster Board Cut into rectangles

Notes and Tips (suggested changes, alternative methods, cautions):

I chose this activity because the class I work with is very talkative and doesn't do well with large group and/or movement style activities. Several pitfalls to avoid: It was very important to only give them one or two steps of the process to do at one time; more mature classes may be able to handle the directions given to them on a worksheet. Also they **MUST** start the hole in the cup with their pencil or it will break the cup. It was very difficult for the students to label their cups right without writing the compass rose first on the top of the cup. Also I started out giving them all the pieces they would need but the students became very distracted, so I took them back and only gave them the other pieces when it was time. It worked well to ask them how we could use our instruments before I explained it to them. This gave them the chance to think about what they had made. A worksheet could be made to go along with chart of weather instruments, to reinforce the names and uses of the other instruments we discussed. In subsequent classes we orally reviewed the names and functions of the instruments and that seemed to be sufficient.

Sources/References:

- 1)
- 2)
- 3)