DeKalb County School District

Fernbank Science Center

Title: Extreme Weather (4436)
Level: 4th Grade
Location: Local School

Type: Outreach
Length: 50 minutes
Limit: One Class per session

Program Description

A classroom activity using large props will allow students to investigate fronts and pressure systems. Students will what they learned to analyze a weather map and make a prediction. Classroom demonstrations of fronts, pressure, and how weather phenomena such as thunderstorms, tornadoes, and hurricanes are created further establish key weather concepts.

Standards

S4E3. Students will differentiate between the states of water and how they relate to the water cycle and weather.

c. Investigate how clouds are formed.
d. Explain the water cycle
e. Investigate different forms of precipitation and sky conditions.

S4E4. Students will analyze weather charts/maps and collect weather data to predict weather events and infer patterns and seasonal changes.

a. Identify weather instruments and explain how each is used in gathering weather data and making forecasts.
b. Using a weather map, identify the fronts, temperature, and precipitation and use the information to interpret the weather conditions.

S4CS1. Students will be aware of the importance of curiosity, honesty, openness, and skepticism in science and will exhibit these traits in their own efforts to understand how the world works.

c. Offer reasons for findings and consider reasons suggested by others.

Vocabulary

evaporation	condensation	precipitation	cold front	tornado
warm front	thermometer	temperature	low pressure	hurricane
high pressure	anemometer	water vapor	thunderstorm	barometer
stationary front	cirrus	cumulonimbus	stratus	cumulus

Pre-Visit Activities

Introduce the class to the vocabulary words listed above.

Post-Visit Activity

Analyze a weather map from the date of birth of a student in the classroom.

- Weather maps 2003 – present: http://www.wpc.ncep.noaa.gov/dailywxmap/index.html
- Older maps: http://www.lib.noaa.gov/collections/imgdocmaps/daily_weather_maps.html (must install this plug-in to view maps: ttps://www.cuminas.jp/en/downloads/download)

Additional Resources

http://www.srh.noaa.gov/jetstream/append/lessonplans.htm
http://ww2010.atmos.uiuc.edu/(Gh)/guides/mtr/af/frnts/home.rxml

[SF 8/2016]

Notes

It is best if the Fernbank instructor for this program can set up equipment and materials in a central location at your school (science lab, media center, classroom, etc.) for the day. Each class can make their visit to the central location for the program.

If you schedule this program (Extreme Weather #4436) for your students, please do not schedule the program at Fernbank Science Center called, “The Whys of Weather (#4405),” as these two programs cover similar content.

[SF 8/2016]