



Weather Saying True or False

Post-visit activity connection to Energizer Weather and Nature exhibit

Grade level: 3rd grade NGSS 3-ESS2-1, ESS2-2; CCSS RI.3.1, RI.3.9, W.3.9, MP.2, MP.4 **5th grade** NGSS 5-ESS2-1; CCSS RI.5.7, SL.5.5, MP.2, MP.4 **6th grade** NGSS 6-ESS2-5, PS3-3, PS3-4, PS3-5; CCSS RST.6.1, RST. 6.9, WHST.6.8, MP.2

Concepts: causes of weather, prediction of weather

Materials needed:

Research materials

Procedure:

1. Ask students what they know about weather sayings and if they've ever heard any sayings that "predict" weather.
2. As students share sayings, generate a list on chart paper or the board. Share some with the students if they are having trouble getting started such as "Red sky at night, sailor's delight"; "A reddish sun has water in his eye; before long you won't be dry"; "A sunny shower won't last an hour".
3. Ask the students their opinions on the weather sayings—do they think they are true? Could some parts of them be true? Where do they think the weather sayings came from? Ask students to survey their family and friends for additional weather sayings. Encourage students to survey people from older generations.
4. Once the survey is completed, invite students to share the sayings that they've recorded from the survey. As students share sayings, add them to the brainstormed list from the previous session.
5. Return to the idea whether the sayings are true, asking students to indicate which sayings they believe and which they doubt or are unsure of.
6. Ask students to brainstorm a list of resources that they can consult to find out more about the truth of weather sayings (e.g., books, Internet sources). Collect suggestions on the board or on chart paper.
7. Divide students into groups or pairs and ask each group to choose 3 to 5 weather sayings from the class list or their own. Additionally, you can provide a Collection of Weather Sayings to provide more options for students' choices. You might encourage students to choose sayings that they are particularly skeptical of or sayings that they have a personal connection to.

8. Discuss with the students how to conduct the research and what your expectations are.
9. When the students have completed their research and verification of their selected weather sayings, have the students write up their weather findings, on paper or with some other media for presentation (teacher choice) using the Explanations of Weather Sayings (Red Sky and Mares' Tails in What's Happening section as models.

What's Happening:

This activity will help students learn facts about prediction of weather and factors that create certain weather conditions, but it will also encourage the questioning of expressions and whether or not we should accept everything at face value.

Following is a sample of what a write up could look like.

Explanation of a Weather Saying
"Red Sky at night, sailor's delight.
Red sky in the morning, sailor take warning."

When the sky in the west is especially clear, there is often a red sunset. Why? As the sun sets, the light from the sun shines through the lower atmosphere, which contains dust, salt, smoke and pollution. These particles in the atmosphere distort the shorter wavelengths of violet and blue, leaving only the longer wavelengths of orange and red. Also, if there is high pressure, the air sinks. This sinking air holds air pollutants near the earth, making the sunset even redder than usual. Therefore, there is a "red sky at night." In most of the northern hemisphere, weather fronts most often approach from the west. Since high pressure generally brings fair weather, this type of red sky at sunset would indicate that clear weather is approaching, which would "delight" a sailor. If there is a "red sky in the morning" in the eastern sky (for the same reasons as above), then the high-pressure region has most likely already passed from west to the east, and an area of low pressure may follow. Low pressure usually brings clouds, rain or storms, a "warning" for sailors.

Websites:

1. www.weatherwizkids.com/; http://www.weatherwizkids.com/?page_id=109
2. www.weather.com
3. www.FactMonster.com
4. www.usartf.org/predicting_weather.htm
5. <http://weatherstories.ssec.wisc.edu/sayings/sayings.html>

Book List:

1. Kid's Book of Weather Forecasting –Williamson books
2. DK Eyewitness Weather by Brian Cosgrove
3. I Face the Wind by Brian Cosgrove
4. Smithsonian Weather Books by Seymour Simon

Extension Activities:

1. Invite the students to create illustrations—literal or figurative—to go along with their weather sayings.
2. Have the students use software to create cartoons to illustrate their weather saying.
3. Encourage students to create their own weather sayings with the knowledge they have gained.

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