

Teacher Instructions

Title: The Effects of Weather on People

Grade Focus: K, 1, 2

Subject: Science

Technology Integration: Microsoft Excel

Recommended Time to Completion: 1 week- 45 minutes per day

INTRODUCTION: How does weather affect people? What causes different types of weather? Where does rain come from? Why do we need different clothes for different weather? Is weather always the same? What is wind and can we see it?

Students will study the effects of weather on Earth and people.

PREREQUISITE EXPERIENCE: Prior to this lesson, students and teachers should be familiar with functions of Microsoft Excel. Students should have some sense of numbers and be familiar with cloud types and basic weather conditions.

TEACHER PREP TIME: Teacher will need to understand basic weather conditions and how weather affects people, the earth and activities. Teacher should know how to access the Internet for local weather conditions if the newspaper is not available.

For additional resources on weather, locate the Cloud Identification lesson plan on Nortel LearniT site. This NASA "How Do You Measure the Weather" web site has some good ideas for teachers presenting weather unit.: <http://ksnn.larc.nasa.gov/weather.html>

MATERIALS:

- Thermometers
- Internet access
- Electric fan
- Construction paper
- Projector (To show PowerPoint titled, Types of Weather)
- Computer with access to Excel

PROJECT: Students will create a booklet of the weather conditions for one week that will track the local weather conditions. They will finish the week by completing a graph using Excel that will display their estimated temperature guesses and the actual temperature. Students will also explore their favorite weather conditions throughout this lesson.

ASSESSMENT/GRADING:

A rubric has been provided to use for assessment.

TIME MANAGEMENT TIP:

Students work individually throughout this project. Teachers can have daily temperatures ready when needed to save time.

Engage

1. Read the book Oh Say can you Say What's the Weather Today? By Lynn Huggins-Cooper or another book related to weather. Perhaps, Weather by Lynn Huggins; All About Weather (Cat in the Hat's Learning Library); K-4: What Will the Weather Be? by Lynda Dewitt; Weather; Lightning: Storms K-2: On the Same Day in March: A Tour of the World's Weather.
2. Brainstorm and explore with your table group some examples of weather and what you know about it. Share your group's thoughts during a classroom discussion.
3. Look at the PowerPoint, Types of Weather. Can you guess the different types of weather conditions?
4. Look at this thermometer (show students a thermometer). Do you know what its function is? Does anyone know how it works? What will happen when your teacher places the thermometer outside?
5. In this lesson, you will be exploring the way it feels outside everyday by guessing what the temperature is and writing the guess in on the "Weather Predictions Worksheet" below.
6. When the teacher has retrieved the outside thermometer, check your prediction against the actual temperature. During the class discussion, explain why you chose the estimated temperature and how different it was from the actual temperature?
7. Predict the weather each day this week and keep up with your predictions on the "Weather Prediction Worksheet?"

Weather Predictions

Name _____ Date _____

Draw a picture of the weather outside.



My guess for today's temperature _____.

Today's temperature is _____.

The weather today is _____.

Explore

Explore: Activity 2 Wind

1. What is wind? Can you see the wind? Does the wind change the temperature? Watch the effects of the wind. Turn on a fan and hold several objects in the winds path. What happens to the objects?
2. If you have access to United Streaming, watch How Wind Affects Weather, located at:
<http://www.unitedstreaming.com/search/assetDetail.cfm?guidAssetID=25e022f4-516b-4370-8cd0-8d1f44d2682d&tabDisplay=myContent>

“Discovery Education streaming is a digital video-on-demand and online teaching service to help improve students' retention and test scores; it is aligned to U.S. state and provincial standards.” If you do not have access to United Streaming, you can sign up for a free 30 day trial at www.unitedstreaming.com

3. Draw a picture of yourself doing something that would be affected by the wind. Perhaps you are flying a kite or surfing on waves. Make sure you show evidence that the wind is blowing.

Explain

Explain: Activity 3 Clouds/Rain

1. Where does rain come from? What is a cloud? How are clouds formed? Draw a picture of a cloud on the board. What type of cloud did you draw?
2. If you have access to United Streaming, watch Clouds, Weather, and Life, located at
<http://streaming.discoveryeducation.com/search/assetDetail.cfm?guidAssetID=876E3388-75E0-4F28-8693-5919FA0ED6CF>

"Discovery Education streaming is a digital video-on-demand and online teaching service to help improve students' retention and test scores; it is aligned to U.S. state and provincial standards." If you do not have access to United Streaming, you can sign up for a free 30 day trial at www.unitedstreaming.com

3. For additional reference material on Clouds, locate the Cloud Identification lesson on Nortel LearniT site.

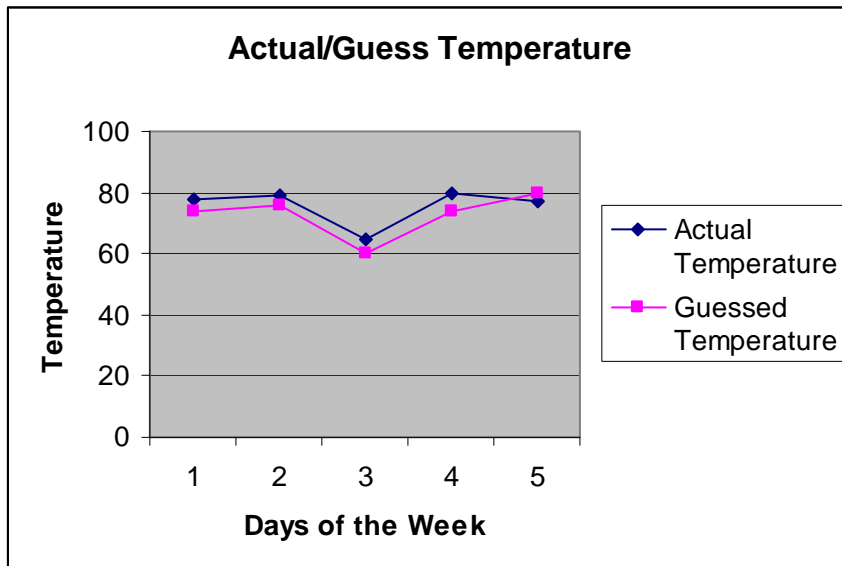
Elaborate

Elaborate Activity 4

1. Complete your daily temperature book today. You will now graph the temperature you estimated (guessed) for each day versus the actual temperature using an Excel Spreadsheet. Look at the example below and use your teacher's guidance in completing the graph.

Example

Actual Temperature	Estimated Temperature
78	74
79	76
65	60
80	74
77	80



2. What did you notice about the numbers? Were your guesses close to the real temperature?

3. What is your favorite weather? Group yourself with others in your class that share the same favorite. Gather yourselves in a designated area of the room and discuss why this was your favorite weather. Share your thoughts with others in the class during a classroom discussion.

Evaluate

Evaluate

Teacher will use the rubric below to evaluate skills taught

Weather Use Checklist

Student Name	Draws picture of environment	Uses weather vocabulary	Identifies clouds	Identifies Specific weather conditions	Completes Temperature book	
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						

Key:

X = Student successfully demonstrated skill

½ = Student is still developing this skill

0 = Student was not able to demonstrate this skill

Extend

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Consider these suggestions for extending the lesson:

1. Group yourself according to the weather condition you liked the best and debate with each other as to why it is your favorite.
2. Draw yourself dressed in the correct clothing indicative of your favorite weather and write a sentence describing what you are wearing and why it is your favorite.
3. Make a rain gauge to use at home.
http://www.eduplace.com/rdg/gen_act/weather/rain.html
4. Perform body (pantomime) that show rain, wind, hot, cold and let your classmates guess the weather condition.
5. Dress yourself in various clothing that represents various weather conditions.
6. Cut out pictures from magazines or draw a picture that depicts varying weather conditions and activities performed in certain weather.

Related Resources

NASA Weather Jeopardy (grade 4, but can be adapted): http://asd-www.larc.nasa.gov/SCOOOL/lesson_plans/Weather_Jeopardy.html

Web Weather for Kids: <http://eo.ucar.edu/webweather>

<http://school.discovery.com/lessonplans/programs/weathermaps/>