



Careers: Meteorologist
Grade: K-4

Description:

Who do you think of when you hear the reference to a meteorologist? Most of us think of the person on the television who tells us about the daily temperature and upcoming weather patterns. Meteorology is actually the science of the atmosphere. It takes its name from the Greek word *meteoron*, meaning something that happens high in the sky. In this “Day in the life of a Meteorologist” Passports, students will learn about a career in meteorology and gain a greater appreciation for weather and the art and science of predicting weather.

Did you know that the ancient Greeks were already were observing clouds, winds, and rain and tried to understand how they are connected to one another so many years ago? The weather was important in their society because it affected the farmers who raised their food and their seamen who sailed the oceans. Today, our society and environment are affected even more seriously by events and changes in the atmosphere. Meteorologists look for answers to important questions such as how to save lives in severe weather conditions and how to protect the environment. Let’s open the doors and step outside into the world of meteorology!

Preparation for the Excursion

To ensure the most meaningful learning experience for your students, it is recommended that students engage in activities prior to the excursion. The video resources provide students with a context for the virtual excursion. The additional resources and activities offer opportunities for curricular connections and integration within your larger unit of study. The excursion is intended to complement a comprehensive unit.

Video Link: (Use the following link to view the *Day in the life of a Meteorologist* video)
http://easylink.playstream.com/21_CenturyLearning/occupations/meteorologist_46.rm

Challenge Questions:

To begin the Passports and assess students’ prior knowledge ask students to respond to these questions:

- What is a meteorologist?
- When and where have you seen a meteorologist?
- What do you think of when you hear the word meteorologist or meteorology?
- What do you think your day might be like if you were a meteorologist?
- Why is it important to study the weather?
- Have you ever listened to a meteorologist give a weather forecast? Why was it important to you? How does weather affect you?
- What challenges do you think a meteorologist might face in his/her job?
- What do you think the best part of being a meteorologist would be?
- What tools do meteorologists use to forecast the weather?

Responses/Prompts:

The questions are intended to spark thinking about a career in meteorology and the study of weather.

Lesson at a glance:

Students will act as a meteorologist as they create and share a weather forecast. Students will predict and forecast the weather by observing the types of clouds they see in the sky. Student will observe, predict, and graph the weather in their area for a month.

Lesson Outcomes:

The students will:

- Recognize different components that makeup a weather forecast and how difficult it may be at times to forecast correctly.
- Understand that forecasting the weather might not always require special tools, and that careful observations can be very helpful.
- Reflect upon observed and recorded information to recognize patterns in weather systems.

Activity:*Activity #1: Weather Forecast*

As a meteorologist of your local news program, you and your co-workers need to write a script for tonight's broadcast. Before you can begin to know what you will say, you will need to research for important weather information and current and future forecasts in your area using the newspaper or online resources. Each meteorologist team should include the following in their forecasts:

- 1) introduction
- 2) a review of current weather conditions
- 3) a forecast for the rest of the week- this should include a poster for the highs/lows and possible precipitation for the rest of the week.
- 4) include local activities that the upcoming weather will affect
- 5) advice about preparing for the weather

Students will then present their broadcasts to the class. Younger students may want to watch local meteorologists and then create their own forecasts based on what they observe.

Activity #2: Clouds and Forecasting Weather

Teachers should begin this lesson by reinforcing the fact to students that sometimes forecasting the weather doesn't require any special equipment or procedures. All you

need to do is go outside and look up at the clouds. Clouds can tell you many things about what the weather will do. It's important to know that not all clouds are the same. Clouds can come in different shapes, sizes, and colors. Even fog is considered a cloud. Different clouds can help meteorologists, or anyone, tell what kind of weather is around them. Students will go outside with their paper and drawing utensil. Have them find a place to sit where they can look at the sky and the clouds. After several minutes of observing the clouds, have the students draw what they see. After drawings are completed, compare student's pictures to actual pictures of clouds, and as a group decide what kinds of clouds were observed, as well as what the clouds mean in terms of current and upcoming weather. Teachers will need to make sure that clouds are visible on the day this activity is completed. Older students may be challenged to research clouds, and make their own analysis and comparisons and then report their findings to the group.

Activity #3: Graphing the Weather

Students will predict and observe the weather for the time period of a month by completing a graph with the information. Teachers may choose to have a class graph, or have individual student graphs. Students can predict what they think the weather will be based on weather forecasts they have seen or from recent weather patterns. The actual weather for the day will also be recorded. At the end of the month, math problems can be created based on the results. For example, how many days were sunny/cloudy, how many more/less days were sunny/rainy, what does the graph show us, what weather patterns do you see.

Another way to implement this project is to broaden the scope to include "World Wide Weather". In this project, students will be divided into groups based on their interest. Each team will track and study the weather in a particular country. Students can use spreadsheets to organize the data and create graphs. Students can interpret the different representations of the data to identify weather patterns and predict future weather. The project culminates with students presenting their findings. Students could develop a PowerPoint presentation showcasing weather patterns in their country and the impact on lifestyle. A poll could be taken to determine where students may want to live based on this information.