



Daily Weather

Guiding Question: How are daily weather data different from seasonal weather data?



Directions

1. Here you will find instructions, background information, vocabulary, your activity, some optional activities and a later activity.
2. Slides 1-3 read through



Introduction

When people talk about weather they often discuss how hot or cold it is (or is supposed to get) or if it will be sunny or stormy. The word **weather** is used to describe the outdoor conditions at a specific time and place. **Meteorologists** are scientists who study weather. When measuring and describing weather conditions, meteorologists collect and analyze data such as temperature, humidity, wind speed, air pressure, and **precipitation**. Precipitation is any form of water that falls from Earth's atmosphere to the ground. This includes rain, snow, sleet, and hail. The amount of precipitation and other weather data varies from hour to hour, data to day, and season to season.



Directions

3. Slides 5-6, directions for collecting weather data
4. Slide 7 has resources you can use to collect data
5. Begin collecting data for your local daily weather and capital city of your EXPO country. If you've already done the daily weather just do your country's capital city.
6. Each of you should have received your own copy of the weather table

Activity

1. Record the daily local weather
 - a. Select a city: this could be Banks, Forest Grove, Hillsboro or Portland. The larger the city the easier it is to get the data
 - b. Record data for the same city each day
 - c. Fill in the chart provided in Google Classroom
 - d. You want to record the actual data, so the actual recorded high and low temperature, etc
 - e. Record 14 days worth of data

Activity Part 2

2. Record the daily weather for your EXPO country
 - a. You will be recording the daily weather in the capital city for your EXPO country
 - b. You will have a separate data table for your EXPO country

Resources

1. Any local news station
 - a. [Kgw](#), [katu](#), [koin](#), [fox](#)
2. Weatherunderground.com
3. Weather.com

Directions

Slides 9-10 have optional activities. You are welcome to do all, some or none.



Other Activities ~ Optional

1. Imagine that you are a meteorologist for a local radio station. Use your data from Tables 1 and 2 to create a radio weather report that summarizes the weather over the five-day period.

2. In your experience, is your area's weather in a particular month, such as January, the same from year to year? Explain.



Other Activities ~ Optional

3. Scientific Careers in Weather ~ Research
 - a. Select a different career in weather to research
 - b. Meteorologist, hydrologist, climatologist and atmospheric scientist
 - c. Things to consider
 - i. Description of their job
 - ii. Education required
 - iii. What weather knowledge is required
 - iv. Do any of these careers interest you? If so explain why

7 DAY FORECAST

Day	High/Low	Conditions
THU	43/51	PARTLY SUNNY, COOL
FRI	34/50	COOL
SAT	33/57	SHOWER
SUN	43/58	WET
MON	34/46	CHANCE
TUE	32/46	CHANCE
WED	30/49	FROST POSSIBLE

Severe Weather

How have severe weather events affected your region?

Directions

1. Slides 3-7, reading for background information
2. Slide 3: record your thoughts or share with someone
3. Focus on new vocabulary
4. Slide 8: Activity, be sure to follow the directions

Getting Started

1. Brainstorm a list of types of weather disasters
2. How are weather disasters different from everyday weather?
3. Which types of weather disasters do you think happen most often in the United States? In our area or Oregon?

What is a Weather Disaster

A weather disaster is a unique meteorological event that has an impact on the economy and usually impacts human life and in death.

Earthquakes, tsunami's, volcanic eruptions, tidal waves are not related to weather, rather they are geological events



Introduction

Severe weather events, such as hurricanes, tornadoes, rain, snow and ice storms, happen fairly regularly. A weather disaster can occur when a severe event happens at a vulnerable location and devastates communities, economies, and the environment.

In 2005, Hurricane Katrina struck along the coasts of Louisiana, Mississippi and Alabama. Everyone living in the area, including 1 million people from the city of New Orleans, Louisiana, was asked to evacuate to a safer place.



Introduction #2

In the spring of 2011, 25% of Joplin, Missouri, was destroyed by a tornado. The tornado was 1 mile wide. It caused 161 deaths and \$2.2 billion in property damage.

In 2016, there were 15 weather and climate disaster events in the United States that each caused damage of over \$1 billion. These events included a drought, four floods, eight severe storms, one tropical cyclone, and one wildfire. How can you tell if a weather disaster is likely to happen where you live?



Introduction #3

Although weather affects people on the ground, a lot of weather occurs in the atmosphere. The **atmosphere** is a mixture of gases (“air”) that surrounds planet Earth. The scientists who study the atmosphere, from Earth’s surface to several hundred kilometers above, are known as **atmospheric scientists**. They may collect and analyze data about current and past conditions. Areas that have had more hurricanes, floods, or tornadoes in the past are considered more likely to have these events in the future.



Activity

1. Select a link to follow
2. <https://www.weather.gov/ltx/20thcenturytopen>
 - a. Go to the link
 - b. Select one of the weather events to learn about
 - c. Fill out worksheet on the severe weather event
3. <https://www.infoplease.com/math-science/weather/worst-weather-of-the-twentieth-century>
 - a. Go to the link
 - b. Select one of the weather events to learn about
 - c. Fill out worksheet on the severe weather event



Guiding Questions

Answer the following questions:

How have severe weather events affects the United States, our region or Oregon?

How are weather disasters different from everyday weather?

Name: _____

TOP US WEATHER EVENTS OF THE 20th CENTURY

1. Survey of weather disaster history of _____.
2. What year did this occur? _____
3. Where did this event happen? Include states, counties, and/or regions.

4. What types of weather phenomenons occurred during this disaster? (Ex: tornados, flooding, hail etc...)

5. Research and find data on the following characteristics of the storm or disaster:

Temperature	Precipitation (snowfall/rainfall)	Air Pressure	Wind Speed

6. Describe the damages to the areas affected (Ex: home repairs, city restructures etc...):

7. What precautions have these areas taken to help these areas recover from this kind of disaster in the future?