

Meteorology

Podcast Length: 13:54
Character Value: Being flexible
Health Message: Weather and health

Synopsis

Today's podcast focuses on the field of meteorology and the forces that create weather patterns and natural phenomenon like rain, thunder, and lightning. The kids discuss and explain how the weather is predicted and how it affects our everyday lives. Weather changes can be caused by temperature shifts that affect our atmosphere and cause the air to move differently. A meteorologist is someone who studies and predicts weather patterns and helps us understand what is going on in our atmosphere.

Objectives

- Identify the characteristics of common weather phenomena like thunder or rain.
- Understand how weather patterns are modeled and predicted.
- Consider the ways that weather impacts everyone on Earth.

Procedure

If you want to compare student comprehension before and after listening, administer the Comprehension Quiz before doing anything related to the podcast. Retest after walking.

- Review key vocabulary (included definitions are limited to the context of today's podcast).
 - atmosphere (noun):** the air; the gases surrounding a planet
The atmosphere was filled with smoke because of the forest fire.
 - forecast (noun):** a prediction of future events; for instance, the weather
The forecast called for rain so we brought umbrellas.
 - current (noun):** a flow or stream; can mean a flow of electricity, air, water, etc.
The strong electrical current had enough power to shock me.
A warm air current is blowing through the region.
- Build background by asking students, "Did you listen to the weather report this morning? Do you know how the weather forecaster was able to predict the weather for today?"
- Allow time for discussion.
- Podcast preview: "Today we're going to learn more about how weather forecasters – or scientists called meteorologists – try to understand our planet's weather patterns. Ready? Let's go!"
- Walk!

Questions for Thought and Discussion

Upon return to the classroom, discuss the main ideas and content from the podcast using the questions and suggested answers below.

- What were some of the big ideas of this podcast?**
 - ✓ Meteorologists study and predict weather patterns and help us understand what is going on in our atmosphere.
 - ✓ Weather changes can be caused by temperature shifts that affect our atmosphere and cause the air to move differently.
 - ✓ Many aspects of our lives are affected by weather conditions – even if we don't have a job that requires being outdoors.
- Why do you think it's important for us to understand weather patterns, even though we can't always control them?**
 - ✓ Many aspects of our lives (jobs and activities) are affected by weather conditions. (e.g. farming, outdoor recreation, airlines, fishermen, etc.)
- The weather isn't something that we can control and sometimes forces us to have to change our plans and be flexible. For example, you might have been planning to go outside to ride your bike, but it begins to rain and you have to stay inside.**
 - How could you show flexibility if it started to rain and you can't go outside?**
 - ✓ Suggestion: Have a good attitude and find something else to do (play a game, read a book, etc.).
 - When are some other times it might be important to be flexible?**
 - ✓ Accept all reasonable answers. (If students are stuck give them an example: You wanted pasta for dinner, but your mom had to work late and she heats up leftovers instead.)

Meteorology Comprehension Quiz

Name: _____

Date: _____

1. A meteorologist studies
 - a. meteors and stars
 - b. the atmosphere
 - c. measurement

2. Rain falls to the earth because
 - a. water droplets inside the clouds become too heavy to stay in the air and fall down.
 - b. the sun warms up the clouds and they begin to melt.
 - c. water is constantly entering the air, and that air cannot move.

3. How do temperature changes and currents cause our weather patterns to shift?
 - a. Polar regions that normally get the most sun on the planet sometimes get the least.
 - b. Cold air rises and draws in more air along with it; warm air pushes other air away.
 - c. The air moves in different ways and distributes the sun's heat across the earth.

4. During a storm,
 - a. loud thunder noises are caused by lightning hitting the earth.
 - b. electrically charged clouds create lightning.
 - c. lightning always occurs, but it is sometimes not visible to human eyes.

5. A current has
 - a. movement and flow
 - b. explosiveness
 - c. a lack of motion

6. Which of the following is a FACT about our weather system?
 - a. We see lightning after hearing thunder because light travels slower than sound.
 - b. Negative and positive charges of electricity in the air repel each other.
 - c. Thunder is created when holes in the air created by lightning collapse.

7. What would someone likely need to know before they accurately predicted the weather?
 - a. how to interpret computer models, satellite images, and radar
 - b. how to look at the sun and the speed and direction it travels
 - c. whether or not animal activity had changed

8. Why would farmers be affected by weather patterns?
 - a. They don't want it to ever rain because then they have to stay indoors.
 - b. They raise animals that could suffer if they are exposed to sunshine.
 - c. They need enough rain for their crops to grow.

9. If living things don't have enough water, they can still be healthy and thrive.
 - a. true
 - b. false

10. If it is raining or snowing out, you won't be able to exercise.
 - a. true
 - b. false