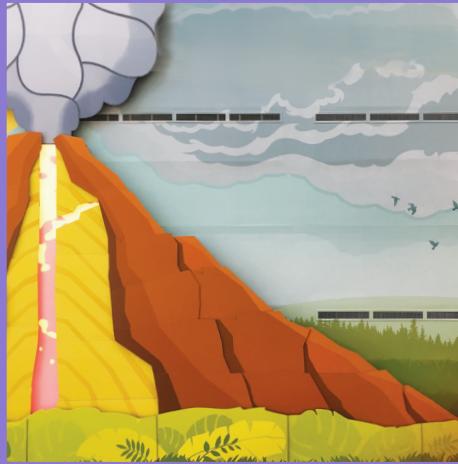


CONNECTICUT SCIENCE CENTER



EXPLORATION GUIDE



CTScienceCenter.org
250 Columbus Blvd.
Hartford, CT 06103

Connecticut
Science Center



WEATHER: WILD & WACKY

Objectives

- Students will investigate some extreme weather patterns, such as hurricanes and tornadoes.
- Students will explore tools that help scientists measure and track weather conditions and patterns.
- Students will examine the correlation between the time of year and weather patterns, which they will connect to current weather conditions.
- Students will look at the effects of temperature on air and connect this to weather.

Overview

Getting Started: This discussion could occur in the classroom, or on the bus ride, when preparing students for the field trip.

Introduction: What is the weather like today? How do you know? Can you predict what the weather will be like tomorrow? Predicting weather is a job done by people called meteorologists. There are many forms of weather that can be tracked and studied using different tools. As we go through the museum today, be on the look out for:

Focus Questions

- What causes the weather that we see?
- What are some of the ways that we can measure weather?
- What are some ways that weather can be dangerous?
- Can we predict what the weather could be at different times of the year?
- How does the weather affect our lives?

Visit Debrief:

On the bus ride home, or back in your classroom, ask your students to reflect on what they learned:

- What are some tools we could use to measure the weather?
- What predictions can we make about the weather tomorrow based on the weather today?
- How could we help protect people from dangerous weather such as hurricanes or tornadoes?

Concept Summary

- Weather follows certain patterns depending on the time of year.
- There are a lot of factors that fall under 'weather' such as rainfall, temperature, sunlight, etc.
- Weather can be measured and tracked in a number of different ways.
- Some forms of weather can be dangerous.
- Weather patterns have a big impact on our daily lives.

Next Generation Science Standards

SCIENCE AND ENGINEERING PRACTICE

Planning and Carrying Out Investigations

Analyzing and Interpreting Data

Constructing Explanations and Designing Solutions

Engaging in Arguments from Evidence

DISCIPLINARY CORE IDEAS:

PS3.B: Conservation of Energy and Energy Transfer

ESS1. B: Earth and the Solar Systems

ESS2.A: Earth Materials and Systems

ESS2.D: Weather and Climate

ESS3.B: Natural Hazards

CROSSCUTTING CONCEPTS:

Patterns

Cause and Effect

WEATHER:

Focus Questions

- What causes the weather that we see?
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- Can we predict what the weather could be at different times of the year?
- How does the weather affect our lives?

Chaperone name:

Students in my group:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____



GETTING STARTED:

Chaperones, these activities can be done in any order as you move through the galleries. For grades K-2, we recommend working as a group, with an adult writing down students' answers for the whole group except where specified.



TRIP TIP: Give your

students some free exploration time when entering a new gallery area. This will help them concentrate when you invite them to focus on a specific exhibit or a question later.



TRIP TIP: Let the

students know when you are recording answers. When you record students' answers to questions, they see that their learning is valued, which is a strong motivator to participate and engage.

WEATHER: WILD & WACKY

Activity Station: Kidspace

Lobby Level, Kidspace Gallery



LOOK around. Find somewhere where water moves like a tornado.



Drop a ball in. What happened to the ball? DRAW a picture or describe what happened.



DESCRIBE how the water tornado is similar or different to the tornado in the video outside of Kidspace? Record student descriptions.



HINT: Compare the shape of the two. Tornadoes occur between a cloud and the ground. What kinds of things could the tornado in Science Alley pick up?

Activity Station: Hot Air Balloon

Level 4, Bridge



MAKE the hot air balloon rise to the top.



DESCRIBE what you think makes the hot air balloon go up and down.

Record student responses.



HINT: The burner in a hot air balloon heats the air inside the balloon. This makes the hot air less dense than the cold air. This allows the balloon to rise above or float upward through the colder air around it. As the air inside cools, the balloon comes back down.

Activity Station: River Overlook

Level 6, River of Life Gallery



LOOK outside. What month is it? What season is it? What evidence do you see outside that helps you figure out the season?

The month is _____.

The season is _____.



HINT: Because of the tilt of the Earth, Connecticut has shorter days in the winter that leads to different types of weather that we would have in the summer.



DRAW 1 activity you can do outside based on today's weather.



HINT: Help students understand how much weather affects our daily lives. Record their responses while they draw on their own sheet.

Activity Station: Weather Tools

Level 6, River of Life Gallery



DESCRIBE what these tools measure. What do they tell us about today's weather?

Record student responses.



HINT: One tool in the anemometer. It measures the speed of the wind. The second is the thermometer; it measures temperature.

Activity Station: Hurricane Simulator

Level 6, Earth Systems Gallery



TRY the hurricane simulator with a friend. DESCRIBE what it felt like and what happened.



PREDICT what would happen if the wind was even faster.

Record student predictions.



HINT: Remember hurricanes often bring severe rainfall with the high winds.

WEATHER:

Focus Questions

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..... NAME: _____

WEATHER: WILD & WACKY

Activity Station: Kidspace
Lobby Level, Kidspace Gallery



DRAW a picture or describe what happened when you dropped the ball in the water tornado.



..... NAME: _____

Activity Station: River Overlook
Level 6, River of Life Gallery



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The month is _____.

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