

WAYFINDER Understanding Weather

The following North Carolina State Science Standards are relevant to this Wayfinder:

Grade K	2.02, 2.03
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Introduction

Weather is an important part of our daily lives. Knowing the conditions outside helps us make important decisions like what to wear, where to go on vacation and what food to eat. Clues all around help us predict the weather and it is important to pay attention to them as we plan our day's and week's activities. Simple observation can turn anyone with a little bit of curiosity into a meteorologist.

Before your visit

Monitor the weather as a class. Keep a visual in the classroom and make a morning routine out of reporting the weather. Discuss questions such as:

- What does the sky look like today?
- What does the ground look like today?
- How would you describe the temperature today?
- What do we call this kind of weather?
- What kinds of activities can we do/not do in this weather?

Create a recipe for the weather on different days using heat, air and water as ingredients. Challenge students to guess what they might see if the recipe for the day were a tiny pinch of heat, a bucket of blowing air and handfuls of lightly frozen water. Have students write their own recipes over multiple days for what they observe outside.

Spend some time observing different kinds of clouds over a period of weeks. Have students represent or describe the clouds that they see in the sky on a particular day. Match these pictures or other representations with a description of what the day's weather seems like. Consider how to describe the weather when clouds are big and fluffy, flat and wide, light and wispy, etc. Can you predict what the weather might be by looking at the clouds in the sky?

During your visit

Visit our *ABC News Channel 11 Weather* area. Give students a chance to explore on their own the different exhibits so that they can become familiar with each one.

As a group, revisit the exhibits and ask or discuss the following:

At Ask a Meteorologist video screen:

- 1) Watch: Name that Cloud. How many types of clouds can you see in the sky?
- 2) Watch: Precipitation. Where does precipitation come from?

At the cloud basin:

- 1) Where might you see something like this outside?

- 2) Put your hand inside the cloud. What does it feel like? Would a real cloud feel this way?
- 3) If you were to see a cloud like this outside, what type of weather might you have that day?
- 4) Name some forms of precipitation that can come from clouds.

At the TV radar screen, looking at a map of North Carolina (“Radar” → “Single Site Base Reflectivity”):

- 1) What type of weather does the screen say we are having outside right now?
- 2) What recipe might we make up to describe this type of weather?
- 3) What do we think the weather will be like a few hours from now? Why do you think this?

At the sandstorm and wind exhibit:

- 1) What is moving the sand?
- 2) When do you know that wind is blowing outside? Can you feel it? Hear it? Smell it? See it? Taste it?
- 3) What are some other things that blow in the wind?
- 4) Describe what happens to the sand when the wind blows into the center of the exhibit area. Describe what happens to the sand when the wind blows down one side of the area along the outside of the space. If you had to draw one shape to show the pattern that the sand makes, what might that shape be?
- 5) How do you think a light wind would change the sand in the space?

At the tornado:

- 1) Have students feel the area near the holes that are on the four posts around the tornado. What do you feel?
- 2) At each pole choose a volunteer to stand up and point in the direction that the air seems to be blowing out of the holes in the pole. Looking at all four pointing fingers of the volunteers, can we predict which way the tornado will spin?
- 3) Watch the mist on the bottom of the exhibit as it rises out of the floor. Is it spinning in the way you predicted?
- 4) Many visitors to the Museum think that rubbing the poles will help the tornado form. If you rub the pole, what will you do to the air that is coming out of the holes? Will the mist be able to spin?
- 5) Try this: Have the whole group stand between the poles around the area where the tornado will form (the more bodies you can get protecting the tornado from drafts caused by passing people the better). If the group stays very still and does not block the moving air, the tornado should form very quickly. Once the tornado is formed, have student volunteers rub the poles. What happens to the tornado? Why?
- 6) What must air always be doing in order to form a tornado?
- 7) How might this tornado be different from one that you would see outside?

After your visit

Have students report their favorite weather exhibit. Discuss as a group how each weather exhibit they explored today was the same or different from what you might experience outside.

Brainstorm different weather phenomena that you have talked about in the past as a class (rain, snow, rainbows, fog, sunshine, etc.). Which items from this list were not featured as a Museum exhibit? Have students draw a picture or describe verbally an exhibit that they might create to explore one of these missing items.