INQUIRY ACTIVITY
Data Analysis

Predict Weather

You looked at a picture of changing weather. Investigate to discover how weather can be predicted. Explain how this happens.

Make a Prediction What kind of weather will the area to the east of your location have tomorrow?

_____

_____

Carry Out an Investigation

1. Look at a current weather map. Circle your area and circle a location to the east of you.

2. Look at a current weekly weather report for your area. Fill in the first row of the weekly forecast on the next page. Draw a symbol to represent the weather you find.

3. Use the information you found to predict what kind of weather the location east of you will have tomorrow and the next day. Add your predictions to the second row of the table.

4. Talk about your predictions with a partner.

Weekly Forecast					
Area	**Day:___**	**Day:___**	**Day:__**	**Day:__**	**Day:__**
My Area:					
Area to the East:					

Communicate Information

6. What patterns did you notice between the weather report for your area and the one for the area east of you? How can you use this relationship to predict weather in the United States?

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💬 Talk About It

With a partner, discuss your predictions for the area east of you. Are they the same as the weather report? Why do you think this is?

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Prep: 15 min | **Class:** 30 min   small groups

Purpose
Students will predict weather patterns by analyzing weather reports and maps.

Materials
Weather maps and reports should be current (within a week's time). They can found in the daily paper, news broadcast, or the Internet.

Before You Begin
Remind students of the phenomenon photo and video where they observed the clouds moving in the sky. Tell students to consider how weather changes. Ask students if they expect today's weather to be experienced tomorrow by people located in a town east of them. Make a connection to what students said about the changes in weather. Focus students on the question that they will investigate:

ASK: What kind of weather will the area to the east of your area have tomorrow?

Inquiry Spectrum

Structured Inquiry
This activity is **Structured Inquiry.**

Guided Inquiry
Have students plan an investigation to analyze data to predict weather patterns..

Open Inquiry
Have students investigate a question they have about how weather reports and maps can predict future weather events.

Guide the Activity
Make a Prediction Helps students make a prediction about how weather changes. Discuss as a class what students predict.

Carry Out an Investigation

1. You may want to review directions (north, east, south, west) with students.

2. Review the different types of weather conditions (sunny, cloudy, rainy, and partly sunny) with students, and come up with symbols for each weather condition as a class.

Communicate Information

6. Check to see if students learned about their current weather and found patterns.

ASK**:** What can you learn by looking at weather near you on a weather map? Sample answer: You see weather that might be moving towards you soon.

CCC Patterns

Students identify patterns in weather and use these patterns to make predictions.

ASK**:** What patterns did you notice? Sample answer: I noticed that the weather moved east.

SEP Analyzing and Interpreting Data

Once students collect data, it must be presented in a form that can reveal any patterns and relationships.

ASK**:** How did the table help you interpret the weather patterns? Sample answer: I could compare the weather of the two cities in a way that was easy to read.

ASK**:** How could you improve this investigation? Sample answer: I would gather and analyze weekly weather reports from cities located in the north, south, and west from my location. I would use this information to confirm that weather generally moves from west to east.

Talk About It

With a partner, have students discuss whether their results supported their prediction.

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Make a Prediction What kind of weather will the area to the east of your location have tomorrow?

Sample answer: It will have the same weather as we had today.

Carry Out an Investigation

1. Look at a current weather map. Circle your area and circle a location to the east of you.

2. Look at a current weekly weather report for your area. Fill in the first row of the weekly forecast on the next page. Draw a symbol to represent the weather you find.

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Area	**Day:___**	**Day:___**	**Day:__**	**Day:__**	**Day:__**
My Area:					
Area to the East:					

Communicate Information

6. What patterns did you notice between the weather report for your area and the one for the area east of you? How can you use this relationship to predict weather in the United States?

Sample answer: The weather east of me is similar to the weather I had the day before. I can predict that the weather is going to move move east.

💬 Talk About It

With a partner, discuss your predictions for the area east of you. Are they the same as the weather report? Why do you think this is?