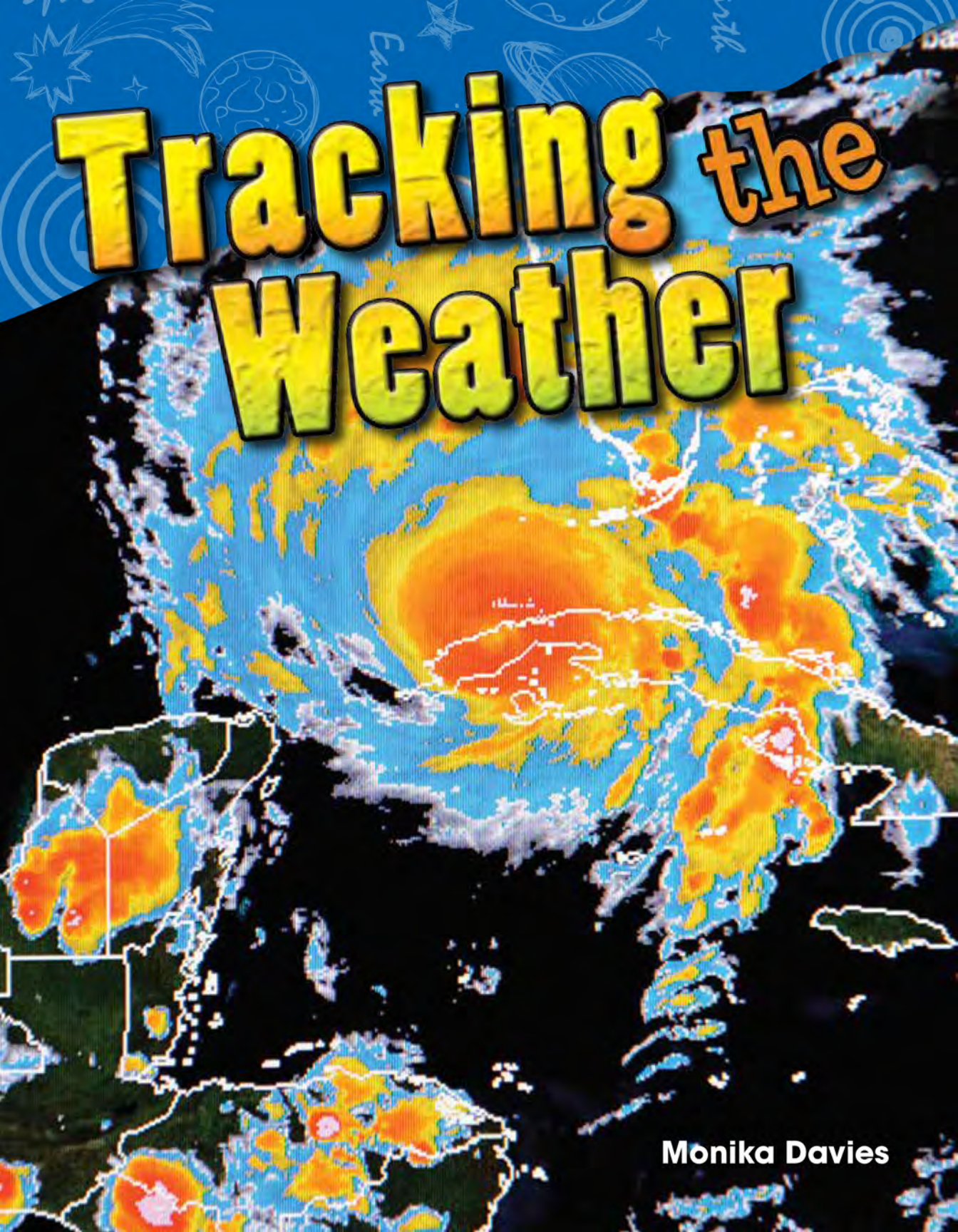
Tracking the Weather



Monika Davies

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Weather Watchers

Have you looked out the window today? Did you notice if the sun was high in the sky? Or did you see dark rain clouds? Was the wind shaking the trees, or was there snow falling?

Weather is the state of the air at a certain place and time. The sun may be shining. The air may be hot or cold. The wind may be blowing. Or there may be rain falling. These are all different types of weather. Most weather is mild. But some weather is dangerous. **Meteorologists** track the weather so we can predict and plan for changes.



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Storm Chasers

Most meteorologists work inside where they and their computers can stay warm and dry. But some meteorologists race outside to catch a glimpse of the latest storms. It is dangerous, but their work helps us better understand how small changes in the air can produce big changes on the ground.



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A **forecast** is a prediction of future weather. You can find forecasts in newspapers or online. Simple symbols help readers quickly know what the weather will be. Most forecasts note the high and low **temperatures** expected each day. Checking the forecast can help you prepare for the week. If a storm is coming, you will know to stay inside. If it is going to be sunny, you can plan a day outside.



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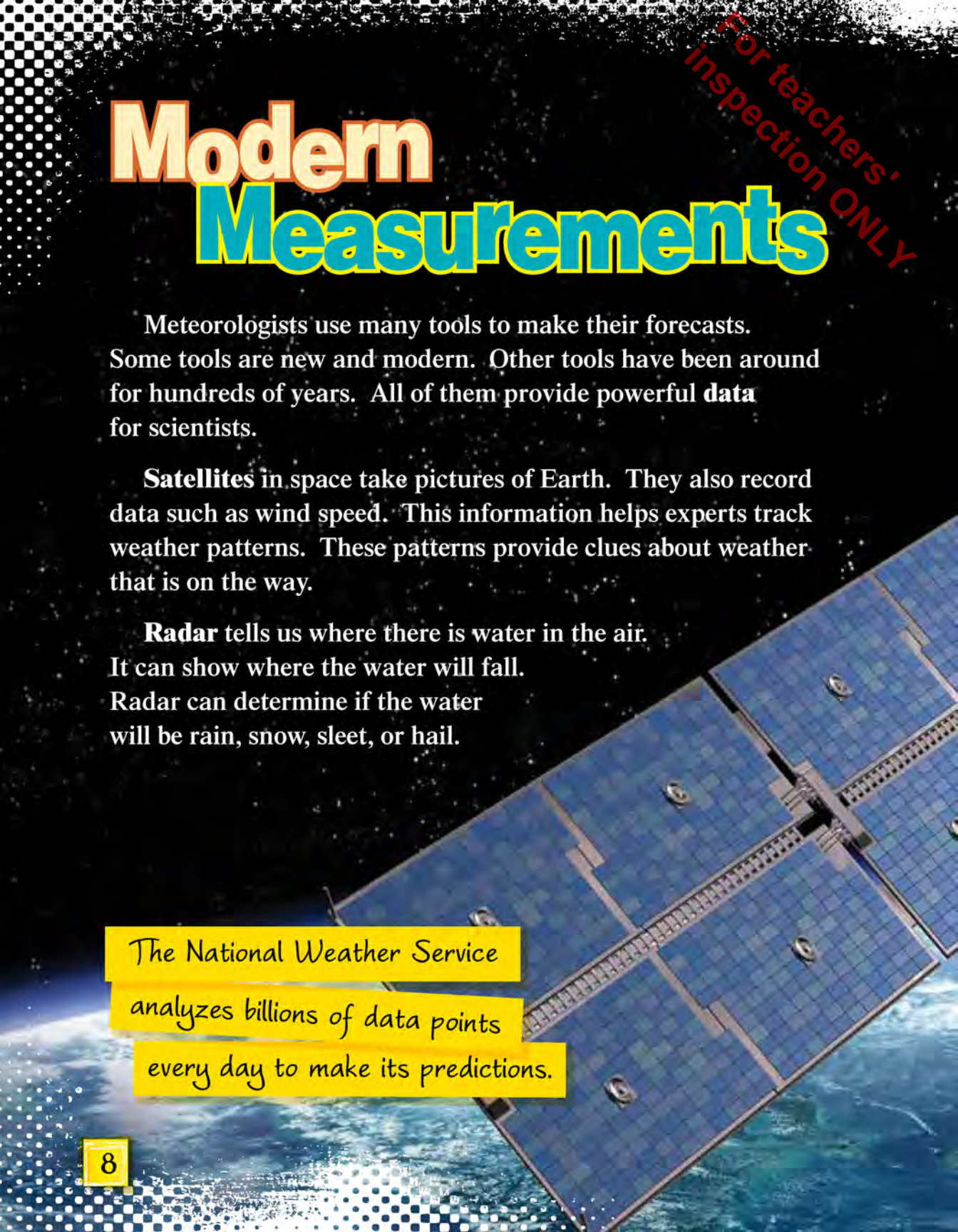
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Modern Measurements

Meteorologists use many tools to make their forecasts. Some tools are new and modern. Other tools have been around for hundreds of years. All of them provide powerful **data** for scientists.

Satellites in space take pictures of Earth. They also record data such as wind speed. This information helps experts track weather patterns. These patterns provide clues about weather that is on the way.

Radar tells us where there is water in the air. It can show where the water will fall. Radar can determine if the water will be rain, snow, sleet, or hail.

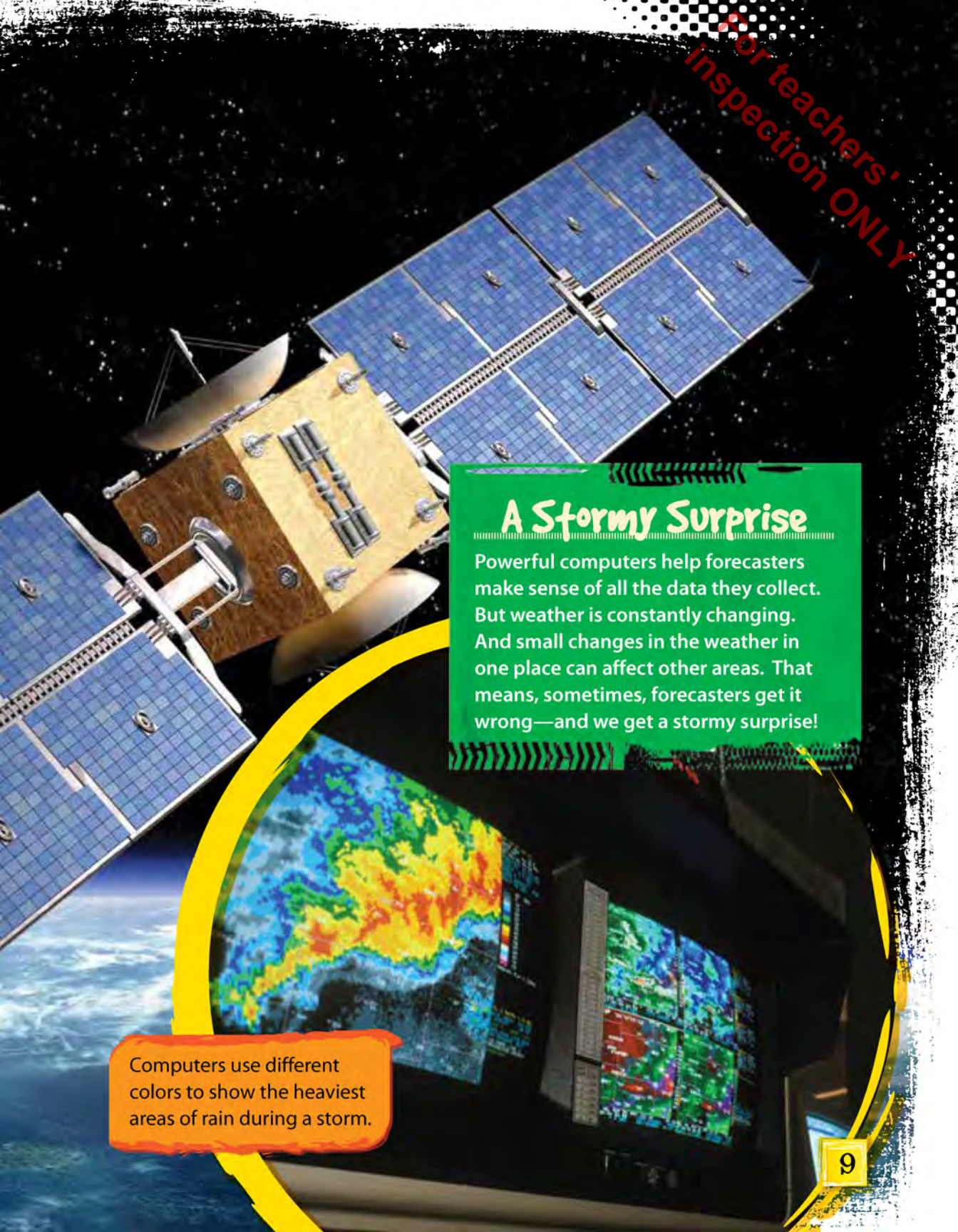


The National Weather Service analyzes billions of data points every day to make its predictions.

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A Stormy Surprise

Powerful computers help forecasters make sense of all the data they collect. But weather is constantly changing. And small changes in the weather in one place can affect other areas. That means, sometimes, forecasters get it wrong—and we get a stormy surprise!



Computers use different colors to show the heaviest areas of rain during a storm.

Think Like a Scientist



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What happens when a cold front meets a warm front? Experiment and find out!

What to Get

- 2 blue balloons
- 2 large tubs
- 2 red balloons
- cold water
- warm water

