

CAREERS

Learn
BRIGHT

METEOROLOGIST

High-Interest Reading Comprehension



GRADE 3-5

- Teacher Guidelines** ▶ pages 1 – 2
- Instructional Pages** ▶ pages 3 – 4
- Activity Pages** ▶ pages 5 – 6
- Practice Pages** ▶ pages 7 – 8
- Answer Key** ▶ pages 9 – 10



Classroom Procedure:

1. Introduce the lesson with the following: Have you ever wondered how someone knows when it's going to snow or if we need an umbrella? Today, we're diving into the world of meteorologists—those amazing scientists who predict the weather! Imagine being the person who gets to warn everyone about a big snowstorm or explain why we see rainbows. Meteorologists get to use cool gadgets and chase after storms. So, grab your imaginary weather maps, and let's explore how you could one day become a weather expert who keeps everyone safe and informed!
2. Distribute the *Careers: Meteorologist* Content Pages. Read and review with students. Point out the text features like numbered paragraphs, images, **bold** printed words, and insets. Explain to students that authors add text features to help readers comprehend and find information in the text more easily. Have your students annotate, take notes, highlight, or underline information as an additional practice.
3. Distribute the Activity Pages. Help students set up their thermometer individually or as a group, or create one as a class.
4. Distribute the Practice Pages. Read and review the questions with students to check for understanding. The Practice Pages can be an independent, group, or summative assessment.
5. In closing, ask students what they learned about becoming a meteorologist while reading or about something related to comprehension, annotations, or some other comprehension skill. What do meteorologists do, and why is it important? What are the text features? How do numbered paragraphs help you comprehend what you read?

Lesson Title: Careers: Meteorologist

Subject: High-Interest Informational Reading

Approximate Grade Level: 3 – 5

Objectives: The student will practice various close reading and comprehension skills. In addition, the student will learn about careers in meteorology.

State Educational Standards*:

LB.ELA-LITERACY.RI.4.2

LB.ELA-LITERACY.RI.4.4

NCSS.D2.ECO.6.3–5

CTE Career Cluster: STEM

Approximate Lexile Reading

Comprehension Level: 810L to 1000L

Class Sessions (45 minutes):

1 to 1½ class sessions

Teaching Materials/Worksheets:

Content Pages (2), Activity Pages (2), Practice Pages (4)

Student Supplies:

Clear plastic drinking straw, preferably a 0.2-inch diameter straw; metric ruler; fine-tipped permanent marker; clean, small, narrow-necked bottle with lid; rubbing alcohol; few drops of red, blue, or green liquid food coloring; paper towels; modeling clay; medicine dropper; water; small bowl; ice cubes

Prepare Ahead of Time:

Copies of worksheets

*Lessons are aligned to meet the education objectives and goals of most states. For more information on your state objectives, contact your local Board of Education or Department of Education in your state.



Teacher Notes

The lesson allows teachers to teach and students to practice grade-appropriate reading comprehension, foundational reading, and reading fluency skills. These lessons are designed to be completed in one or two class settings. Each lesson is a high-interest content lesson that students want to read, which teachers will want to incorporate into their instruction. The lesson is appropriate as a whole-class, stand-alone lesson or as an independent small-group activity. Check out the Learn Bright video that goes with this lesson.

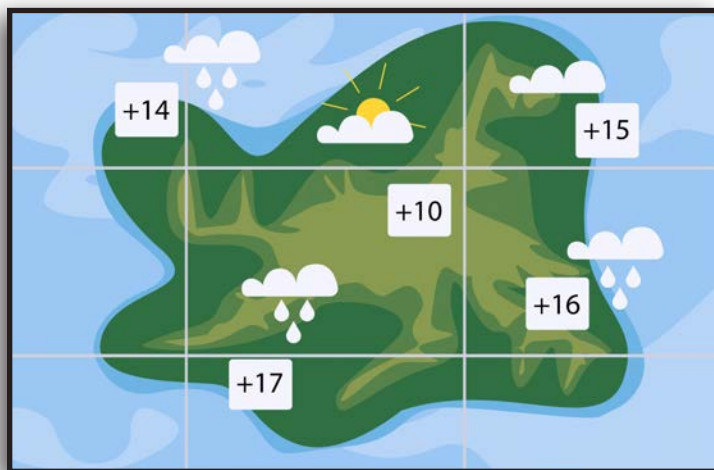
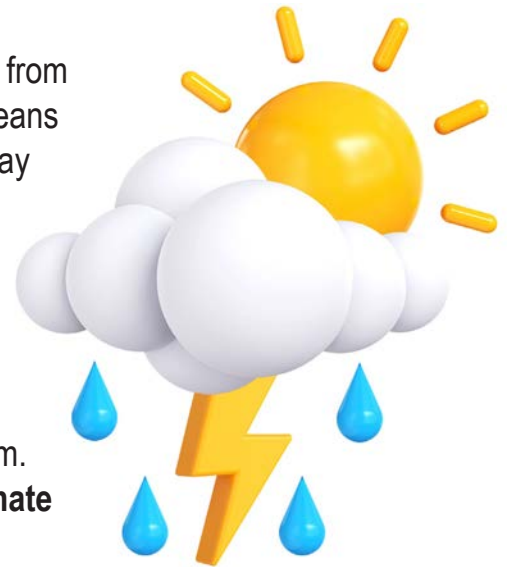
Careers: Meteorologist



¹It's important to consider what job you might want when you become an adult. You may ask, "Why? I'm just a kid!" Well, guess what? It takes a lot of training and education to be great at any **career**. And if you like weather, we have the perfect job for you! Meteorologists are the weather experts who study the atmosphere and forecast the weather. They play a significant role in helping us understand and **prepare** for different weather conditions, from sunny days to thunderstorms.

²A meteorologist's day is filled with a variety of tasks. They **analyze** data from weather satellites, radars, and other tools to predict the weather. This means they look at things like temperature, humidity, and wind patterns. Each day brings new challenges and discoveries.

³Meteorologists work to provide accurate weather forecasts that keep people safe and informed. They create weather reports that you see on TV, hear on the radio, or find online. They explain what kind of weather to expect and advise people on how to stay safe. For instance, they can tell you when to bring an umbrella or stay indoors during a storm. Meteorologists also study long-term weather patterns to understand **climate change** and help us prepare for the future.



⁴These weather scientists can work in various settings, including weather stations, news stations, and research labs. They can work in more unique places as well, from snowy mountains to tropical islands, to understand weather patterns. They might specialize in severe weather, climate, or marine meteorology. Some even work with the government or military to help plan activities that depend on the weather, like launching rockets or planning outdoor events.

⁵A typical day for a meteorologist starts early with gathering data from satellites, radars, and weather stations to analyze current conditions. They create weather maps and forecasts, often appearing on TV or radio shows to share updates. They also write reports and answer questions about the weather. Some work on research projects, studying climate change or developing new **forecasting** methods. Their day involves a mix of science, communication, and problem-solving to help people understand the weather.

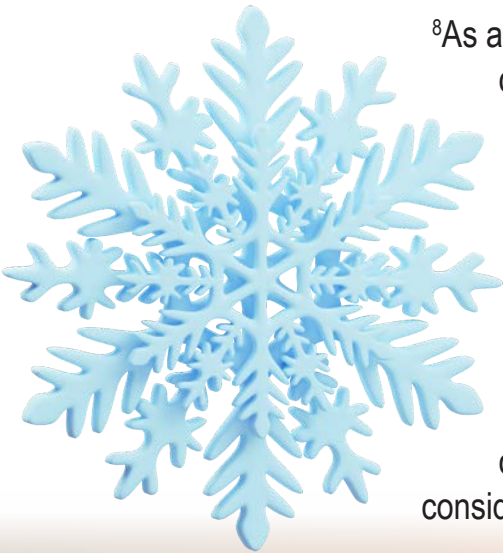
⁶Meteorologists sometimes report the weather live during certain natural disasters, like hurricanes and tornadoes. They use tools like weather balloons and Doppler radar to see what's happening inside the storms. Some meteorologists even chase tornadoes to study them up close! Meteorologists often see rare weather phenomena like double rainbows or ice halos before anyone else. Their job is not just about predicting rain; it's also about exploring the incredible wonders of our atmosphere. Plus, they sometimes get to name the storms.

⁷To become a meteorologist, you need to have a strong understanding of math and science. Participating in STEM programs is very helpful in elementary, middle, and high school. If you plan to be a television meteorologist, learning communication skills and how to make presentations will help you as well. Most meteorologists have a college degree in meteorology or **atmospheric science**. They often gain practical experience through internships or by working with experienced meteorologists. Continuing education is also essential, as meteorologists must stay updated on their field's latest technology and research.



⁸As a meteorologist, you can earn a starting salary of around \$60,000 per year, depending on experience and location. Many television personalities earn considerably more. The opportunity to help people by providing important weather information and the chance to explore the fascinating world of weather makes it an exciting career choice.

⁹If you're interested in weather and enjoy science, this might be the perfect job for you. Whether you're fascinated by tornadoes, snowstorms, or sunny skies, you would have the chance to study it all. Meteorologists master the mysteries of the atmosphere. So, if you dream of predicting the weather and helping people stay safe in a unique way, consider a career as a meteorologist!





MAKE A THERMOMETER

Student Supplies: Clear plastic drinking straw, preferably a 0.2-inch diameter straw; metric ruler; fine-tipped permanent marker; clean, small, narrow-necked bottle with lid; rubbing alcohol; few drops of red, blue, or green liquid food coloring; paper towels; modeling clay; medicine dropper; water; small bowl; ice cubes

Instructions: Using the supplies, follow the steps below to build and test your own working thermometer. Answer the questions on the next page once you finish building your thermometer.

1. Use a permanent marker to mark the straw from the bottom at half-centimeter intervals. These will serve as level marks on your thermometer. Modeling clay will seal the bottle's neck and hold the straw. Mold the clay into a ball and push it flat. This round, flat piece of clay should be bigger than the neck of your bottle.
2. Use your straw to punch a hole in the middle of this round piece of clay, just big enough to allow the straw to go through. Remove any clay clogging the straw.
3. Add rubbing alcohol to the bottle, filling it about a third to halfway up.
4. Add a couple drops of food coloring to the alcohol. Close the bottle, and shake it so the liquids mix well. Open the bottle and fill a medicine dropper with the colored rubbing alcohol.
5. Carefully set the medicine dropper on a paper towel in case any liquid leaks out.
6. Poke the straw through the hole in your modeling clay and place the clay on the bottle's neck so the straw hangs into the bottle.
7. Adjust the straw so the end is down in the liquid but does not touch the bottom of the bottle. The majority of the straw will be sticking out from the bottle.
8. Use the clay to seal the bottle opening and hold the straw. Important: Make sure the clay forms an airtight seal around the straw and over the mouth of the bottle, but do not close off the straw's opening.
9. Drip the content of your medicine dropper—drop by drop—into the straw. The fluid level in the straw should reach about halfway up the visible part of the straw. If needed, use the dropper to add more alcohol to the straw.
10. Observe the fluid level in the straw. This level indicates room temperature. Use the permanent marker to make a small symbol indicating this fluid level on your straw.





Activity

Name _____ Date _____

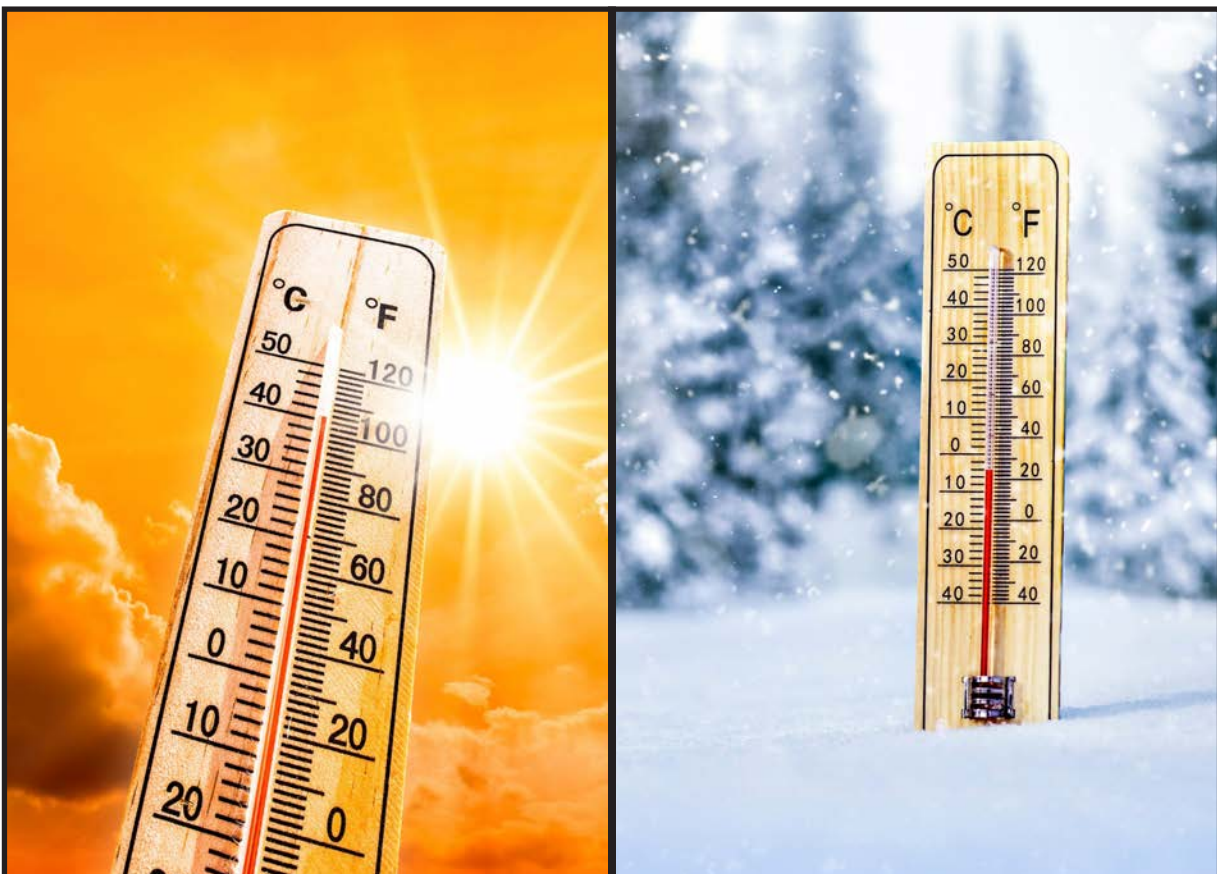
How do you think the fluid level will change if the bottle is cooled or warmed?

Add cold water to a bowl. Place ice cubes in the water so the water cools. Place the thermometer in the bowl. Give the thermometer time to work.

What happened to the liquid?

Put some medium-hot tap water in a small bowl and place your thermometer reservoir in the water. Give the thermometer time to work. ****Be sure to take the thermometer out of the water bath if the fluid rises to a level close to the top of your straw!**

What happened to the liquid?





Practice

Name _____ Date _____



Instructions: Show what you know!

1) Why did you choose to read about this career? (Perspective)

2) What are three text features in the article? Explain how they help readers comprehend the article. (Text feature)

3) In paragraph 5, the author uses the word *forecasting*. What is the meaning of forecasting? (Vocabulary)

4) What is the potential income from this career? Where did you find the information? (Comprehension)

5) What must you know to work as a meteorologist? (Comprehension)



Practice

Name _____ Date _____



6) What is the difference between weather and climate? Can meteorologists accurately forecast what the climate will be like in the years to come? Explain. (Inference)

7) What are some tools meteorologists use to see inside storms? Where did you find the information? (Close reading)

8) Choose the word the author would say **least** describes a meteorologist. (Point of view)
a. forecaster b. weather person c. prognosticator d. astrologer

9) The author uses alliteration in paragraph 9. What is it? (Figurative language)

10) Does the article encourage you to consider a career in meteorology? Explain why or why not.



Practice

Name Answer Key Date _____



Instructions: Show what you know!

1) Why did you choose to read about this career? (Perspective)

(Answers will vary depending on student interests.) Sample response: A meteorologist is a person who studies the weather. I am interested in weather science, and I think it would be cool to be on television reporting the weather!

2) What are three text features in the article? Explain how they help readers comprehend the article. (Text feature)

Three text features are words in bold print, numbered paragraphs, and images. Text features help readers find information quickly and comprehend the text more easily.

3) In paragraph 5, the author uses the word *forecasting*. What is the meaning of forecasting? (Vocabulary)

To forecast means to make a prediction or estimate of future events, especially relating to either weather or a financial trend.

4) What is the potential income from this career? Where did you find the information? (Comprehension)

A meteorologist typically starts out making around \$60,000 per year or more. Some weather television forecasters earn hundreds of thousands of dollars! The information is in paragraph 8.

5) What must you know to work as a meteorologist? (Comprehension)

Meteorologists must learn about math and science. They usually need to have a degree in meteorology or atmospheric science. They can also do an internship and/or work with other meteorologists.



Practice

Name Answer Key Date _____

6) What is the difference between weather and climate? Can meteorologists accurately forecast what the climate will be like in the years to come? Explain. (Inference)

Weather refers to short-term atmospheric conditions. Climate is the weather of a specific region averaged over a long period of time. Yes, meteorologists have sophisticated computer simulations, tools, and a weather history to make predictions. No. Meteorologists are wrong about as many times as they are right about what the weather is for a particular day. How often has it rained on you when the weather person said it would be sunny all day?

7) What are some tools meteorologists use to see inside storms? Where did you find the information? (Close reading)

Some of the tools they use are weather balloons and Doppler radar to see inside storms. The information is in paragraph 6.

8) Choose the word the author would say **least** describes a meteorologist. (Point of view)
a. forecaster b. weather person c. prognosticator d. astrologer

9) The author uses alliteration in paragraph 9. What is it? (Figurative language)

The phrase, "Meteorologists master the mysteries of the atmosphere" is an alliteration. The repeated "m" sound at the beginning of those three words qualifies as alliteration. Alliteration is a poetic device where consonant sounds are repeated in nearby words for emphasis or effect.

10) Does the article encourage you to consider a career in meteorology? Explain why or why not.

(Answers will vary.) Sample responses:

Yes, I like the weather, and it would be fun to name a storm.

No, I am scared of thunderstorms and don't really care to study them.