Teaching

Bel the Weather Girl

Interest Level: Grades PK–3
Reading Level: Grade 2

LERNER SOURCE™

Titles in this series:

A Party for Clouds: Thunderstorms
Raindrops on a Roller Coaster: Hail
The Sky Stirs Up Trouble: Tornadoes
A Snowstorm Shows Off: Blizzards
Spinning Wind and Water: Hurricanes
Weather Clues in the Sky: Clouds

Standards

Next Generation Science Standards

Science and Engineering Practices

- Developing and Using Models
- Obtaining, Evaluating, and Communicating Information

Disciplinary Core Idea

ESS2.C The Roles of Water in Earth's Surface Processes

Crosscutting Concepts

- Science Addresses Questions About the Natural and Material World

Common Core State Standards

RL.2.3 Describe how characters in a story respond to major events and challenges.

RL.2.7 Use information gained from the illustrations and words in a print or digital text to demonstrate understanding of its characters, setting, or plot.

RI.2.1 Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.

RI.2.5 Know and use various text features (e.g., captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information in a text efficiently.

RI.2.6 Identify the main purpose of a text, including what the author wants to answer, explain, or describe.

SL.2.2 Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.

Multiple Intelligences Utilized

Linguistic, logical, bodily-kinesthetic, naturalistic, spatial-visual, interpersonal, intrapersonal

LernerClassroom™
ISBN 978-1-5124-0320-6

Lesson 1 Introduction to Severe Weather: Thunderstorms

Purpose
Students will learn about severe weather, specifically, thunderstorms. Students will draw illustrations and write sentences using evidence from the text to support what they learned

Materials
- Bel the Weather Girl series
- Whiteboard or chart paper
- Paper for drawing
- Pencils
- Crayons, colored pencils or markers

Prepare
- Draw a K-W-L Chart on a whiteboard or chart paper.

Pretest
- Ask students what they know about severe weather, specifically thunderstorms, and what they wonder about thunderstorms.
- Suggested questions:
  - Why do thunderstorms occur?
  - What happens during a thunderstorm?
  - What would you like to learn about thunderstorms?
- List a few examples students give under the K and W on the K-W-L Chart.

Read
- Read *A Party for Clouds* from the Bel the Weather Girl series.
- Introduce new vocabulary from the book (cumulonimbus clouds, lightning, electricity, energy).

Model
- Write an example of something learned from the book (example: safety tips during storms) under the L on the K-W-L Chart
- Draw a simple picture of your example.
- Write 3 sentences using this format: 1) State what you learned by using specific evidence from the text 2) State why this information is important, and 3) How you could use what you learned in real life.

Practice
- Have students discuss what they learned about thunderstorms with a partner. Have them draw a picture to reflect what they learned and write three sentences using evidence from the text.

Step 1 Pair students together.
Step 2 Students discuss what they learned with their partner.
Step 3 Students illustrate a picture together and use details from the text to write three sentences about what they learned using the format modeled.

Discuss
- Have students share some of their illustrations and read their sentences to the class.
- While students are sharing, fill in the L on the K-W-L Chart.
- Were students able to learn anything listed under the W on the K-W-L chart?

Evaluate
- Read students sentences to evaluate what they learned. Determine if details used from the text are accurate.

LernerClassroom™
ISBN 978-1-5124-0320-6

Lesson 2
Asking Questions: Investigating Ice Balloons

Purpose
Students will learn different types of questions to ask when conducting experiments and learn how to sort them.

Materials
- *Raindrops On A Roller Coaster* from the Bel the Weather Girl series
- Investigating Ice Balloons: Sorting Questions (p. 6)
- Water balloons or regular balloons
- Plastic bins or tupperware
- Toothpicks
- Popsicle sticks
- Paper clips
- Food coloring
- Coarse salt
- Hand lenses
- Flashlights
- Paper
- Pencils

Prepare
- Freeze water balloons (one for each group of three students and a few extra).
- Put together explorer kits for each group (include above items in a container or plastic bowl).

Pretest
- Ask student how curious they are feeling today?
- Explain that scientists are very curious and have to always ask different types of questions when conducting experiments.
- Ask students if they can give you some examples of different types of questions.

Read
- Read *Raindrops On A Roller Coaster* as a read aloud.
- Model different types of questions as you are reading. An example: I wonder how long it takes hail to melt?

Model
- After reading, show students a frozen balloon and explorer kit. Cut off the balloon.
- Use some of the supplies in the kit to begin exploring the ice.
- State questions you have as you use the supplies and give examples of each type of question. Write examples of questions on the board.
  - Research—What is ice made of?
  - Opinion—Why does ice seem sad?
  - Observation/Measurement—How long does it take for ice to melt?
  - Experiment—Does the color of the food coloring change how quickly the ice melts?
- Emphasize that students should not judge the questions group members ask, try to answer the questions, or worry about coming up with good questions. Encourage students to ask questions using the various instruments in their explorer kits.

Practice

Step 1 Put students into groups of three. Give each group an explorer kit and a frozen balloon. Tell students to remove the balloon and begin exploring.

Step 2 As they are exploring, tell students to write their questions down on a piece of paper. Allow 15 to 20 minutes of exploration with the supplies in the kits.

Step 3 After students have had time to explore, explain that their group is going to work together to sort the questions they came up. Students will record their question on the Sorting Questions sheet provided.

Discuss
- Why is important that scientists ask questions?
- Do you think one type of question is the most important? Why or why not?

Evaluate
- Use the Sorting Questions sheet to evaluate student understanding of asking questions.

LernerClassroom™
ISBN 978-1-5124-0320-6

Lesson 3
Tornado in a Jar Experiment

Purpose
Students will make predictions to see how different objects affect the outcome of the experiment.

Materials
- *The Sky Stirs up Trouble* from the Bel the Weather Girl series
- A jar/clear plastic container with a lid for groups of three to four students (one extra to demonstrate)
- Water
- Liquid dish soap (clear)—2 teaspoons per jar
- Vinegar—2 teaspoons per jar
- Food coloring, glitter or small items to put in the tornado
- Tornado in a Jar Sheet (p. 8)

Prepare
- Determine how many jars/containers you will need for groups of students (three to four) to complete the experiment.
- Fill jars three-fourths full of water
- Give each group one item to add to their tornado (food coloring, glitter, paper clips, small animals, doll house items, etc.).

Pretest
- Ask students what they know about tornadoes.
  - How are tornadoes formed?
  - What happens during tornadoes?
  - Have you seen a tornado before?

Read
- Read *The Sky Stirs Up Trouble*
- Introduce new vocabulary from the book (meteorologists, funnel cloud, jet stream).

Model
- Explain that students will be making their own tornados in a jar.
- Demonstrate how to make the tornado. Add two teaspoons of dish soap and two teaspoons of vinegar to the jar. Tighten the lid and shake to mix the ingredients.
- Swirl jar in a circular motion to make a tornado.
- Explain that each group will be conducting their own experiment by adding an object to their tornado.
- First, make a prediction—explain and give an example (I predict when I add glitter to my tornado it will swirl around really fast because it is very light in weight).
- Then, add the object to your jar. Swirl to make the tornado. Demonstrate how to complete each section of the Tornado in a Jar sheet.

Practice
- Students will make predictions, test their predictions, and record their findings.

Step 1 Put students in groups of three to four. Have students add the dish soap and vinegar to their jars. Test their tornado by mixing and swirling in circular motion.

Step 2 Students will make their predictions and record them on their sheet.

Step 3 Students will add their objects to their jars and test their prediction.

Step 4 Students will fill in their sheet on what procedure they used and record their findings.

Step 5 Students will draw and label an illustration of their experiment.

Discuss
- Did different groups have different findings based on the size, weight, etc. of objects that were added to their tornados? Were their predictions correct? What would they do differently next time?

Evaluate
- Use the Tornado in a Jar sheet to evaluate student understanding.

LernerClassroom™
ISBN 978-1-5124-0320-6

Lesson 4
Narrative Nonfiction:
A Snow Storm Shows Off

Purpose
Students will learn what a narrative nonfiction text is and which characteristics of the text are fiction and which are nonfiction.

Materials
- *A Snow Storm Shows Off* from the Bel the Weather Girl series
- Narrative Nonfiction graphic organizer (p. 7)
- Pencils

Prepare
- Make copies of the Narrative Nonfiction sheet on p. 7 for each student.

Pretest
- Ask students to think to themselves as you are reading whether this book is fiction or nonfiction.

Read
- Read *A Snowstorm Shows Off* from the Bel the Weather Girl series.
- Introduce new vocabulary from the book as you read (vapor, crystals, etc.).

Model
- Review the elements of a fictional story (characters, setting, problem, solution).
- Review the characteristics of a nonfiction book (gives information, table of contents, index, glossary).
- Ask students to give a few examples of things they learned about blizzards.
- Ask students if *A Snowstorm Shows Off* is fiction or nonfiction.
  - Are there characters in the book? Was there a problem?
  - Did you learn new information about blizzards?
- Explain that this is a narrative nonfiction book. It has fictional characters and narration, but it gives factual information about blizzards.

Practice
- Students complete their Narrative Nonfiction Graphic Organizer and determine the parts of the story that are fiction and nonfiction.

Step 1 Pass out the graphic organizer to each student.

Step 2 Students complete the Narrative Nonfiction Graphic Organizer independently.

Discuss
- What facts did you learn about blizzards?
- Was their a problem and/or solution in the story?
- What did you like or dislike about reading narrative nonfiction books about weather versus regular nonfiction books?

Evaluate
- Use the graphic organizer to determine student understanding of narrative nonfiction and if they correctly depicted the difference between fiction and nonfiction within the story.

LernerClassroom™
ISBN 978-1-5124-0320-6

Name _____

Investigating Ice Balloons: Sorting Questions

Research Questions:
Opinion Questions:
Observation/Measurement Questions:
Experiment Questions/Investigable Questions:

ISBN 978-1-5124-0320-6

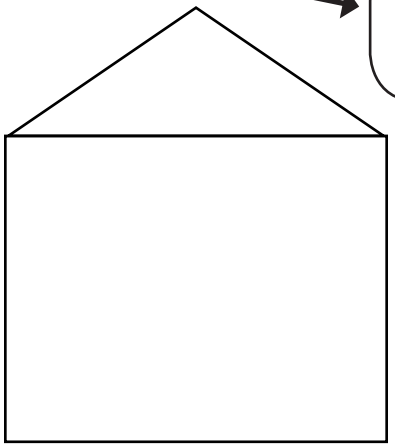
Name _____

Narrative Nonfiction: Fiction or Nonfiction?

The book, *A Snowstorm Shows Off,* gives information about blizzards, but has fictional characters in the story. It is called a narrative nonfiction book. Use the graphic organizer below to determine what parts of the story are fiction and what are nonfiction.

FICTION

Characters



Setting

Problem: _____

_____

_____

Solution: _____

_____

_____

NONFICTION

Topic

_____

_____

_____

Fact 1:

_____

_____

_____

_____

_____

_____

_____

Fact 2:

_____

_____

_____

_____

_____

_____

_____

LernerClassroom™
978-1-5124-0320-6

Name _____

Tornado in a Jar Experiment

Make a prediction about what you think will happen when you add an object to your Tornado in a Jar. Explain what you did. Explain what happened. Draw and label an illustration of your Tornado in a Jar.

I predict: _____

_____

_____

_____

_____

_____

What I did: _____

_____

_____

_____

_____

_____

What happened: _____

_____

_____

_____

_____

_____

_____

Illustration:

LernerClassroom™
ISBN 978-1-5124-0320-6