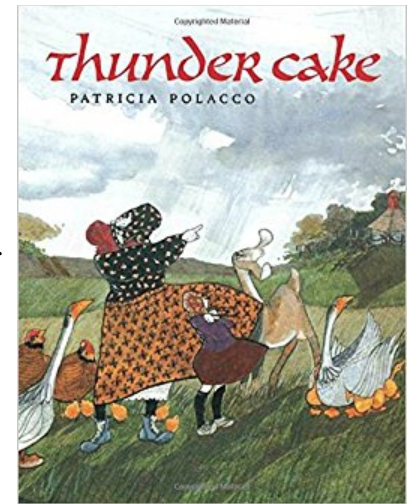


July 2017 Book of the Month

Thunder Cake

By: Patricia Polacco

Did you ever think baking could be related to thunderstorms? In this book, Grandma collects all of the ingredients to make a “thunder cake” to distract her granddaughter from being scared of a thunderstorm. Patricia Polacco uses wonderful onomatopoeia to tell the story. Grandma and granddaughter travel around the farm collecting the ingredients: eggs and milk from the chickens and cow, flour from the dry shed, tomatoes and strawberries. With each stop, the thunderstorm gets closer, but they make it back home just in time to make a real thunder cake!



Fun Facts:

- To calculate how far away you are from lightning strikes, just count the number of seconds that pass between a flash of lightning and the crack of thunder that follows it, and then divide that number by five. The resulting number will tell you how many miles away you are from where the lightning just struck. For example, five seconds would indicate the lightning struck 1 mile away, and a 10-second gap means the lightning was 2 miles away. ¹
- At any given moment, nearly 1,800 thunderstorms are in progress over the surface of the earth. ²
- Thunderstorm season in North Carolina typically occurs in the warm summer months. ³
- North Carolina usually has between 40 and 50 thunderstorm days annually. ³
- Every year, the North Carolina State Fair holds a Decorated Cakes Competition, and one cake is awarded the Best in Show ribbon. ⁴
- Sweet potato pie is thought to be North Carolina’s signature dessert because the state produces more sweet potatoes than any other state. ⁵

Activities

Onomatopoeia Around the Farm ⁶

Patricia Polacco uses onomatopoeia (sound words, such as boom, crash, etc.) to describe the sounds of the thunderstorm that Grandma and Granddaughter hear as they are collecting ingredients for their thunder cake. Highlight or underline the onomatopoeia words in each sentence from the story below.

1. The thunder roared.
2. Zip went the lightning.
3. Barroom went the thunder.
4. Boom Ba-Boom crashing the thunder.
5. Crackle, crackle, boom, ka-boom, the thunder bellowed.

6. I only counted to three and the thunder rumbled and crashed.
7. Even before the last flash had faded, the thunder rolled, boomed, crashed and barroomed just above us.
8. When the thunder roared above us so hard it shook the windows and rattled the dishes in the cupboards, we just smiled and ate our Thunder Cake.

Next, revisit each of Grandma and Granddaughter's stops in the book. What sounds other than the thunderstorm do you think they heard? For example, do you think the cow mooed when it was being milked by Grandma? What sound do you think the door of the dry shed made when they opened it? Make a list of onomatopoeia words to describe sounds heard on Grandma and Granddaughter's journey around the farm.

The Water Cycle Experiment ⁷

Materials:

- Skillet
- Water
- Oven mitts
- Pie pan
- Ice cubes
- Hot plate, or stove top

Procedure:

1. Pour water into the skillet and heat it. Have your students watch as the heated water turns into steam and disappears.
2. Using the oven mitts, hold the pan of ice cubes about six inches above the steaming water and tell your students to watch the bottom of the pie pan.

Questions:

1. What happens to the water when it is heated?
2. What happens to the steam?
3. What part of the water cycle do the ice cubes represent?
4. Why do drops of water fall back into the skillet?

Explanation:

The water in the skillet that is heated is like water that is heated from the sun and causes it to evaporate. Water evaporates in the form of water vapor. As the vapor rises, it cools off along the air around it. Eventually, the air cools off so much that it can no longer hold the water vapor. At this point the water vapor changes or condenses into water droplets. In this demonstration, the pan of ice cubes is used to quickly cool the water vapor and the air. In nature, the water droplets that form on the bottom of the pan would be seen as clouds. As the droplets continue to gather moisture, they increase in weight. Eventually they become so heavy that they fall back to the skillet (earth) as precipitation (i.e.: rain). Then, the cycle starts again.

- **Collection:** Water collected in the pan (or a river, lake, stream, ocean, etc.)
- **Evaporation:** Water vapor rising

- **Condensation:** Water vapor changing into droplets
- **Precipitaion:** Water falling back to the skillet (earth)

Products from the Thunder Cake Farm ⁷

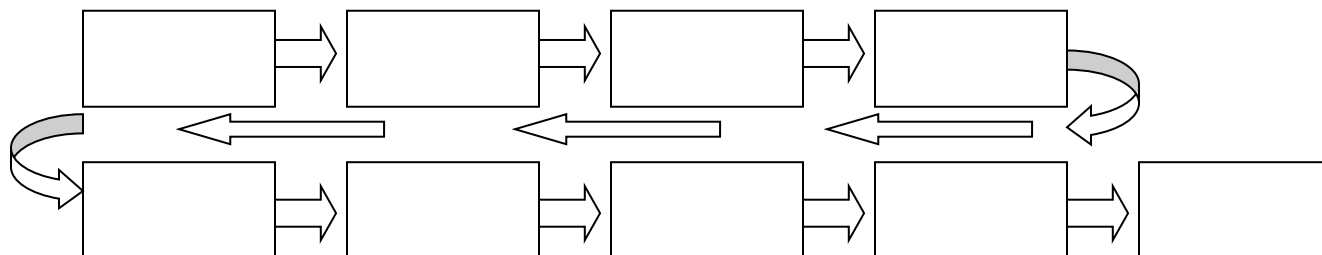
Ask the students to identify the animals in the story. Then, ask the following questions. The students may write their answers, answer openly by raising their hands, work in groups and share answers with the class, etc.

1. What do we get from chickens?
2. How many ways can you think to cook eggs? (Answers may include scrambled, fried, etc. but don't forget to mention how they are incorporated into recipes, such as Thunder Cake!)
3. What is the name for a female chicken? (hen)
4. What is the name for a male chicken? (rooster)
5. What about a baby chicken? (chick)
6. What do we get from a dairy cow? (milk)
7. What can we make from milk? (ice cream, yogurt, sour cream, cheese)
8. How many types of cheese can you name? (cheddar, gouda, provolone, swiss)
9. What is the name for a female cow? (cow)
10. What is the name for a male cow? (bull)
11. What is the name for a baby cow? (calf)

Thunder Cake Story Quest ⁸

Have students complete the questions below.

1. What adjectives does the author use to describe how the air was?
Page ____
2. Find three words that have an ending where the ending consonant in the base word needed to be doubled before adding the ending.
Page ____ Page ____
Page ____
3. How many minutes away is the storm when Grandma said the storm was ten miles away?
Page ____
4. List the ingredients for Thunder Cake in the order Grandma and her Granddaughter collected them in.



5. How did the little girl's feelings change from the beginning of the story to the end of the story?
6. Give two examples of things Grandma says to calm her Granddaughter's fears.

Page _____

Page _____

Links

- Water Cycle Song Video
<https://www.youtube.com/watch?v=TWb4KIM2vts>
- State Climate Office of North Carolina
<http://climate.ncsu.edu/climate/ncclimate.html>
- Our World: What is Weather? Video
<https://www.youtube.com/watch?v=UtgFHHhm1xU&feature=youtu.be>
- Weather Videos for Kids
<http://www.primarythemepark.com/2016/03/weather-videos-for-kids/>

Sources:

1. <http://www.livescience.com/37734-how-far-away-is-lightning-distance.html>
2. <http://climate.ncsu.edu/thunderstorms/overview>
3. <http://abc11.com/weather/thunderstorm-season-is-just-around-the-corner--heres-how-to-stay-safe/540794/>
4. <http://www.ncstatefair.org/2016/Competitions/Entering/DecoratedCakesCompetition.html>
5. http://www.slate.com/articles/life/food/2014/08/united_sweets_of_america_map_a_dessert_for_every_state_in_the_country.html
6. <http://zunal.com/process.php?w=148390>
7. http://www.homeschoolshare.com/thunder_cake.php
8. <https://teachers.bluevalleyk12.org/Page/1614>