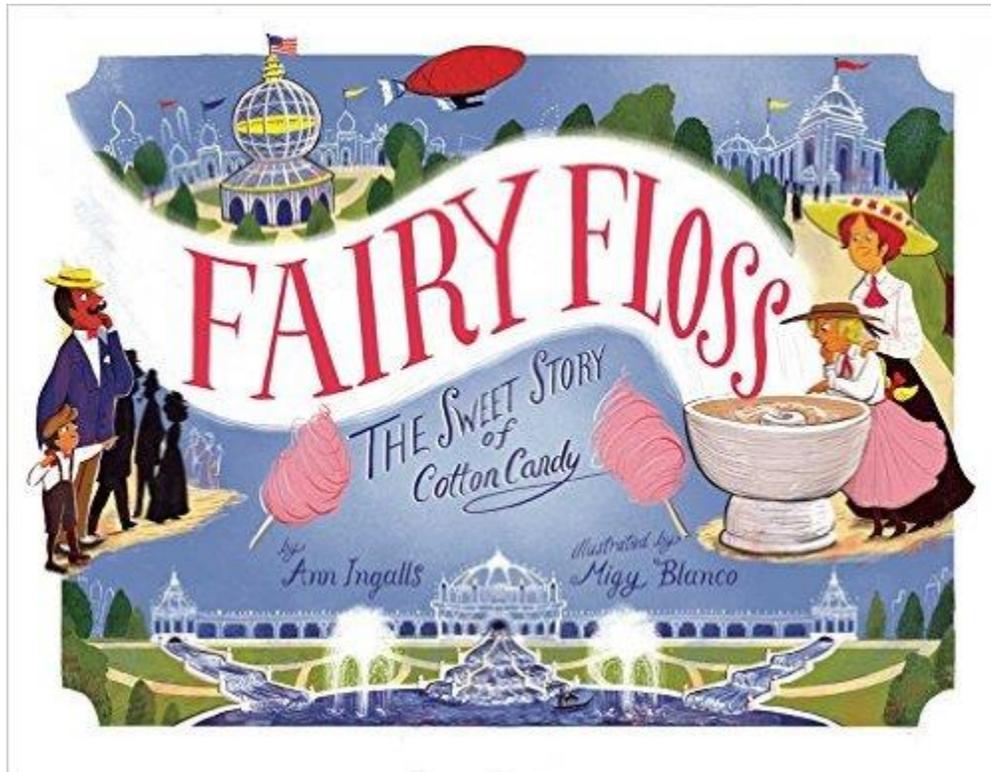


Education Guide



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Language Arts

Step by Step

How do you make Fairy Floss? Lillie helped William make some at the World's Fair. Write the step by step directions Lillie used for making Fairy Floss. Use the ordinal words first, next, then, after that, and finally or last in your directions. Look in the story for clues. Illustrate each step.

Extension: What is your favorite treat? Write the step by step directions. Read it to a friend and see if they can guess what it is.

A Fairy Adventure

Why is Fairy Floss called Fairy Floss? Was it made by fairies? What would fairies use it for? Use your imagination and write an adventure about how it was created. Be sure your story has a beginning, middle and end. Use lots of adjectives and adverbs in your writing. Illustrate your story when you are finished.

Describe the overall structure of a story, including describing how the beginning introduces the story and the ending concludes the action.

Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.

Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences

Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section.

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

Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

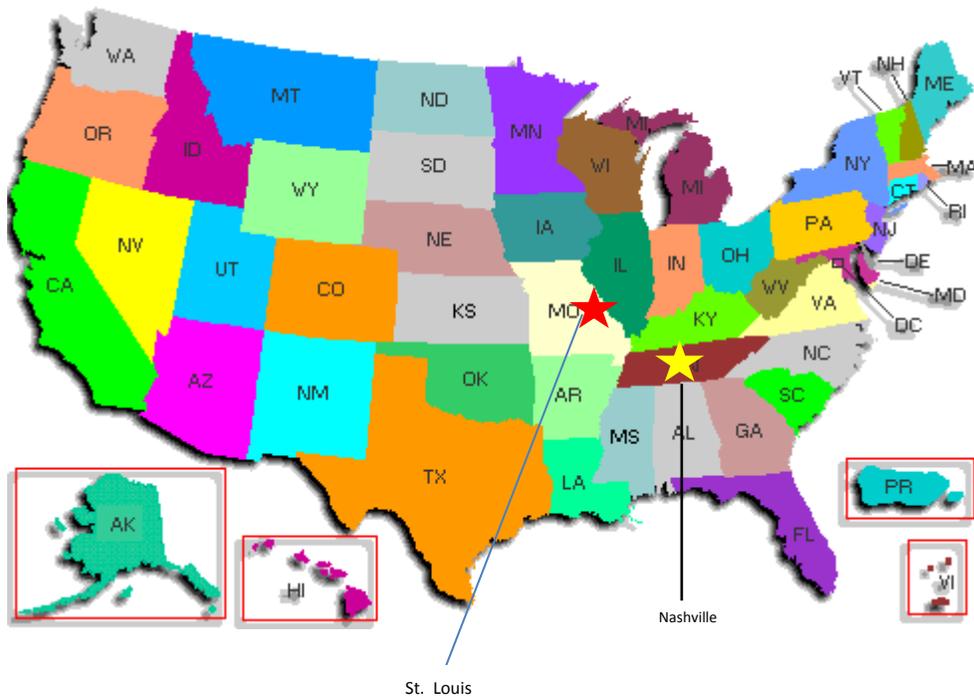
Conduct short research projects that build knowledge through investigation of different aspects of a topic.

Use adjectives and adverbs, and choose between them depending on what is to be modified.

Adapt speech to a variety of contexts and tasks, using formal English when appropriate to task and situation.

Geography

John Warton and his friend, dentist William Morrison, invented the electric candy machine in Nashville in 1897. They shared their invention at the 1904 St. Louis World's Fair. Locate Nashville, TN and St. Louis, MO on the map. What type of transportation would they have used? How long would it have taken them to make the trip in 1904? Older children can calculate the mileage from Nashville and St. Louis.



Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

Science

Cotton candy is still made in an electric candy machine very similar to the one John Wharton and William Morrison invented. Melted sugar is the only ingredient. Although now it is made with added colors and flavors. The following activities explore the science behind Fairy Floss.

Melting Sugar

Materials:

Cotton Candy
Sugar Cubes
Granulated Sugar
Water
Lemon-lime Soda
Clear Cups
Recording Sheet



Directions:

Step 1: Make predictions.

Which will dissolve fastest? Cotton candy, granulated sugar or a sugar cube?
Will they dissolve faster in water or in the soda?

Step 2: Using a clear cup, fill 3 cups with the same amount of water.

Step 3: At the same time, drop a sugar cube in the first cup, 1 teaspoon of granulated sugar in the second cup and a half dollar size piece of cotton candy in the third cup.

Step 4: Record your observations.

Step 5: After one minute, stir the cups. Record your observations.

Step 6: Repeat steps 2-5 using the soda instead of water. Record your predictions.



Melting Sugar Recording Sheet

Name _____

Make Predictions:

Circle which sugar you think will dissolve the fastest in water.

Granulated Sugar

Sugar Cube

Cotton Candy

Circle which sugar you think will dissolve fastest in soda.

Granulated Sugar

Sugar Cube

Cotton Candy

Results:

The _____ dissolved fastest in water.

The _____ dissolved fastest in soda.

Conclusion:

Spin, Spin, Spin!

Centrifugal force is a force that causes an object moving in a circular path to move out and away from the center. In a cotton candy machine, centrifugal force is what causes the melted sugar to form thin threads. To observe centrifugal force, make a tornado funnel in a bottle.

Materials:

Plastic bottle with a lid-one with a flat bottom works best

Water

Liquid dish soap

Optional - food coloring

Optional - glitter



Step 1: Remove the lid and fill the bottle with water.

Step 2: Add a couple drops of dish soap and food coloring (if desired). Adding glitter helps make the funnel more visible

Step 3: Replace the lid tightly.



To show the centrifugal force, hold the bottle by the neck and quickly rotate the bottle in a circle until you see the funnel forming. The narrowest point of the funnel would be similar to where the liquid sugar enters the bowl of the cotton candy machine. The wider part of the funnel would be the edge of the bowl.



It's Electric

Electricity was a big part of many things at the 1904 World's Fair. Explore electricity by making simple circuits. You can make a simple circuit with materials you probably already have.

Materials:

D Battery

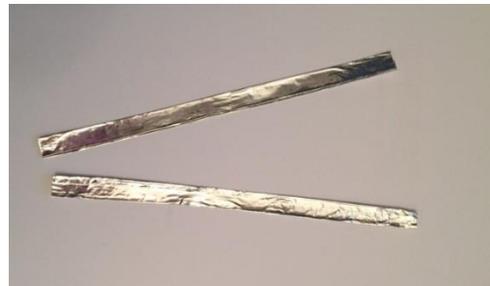
2 strips of aluminum foil 2 inches wide

Small lightbulb from a flashlight

Tape-any kind works



Step 1: Fold both pieces of foil into narrow strips



Step 2: Attach the end of one piece of foil to the positive (top) end of the battery. Attach the end of the other piece of foil to the negative (bottom) end of the battery. Press firmly and secure with tape.



Step 3: Wrap the other end of one piece of foil securely around the base of the lightbulb. Be sure it does not touch the bottom of the bulb.



Step 4: To complete the circuit, touch the base of the bulb to the other end of the foil. Tightly hold the foil around the bulb and press down on the foil on the top of the battery to make the light brighter.



Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.

Plan and conduct an investigation to describe and classify different types of materials by their observable properties.

Make observations and/or observations of an objects motion to provide evidence that the pattern can be used to predict future motion

Just for Fun

Make Your Own Fairy Floss

Materials:

Paper

Cotton Balls

Glue

Step 1: Make a paper



Step 2: Stretch out the cotton balls or use the spider web you can get for Halloween.



Step 3: Put a thin line of white glue down the edge of the cone about halfway down. Stretch out the cotton balls and wrap them around and around the cone to create the Fairy Floss.



If desired color the Fairy Floss with a marker.



Fairy Floss Painting

Make a Fairy Floss painting using puffy paint. Use 1 part shaving cream mixed with 1 part glue. Add food coloring or tempera paint if desired. Make the cone from paper, colored or painted on paper. Use the puffy paint to make the fluffy Fairy Floss.

Materials:

Shaving Cream

Glue

Food Coloring



Step 1: One part glue mixed with one part shaving cream. 1-2 drops of red food



Step 2: Glue or paint the cone shape. Then use a spoon or paintbrush to paint the Fairy Floss onto the cone. Let dry overnight.



Fairy Boxes

Fairy Floss was first sold in boxes not in bags or on cones like we buy cotton candy now. What would the Fairy Floss box for the 1904 World's Fair look like if you were designing it? Use a small box (one that crackers or granola bars come in). Cover it with white paper and design the top and sides. Tie it with a ribbon when you are finished!

