

The Polar Express

Book by Chris Van Allsburg

Unit study by Pam Cloar

Language Arts

Figurative Language

Figurative language is describing something by comparing it to something else. The Polar Express is full of figurative language. Three of the types used are imagery, similes, and metaphors.

Imagery

Imagery is the use of words to stimulate the senses- sight, sound, taste, touch, and smell. Discuss the author's use of imagery in the story. Find examples (ex.-hissing steam, squeaking metal).

Simile

A simile is the comparison of two unlike objects using the words like or as. Find an example of a simile in the story (ex.-hot cocoa as thick and rich as melted chocolate bar).

Metaphor

A metaphor is the comparison between two unlike objects using a form of the verb be. Find examples of metaphors in the story (ex.-apron of steam).

Letter Writing

Practice writing a friendly letter by writing a letter to Santa. There are five main parts to a friendly letter; be sure to include all five.

1. Heading

The heading gives the date that the letter was written as well as the complete address of the person who is writing the letter.

2. Greeting

The greeting tells to whom the letter is written. The most common greeting is

"Dear _____". It is considered impolite to use only the person's name as a greeting.

3. Body

The body is the letter itself.

4. Closing

The closing is a polite way to say goodbye. (Sincerely, Sincerely Yours, etc.)

5. Signature

The signature is the name of the writer.

Biography

Chris Van Allsburg was born in Grand Rapids, Michigan on June 18th, 1949, the second child of Doris Christiansen Van Allsburg and Richard Van Allsburg. He attended the University of Michigan, and currently live in Rhode Island. He is the winner of two Caldecott Medals.

Have student write a brief biography of Van Allsburg's life. An older student may want to do more research.

Fun fact- Every one of Van Allsburg's books features Fritz, a bull terrier that is based on a real-life dog owned by Chris Van Allsburg's brother-in-law (located on the first page as a puppet). You may want to check out some other Van Allsburg books from the library and see if your student can find Fritz in every book.

Vocabulary

express-sent or traveling at high speed

insist-to make a demand : request urgently

conductor-a person who collects fares in a public means of transportation (as a bus or railroad train)

carols- a religious song of joy

flickered- to move irregularly or unsteadily

scrape- to rub or cause to rub so as to make a harsh noise

valley- an area of lowland between ranges of hills or mountains

harness- the straps and fastenings by which an animal pulls a load

rustle- to act or move with energy

barren- not producing results or gain; an empty place

Compare and Contrast

If you decide to watch the movie, complete a Venn Diagram comparing and contrasting the book and the movie.

Mythological Creatures-- Elves

You will encounter various mythological (make-believe) creatures as you read different stories. An elf is a small and often mischievous (trouble-making) fairy. Legend has it that Santa's workshop is filled with elves that make toys. Has your student read other stories with elves? What other mythological creatures can your student think of? (unicorns, trolls, dragons, centaurs, gryphons, etc.)

Social Studies

The Legend of St. Nicholas

St. Nicholas was a godly man who gave to those less fortunate than he. He was born in the third century near modern day Turkey. His parents died while he was young and he is famous for using the money he inherited from his parents to help the less fortunate. He was also famous for his "generosity, love for children, and concern for sailors."

St. Nicholas has become somewhat of a legend and there are many stories that have been told and embellished about him. We aren't sure what is fact and what is fiction, but the stories center around Nicholas' compassion and in them you will find him saving people from famine, sparing the lives of those who were innocently abused, and doing kind deeds in secret. Within a century of his death, he was celebrated by the Catholic church as a saint. His feast day on December 6th is a reminder to all of his kindheartedness. December 6th is still the main day for celebration and gift giving in much of Europe. In the Netherlands St. Nicholas is celebrated by sharing candies (thrown in the door), chocolate initial letters, small gifts, and riddles. The children leave carrots and hay in their shoes for the St.

Nicholas' horse, and they hope they will receive small gifts in return. The next morning the children find little presents as well as treats such as fruit, nuts, candies, and cookies. In spirit of the holiday, the gifts are meant to be shared with others.

Read a book about the legend of St. Nick. One possibility is Saint Nicholas: The Story of the Real Santa Claus by Mary Joslin.

Passenger Trains

Passenger trains travel between stations where passengers can get on and off. Discuss the use of passenger trains. Discuss the different types of passenger trains (long-distance, inner-city, light-rail).

Long-Distance Trains- Long-distance trains travel between many cities or regions of a country. They sometimes cross more than one country. These trains may include a dining car or sleeping car. (Example- Amtrak)

Rapid Transit and Light Rail - These trains range from old trolleys to new subways (underground). They are powered electrically and usually run in tunnels underground, with the exception of trolleys. Their goal is to relieve congestion and offer people a transportation option other than driving cars.

Commuter Trains- Many cities have networks of these trains which serve the city and its suburbs. The trains cope with large traffic demand in a metropolis. These trains are sometimes double-deckers.

Geography

North Pole

Locate the North Pole on a globe or map. What are the differences between the North Pole and where you live?

The North Pole is the northernmost point on the earth's surface. Most of the time, sea ice covers the area, usually 2-3 meters thick. There has been water sighted at the pole's exact location. Winter temperatures range from about -45°F (-43°C) to -15°F (-26°C). The average is probably around -30°F (-34°C). Summer

temperatures average around the freezing point at 32°F (0 °C). The polar bear, ringed seal, and arctic fox have all been seen in the vicinity of the North Pole. Fish have been sighted at the North Pole but are suspected to be few in number. Some birds (Snow Bunting, Northern Fulmar, and Black-legged Kittiwake) have been seen at or near the North Pole. No country owns the North Pole or the Arctic Ocean surrounding it.

Arctic Circle

The Arctic Circle is one of the five major lines of latitude on a map. Locate the Arctic Circle on a map or globe. Discuss why it would be difficult to live north of the Arctic Circle.

The land on the Arctic Circle is divided between eight countries: Norway, Sweden, Finland, Russia, the United States, Canada, Denmark, and Iceland. Relatively few people live north of the Arctic Circle because of its extreme climate. The temperatures are extremely cold, and there is constant darkness in winter (Polar Night or 24-hour night). In the summer temperatures are above freezing with constant daylight (Polar Day or 24-hour day). The diet is dependent on things that can be taken from the natural environment such as fish, seals, whales, caribou, berries, and plants. Agriculture is impossible.

Science

Biome

A biome is a type of ecological community. Within each biome is a distinctive set of plants and animals. We see two biomes in The Polar Express. First, they head north and go through cold dark forest (this would be the Coniferous Forest biome) and eventually arrive in the North Pole (a biome known as the Tundra).

Coniferous Forest

The coniferous forests make up about 15 % of the Earth's land surface. They often occur on mountainsides and are made up mostly of cone-bearing trees such as firs and pines. They have small lakes and swampy areas and are cold and snow-covered most of the year. Not many animals live in the habitat year-round, but there are animals such as bald eagles, and some types of bears, snakes, and butterflies.

Tundra

The tundra is a treeless plain especially in arctic regions that has a permanently frozen layer below the surface soil. This is the coldest of all biomes. The plant life is made up mostly of mosses, lichens, herbs, and very small shrubs. Polar bears, the arctic fox, snowy owls, and caribou are some of the animals you might see on the tundra.

Animals of the Arctic

What types of animals live in the Arctic region? Wolves, polar bears, caribou (reindeer), musk oxen, the arctic hare and other animals live in the arctic region. How do these animals compare to the animals that live in your region?

Polar Bears- Polar bears are the world's largest land predators. They live in the arctic where they prey primarily on seals. Adult male polar bears weigh from 775 to more than 1,500 pounds. The females are considerably smaller, normally weighing from 330 to 550 pounds.

Caribou- The caribou is a member of the deer family. Most males and females have antlers. The caribou eats lichen (a moss) that takes years to grow back, resulting in the animal always being on the move. These animals are capable of sleeping in water. Domesticated caribous are called reindeer.

Musk Oxen- The Musk ox roams the tundra in search of the roots, mosses, and lichens to eat in winter. In summer, the oxen add Arctic flowers and grasses to their diet. Thick, shaggy fur keeps the musk oxen warm. These animals roam in herds with two or three dozen animals being led by a single female.

Arctic Hare- These animals have a thick, white fur that keeps them warm in very cold temperatures and provides a camouflage in the ice and snow. Arctic hares are fast and can bound at speeds of up to 40 miles (60 kilometers) an hour. Hares survive by eating woody plants, mosses, and lichens in winter. In other seasons they eat buds, berries, leaves, roots, and bark.

Arctic Wolves- The arctic wolf can survive for weeks without food in sub-zero temperatures. The wolves prey on lemmings and arctic hare, but the most substantial source of food is musk oxen and caribou. They will kill almost any animal they can catch, and eat every part of it- including skin, fur, and bones. On average, the Arctic wolf is about 3 feet tall from head to toe. Body length may be from 3 to 5 feet (nose to tail), and colors may range from red, gray, white and black.

Temperature

At what temperature does water freeze? (0°C / 32°F)

What is the average temperature in the Arctic Region? The temperature averages below freezing year-round, with an average annual temperature of only -14°C / 7°F. What is the average temperature where you live? You may want to keep track of the daily temperature and graph your results after a month of recording.

Snow

Snow forms when an ice crystal is blown back and forth between the top and bottom of a cloud. As it bounces, it grows, and when it becomes heavy enough, it falls to the ground. If the temperature of the air below the cloud is cold enough, snow falls. All snowflakes are hexagons and have six sides, but no two snowflakes are just alike.

Applied Math

Mile

How many miles is it from your city to the North Pole? Calculate (or estimate) the number of miles. Convert to yards and then to feet.

Time

Practice telling time with an emphasis on midnight.

Art

Caldecott Medal

Have your child find the award on the cover of *The Polar Express*. The Caldecott Medal is given every year to the artist of “the most distinguished American picture book for children published in the United States during the preceding year”. First awarded in 1938, the idea for the award was proposed to the American Library Association by Fredric Melcher, secretary of the American Booksellers Association. The winner of the medal, named after 19th century picture book illustrator Randolph Caldecott, is selected by a committee of the American Library

Association and announced at their midwinter meeting. Ask your child why he thinks *The Polar Express* may have won this prestigious award in 1986. Chris Van Allsburg has won this medal twice! He won it in it 1982 for *Jumanji*.

Perspective

Van Allsburg's drawings are noted for their use of perspective. Many of his illustrations are from a child's perspective, which conveys the world as they see it.

Design Your Own Ticket

Design your own ticket for the Polar Express.

Just for Fun

Cooking

Hot Cocoa Recipe

3/4 cup powdered milk
1/2 teaspoon ground cinnamon
3/4 cup sugar
1/2 cup cocoa powder
4 ounces bittersweet chocolate

Combine all the dry ingredients in a large bowl and mix well. Take the bittersweet chocolate and roughly chop it up to give a chunky but consistent size. Mix well with a wooden spoon and then store in a dry airtight container. To make the hot chocolate, simply add 1 cup of water per 1/2 cup of hot cocoa mix. Heat in a small saucepan over low heat, stirring with a whisk. Heat until hot, but do not boil, about 6 to 7 minutes. Serve with marshmallows.

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