

Lesson Plan

Parky Symmetry

Developed by:

Laura Wright – 2016 Iditarod Teacher on the Trail™

Discipline / Subject:

Math and Reading

Topic:

Symmetry

Grade Level:

4th grade – can be modified for all primary grades

Resources / References / Materials Teacher Needs:

Mama, Do You Love Me? by Barbara M. Joose

Jingle Dancer by Cynthia Leitich Smith

White paper, black markers, crayons, and colored pencils

Optional: watercolor paper, watercolors, and paintbrushes

The parky graphic created for the lesson – see attached

Computer for internet research

A white board or chalkboard for “noticings” while reading the books

Lesson Summary:

In this lesson, students will learn about traditional Arctic native dress and create symmetrical parkys in math class. Students will compare this to Native Americans in other parts of the United States or their own state. Using symmetry in math, they will create mukluks and mittens for their parky design.

Standards Addressed:

Common Core State Standards

CCSS.MATH.CONTENT.4.G.A.3

Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.

Integration of Knowledge and Ideas:

CCSS.ELA-LITERACY.RL.4.7

Make connections between the text of a story or drama and a visual or oral presentation of the text, identifying where each version reflects specific descriptions and directions in the text.

CCSS.ELA-LITERACY.RL.4.9

Compare and contrast the treatment of similar themes and topics (e.g., opposition of good and evil) and patterns of events (e.g., the quest) in stories, myths, and traditional literature from different cultures.

Texas State Standards

6. (B) identify and draw one or more lines of symmetry, if they exist, for a two-dimensional figure

Alaska State Standards

4.G.3. Recognize a line of symmetry for a two-dimensional (plane) figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.

Learning Objectives:

1. Compare and Contrast Alaska Native Cultures and Native American tribes by researching the traditional clothing of each
2. Practice symmetry and congruency in math by making mukluks and mitts

Assessment:

1. The parky should have a base color that reflects an animal skin such as brown, black, or white
2. The mukluks and mitts are symmetrical and congruent; they can be different sizes
3. They should be decorated using images and references from the internet, such as the Iditarod site or books

Procedural Activities

1. Read Mama, Do You Love Me? by Barbara M. Joose and Jingle Dancer by Cynthia Leitich Smith
2. Discuss the book as you read it and chart the differences in clothing and culture using a chart or a Venn diagram
3. Research the parka or parky from the Iditarod site and Internet research. Make a list of animals hides used and show images of decorative parkys from research
4. Color the parky using crayons or colored pencils
5. Optional: take a photo of each student for the hood. Tape the photo to the inside. Students can also design and color a face instead of a photo.
6. Fold and cut a white sheet of paper into 8 pieces and hand them out to students. They will need two each.
7. Students will fold the little pieces of paper in half: creating a line of symmetry
8. On the fold use a black marker to draw one mukluk and then one mitten
9. Fold backwards and trace the other side creating two mukluks and two mittens
10. Cut them out and decorate them using images from the internet or books showing traditional decorative designs
11. Optional: Create a bulletin board display, or glue them onto a background scene

Materials Students Need:

The parky graphic

White paper and black markers

Coloring materials such as crayons and colored pencils

Optional: watercolor paper and watercolor sets

Technology Utilized to Enhance Learning:

Computer or tablet for the internet

Document Camera

Eye on the Trail Parky article for reference:

<http://iditarod.com/eye-on-the-trail-parky-fashion-in-unalakleet/>

Other Information:

Create a class art gallery and put the pictures in frames or on a bulletin board for viewing

Modifications for Special Learners/ Enrichment Opportunities:**Modified:**

The teacher can create a basic symmetrical outline of the parky and mittens first, and then allow the student to decorate them and cut them out.

Enrichment:

Research the northern lights of the Arctic and create a background with appropriate colors and patterns

Research the 11 Alaska Native Cultures with a research report or written paragraph

Additional Information:

Share your bulletin board display with the Iditarod Education Department online

Create a northern lights background or a winter scene for the parky

See below for parky graphic

