

THE COTERIE

no small characters.

GEOMETRY LESSON PLAN Grades K-2

Created for use in your classroom before seeing
Rudolph the Red-Nosed Reindeer at The Coterie

Developed by The Coterie Education Director Amanda Kibler and Education Intern Theresa Hancock

Kansas & Missouri Learning Standards:

K.G.A.1: Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind and next to.

1. G.A.2: Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape

2. G. A.2: Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes

Materials Included:

- Shape flash cards (Appendix A)
- *Rudolph the Red-Nosed Reindeer* setting descriptions (Appendix B)
- Shape worksheet (Appendix C)
- Design example (Appendix D)

Student Objectives:

Students will be able to:

- Identify and recreate shapes from the set of *Rudolph the Red-Nosed Reindeer*.
- Create and analyze composite shapes

Assessments:

- Post- share Q&A: Students will compare their drawings and discuss what they drew.
- Individual design: Students turn in their designs.

Grade Focus Area:

- **Kindergarten:** Identifying and recreating shapes
- **1st grade:** Drawing 2-D or 3-D shapes to create composite shapes
- **2nd grade:** Recognizing and drawing shapes with specified attributes

Lesson:

Introduction

- *Shape Shifting (10-15 minutes)*: Before seeing The Coterie's production of *Rudolph the Red-Nosed Reindeer*, students will be creating their own designs of the settings they will see in the show using shapes. To introduce the design project ask students to recreate shapes using their bodies. Starting individually, students will find an open space in the room. As you announce a shape and hold up the flashcard (Appendix A), students will make that shape. After a couple of individual rounds, pair them off so that they can create the same shapes with another student.

Building Activities

- *Body Work (10-15 minutes)*: After time is called, students will then have an opportunity to create the settings from the show using their bodies and the shapes they just worked with. Read the name of a setting found in the play (Appendix B). Students will then describe what they think is found in each of these settings. As elements of the setting are named, ask students to come up and use their bodies to create the different items of the setting. For example, in Santa's Workroom, one student would be a desk while another would be a bench. When they are done, the students will have created the setting they described. This way, students can see how shapes are found and used in different environments.
- *Become a Designer (40-50 minutes)*: Students will now have a chance to design their own set. A set designer is someone who creates the world that the audience sees on stage. They use shapes and angles to design the space where the characters live and work, such as houses, landscapes, and furniture. Using different shapes, students will get the chance to be their own designer and create different settings from *Rudolph the Red-Nosed Reindeer*. Each student is given a piece of paper where they will create their own set design based on the descriptions found in Appendix B.

**A "set design" is the initial drawing of the environment in which the story takes place.*

- **Kindergarten:** Students will use given shapes to piece together a setting. Read the descriptions of the different settings in Appendix B to the class. Each student will then choose one of those settings to design. Supplying students with a variety of shapes, ask students to cut out shapes that can be put together to create their chosen environment. There are shapes included in Appendix C. Using the shapes they just cut out, ask students to put together a picture

based on the description of the environment. By using the shapes, they will be able to create a picture and see how shapes are used in the environment. The shapes will be glued to a piece of paper to finalize the design. (See an example in Appendix D)

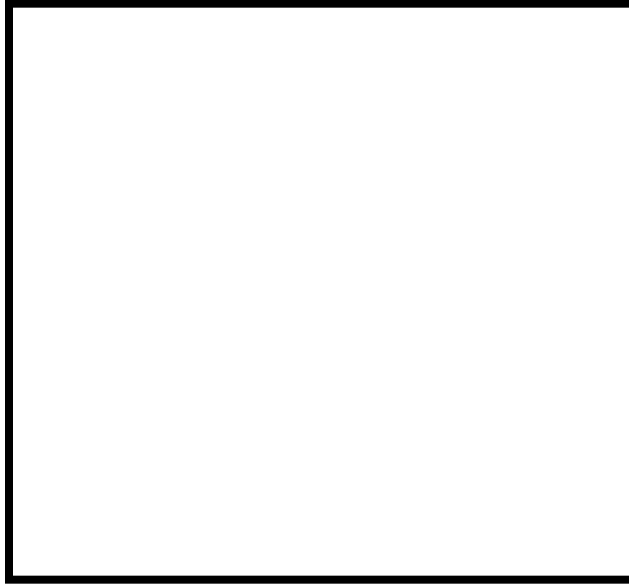
- *Teacher Note: In addition to shape composition, color is a very important part of design. Encourage your students to color their shapes as they create their designs.*
- **1st grade:** In order to design, students will need to combine basic shapes to form new composite shapes. Ask students to cut out the shapes found on the worksheet in Appendix C. Then read to them the descriptions of the different settings in Appendix B. Ask students to then create new shapes using the cut outs of the shapes and combine them to create composite shapes. Then they will arrange the composite shapes to create a picture based off of the descriptions. The shapes will be glued to a piece of paper to finalize the design. (See an example in Appendix D)
 - *Teacher Note: In addition to shape composition, color is a very important part of design. Encourage your students to color their shapes as they create their designs.*
- **2nd grade:** Students will use the description of the setting and their knowledge of shapes to design one of the places found in Rudolph the Red-Nosed Reindeer. Read them the descriptions of the settings (Appendix B). Then, ask them to draw shapes that could be used to create the environment. Students will cut out the shapes and put them together to make the setting using composite shapes. The shapes will be glued to a piece of paper to finalize the design. (See an example in Appendix D)
 - *Teacher Note: In addition to shape composition, color is a very important part of design. Encourage your students to color their shapes as they create their designs.*

Wrap-up

- *Collaborative Design Share (10-15 minutes)*: When everyone is finished, ask the students to find everyone else in class who designed the same location. In their smaller groups, each student is given time to share their designs with the group. After everyone has shared, ask students to reflect on the similarities and the differences of the designs.
 - Which shape was used the most? Which one was used the least?
 - How were the same shapes used differently in the designs?
 - What new shapes were created and how were they used?
- Come back together as a whole class and discuss the similarities and differences in each design group.

APPENDIX A

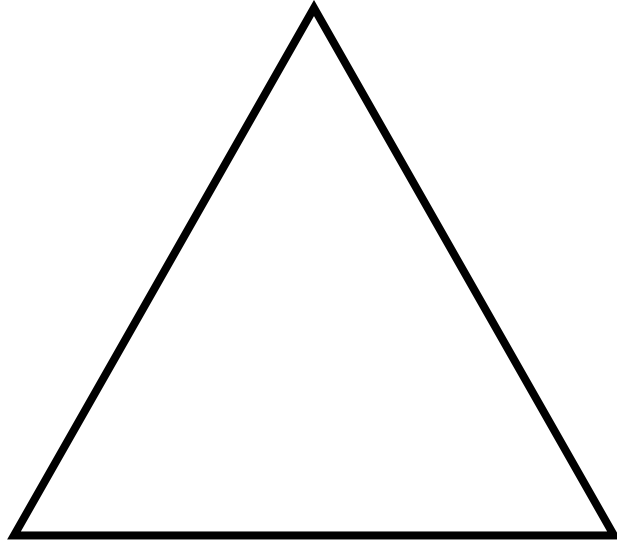
Flash Cards



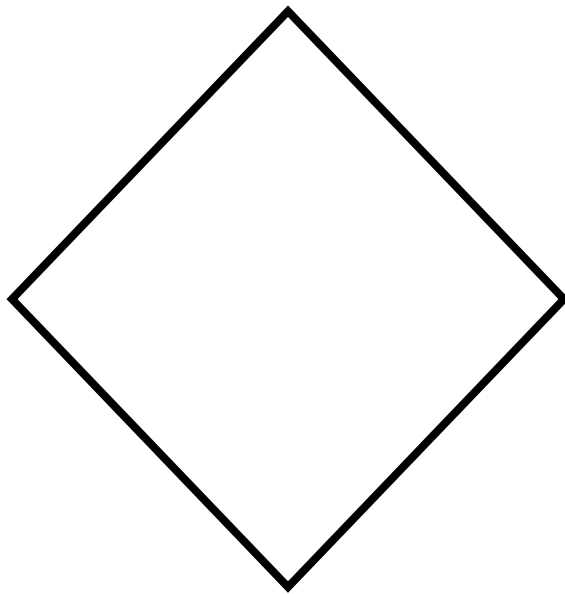
Square



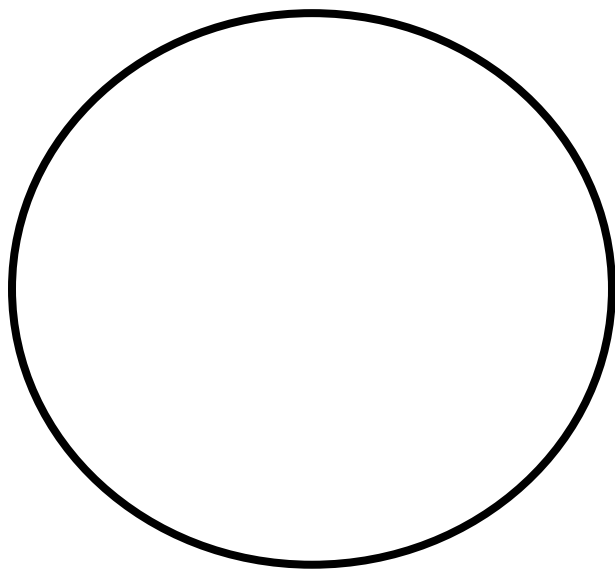
Rectangle



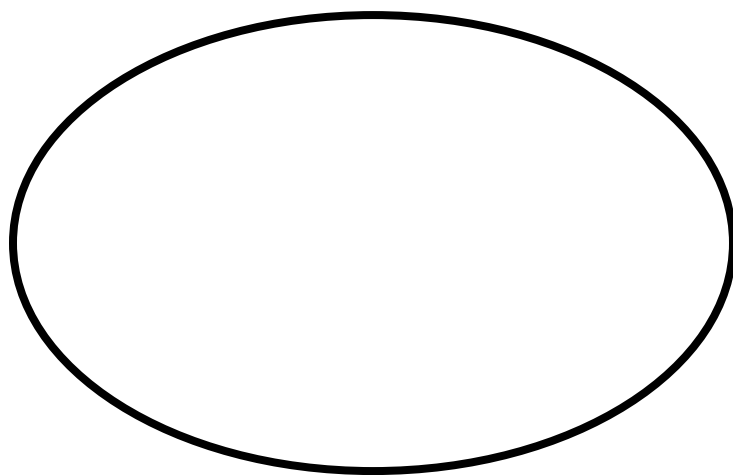
Triangle



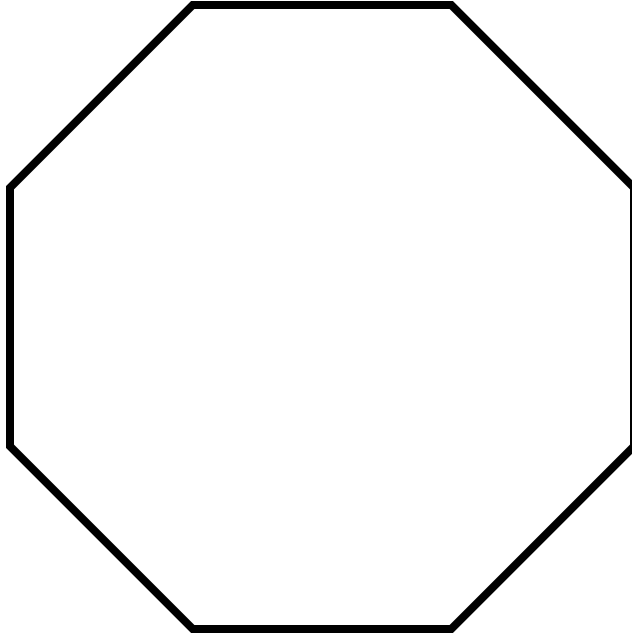
Diamond



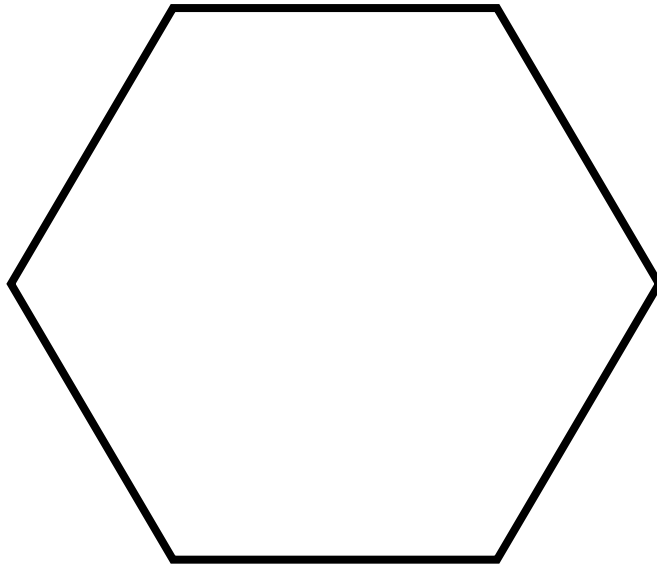
Circle



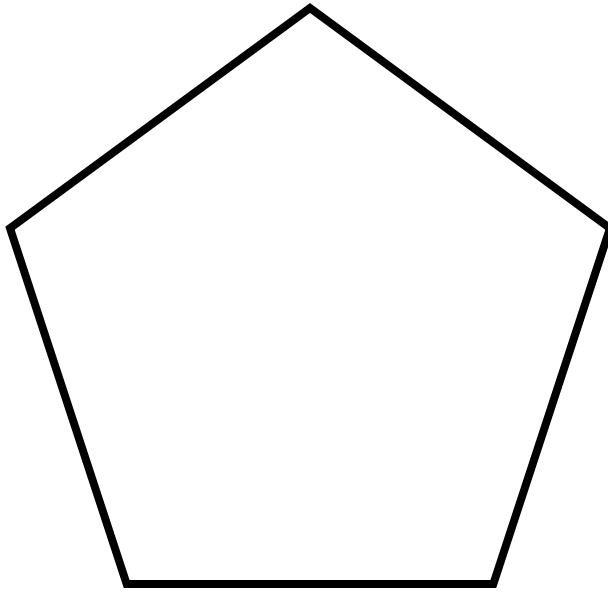
Oval



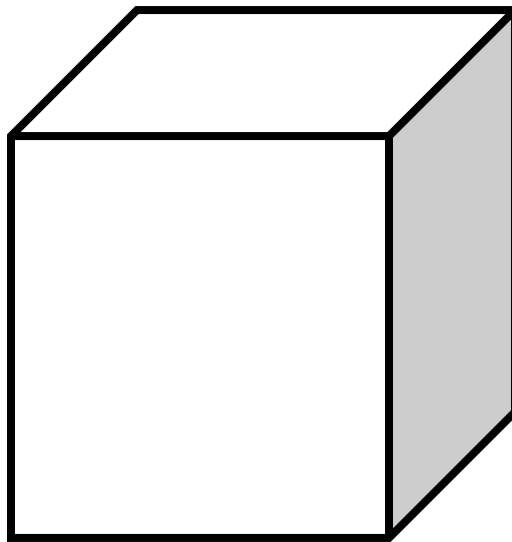
Octagon



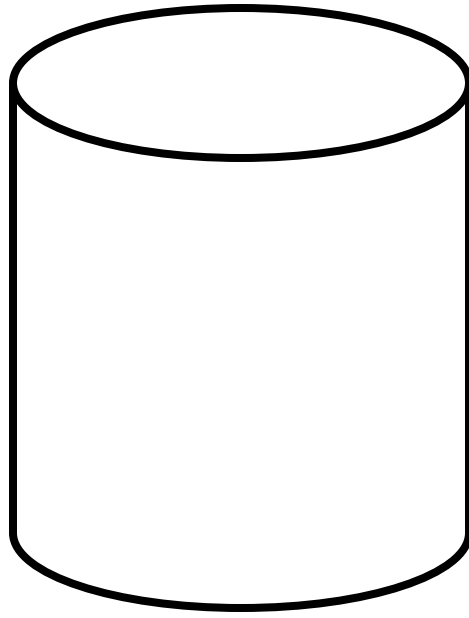
Hexagon



Pentagon



Cube



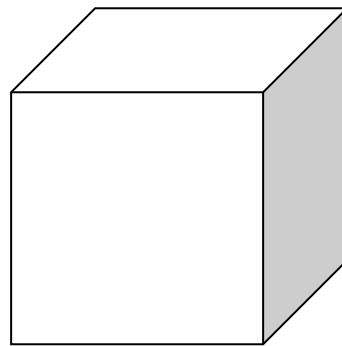
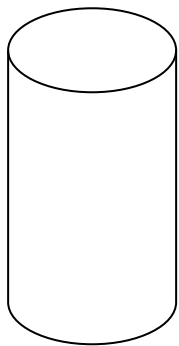
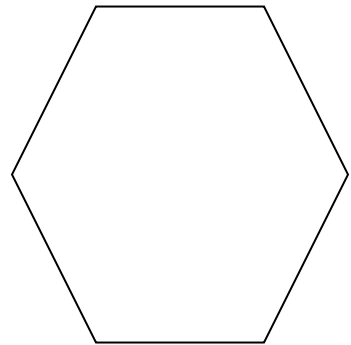
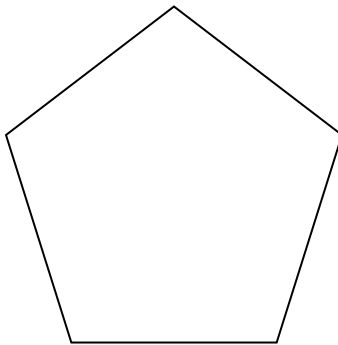
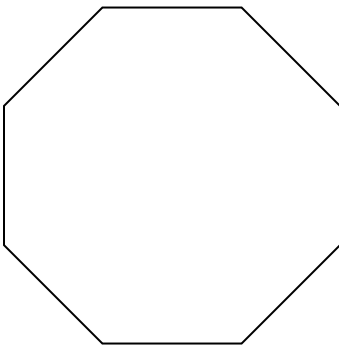
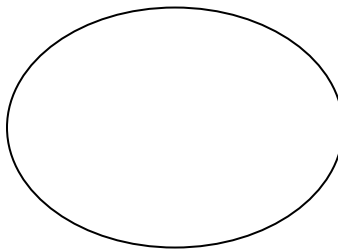
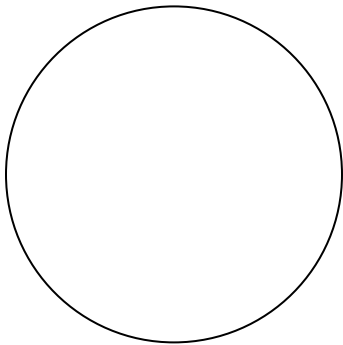
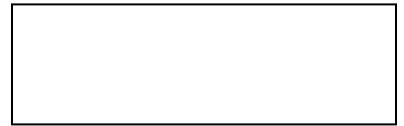
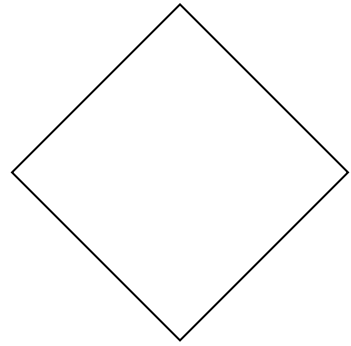
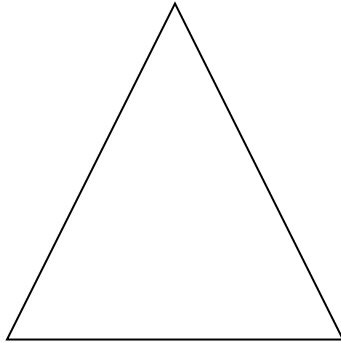
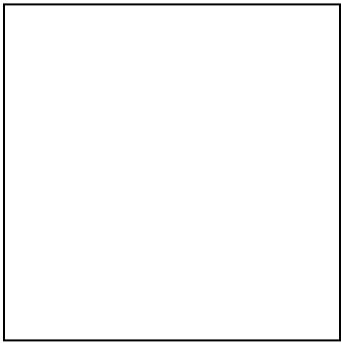
Cylinder

APPENDIX B

Settings

- **Christmastown**
 - Christmastown is also called the North Pole. It is where Mr. and Mrs. Clause live with the elves and all the reindeer. Christmastown is a clearing in the hills just beyond Santa's castle. There are a lot of trees and you can see Santa's castle shining over the hill. It's the first one on the left.
- **The Donners' Cave**
 - This is where Rudolph and his family live. It is a cave in the side of one of the hills in Christmastown.
- **Interior of Santa's Castle**
 - The interior of Santa's Castle is where you'll find all of the elves busy making toys for the good boys and girls to open on Christmas Day! There are benches and tables for the elves to work at.
- **King Moonracer's Throne Room**
 - King Moonracer's Throne Room is where the king of the Island of Misfit Toys meets with Rudolph and his friends.
- **An Icy Mountain Pass**
 - An Icy Mountain Pass is a pathway cut into the side of a huge mountain, covered in snow and ice. This is where Rudolph and Hermey meet for the first time.
- **The Island of Misfit Toys**
 - The Island of Misfit Toys is where all of the toys that kids do not want to play with go to live. There are many snowdrifts that the Toys hide behind and play in.
- **The Cave of Bumble the Abominable Snowman**
 - This is where Bumble the Abominable Snowman lives. It is very dark and there is a lot of ice everywhere. Right outside the cave is a large cliff that falls down into deep hole.

APPENDIX C



APPENDIX D

