

Sherlock Gnomes

Math and Art, Kindergarten Teacher Guide

Objective

Students will be able to understand the relationship between mathematical properties and visual elements in a work of art.

Introduction

Movie Marketing: A movie's Marketing Team performs the important role of making sure people are aware of the movie and are excited to go see it. The *Sherlock Gnomes* Marketing Team includes many departments, including Market Research, Publicity, and Digital Marketing. The focus of this lesson is the In-Theater Marketing department, which is responsible for producing and distributing advertisements that are displayed in movie theaters. Advertising at movie theaters is important because the Marketing Team wants to make sure they are reaching people who will go out and see the movie, and who better to advertise to than people who already like going to the movies?! This lesson follows the production of large-scale cardboard cutouts of the *Sherlock Gnomes* Goon character that can be displayed in movie theater lobbies across the country.

Artists Use Math: Artists must understand sizing and proportion to ensure that the characters they are drawing are accurate and consistent. Without this understanding, characters become stretched or distorted which can make the characters not look like themselves. Before an artist can think about color or details, they must first perform mathematical calculations to make sure that all of their characters' arms, legs, torsos, heads, and hats are the right size. This type of math is important for the artists working on the actual movie and also for the artists who produce marketing materials that vary dramatically in size. Artists are responsible for creating not only movie posters that can hang on a wall, but also small website pop-ups and giant eye-catching billboards.

Activities

Discuss: Play the video, "How to Draw Sherlock" from 0:00 to 0:58. Ask students to pay close attention to the animator's discussion of proportions. Ask: "what does the artist mean when he references the proportion of the hat?" Share with students that the artist is making sure that Sherlock's hat is the correct size when compared to the size of his face.

List: Working in groups, have students create a list of objects that are similar but their different proportions make them unique. Eg: car/limousine, shorts/pants, loaf of bread/baguette. Warn students that even though two items may have different sizes, their proportions may be the same. Eg: kitten/cat, tennis ball/basketball.

Review Sizes: Review size words with students by using kinesthetic movement while saying words aloud and/or pointing to objects. Large: stretch out arms, point to the teacher desk. Small: squeeze fingers together, point to a pencil eraser.

Share with students that artists have to pay close attention to sizes when they are drawing. "What would the movie look like if the artists drew the Gnomes very large? Would they still be Gnomes or would they be giants?"

Distribute Worksheet: Distribute Worksheet K-A. *Worksheet may be completed as a whole-class activity or can be assigned to students using the differentiated options on the next page.*



Identify Sizes: Instruct students to circle the largest Goon in each box.

Draw: Have the students draw a small Goon in the small box and a large Goon in the large box. Encourage students to fill up the whole box with their Goon. Also encourage them to try to keep the sizes of the Goon's features consistent: *"In the small drawing, you made your hat a lot larger than the body. In the large drawing, also make the hat a lot larger than the body."*

Draw: Play the video, "How to Draw a Goon." Pause the video periodically and ask the students questions about the choices the artist is making. *"The artist said that the Goon's hat is 'big and long' and it has 'tiny, little legs.' How did the artists draw these two objects differently to make them the correct size?"*

Critique: Ask students to give their friends feedback on their drawings, focusing on the size of objects.

Goal Set: Ask students to assess their work (both math and art) and set a goal for future learning. Prompt and scaffold as appropriate, but provide the space for students to set their *own* goals.

Duration

1 hour

Standards

Common Core State Standards, Mathematics

1.MD.A.2

National Core Arts Standards

VA:Cr:1.2.1a

Differentiation

For advanced students, distribute Worksheet K-B. This worksheet features more complex questions.

Vocabulary

Tier 2

Small

Large

Size

Artist

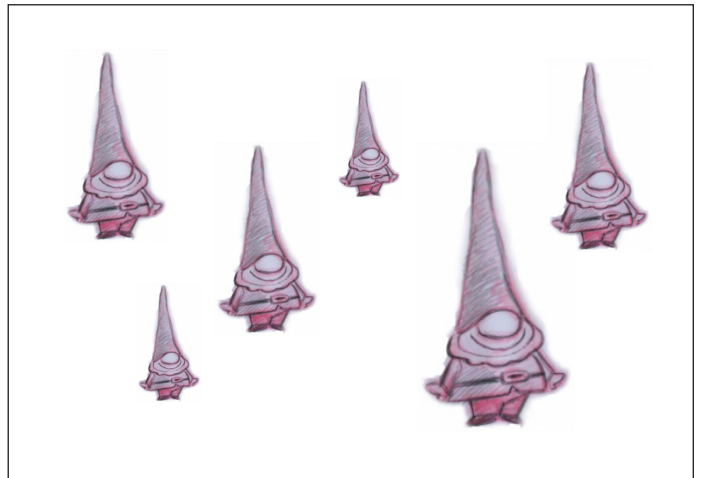
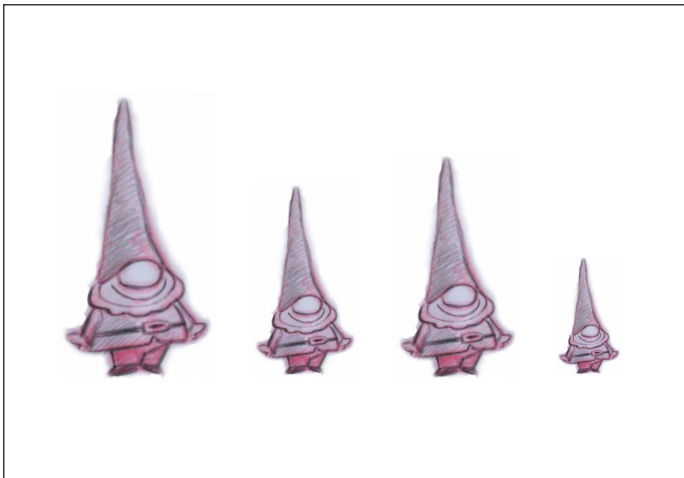
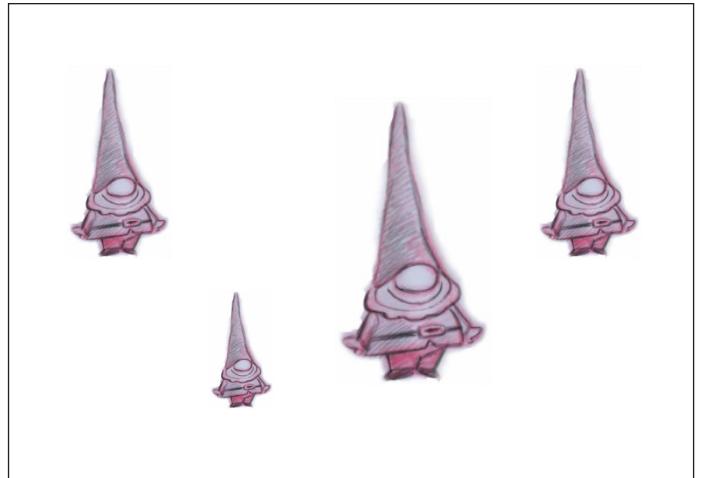
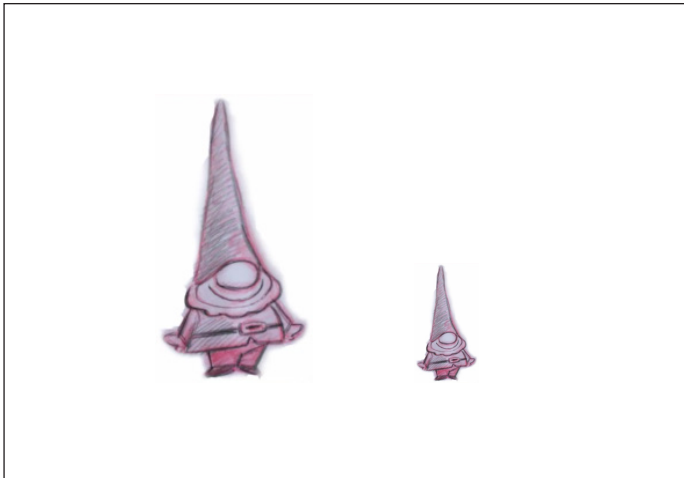
Draw

Sherlock Gnomes

Name _____

Ratios and Proportions, Worksheet K-A

Circle the largest Goon in every box.



Draw a small Goon and a large Goon.

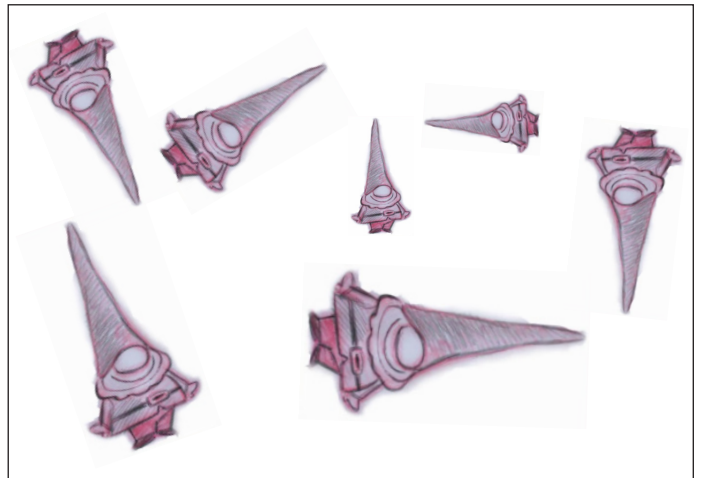
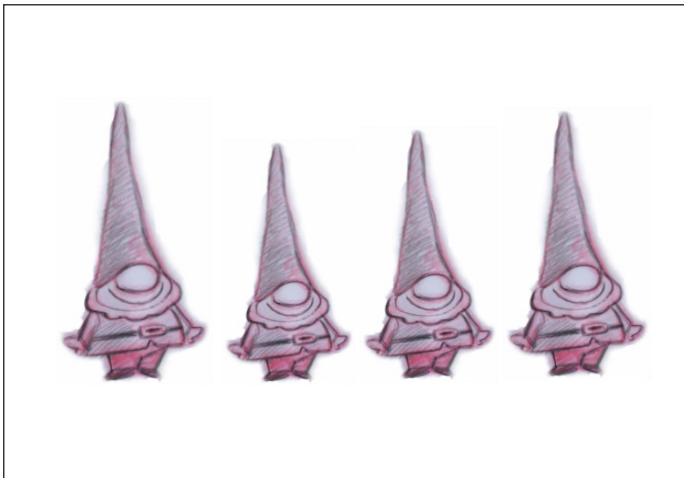
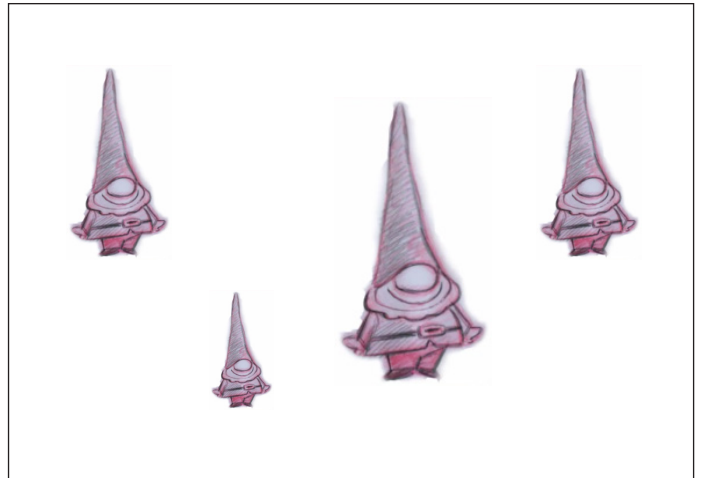
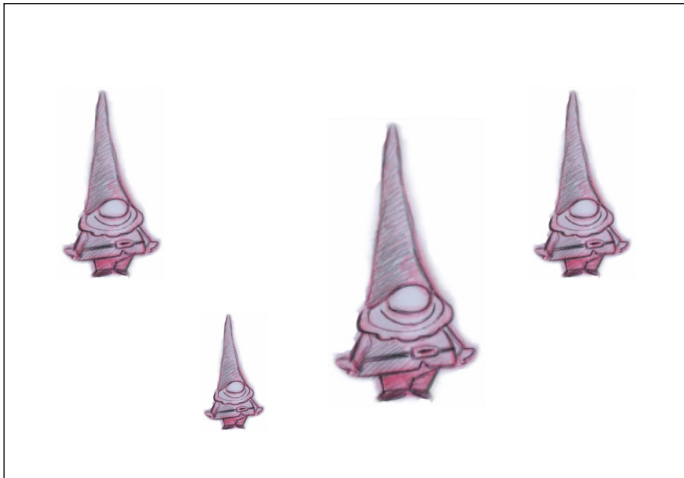


Sherlock Gnomes

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Ratios and Proportions, Worksheet K-B

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