

Area - Interior Design

Project - Applying Principles and Elements of Design

Standards

National FACS Standard(s)

FCS 11.7.3

Demonstrate design ideas through visual presentation.

SD Mathematics Standard(s)

Math 9-12.N.3.1

Students are able to use estimation strategies in problem situations to predict results and to check the reasonableness of results.

Math 9-12.N.1.1.

Identify multiple representations of a real number.

Math 9-12.M.1.3

Use formulas to find perimeter, circumference, and area to solve problems involving common geometric figures.

Math 9-12.G.1.4A

Students are able to use formulas for surface area and volume to solve problems involving three-dimensional figures.

Math 9-12.N.2.1

Students are able to add, subtract, multiply, and divide real numbers including integral exponents.

Math 9-12.S.1.3

Represent a set of data in a variety of graphical forms and draw conclusions.

Project

Students will use rulers, scale, estimation, and fractions to make a gingerbread house based on the elements and principles of design.

What will you do?

Student will use accurate measurements and $\frac{1}{4}$ " scale to enlarge a pattern for a gingerbread house. The students will estimate the amount of candy needed to decorate their house using calipers and samples of candy; they should probably draw a sketch showing types and general locations of candy. Students should complete the estimation costs worksheet and amount of candy needed to cover the project. The students will prepare dough using accurate

measurements. Using their patterns, students will make a gingerbread house. Students will decorate the house, based on elements and principles of design, using candy and frosting. (If you want to make the project more in depth, you could sell or raffle the houses off. You could turn it into a business; perhaps a joint project with an entrepreneurship class.)

What will you need?

1/4" graph paper

Ruler

Gingerbread house pattern

Cookie dough recipe

Frosting

Calipers

Calculator

Candy to decorate with

Boxes for gingerbread houses

Ingredients for dough

Electric mixer

Scissors

Measuring cups and spoons

How will you be evaluated?

Teacher-generated checklist:

_____ Patterns to scale

_____ Estimation worksheet

_____ Actual cost worksheet

_____ Elements and principles of design summary sheet

Supplemental Materials

Mini gingerbread house recipe, directions, and pattern (source unknown)

Estimation worksheet

Actual cost worksheet

Elements and principles of design summary sheet

Resources

Gingerbread House pattern – source unknown