Learning Goals

Section 1: Scaled Copies

Lesson 1: Scaling Machines
What Are Scaled Copies?
- ▢ I can tell whether or not a figure is a scaled copy of another figure.
- ▢ I can describe some characteristics of a scaled copy.

Lesson 2: Scaling Robots
Lengths and Scaled Copies
- ▢ I can explain what scale factor is.
- ▢ I can state the relationship between lengths in an original figure and in a scaled copy.

Lesson 3: Make It Scale
Drawing Scaled Copies
- ▢ I can draw a scaled copy of a figure using a given scale factor.

Lesson 4: Scale Factor Challenges
Effects of Scale Factors
- ▢ I can describe the effect on a scaled copy when I use a scale factor that is greater than 1, between 0 and 1, or equal to 1.
- ▢ I can explain how the scale factor that takes one figure to another figure relates to the scale factor that takes the second figure back to the first.

Lesson 5: Tiles
Scaling and Area
- ▢ I can describe how scale factor impacts the area of a scaled copy.
- ▢ I can calculate the area of a scaled copy.

Section 2: Scale Drawings

Lesson 6: Introducing Scale
Comparing Scale Factor and Scale
- ◻ I can explain what a scale is.
- ◻ I can interpret the scale of a drawing.

Lesson 7: Will It Fit?
Scale Drawings
- ◻ I can use a scale drawing and a scale to calculate actual and scaled distances.
- ◻ I can determine actual areas from a scale drawing.

Lesson 8: Scaling States
Creating Scale Drawings
- ◻ I can create a scale drawing given a scale.
- ◻ I can describe how different scales affect lengths in a scale drawing.

Lesson 9: Scaling Buildings
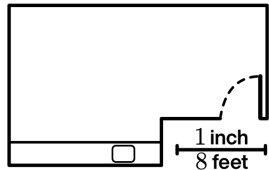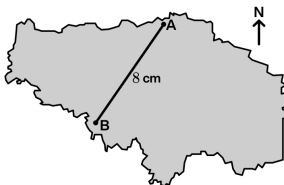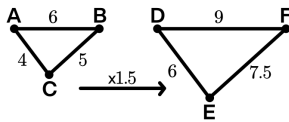*Same Object, Different Scales*
- ◻ I can calculate a distance on one scale drawing based on another drawing with a different scale.
- ◻ I can determine the scale of a scale drawing.
- ◻ I can decide whether two scales will create scale drawings of the same size.

Lesson 10: Classroom Redesign
Choosing Your Own Scale
- ◻ I can choose an appropriate scale to make a scale drawing.
- ◻ I can accurately draw a complex scale drawing.

Glossary

Term	Definition
scale	A scale tells us how the measurements in a scale drawing represent the actual measurements of the object. For example, the scale of this floor plan tells us that 1 inch on the drawing represents 8 feet in the actual room. This means that 2 inches would represent 16 feet, and a half inch represents 4 feet.
scale drawing	A scale drawing represents an actual place or object. All the measurements in the drawing correspond to the measurements of the actual object by the same scale. For example, a scale may show that 1 centimeter on a map represents 30 miles on land. The distance marked on this map is 8 centimeters, or 240 miles.
scale factor	To create a scaled copy, we multiply all the lengths in the original figure by the same number. This number is called the scale factor. For example, the scale factor from ABC to DEF is 1.5.
scaled copy	A scaled copy is a copy of a figure where every length in the original figure is multiplied by the same number.