

Unit Title: Scale Drawings and Similarity

Grade Level: 7th

Subject Area: Pre-Algebra

Duration/Length/Number of class periods: 8 class periods (82 minute blocks)

Description: This unit introduces students to scale, scale factors, and scale drawings. Students will be able to determine scale models and similar figures as well as describe their characteristics.

Established Goals (National, State, Local):

Math Benchmarks 7.3.2.1, 7.3.2.2, 7.3.2.3

What Enduring Understandings are desired?

Describe the properties of similarity, compare geometric figures for similarity, and determine scale factors.

Apply scale factors, length ratios and area ratios to determine side lengths and areas of similar geometric figures.

Use proportions and ratios to solve problems involving scale drawings and conversions of measurement units.

What Essential Questions will be considered?

What are scaled copies and what are their characteristics?
How does changing the scale factor affect the original shape?

Students will know / be able to:

I can apply scale factors to determine side lengths and areas of similar figures in a drawing or context.

I can use proportions and ratios to solve problems with scale drawings and conversions of measurement units, including square units.

Description <i>Units must include at least one of each formative, summative, introductory activity and learning activity. Check the appropriate box; one per row.</i>	Formative x	Summative 	Introductory Activity	Learning Activity	Student Technology Used	Teacher Technology Used	ISTE Standards
Daily Checks/Exit Slips <ul style="list-style-type: none"> One to two questions at the end of each lesson to check and see what kids know or still need to work on Plan to do through Google Forms and EquatIO extension 	x			x	x	x	4,6
Scale drawing of classroom/room in home <ul style="list-style-type: none"> Data will be collected in Google Docs Students will either measure dimensions of a room in the school or a room in their home Measurements will be used to create a scale drawing Could be tied to a unit assessment 	x			x	x	x	2,4-6
Exploring Scale copies <ul style="list-style-type: none"> Students will see pictures of shapes and have to discover what it means for two shapes to be “scaled copies” The goal of this would be for kids to be able to identify and define scaled copies 			x	x	x	x	4-6
Card Sorting Activity - Plickers <ul style="list-style-type: none"> Centered around scale factors Purpose is to discover the effect of changing the scale factor 	x			x		x	
Unit Assessment- Google Forms?		x			x	x	4-6

Materials, tools and resources: Plickers, Google Suite,

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Additional credit given to