Grade 7 Unit 1: Scale Drawings
Lessons 1–6: Scaled Copies

Explore, Play, and Discuss

- I can describe some characteristics of a scaled copy.
- I can tell whether or not a figure is a scaled copy of another figure.

Activity Suggestions:

➢ Lesson 1: Focus on scaled copies and scale factor. Activity 3 may need to be adjusted from partners to individual matching activity. Debrief as a whole class.

Assessment Suggestions:

➢ Check Your Readiness Assessment: Administer all items within the first or second day of this section. Use the guidance provided with each problem to adjust instruction so that students can access the math in the unit.

Deep Dive

- I can describe what the scale factor has to do with a figure and its scaled copy.
- In a pair of figures, I can identify corresponding points, corresponding segments, and corresponding angles.
- I can draw a scaled copy of a figure using a given scale factor.
- I know what operation to use on the side lengths of a figure to produce a scaled copy.

Activity Suggestions:

➢ Lesson 2: Focus on developing the vocabulary for talking about scaling and scaled copies more precisely, and identifying the structures in common between two figures. *Activity 2 has a digital version.*

➢ Lesson 3: Focus on drawing scaled copies of simple shapes on and off a grid. Highlight the relationship between scaled copies is multiplicative, not additive. *Activity 2 has a digital version and is optional.*

Assessment Suggestions:

➢ Lesson 2 cool-down or Activity 5.1

➢ Lesson 3 cool-down or Activity 4.1

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Synthesize and Apply

- I can use corresponding distances and corresponding angles to tell whether one figure is a scaled copy of another.
- When I see a figure and its scaled copy, I can explain what is true about corresponding angles and what is true about corresponding distances.
- I can explain how the scale factor that takes Figure A to its copy Figure B is related to the scale factor that takes Figure B to Figure A.

Activity Suggestions:

- ➢ Combine Lesson 4 and Lesson 5: Focus on corresponding distances and angles to determine if a figure is a scaled copy of another. Students will need protractors. *Lesson 4 Activity 4, Lesson 5 Activity 3, and Lesson 5 Activity 4 are optional making these lessons ideal for combining.*
- ➢ Activity 5.2 Make contents of cards available in online or paper journals for students to respond.
- ➢ Teach and encourage students to study the lesson summaries (at the end of every lesson) and refer back to them.

Assessment Suggestions:

- ➢ Lesson 6 cool-down
- ➢ Revisions to previous assessment prompts
- ➢ Students use learning targets to decide what additional practice they need.

Ongoing Practice

- Assign one or more of the distributed practice problem sets from Lessons 1–6 to be completed over the time period that the section is being worked on.
- These could also be lagging, so that students are working on practice problems from the previous section or unit during this section or unit.
- Specify which problems students should submit, or let them choose.
- Note: Several existing platforms already have IM's practice problems loaded so that students can complete and submit them online. Some can be autoscored.

Anytime Resources

- Delve into any of the activities of Lesson 6.
- Use any of the lessons from Grade 6, Unit 2 focusing on equivalent ratios (Lessons 5, 8, 11, and 14)

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Lessons 7–13: Scaled Drawings

Explore

- I can explain what a scale drawing is, and I can explain what its scale means.
- I can use actual distances and a scale to find scaled distances.
- I can use a scale drawing and its scale to find actual distances.
- When I know the actual measurements, I can create a scale drawing at a given scale.

Activity Suggestions:

- ➢ Lesson 7: Focus on strategies for using scale and scale drawings to find actual and scaled lengths. Activity 2 may need to be completed individually if students can not be paired.
- ➢ Lesson 9: This is the first lesson where students use the actual distance to calculate the scaled distance and create their own scale drawings. If needed, there is a digital version of Activity 2.

Assessment Suggestions:

- ➢ Lesson 7 cool-down
- ➢ Lesson 9 cool-down

Dive Deep

- Given a scale drawing, I can create another scale drawing that shows the same thing at a different scale.
- I can use a scale drawing to find actual areas.
- I can explain the meaning of scales expressed without units.

Activity Suggestions:

- ➢ Lesson 10: Focus on two possible strategies of producing scale drawings (calculating the actual lengths and then using the new scale to find lengths on the new scale drawing, or relating the two scales and calculating the lengths for the new scale drawing using corresponding lengths on the given drawing). Grouping in Activity 3 may need to be modified.

Assessment Suggestions:

- ➢ Lesson 10 cool-down

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Synthesize and Apply

- I can tell whether two scales are equivalent.
- I can write scales with units as scales without units.
- When given requirements on drawing size, I can choose an appropriate scale to represent an actual object.

Activity Suggestions:

- ➢ Lesson 11: Focus on the idea that scale can also be expressed without units. If needed, Activity 2 or 3 can be omitted for time.
- ➢ Lesson 12: Focus on how it is helpful to rewrite scales with units as scales without units in order to compare them. *Activity 2 and 4 are optional.*

Assessment Suggestions:

- ➢ Lesson 11 cool-down
- ➢ Optional Lesson 13
- ➢ Revisions to previous assessment prompts
- ➢ Students use learning targets to decide what additional practice they need.

Ongoing Practice

- Assign one or more of the distributed practice problem sets from Lessons 7–12 to be completed over the time period that the section is being worked on.
- These could also be lagging, so that students are working on practice problems from the previous section or unit during this section or unit.
- Specify which problems students should submit, or let them choose.
- Note: Several existing platforms already have IM's practice problems loaded so that students can complete and submit them online. Some can be autoscored.

Anytime Resources

- Delve into any of the activities of Lesson 8.

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