Proportions, Ratios and Scale Drawings

Overview:
Apply learning about proportions, ratio, and scale to create a scale drawing of a room.

Materials (per student):
- Proportions Worksheet
- Map Scale
- Exercises in Scale
- Scale Drawing of a Room
- Reflection Worksheet
- Rulers or measuring tapes

Objective/Questions:
Learn about proportions, ratios, and scale, and apply that knowledge to create a scale drawing of an actual room.

Questions:
- What is the appropriate scale to map the object(s) being drawn given the size of the paper being used?
- Is the scale appropriate in relationship to the other items in the drawing?
- Is the scale consistent throughout the drawing?

Explorations, Communication, Solve:
Have students complete the following worksheets: Proportions Worksheet, Map Scale, and Exercises in Scale.

Have students complete Scale Drawing of a Room as a home assignment. Instruct them to:
- Choose a room in their homes.
- Measure and record the dimensions of all large furniture and appliances.
- Decide on an appropriate scale for their map, and transfer their dimensions of their furniture and appliances onto graph paper.
- Identify their scale on the graph, similar to a map.
As an extended activity, you may have students work in groups of three to develop a scale-map drawing of the classroom or school.

**Test, Record, and Analyze Results, Final Product:**

Have students exchange room drawings with each other and label the dimensions of items in the drawing using the designated scale.

**Post Activity Reflections:**

Have students complete the [Reflection Worksheet](#) about their experiences with using proportions, ration, and scale.