Activities involving Surface Area and Volume

1. Make several different rectangular structures with 24 cubes.

They all have the same **volume** ( 24 cubic units). Do they have the same

**surface area**?

• Figure out the surface area of each structure.

• Sketch each structure and write its dimensions.

• If 2 structures have the same volume, will they always have the same

surface area?

• If 2 structures have the same surface area, will they always have the

same volume?

**2. 'Cutting Corners' to build boxes.**

• Make several boxes from a 20x20 sheet of paper. For the first box, cut out

a 1x1 square from each corner, then fold up the sides, and figure out the

volume.

• For the next box, cut out a 2x2 square from each corner, fold up the sides

and figure out the volume.

• Continue in this way, cutting out larger squares from each corner,

making all the boxes you can.

• Write the **dimensions** and **volume** of each box.

**3. Solve the problem: 'Filling some Planters'**

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