

Making Scale Drawings

Scale drawings support writing with visual details. They show readers what you describe in writing. Scale drawings should include descriptions that explain the details in the graphic. This graphic type is especially important for complex ideas. The graphics should be realistic and detailed. They show what the object would look like in real life.

To create an informational scale drawing, follow these 3 steps:

- 1. Plan your drawing.**
- 2. Determine your scale and draw a rough sketch.**
- 3. Make the final scaled version of your drawing.**

First, **plan what you will be drawing**. Brainstorm ideas. **Think carefully about what you want to represent**. Make sure you know the key details you need to show. If you are drawing a real-world object, look at example pictures. This is the plan for drawing a scale model of a Geiger counter:

- Plan the drawing of a Geiger counter scale drawing:
 - Include screen and buttons on tool
 - Show radiation scale with numbers

Second, **determine your scale and draw a rough sketch** to make mistakes on the draft and organize your graphic. Determine your scale by first finding the longest measurement on your object. You could measure the object using a ruler if you have it in real life. Or, you can determine the longest length through your research.

Set up a scale using the real-world measurement and the length of the graphic on your page. Most paper is about 8 inches wide and about 11 inches tall. In most cases, you can divide the length of the actual object by 8 inches and make a scale using 1 inch is equal to your quotient. Then, **make a rough scale drawing** of your object. It should not be perfect. Focus on getting the right shape and labeling the key parts. Use your scale to draw each line using the correct measurements.

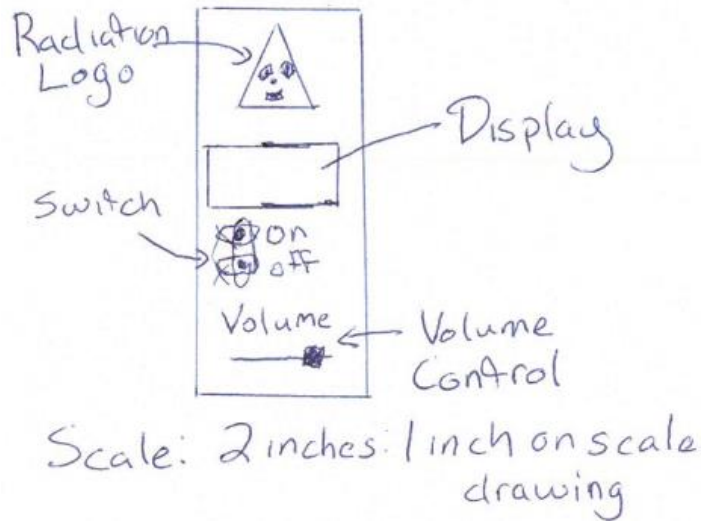
- Determine the scale:
 - Find the longest measurement of the real object
 - Create a scale to fit on an 8-inch piece of paper
- Draw a rough sketch:
 - Create a rough sketch using the scale and labels

For example, this Geiger counter is about 5 inches tall and 2 inches wide in real life (we estimated using the person's hand). We used the scale factor: "2 inches in real life equals 1 inch in the sketch." This rough sketch allowed us to figure out how to make the on-off switch correctly and make each length the right size.

Example Picture

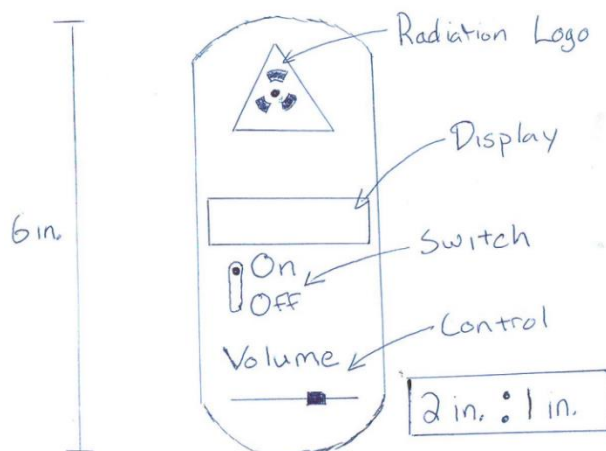


Sketch of Scale Drawing



Now that we have a rough scale drawing sketch, we can improve it for the drawing we will submit with the written description.

The final step is to **make the final scale drawing!** Use your scale to **measure each length accurately**. Work carefully to **keep it neat**. Then, add measurement labels to your final work. The final step is to clearly write the scale you used on the graphic. This tells other people how big the object would be in real life. An example of a **final scale drawing** is shown below.



- Final scale drawing
 - Every line is the correct length
 - Labels are clear and highlight key details