

How To Create a Scale Bar — Hardcopy

Materials/Resources:

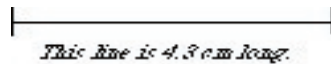
- Printout of an ISS EarthKAM image, the image’s Metadata Table or access to the ISS EarthKAM Datasystem, calculator, ruler, marker, and blank paper

Recommended Procedures:

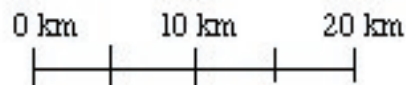
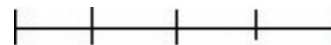
1. Measure one of the long sides of the image.
2. Find the Image Width from the Metadata Table.
3. Divide the long-side length you measured by the Image Width.
4. Multiply this number by the length in kilometers you want for your scale bar.
5. Draw a line the length you calculated.
6. Divide this line into segments of reasonable lengths:
 - Decide on the number of segments.
 - Divide the length of the line by that number.
 - Mark the line at the appropriate lengths.
7. Label your scale bar.
8. Use this scale bar to measure features in the image.
9. Optional—Include the scale bar on your annotation of the image.

Example

25.4 cm
118.7 km
 $25.4 \text{ cm} / 118.7 \text{ km} = 0.214 \text{ cm/km}$
20 km is a good length for a scale bar: $0.214 \text{ cm/km} * 20 \text{ km} = 4.3 \text{ cm}$



20 km length can be easily divided into four segments, making them each 5 km.



STANDARDS

Mathematics

Measurement

- Apply appropriate techniques, tools, and formulas to determine measurements

DATASYSTEM

<http://datasystem.earthkam.ucsd.edu>

A scale bar is provided on the Image Viewer pages. This scale bar adjusts automatically as you move between Low, Medium, and High Resolution views.

