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How Small is Small?

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HOW SMALL IS SMALL

The first challenge in illustrating a world invisible to the naked eye is understanding size. How big (or small) is the width of a human hair? What is the actual size of bacteria? What is the range of visible light? What is the diameter of a carbon nanotube? Compare the relative sizes of the things featured in this exhibit.

The International System of Units (SI) has adopted a standard nomenclature for measurement based on the meter.

$$10^0 \text{ m} = 1 \text{ meter (m)}$$

$$10^{-1} \text{ m} = 1 \text{ decimeter (dm)}$$

$$10^{-2} \text{ m} = 1 \text{ centimeter (cm)}$$

$$10^{-3} \text{ m} = 1 \text{ millimeter (mm)}$$

$$10^{-6} \text{ m} = 1 \text{ micrometer } (\mu\text{m})$$

$$10^{-9} \text{ m} = 1 \text{ nanometer (nm)}$$

$$10^{-12} \text{ m} = 1 \text{ picometer (pm)}$$

$$10^{-15} \text{ m} = 1 \text{ femtometer (fm)}$$