

| Object | Measurement | Actual Size | Sized Up by 10^6 (one million times larger) | Sized-Up Model |
|---------------------------------|--|---|--|----------------|
| Human hair | diameter | 80 μm $80 \times 10^{-6} \text{ m}$ | | |
| Human adult | average height (males and females averaged together) | 1.7 m $1.7 \times 10^0 \text{ m}$ | | |
| Human cheek cell | diameter | 30 μm $30 \times 10^{-6} \text{ m}$ | | |
| Plasma membrane (cell membrane) | thickness | 7 nm $7 \times 10^{-9} \text{ m}$ | | |
| Human liver cell | diameter | 20 μm $20 \times 10^{-6} \text{ m}$ | | |
| Nucleus of a human liver cell | diameter | 8 μm $8 \times 10^{-6} \text{ m}$ | | |
| DNA molecule | diameter x length in one chromosome | 2 nm (diameter) x 60 mm (length) $2 \times 10^{-9} \text{ m}$ (diameter) by $60 \times 10^{-3} \text{ m}$ (length) | | |
| Mitochondrion | length x width | 2 μm (length) x 1 μm (width) $2 \times 10^{-6} \text{ m}$ (length) by $1 \times 10^{-6} \text{ m}$ (width) | | |
| Human egg cell | diameter | 150 μm $150 \times 10^{-6} \text{ m}$ | | |
| Human sperm cell | diameter | 4 μm $4 \times 10^{-6} \text{ m}$ | | |
| <i>Elodea</i> cell | length x width | 50 μm (length) x 25 μm (width) $50 \times 10^{-6} \text{ m}$ (length) by $25 \times 10^{-6} \text{ m}$ (width) | | |

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|--|--------------------------|---|--|----------------|
| Onion skin cell | length x width | 300 μm $300 \times 10^{-6} \text{ m}$ | | |
| Chloroplast | length x width | 8 μm (length) x 2 μm (width) $8 \times 10^{-6} \text{ m}$ (length) by $2 \times 10^{-6} \text{ m}$ (width) | | |
| Stoma aperture (opening) | diameter open and closed | 12 μm (open) and 3 μm (closed) $12 \times 10^{-6} \text{ m}$ (open) and $3 \times 10^{-6} \text{ m}$ (closed) | | |
| <i>Streptococcus pyogenes</i> bacteria (causing many different human infections) | diameter | 900 nm $900 \times 10^{-9} \text{ m}$ | | |
| <i>Salmonella enteritidis</i> bacteria (causes food poisoning) | diameter | 600 nm $600 \times 10^{-9} \text{ m}$ | | |
| Human Immunodeficiency Virus (causes HIV disease and AIDS) | diameter | 110 nm $110 \times 10^{-9} \text{ m}$ | | |
| Coronavirus (causes several diseases in humans, including COVID-19) | diameter | 120 nm $120 \times 10^{-9} \text{ m}$ | | |