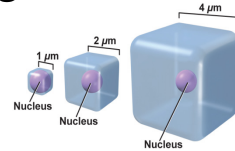


## Cellular Growth

### Ratio of Surface Area to Volume

- As the cell grows, its **volume increases** much **more** rapidly than the **surface area**.
- Large cells have a small SA/Vol ratio making it difficult to maintain homeostasis
- SA is the plasma membrane
- VOL is cytoplasm & organelles



## Why Cells are Small?

- Cellular Transport – transport slows as cell gets bigger
- Cellular Communication - Difficult to communicate when cell is big