

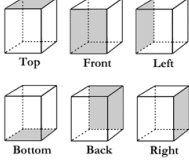
Surface to Volume Ration

AND THE EFFECT ON CELLS

Surface Area


- The amount of space touching the outside

Surface Area of a Prism





VOLUME

- THE AMOUNT OF (3D) SPACE IT TAKES UP




Ratio

- A relationship between two numbers of the same kind
- Basically: a ratio represents
 - for every amount of one thing, how much there is of another thing



Surface to Volume Ratio "Surface: Volume"

- The amount of area exposed, relative to how much (3D) space it takes up.

Surface area of large cube = 5400 μm^2
 Total surface area of 27 small cubes = 16,200 μm^2

Surface to Volume Ratio In Cells

Surface area of one large cube = 5400 μm^2
 Total surface area of 27 small cubes = 16,200 μm^2

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How Does this Effect Cells?

Summary

(From your flexbook)

- All cells are very small because they need to pass substances across their surface. Their small size gives them a relatively large ratio of surface area to volume, facilitating the transfer of substances.
- The shapes of cells may vary, and a