



Classwork questions

1. What is the formula for the volume of a cube?
2. Determine the volume of the large cube and 1 small cube.
3. How many small cubes have the same volume as the large cube?
4. What is the surface area of the large cube?
5. What is the surface area of 1 small cube?
6. Which has the greater surface area to volume ratio, the small cube or the large cube?
7. What is the total surface area of eight small cubes?
8. What is the total volume of eight small cubes?
9. The large cube was cut into 8 small cubes using three cuts. What effect did this have on the overall surface area to volume ratio?
10. Diffusion MUST occur at the surface of an object. Which situation is more beneficial for diffusion, the large cube or the eight small cubes?

Bonus questions

- B1. Why are all insects on Earth very small?
- B2. Millions of years ago there were some very big insects on Earth, How could this be possible?