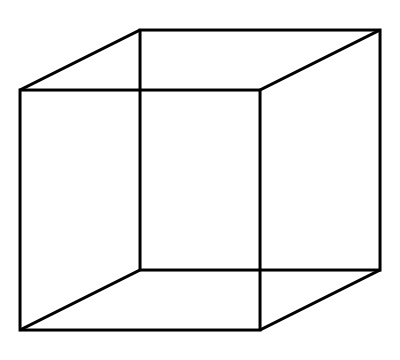
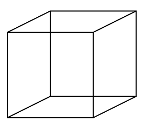
1. Who was the first person to ever observe cells? What did he think they looked like?

**Review Packet: Cell Test**

1. Who was the first person to ever observe living cells?
2. Two German scientists were good friends and shared notes during the 1800’s. Who were they and what did they each discover about cells?
3. Who was Rudolf Virchow? What did he discover?
4. Name the three main tenants of the cell theory.
5. Name three structures that are similar across all cells.
6. Name the two different types of cells.
7. What is one main distinguishing feature of a prokaryotic cell? What is one major distinguishing factor for a eukaryotic cell?
8. Find the surface area and volume of the two cubes below.

3 cm

1 cm

1 cm

1 cm

3 cm

3 cm

1. Describe the nucleus. What does it look like? Where is it located? What is its purpose?
2. Describe the cell wall. What does it look like? Where is it located? What is its purpose?
3. Describe the Golgi Apparatus. What does it look like? Where is it located? What is the purpose?
4. Describe the ribosome. What does it look like? Where is it located? What is its purpose?
5. Describe the vacuole. What is its purpose? Where is it located? What is its purpose?
6. Draw a picture of a lipid bilayer.
7. Where would you expect to find a lipid bilayer?
8. What types of molecules can diffuse through a lipid bilayer?
9. What are the three types of passive transport?
10. Give an example of diffusion from the world around you.
11. What type of molecules can diffuse through a cell membrane?
12. What is osmosis?
13. Define hypotonic, isotonic and hypertonic
14. Draw a picture of a cell in an isotonic solution. What direction would water flow?
15. Draw a picture of a cell in a hypotonic solution. What direction would water flow?
16. Draw a picture of a cell in a hypertonic solution. What direction would water flow?
17. What types of proteins must large molecules pass through in order to come into the cell?
18. Describe facilitated diffusion.
19. What is the difference between diffusion and facilitated diffusion?
20. Active transport requires…
21. Active transport moves molecules from a \_\_\_\_\_\_\_\_\_\_ concentration to a \_\_\_\_\_\_\_\_\_\_\_\_ concentration.
22. What are the two types of active transport?
23. What is a binding site?
24. Describe how the Na/K pump works in an animal cell.
25. What is a vesicle?
26. Describe the difference between endocytosis and exocytosis.
27. Describe the difference between pinocytosis and phagocytosis.