FLINN SCIENTIFIC

Name_____

Cell Size and Diffusion Worksheet

Cube	Surface Area (cm^2)	Volume (cm^3)	Surface Area-To-Volume Ratio	Diffusion Depth (mm)	Diffusion Rate (mm/min)
1 cm					
2 cm					
3 cm					

Complete the following:

1. Draw the cross section of each cube to scale after soaking in the hydrochloric acid solution (HCl).

2. What evidence supports the hypothesis that hydrochloric acid solution diffuses into the cubes?

3. What happens to the diffusion rate as a cell gets larger?

4. What happens to the surface area-to-volume ratio as a cell gets larger?

5. Propose a hypothesis to explain why large organisms have developed from *more* cells rather than larger cells.