8.3 Cell Size, Shape, Function

Date: Nov 29	Teacher: Sub	Length of Class: 50 min (8:00 to 8:50)
Subject: science		Unit: 3 - Bio
Outcome(s)(GLO/SLO): STS 2.h		Grade: 10 AP
Learning Objectives: (Students Will:) 1) relate surface area of a cell to its volume 2) explain how that relationship (ratio) limits cell sizes and therefore function		
Materials: slides, youtube video URL, student notes (handouts).		
KSAs: 3, 5, 6, 9		
Background Information: students just finished an osmosis (egg membrane) lab, and have notes regarding sections 8.1 and 8.2.		
File location: *S:\SCIENCE\Schnell\Sci10AP\cell size.pptx*		
Assessment – probing throughout; practice problems from 8.2 and 8.3		

Attendance

Introduction: (5 mins) Recap yesterday (talked about osmosis, diffusion, active/passive transport, endo/exocytosis)

Today - ask: why are cells small? Does size matter? Discuss for a minute, then proceed and find out.

Body: (Activities/Sponge): (~30 mins)
Show slides: (no need to explain everything if you don't want)
How to calculate Surface Area
How to calculate volume
SA/V ratio

Show Video at URL: (first ~1:30 of video, then last 5:30 minutes starting at 10:00 mark)
http://www.youtube.com/watch?v=6Y0y7jELS0k (link in notes)

After video, compare volleyball, styrofoam ball, rock – which has highest SA/V ratio, why?
(the rock; because it has so many jagged features, the surface area is very high. It has a volume slightly less than the styrofoam ball, so the SA/V ratio will be much higher.)

Work on problems: pg. 307 #1-5, #7 and pg 314 #1-7

Closure: (review/Preview) (5 mins)
Make sure they address any questions or concerns on Edmodo over the weekend. Monday during last half of period there will be a quiz on chapter 8.

Up Next? – review ch. 8, QUIZ (Monday)	End time: 8:50
Comments:	