

Biology K Lesson Plans Unit 8 19-20

UNIT OBJECTIVES: TEKS

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All cells use the same basic processes to get the matter and energy they need and remove waste to maintain homeostasis. Both autotrophs and heterotrophs need glucose and oxygen to enter cells for cellular respiration and need to eliminate the waste product carbon dioxide. These materials move into and out of cells by passive or active transport. The water and carbon dioxide that autotrophs need for photosynthesis move into cells while the glucose and oxygen produced move out. Water, carbon dioxide, and oxygen move by passive transport and glucose requires active transport.

Cells must remain small to be able to efficiently transport matter and have enough energy to perform life functions. Prokaryotic cells must stay incredibly small because they are limited by the energy they can produce. Eukaryotic cells are still microscopic but are much larger than prokaryotes because they have specialized structures to produce more energy or perform specialized jobs.

Eukaryotes can also be multicellular. Cells in the same organism do specific jobs for the organism to maintain homeostasis. This is called cell specialization. All cells in an organism have the same genes, but the expression of only certain genes let cells specialize to perform specific functions. These cells form tissues, organs, and organ systems of multicellular organism

TEKS
4.B investigate and explain cellular processes, including homeostasis and transport of molecules
9.A compare the functions of different types of biomolecules, including carbohydrates , lipids, proteins, and nucleic acids
(4) The student knows that cells are the basic structures of all living things with specialized parts that perform specific functions and that viruses are different from cells
4.A compare and contrast prokaryotic and eukaryotic cells, including their complexity, and compare and contrast scientific explanations for cellular complexity
(5) The student knows how an organism grows and the importance of cell differentiation
5.A describe the stages of the cell cycle, including deoxyribonucleic acid (DNA) replication and mitosis, and the importance of the cell cycle to the growth of organisms
5.B describe the roles of DNA, ribonucleic acid (RNA), and environmental factors in cell differentiation

Unit Calendar: February/ March

Monday	Tuesday	Wednesday	Thursday	Friday
10 Review	11 Unit 7 Part 2 Test (MG)	12 TELPAS (DG)	13 Cell Membrane Notes & Explain Cell Membrane Project	14 Cell Membrane Project (AS)
17 Professional Day No Students <u>PROGRESS REPORTS @ 8</u>	18 Cell Membrane Project (AS)	19 Cell Membrane Project (AS)	20 Types of Transport Notes	21 Active Transport Worksheet (DG)
24 Tonicity Notes & Osmosis Worksheet (DG)	25 Diffusion & Osmosis Worksheet (DG)	26 Homeostasis Potato Lab (DG)	27 Finish Potato Lab & Cell Specialization notes	28 Cell Processes Quiz (DG) Cell Transport Worksheet (DG)
2 Investigating the Limits of Cell Growth lab (DG)	3 review	4 Unit 8 Test (MG)	5 RE-DO test	6 Plant video END OF 9 WEEKS
9 SPRING BREAK! NO SCHOOL!	10 SPRING BREAK! NO SCHOOL!	11 SPRING BREAK! NO SCHOOL!	12 SPRING BREAK! NO SCHOOL!	13 SPRING BREAK! NO SCHOOL!

Grades Unit 8

Daily Grades: 1 Quiz + 2 Labs + TELPAS + 1 choice

Relative Assessment: 1 Cell Membrane Project + 1 ST Skills

Major Grades: 1 Unit 8 test

= 8 total grades