

UNIT OF STUDY

Title: Cell Cycle	Subject/Course: Biology	Length: 1 week
Topic: Molecules and Cells 5	Grade: 10 th grade	Designer: Woods
UNIT GOALS AND EXPECTATIONS		
<p>IMPORTANT CONCEPTS/UNDERSTANDINGS: Cell functions are regulated. Regulation occurs both through changes in the activity of the functions performed by proteins and through the selective expression of individual genes. This regulation allows cells to respond to their environment and to control and coordinate cell growth and division.</p>	<p>ESSENTIAL QUESTIONS: Why is it important to understand how cells divide and reproduce? What do cell look like while they are undergoing mitosis?</p>	
<p>STUDENT LEARNING EXPECTATIONS: MC.2.B.8 Describe the main events in the cell cycle, including the differences in plant and animal cell division:</p> <ul style="list-style-type: none"> ▪ interphase ▪ mitosis: List in order and describe each stage <ul style="list-style-type: none"> ▪ prophase ▪ metaphase ▪ anaphase ▪ telophase.(MC.2.B.9) ▪ cytokinesis 		
<p>SPECIFIC DECLARATIVE KNOWLEDGE –know Explain the problems that growth causes for cells. Describe how cell division solves the problems of cell growth. Name the main events of the cell cycle. Describe what happens during the four phases of mitosis. Explain how cancer cells are different from other cells.</p>	<p>SPECIFIC PROCEDURAL KNOWLEDGE – do Sequence the steps of the cell cycle Identify changes in the cell cycle that cause cancer.</p>	
UNIT ASSESSMENTS		
(Include tasks related to Dimensions 3 and 4 and Bloom’s Taxonomy)		
<p>“Stages of the Cell Cycle” Lab-Draw conclusions about the cell cycle based on slides of onion root tip mitosis. Cell Cycle Story Book Project(or other performance based activity for assessment)</p>		
<p>Traditional Assessments: Written Test Cell Cycle Quiz Section Quizzes</p>	<p>Other Evidence of Learning: Bellringers Informal Questioning Mitosis coloring sheets</p>	
ACTIVITIES AND LEARNING EXPERIENCES		Resources
<p>www.johnkyrk.com --Cell cycle animations and illustrations “Onion Root Tip Meiosis”- Microscope lab in cooperative groups Establish Habits of Mind for Science in Critical Thinking, Creative thinking, and Self Regulated Thinking Vocabulary Strategy Daily Notebook Entries Note-taking powerpoint</p>		<p>Prentice Hall Textbook: Biology TI-83’s Internet Powerpoint Lab Equipment</p>
Career Connections		
Oncology		