Grade 9 and 10
Distance Learning Module (1 Cell Cycle Mitosis): Week of: March 30-April 3

Content Area: Biology Honors Unit 4 Inheritance

Targeted Goals from Stage 1: Desired Results

Content Knowledge: **Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.**

Vocabulary: **mitosis,** Sister chromatids, Centrioles, Spindle fibers, Centromere, Nuclear membrane, Chromosome, Chromatin, Daughter cells

Skills: **Cellular division occurs in phases, with a specific set of functions taking place at each step.**

Expectation: **Students will understand that In multicellular organisms individual cells grow and then divide via a process called mitosis, thereby allowing the organism to grow. The organism begins as a single cell (fertilized egg) that divides successively to produce many cells, with each parent cell passing identical genetic material (two variants of each chromosome pair) to both daughter cells. Cellular division and differentiation produce and maintain a complex organism, composed of systems of tissues and organs that work together to meet the needs of the whole organism.**

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
Monday: Look at and discuss Embryogenesis GIF on classroom under "question"	Slideshow has link to GIF	Classroom discussion board answer: What is this animation showing?
Tuesday: Research the steps of cell division to create a model (You are not responsible for knowing all the vocabulary but should focus on the essential questions)	Slideshow Model template (this is the minimum- feel free to get creative)	Work on model of the phases of the cell cycle Including steps of mitosis and the following vocabulary: Sister chromatids, Centrioles, Spindle fibers, Centromere, Nuclear membrane, Chromosome, Chromatin, Daughter cells (also see above) Kahoot challenge to check understanding

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
		Exit slip (discussion) on google classroom: Why do cells go through the cycle? What part of the cell cycle is confusing to you?
Wednesday: Continue to work on model	Rubric for model Slideshow	Submit your model of the phases of mitosis and include the vocabulary (Sister chromatids, Centrioles, Spindle fibers, Centromere Nuclear membrane, Chromosome Chromatin, Daughter cells) in the model
Thursday: Watch a student generated video on cell cycle, how well does this model explain the cell cycle?	Mitosis Stop Motion Biology Project Youtube visdeo	Exit Slip Question: How well does this model explain the cell cycle? What terms in the video are different from our "must have" list? Sister chromatids, Centrioles, Spindle fibers, Centromere, Nuclear membrane, Chromosome, Chromatin, Daughter cells
Friday: Reflection on Models generated by students- what is the big picture?		Why do organisms perform cellular division? Why does DNA need to copy itself (replicate) during cellular reproduction? What mechanisms ensure that the daughter cells are genetically identical to each other and the original (parent) cell?

Week criteria for success (attach student checklists or rubrics):

Complete all tasks outline above:

Monday: Post to discussion board

Tuesday: Work on model and complete exit slip

Wednesday: Submit completed model- see rubric for grade

Thursday: Respond to exit slip

Friday: Answer essential questions

Supportive resources and tutorials for the week (plans for re-teaching):

My YouTube Playlist of helpful videos on Cell Division:

Youtube video

Websites:

Cells alive-mitosis link here

mitosis link here

Hybrid medical animation on the -stages-of-mitosis linked here

Quizlet of vocabulary mitosis flash cards linked here

Textbook:

Chapter 8.6 Mitosis and Cell Division pg 222-224