

Grade 9 and 10

Distance Learning Module (2 DNA mutations and Cancer) Week of: April 6-10

Content Area: Biology Honors [Unit 4 Inheritance](#)

Targeted Goals from Stage 1: Desired Results

Content Knowledge: Although DNA replication is tightly regulated and remarkably accurate, errors do occur and result in mutations, which are also a source of genetic variation. Environmental factors can also cause mutations in genes, and viable mutations are inherited.

Vocabulary: Mitosis, apoptosis, regulation, expression, mutation, deletion, addition, substitution, frameshift

Skills: Errors in DNA are called mutations and can be helpful, harmful or neutral.

Expectation: All cells contain genetic information in the form of DNA molecules. Genes are regions in the DNA that contain the instructions that code for the formation of proteins. Errors in DNA are called mutations and can be helpful, harmful or neutral.

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
Monday: Learn about types of mutations	<u>Slides</u> What is a mutation <u>notes</u>	Exit slip Google <u>form</u> (need to assign to class-teachers can see it here)
Tuesday: Learn how DNA mutations relate to cancer Review the cell cycle and start HHMI Biointeractive	<u>Click and learn</u> website Student note <u>sheet</u> HHMI #1-10	Snapshot of HHMI #1-10
Wednesday: Complete HHMI Biointeractive Make the connection between mutations (day 1 and cancer from the HHMI resource)	<u>Click and learn</u> website Continue HHMI Biointeractive 11-15	Snapshot of <u>completed</u> HHMI assignment #1-15
Thursday:		<u>Quizziz</u> cancer and mutations

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
Watch animation on angiogenesis Understanding what cancer cells need and how they spread around the body.	YouTube- How Tumors Grow HHMI BioInteractive Video	
<p>School is closed for Good Friday. We have provided some optional activities for interested students. There is no obligation to complete any of these activities and students will not be behind their classmates if they do not complete them.</p> <p>Friday: In small discussion groups research and explain one type of cancer treatment.</p>	Group work! <u>Cancer Treatment research and optional interview</u>	Submit one response per group

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

Students will be assessed on their completion of the activities for the week and performance on these tasks

Answer key for HHMI click and learn activity

Rubric for group work on cancer treatment

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

Erica's cancer playlist of videos on YouTube

BSCS textbook Regulation of the Cell Cycle (8.8 Control of the Cell Cycle 8.9 Checkpoints, pg 228 Cancer)