

Lesson Plans 1/20 - 1/24  
**January 20 - 24, 2020**

MON. JAN. 20TH	TUE. JAN. 21ST	WED. JAN. 22ND	THU. JAN. 23RD	FRI. JAN. 24TH
8th Grade Science <b>No School</b>	8th Grade Science <b>Inheritance and Variation of Traits</b>			
<b>Standards</b> <b>MS-LS3-1</b> Develop and use a model to describe why structural changes to genes (mutations) located on chromosomes may affect proteins and may result in harmful, beneficial, or neutral effects to the structure and function of the organism. Next Generation Science Standards Science <b>MS-LS4-5</b> Gather and synthesize information about the technologies that have changed the way humans influence the inheritance of desired traits in organisms. Next Generation Science Standards Science	<b>Standards</b> <b>MS-LS3-1</b> Develop and use a model to describe why structural changes to genes (mutations) located on chromosomes may affect proteins and may result in harmful, beneficial, or neutral effects to the structure and function of the organism. Next Generation Science Standards Science <b>MS-LS4-5</b> Gather and synthesize information about the technologies that have changed the way humans influence the inheritance of desired traits in organisms. Next Generation Science Standards Science	<b>Standards</b> <b>MS-LS3-1</b> Develop and use a model to describe why structural changes to genes (mutations) located on chromosomes may affect proteins and may result in harmful, beneficial, or neutral effects to the structure and function of the organism. Next Generation Science Standards Science <b>MS-LS4-5</b> Gather and synthesize information about the technologies that have changed the way humans influence the inheritance of desired traits in organisms. Next Generation Science Standards Science	<b>Standards</b> <b>MS-LS3-1</b> Develop and use a model to describe why structural changes to genes (mutations) located on chromosomes may affect proteins and may result in harmful, beneficial, or neutral effects to the structure and function of the organism. Next Generation Science Standards Science <b>MS-LS4-5</b> Gather and synthesize information about the technologies that have changed the way humans influence the inheritance of desired traits in organisms. Next Generation Science Standards Science	<b>Standards</b> <b>MS-LS3-1</b> Develop and use a model to describe why structural changes to genes (mutations) located on chromosomes may affect proteins and may result in harmful, beneficial, or neutral effects to the structure and function of the organism. Next Generation Science Standards Science <b>MS-LS4-5</b> Gather and synthesize information about the technologies that have changed the way humans influence the inheritance of desired traits in organisms. Next Generation Science Standards Science
<b>Objective</b> <ul style="list-style-type: none"> <li>Students will demonstrate and understand that every organism inherits a unique combination of traits.</li> <li>Students will demonstrate and understand that DNA is a set of instructions that specifies the traits of an organism.</li> <li>Students will demonstrate and understand that information in the DNA molecule is divided into segments (called genes).</li> <li>Students will demonstrate and understand that variations in the DNA lead to the inheritance of different traits</li> </ul>	<b>Objective</b> <ul style="list-style-type: none"> <li>Explore the actions of CRISPR, a revolutionary, gene-editing tool used to make intentional mutations.</li> <li>Use CRISPR to genetically modify the DNA of an organism in order to design a solution to problem</li> <li>Demonstrate the understanding of how mutations impact traits</li> </ul>	<b>Critical Questions</b> How can we use CRISPR to genetically engineer an organism in order to solve a problem?	<b>Critical Questions</b> How can we use CRISPR to genetically engineer an organism in order to solve a problem?	<b>Objective</b> <ul style="list-style-type: none"> <li>Explore the actions of CRISPR, a revolutionary, gene-editing tool used to make intentional mutations.</li> <li>Use CRISPR to genetically modify the DNA of an organism in order to design a solution to problem</li> <li>Demonstrate the understanding of how mutations impact traits</li> </ul>
<b>Bellringer</b> Read " Woolly mammoth on verge of resurrection, scientists reveal" <a href="http://bit.ly/2RbaxtS">http://bit.ly/2RbaxtS</a>	<b>Bellringer</b> Read " Woolly mammoth on verge of resurrection, scientists reveal" <a href="http://bit.ly/2R6X0DR">http://bit.ly/2R6X0DR</a>	<b>Engage</b> 1. Power Point on CRISPR 2. Genome Editing with CRISP <a href="http://bit.ly/2R6X0DR">http://bit.ly/2R6X0DR</a> 3. Go over project	<b>Engage</b> 1. Select a gene of interest 2. Research the gene. Identify its properties and how the gene could be used to solve a problem. 3. Use CRISPR to solve a problem: use a known gene to solve a problem in another organism. 4. Present your engineered solution via Google Slides	<b>Bellringer</b>
<b>Critical Questions</b> Science Fair Work: 1. Graphing Experiment Results	<b>Engage</b> 1. Power Point on CRISPR 2. Genome Editing with CRISP <a href="http://bit.ly/2R6X0DR">http://bit.ly/2R6X0DR</a> 3. Go over project			

- 2. Writing Abstract
  - 3. Writing Hypothesis
  - 4. Writing Background
  - 5. Hand out science fair rubric
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#### Assessment

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#### Notes

#### Assessment

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- 4. Present your engineered solution via Google Slides
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#### Assessment

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