

Teacher(s)	Mr. LoBianco	Subject group and discipline	Science 2 (Genetics)		
Unit title	What Controls Change	MYP year	3	Unit duration (hrs)	6 Weeks

Inquiry: Establishing the purpose of the unit

Key concept	Related concept(s)	Global context
Change	Transfer Transformation	Personal and Cultural Expression
Statement of inquiry		
The expression of genetics can change through engineering or when transferred from generation to generation.		
Inquiry questions		
Factual— What is inheritance? Conceptual— How does genetic modification affect natural systems? Debatable— How can the effects of DNA alterations be beneficial or harmful?		
Objectives	Summative assessment	
<p>MYP Objectives</p> <p>SWBAT:</p> <ul style="list-style-type: none"> Understand the process of genetic modifications. Both natural and man made. Explain the process of mutations at the cellular level. Explain the impact of GMO's on society. Analyze texts, draw conclusions, and collect data in order to take a stand, formulate a claim, and refute counterclaims. <p>MYP Objectives</p> <p>A: Knowing and Understanding</p> <p>C: Processing and Evaluating</p> <p>D: Reflecting on the impacts of Science</p>	<p>Outline of summative task / GRASPS</p> <p>G: Analyze the effects of genetic modification.</p> <p>R: You will act as a farmer.</p> <p>A: You need to convince local farmers to use or not use GMO's.</p> <p>S: You are trying to buy new crops but you are unsure to buy GMO crops or natural crops.</p> <p>P: You will create an argumentative essay analysing the significance and impact of GMO's on society. Arguing if they should be used or not.</p> <p>S: A successful essay will analyse both sides of the argument and cite specific research.</p>	<p>Relationship between summative assessment task(s) and statement of inquiry:</p> <ul style="list-style-type: none"> This task will let student's research genetic modification and connect the modifications to their genotypic and phenotypic expressions. Also it will let students research the effects modifications can have on societies and individuals.

Approaches to learning (ATL)
<ol style="list-style-type: none"> 1. Information literacy <ul style="list-style-type: none"> ● Make connections between various sources of information. ● Collect and analyse data to identify solutions and make informed decisions 2. Critical-Thinking <ul style="list-style-type: none"> ● Draw reasonable conclusions and generalizations ● Evaluate evidence and arguments ● Gather and organize relevant information to formulate and argument.

Action: Teaching and learning through inquiry

Content	Learning process
Week 1 <ul style="list-style-type: none"> ● Inheritance ● Reproduction Week 2 <ul style="list-style-type: none"> ● Genetic expression ● Variation Week 3 <ul style="list-style-type: none"> ● Punnet Squares Week 4 <ul style="list-style-type: none"> ● Genetic Modifications Week 5 <ul style="list-style-type: none"> ● Research ● Citations Week 6 <ul style="list-style-type: none"> ● Summative Assessment CCSS Focus Standards – <ul style="list-style-type: none"> ● CCSS.ELA-Literacy.WHS T.6-8.1 - Write arguments focused on <i>discipline-specific content</i>. ● CCSS.ELA-Literacy.RST. 6-8.1 - Cite specific textual evidence to support analysis of science and technical texts. ● CCSS.ELA-Literacy.RST. 6-8.8 - Distinguish among facts, reasoned judgment based on research findings, and speculation in a text. 	Learning experiences and teaching strategies <ul style="list-style-type: none"> ● Multimedia ● Annotated Articles ● Collaborative Activities ● Graphic Organizers Formative assessments <ol style="list-style-type: none"> 1. Content Quiz 2. Inheritance Lab 3. Monster Genetics Lab 4. Informal Discussion 5. Article Analysis 6. Reading Comprehension 7. Writing Prompts Differentiation <ul style="list-style-type: none"> ● Peer Critique ● Skeleton Notes ● Visuals ● Read Aloud ● Closures

Resources
<ol style="list-style-type: none"> 1. Cambridge Checkpoint Science 2. Glencoe Science – New York Science 3. BrianPop

Reflection: Considering the planning, process and impact of the inquiry

Prior to teaching the unit	During teaching	After teaching the unit
<p>This unit will be interesting because it should be the first time most student's think where there physical features and behaviors come from. Also the students should enjoy the study of what has been done to most foods over the last 20 years. The unit will force students to focus on being inquires, communicators, and knowledgable while studying the new content.</p>		