



Thomas Haney Secondary School

Science 10

23000 116 Ave, Maple Ridge, B.C. V2X 0T8

Telephone: (604)463-2001

LG #15: Outcomes of Genetics

(What I need to understand)

BIG IDEA: How are natural & artificial selection mechanisms for the diversity of life?

Learning Standards:

Content <i>(what I need to know)</i>	Curricular Competencies <i>(What I need to do)</i>
<ul style="list-style-type: none"> ☆ The difference between natural and artificial selection ☆ Vocabulary: Evolution, natural selection, artificial selection, fitness, population, traits 	<ul style="list-style-type: none"> • Use knowledge of scientific concepts to draw conclusions that are consistent with evidence • Analyze cause-and-effect relationships • Consider social, ethical, and environmental implications of the findings and from their own and others investigations

Assessment of Learning Standards:

Have an interview to show evidence of the **Learning Standards**, or elect to take a quiz

ADVANCED (B)		MASTERY (A)
<p>ESSENTIALS (C/C+)</p> <p>I CAN:</p> <ul style="list-style-type: none"> ☆ Define the vocab: Evolution, natural selection, artificial selection, fitness, population, traits ☆ compare & contrast artificial and natural selection ☆ Explain how natural selection plays a role in evolution. 	<p>I CAN:</p> <ul style="list-style-type: none"> ➤ Relate natural selection and its role in evolution by explaining different selection processes (gradual, punctuated equilibrium, geographical, reproductive selection etc). 	<p>I CAN:</p> <ul style="list-style-type: none"> ✓ Consider social, ethical, and environmental implications of artificial selection

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Reflection:

After finishing my learning activities what do I understand? How have I answered the BIG Question?

OPTION 1

Choose your own adventure:

- ☆ Pick up an Adventure proposal form from the Science Kiosk
- ☆ Create a plan, include what topics will be covered
- ☆ Get teacher approval for your plan before beginning
- ☆ Bring your approved plan and your evidence of learning to the LG interview

OPTION 2

- ☆ Use the following resources as a start to building your understanding of natural & artificial selection:
<http://learn.genetics.utah.edu/content/selection/artificial/>

Crash Course:
https://youtu.be/aTftyFboC_M

Define the following terms:
Evolution, natural selection, artificial selection, fitness, population, traits
- ☆ **Create** a Similarities and Difference "T" Chart to show your understanding of natural and artificial selection.
- ☆ **Complete** the Darwin's Natural Selection worksheet.
- **Complete** the "Evolution Web Quest".
https://evolution.berkeley.edu/evolution-library/article/evo_01
- ✓ **Make a list** of the pros and cons our current farming and breeding practices. Defend a position for or against artificial selection. Be sure to discuss the ethical, social and environmental issues.

OPTION 3

- ☆ **Find, SOURCE, and share appropriate resources** with your teacher to gather knowledge of natural and artificial selection. Create a "mindmap" of the following terms: Evolution, natural selection, artificial selection, fitness, population, traits
- ☆ **Compare** natural and artificial selection using a venn diagram.
- ☆ **Write a summary** of the process of natural selection and use examples to show your understanding. Being able to explain your examples is IMPORTANT! Check in with your **teacher (beforehand)** with your proposed examples.

Teacher Initials: _____
- Further **explain** natural selection using the changes in the rabbit and moth populations during the industrial revolution, Include the following vocab in your paragraphs: gradual, punctuated equilibrium, geographical, reproductive selection etc.
- ✓ Find a current article about artificial selection such as dog breeding or designer babies. **Explain** how these might be controversial ethical, morally or environmental?