Science 10 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



**GENETICS UNIT PROJECT**

**Applications of Genetics**

**Big Idea**: Genes are the foundation for the diversity of living things.

Task: to investigate the application of genetics in the real world to answer your own inquiry question.

**Assignment**:

1. Individually, investigate the following Applications of Genetics topics.

-**Choose** one topic to research further:

|  |  |  |
| --- | --- | --- |
| **Genetic Testing** | **Designer Babies** | **GMO** (Genetically Modified Organisms) |
| **Human Genome Project** | **Genetic Engineering** | **Gene Editing** |
| **CRISPR** | **Gene Therapy** | **Genetic Diseases** |

2. Come up with a specific and thoughtful **Inquiry Question**

* + Good Questions:
    - A question you don’t already know the answer to.
    - Not simple. Not a *Yes or No* question.
    - “How…” *or* “Why…” *or* “To what extent…” *or* “What is the relationship between…”

**Inquiry Question:**

*Teacher approval: \_\_\_\_\_\_\_\_\_\_\_*

3. **Research** your question and record your sources in a reference list and in-text (using APA format)

4. **Create** a Product that displays your answer to your inquiry question:

***- Movie – Play – Poster – Model – Report – Presentation – Artwork – Song – Vlog -***

**Product Type:**

*Teacher approval: \_\_\_\_\_\_\_\_\_\_\_*

**Audience**:

You will be sharing your findings to groups of students in our class. Keep your writing to an appropriate level of understanding. Be engaging!

**Assessment**:

You will be assessed on this assignment using **Criterion D: Reflecting on the Impacts of Science.**

**DUE \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Planning**:

**Assessment Rubric:**

|  |  |
| --- | --- |
| **Level** | **Level descriptor Criterion D: Reflecting on the impacts of science** |
| 0 | The student **does not** reach a standard described by any of the descriptors below. |
| 1-2 | * **outline** the ways in which science is used to address a specific problem or issue * **outline** the implications of using science to solve a specific problem or issue, interacting with a factor * **apply** scientific language to communicate understanding but does so **with limited success** * document sources, with **limited success** |
| 3-4 | * **summarize** the ways in which science is used to address a specific problem or issue * **describe** the implications of using science to solve a specific problem or issue, interacting with a factor * **sometimes apply** scientific language to communicate understanding * **sometimes** document sources correctly |
| 5-6 | * **describe** the ways in which science is used to address a specific problem or issue * **discuss** the implications of using science to solve a specific problem or issue, interacting with a factor * **usually apply** scientific language to communicate understanding **clearly and precisely** * **usually** document sources correctly |
| 7-8 | * **explain** the ways in which science is used to address a specific problem or issue * **discuss and evaluate** the implications of using science to solve a specific problem or issue, interacting with a factor * **consistently apply** scientific language to communicate understanding **clearly and precisely** * document sources **completely** |

**Explain:** Give a detailed account, with scientific reasoning and connections between situations, events, patterns and processes

**Describe:** Give a detailed account or picture of a situation, event, pattern or process

**Outline:** Give a brief account

**Discuss:** Offer a considered and balanced review that includes a range of arguments, factors or hypotheses. Opinions or conclusions should be presented clearly and supported by appropriate evidence

**Evaluate:** Make an appraisal by weighing the strengths and limitations

**Summarize:** Abstract a general theme or major point(s)

**Factors**: social, economic, political, environmental, ethical, moral