Project Outline

**Project Introduction**

 This is a chance to explore your curiosities about the genetics that make up who we are and how this "information of life" gets passed down from generation to generation. Perhaps you're interested in how mutations in our genes cause disease or make some individuals more susceptible to certain diseases. What if some of these genes can be passed down? What if there are ways scientists could manipulate the cell to prevent certain "bad" genes being passed on? What if genes could be manipulated too? There are so many possibilities and topics to explore, especially when genetics is currently a very popular research area.

 This is an open-ended project where you and your group explore a topic of interest that is related to this unit. You will be asked to present this interesting topic in a creative way however you like. In other words, you choose the topic and how you want to present your findings!

**Ideas**

Below are some ideas to get you thinking about how you'd like to present your topic of interest.

1. Presentation (Powerpoint, Pressie, chalkboard, etc)
2. Video clip
3. Music with lyrics (this could be a parody of a song such as "Let it Go")
4. Skit, role play
5. Game (board game, card game, mystery game, social game, etc)
6. Poster
7. Piece of artwork
8. Commercial, television news
9. Create your own mode of presentation! Be creative!

**Requirements**

***Big Idea and Learning Outcomes***

You must choose **at least 1 Big Idea and 2 Learning Outcomes (2-10)** listed in your Unit Overview related to your topic. You will be assessed on how well you integrate your Big Idea and Learning Outcomes to your topic of interest. You have a chance to discuss this in your Project Summary.

Example:

Jonas and Kim chooses:

*Big Idea 5* - How loss or gain of function of a gene can lead to certain diseases (ex. mutations in genes that regulate cell division can lead to cancer)

*Learning Outcomes 6 and 10*

6 - Explore the effect of changes in genetic information (mutations, chromosome aberrations

10 - Discuss what causes malfunctions in the checkpoints in cell division and how this leads to cancer

Their topic is about certain types of genes that code for proteins that control the checkpoints in cell division. They will explore how mutations lead to a loss of function/gain of function of these proteins that leave the cell cycle unchecked, which might lead to cancer.

***Groups/Individual***

You may work individually or within a group. The group size is unlimited, but should depend on how you're presenting your topic.

When you are forming your groups, you might want to work with people with similar interests and share similar ideas on how to present the topic. Some presentation modes may need a few people (ex. skit).

**What to hand in**

1) **Main article** (presentation, video clip, music, game, poster, etc)

2) **Assisting documents** - these documents completes your main article. How many assisting documents are needed depends on your mode of presentation. Your project should have at least a page of references. Below are some examples.

Example 1

Main article: Music file (mp3)

Additional documents: Lyrics sheet + References

Example 2

Main article: Board game

Assisting documents: Game Rules sheet + References

Example 3

Main article: Poster

Assisting documents: References (this may be included in your poster as opposed to a separate document)

4) **Project summary** - 1 to 2 pages, double spaced description on how your topic and mode of presentation relates to your Big Idea and your Learning Objectives. If your mode of presentation is very abstract, this is the place to explain what your presentation meant to show. Submitted as group.

5) **Self designed rubric** - design a rubric on your mode of presentation. If you are designing a game, what qualities make a good educational game? If you are doing an oral presentation, what are good qualities of an oral presentation? Your rubric must have at least 3 criteria (ex. from our self-directed learning rubric, collaboration and reflection where examples of criteria) and at least 3 tiers (ex. beginning, developing, and exceeding were examples from the self-directed learning rubric). You must include a copy of your rubric when you hand in your project. After you finish your mode of presentation, you evaluate your performance using your own rubric and hand in a second copy. Submitted as group.

6) **Reflection** - This is 1-2 page, single spaced reflection on your project progress. Every member of the group must submit their own reflection. Consider the following questions when writing your reflection. You may create your own questions as well.

Why did you choose your topic? Why was this topic relevant to you or your group?

How did you approach your topic? Why did you approach your topic the way you did?

If you were working with a group, how did you and your group approach this topic together? What did you or your group do to form a strong collaboration?

What problems did you or your group have during this process?

What did you or your group do to resolve these problems?

How did you or your group deal with time management? How could this be improved?

What did you learn from this project? Include both knowledge AND skills gained or developed.

What would you or your group do differently to improve your learning for the next project?

7) **Project proposal** - please check *"Deadlines” for* more dates

Your project proposal allows time for Ms. Li to give you feedback on your topic and mode of presentation. These are the items to include in your project proposal:

*Topic* - Briefly describe your topic of interest.

*Big Idea and Learning Outcomes* - Indicate which Big Idea and 2 Learning Outcomes your topic relates to

*Mode of presentation* - State how you or your group would like to present your topic

*Assisting documents* - Based on your mode of presentation, mention what documents you'd need to submit for a complete project.

*Self designed rubric* - You ONLY need to provide **the criteria** you or your group wishes to self assess

*Group members* - list the names in your group

**Deadlines**

Tues April 7, 2015 - Project Proposal

Tues April 21, 2015 - Project due

Tues April 21, 2015 - Presentation day

Thurs April 23, 2015 - Presentation day/Party

**Assessment: Rubric**

You will each receive an individual rubric that assesses your performance on your project. Some criteria apply to your group (if you are working in a group), others to only you.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Beginning1 | Developing2 | Accomplished3 | Exemplary4 |
| **Content** (40%)You or your group will be assessed on how well you demonstrated understanding for your topic and how it related to the big ideas and learning objectives. This will be demonstrated in your mode of presentation and in your project summary. Group grade. | 1) Topic unclear or unfocused2) Topic unrelated to Big Idea (BI) and Learning Objectives (LO)3) BI and LOs are mentioned briefly4) Mode of presentation distracts understanding of topic | 1) Topic is clear but lacks focus2) Topic briefly mentions BI and LOs3) BI and LOs are explored with little depth and gaps in understanding4) Mode of presentation is appropriate for the topic | 1) Topic is clear and focused2) Topic builds on BI and LOs mentioned3) BI and LOs are explored with almost no gaps in understanding4) Mode of presentation enhances understanding of topic | 1) Topic is clear, focused, and carries meaning for the group/individual2) Topic, BI, and LOs are fully integrated3) BI and LOs are explored in depth with no gaps in understanding4) Mode of presentation provides opportunity to explore the topic further |
| **Reflection** (20%)You will be assessed on the depth of your reflection. Individual grade. | 1) No guiding questions explored2) Reflection attempts to analyze the learning process, and suggests irrelevant ideas to improve the project | 1) Few guiding questions explored2) Reflection analyzes the learning process, and suggests ideas to improve the project | 1) Most guiding questions explored2) Reflection demonstrates a complete analysis of the learning process, and discusses ideas to improve the project | 1) Almost all guiding questions explored AND individually created questions discussed2) Reflection demonstrates honesty, critical analysis of the learning process, and discusses constructive ideas to improve the project |
| **Creativity/Effort** (15%)The project will be assessed on how unique, how much effort, and enthusiasm was put into the project. Group grade. | 1) Mode of presentation presents some understanding of the topic2) Topic and mode of presentation draw on 1 or 2 experiences and resources3) Presenter(s) demonstrate(s) little enthusiasm towards topic | 1) Mode of presentation presents a full understanding of the topic2) Topic and mode of presentation draw on some experiences and resources3) Presenter(s) demonstrate(s) inconsistent enthusiasm towards topic | 1) Mode of presentation presents a new way of understanding a section of the topic2) Topic and mode of presentation draw on multiple experiences and resources3) Presenter(s) demonstrate(s) consistent enthusiasm towards topic | 1) Mode of presentation is unique and presents a new way of looking at and understanding the topic2) Topic and mode of presentation draw on multiple experiences and resources to create something new3) Presenter(s) demonstrate(s) passion for the topic  |
| **Holistic** (25%) This criterion describes how much care you/group put into your project in completing all the tasks. Group grade. | 1) 1-2 items submitted | 1) Some items submitted | 1) All Items from 1-7 submitted  | 1) Items 1-7 submitted and thoughtfully crafted with care |

Total: 40 x \_\_\_\_\_\_+ 20 x \_\_\_\_\_\_+ 15 x \_\_\_\_\_\_+ 20 x \_\_\_\_\_\_= /100

**Feedback**

---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------