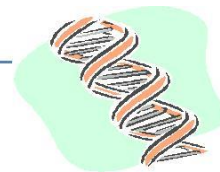


Genomics and Genetic Processes Presentations



“Canadian society is entering an era when we must deal with increasingly complex and controversial scientific and ethical issues. Is scientific discovery outpacing our ability to deal with it? As a society, we need to reflect on what *can* scientifically be done and what, we believe, *should* be done.”

Dr. Martin Godbout, President of Genome Canada (1999-2009)

Hence the importance of all Canadians to become well informed on such technologies before we make key decisions that will affect our future. Your task is to conduct a presentation (or product) to your classmates that will help them understand one of the areas of Genomics (the study of an organism’s entire DNA sequence) or Genetic Processes.

In a group of two you’ll be asked to choose one of the following topics:

- Barcode of Life Data Systems
- Canadian Autism Genome Project
- Cancer Stem Cells
- Direct to Consumer Genetic Testing (e.g. decode, 23andME and Navigenics)
- Pharmacogenomics (Personalized Medicine)
- The Genographic Project
- Human Genome Project
- Biofuels
- Enviropig™
- De-extinction of the Tasmanian Tiger
- De-extinction of the Woolly Mammoth
- GM Mosquitos to Control Dengue Fever (The “Wipeout” Gene)
- Virus Therapy for Cancer
- Pharming
- Forensic Sketches from DNA
- Epigenetics Contribution to Mental Illness and Drug Addiction
- Cloning
- In vitro fertilization
- DNA data banking (biobanking)
- Stem Cell Therapy
- Transgenic Crops
- Nutrigenomics
- Genetic Testing
- Tracking Ebola Outbreak + Vaccination Creation
- Gene Therapy
- Bioremediation (e.g. *Acinetobacter calcoaceticus* RAG-1)
- DNA Fingerprinting
- Controlling the Spruce Budworm using Viruses
- CRISPR – Genome Editing
- Topic of your choice, with teacher approval

Presentation

Your presentation should consider the following:

- An overview of the topic (what is it, how long has it been going on, where is it at now, past and projected timelines, if possible).
- The science behind the topic
- What are the benefits and controversies? Or negative or positive impacts?
- Consist of visuals, either through PowerPoint, Google Slides, Keynote or Prezi
- Maximum number of slides is 15 (not including bibliography)
- Visuals are easily visible by everyone in the class
- Be mindful of your particular audience (i.e. your peers)
- Loud, clear voice with eye contact to the audience
- Be no more than 8 minutes.
- Bibliography with at least 3 sources.

SBI 3U Genetics Presentation - Rubric

Name(s): _____

Topic: _____

PowerPoint and Summary Sheet

| CRITERIA | LEVEL 1 | LEVEL 2 | LEVEL 3 | LEVEL 4 |
|---|---|--|---|--|
| General Information (20%) - Detailed and accurate summary of the disorder | Limited understanding of the material. | Average understanding of the material. | Considerable understanding of the disease. | Thorough understanding of the material. |
| Genetic Basis (25%) - Detailed examination of the underlying genetics | Explains the genetics with limited effectiveness | Explains the genetics with some effectiveness | Explains the genetics with considerable effectiveness | Explains the genetics with superior effectiveness |
| PowerPoint I (15%) - Readability (level of clutter) | Cluttered and confusing; difficult to follow | Somewhat cluttered; readability reduced | No clutter; easily readable | Professional arrangement; Clear and engaging |
| PowerPoint II (15%) - Design (overall look and feel; clickiness) | Random appearance for each slide; high clickiness | Minimal effort for design; moderate to high clickiness | Adequate effort in design; little to no clickiness | Expert design; presentation advances fluidly |
| PowerPoint III (15%) - Use of Media (videos and pictures) | Slideshow uses no, or irrelevant, media | Uses some media; relevance is clear | Uses media well to convey meaning | Media is expertly used; engaging with good variety |
| Handout (10%) - Appearance and ability to convey information | Little to no material provided; no engagement | Some information present; some engagement | All information present; engaging | Extra information provided to increase engagement |

Presentation (NB: these marks are based on the entire group; it is only as strong as the weakest link!)

| CRITERIA | LEVEL 1 | LEVEL 2 | LEVEL 3 | LEVEL 4 |
|---|--|--|--|--|
| Vocal Quality (30%) - Clarity and use of pitch and tone | Student's voice is garbled; uses monotone voice | Voice is clear (but low); may alter pitch and tone | Voice is clear and loud; alters pitch and tone | Voice is compelling and engaging |
| Presence I – Eye Contact (20%) - Audience contact | Student always faces screen or notes | Usually faces screen or notes | Usually faces audience | Always faces audience; engages with them |
| Presence II – Posture (20%) - Audience perception | Slouching; appears sullen and disinterested | Somewhat slouchy; appears somewhat interested | Acceptable posture; appears interested | Commanding posture; fully engaged with material |
| Vocabulary (15%) - Level of vocabulary and enunciation | Student used little or no vocab; poor enunciation | Vocab was appropriate; enunciation low | Vocab was good; enunciation satisfactory | Vocab is rich and used without error |
| Delivery (15%) - Speed and confidence in material | Student delivered material rapidly; low confidence | Delivered material quickly; some confidence | Delivered at a reasonable pace with confidence | Delivery was expertly paced with full confidence |

Overall Levels:

| | | | | |
|---|---|-------------------------------|---|---------------------------|
| PowerPoint and Summary (60%) | + | Presentation (40%) | = | Overall Level: |
| | | | | |

Notes: