**Unit 3 Research Project**

This unit we looked at various reproductive technologies and how they may be used to influence individuals. In this report you will have the choice to research ONE of THREE different topics.

Answer **ONE** of the following questions:

* 1. Scientists are using genetically modified embryonic stem cells to study the role of specific genes in human development, aging and the genetic causes of disease. Some people are concerned that these techniques could one day be used to “design” babies with certain desirable traits, creating a class of genetically superior individuals.
  2. Important Points to Include:
     1. What are embryonic stem cells?
     2. What diseases could benefit from stem cell research?
     3. What are some positives and negatives of stem cell research?
     4. Do you think embryonic stem cell research should be allowed given the pros and cons?

1. Couples who are having a baby are able to undergo prenatal genetic testing and counseling.
   1. Important Points to Include:
      1. What is prenatal genetic testing and how is it performed?
      2. What is the job of a genetic counselor?
      3. What are some of the diseases that can be detected?
      4. Do you think this is a valuable procedure? Why or why not?
2. Down syndrome is a genetic disorder that in most cases is sporadic and shows no recurrence in the family. It occurs at a frequency of approximately 0.15% of all live births.
   1. Important Points to Include:
      1. What is the chromosome mutation associated with most cases of Down syndrome? Describe how this mutation occurs.
      2. What are the characteristics of someone with Down syndrome?
      3. What tests can be used to detect Down syndrome prior to birth?
      4. Given the fact that older mothers have a greatly elevated risk of having Down-syndrome children; do you think there should be an age limit on having children? Why or why not?

You may choose to represent your information in any of the following ways:

-A Posterboard/Flyer Format

-A PowerPoint/Prezi

-A report (2 pages double spaced)

Please remember that no matter what format you use to present, your research project MUST include both VISUAL AIDS (2) and REFERENCES (3).

**Rubric**

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|  | Not observed | Level 1 | Level 2 | Level 3 | Level 4 |
| Content  /10 | -does not include information listed in important points  -unable to answer the chosen question  -does not use evidence to support answer | -includes information about only one important point  -answers the chosen question with minimal support | -includes information about 2 important points  - answers the chosen question with adequate support | -includes information about 3 important points  -answers the chosen question using considerable support | -includes thorough information about all important points  -answers the chosen question using thorough research |
| Formatting and Presentation  /10 | Word choice and level of language does not reflect the purpose or course of study | Word choice and level of language shows a limited sense of purpose and course of study | Word choice and level of language attempts to suit the purpose and course of study | Word choice and level of language shows is appropriate for the purpose and course of study | Word choice and level of language is skillfully suited to the purpose and course of study |
| Ideas are presented with no logic or originality. No references or visual aids are included | Ideas are presented with significant lapses in logic. Missing references or visual aids. | Ideas are presented with some lapses in logic. Visual aids and references are included but references are inadequate. | Ideas are presented in a logical sequence. Visual aids and references are included but references are not in the correct format. | Ideas are presented in a logical and original way. References and visual aids are included. |