Pedigree Assignment:

Using your iPad, access “Genetics 4 Medics” and Genetics Encyclopedia in order to become familiar with inheritance patterns within families. Also included on the website, are notes for further understanding.

After you have played around with these apps, your assignment is to create a hypothetical genetic mutation/disease. After you have created this disease, you must design a set of rules that describes how your mutation is inherited throughout families. For example, is it recessive, dominant, co-dominant, etc. After you have created this set of rules, you need to create a visual of a pedigree, and show how the disease you created is inherited through at least 4 generations.

Below is a rubric of how you will be graded on this assignment.

1. On-Task Behavior:

5 Points: The student is intensely engaged in all phases of the laboratory investigation: the student is active in designing the experimental protocol; assists in set up of apparatus and collection of data; continuously interacts with other lab group members regarding the reliability of the measurements being made; ensures that data is recorded and secured (i.e. the data is saved in multiple locations, appropriately named and labeled, accessible to all lab group members); is never distracted by other studies or students and does not distract other lab groups.

4 Points: The student clearly displays four of the five behaviors.

3 Points: The student clearly displays three of the five behaviors.

2 Points: The student clearly displays two of the five behaviors.

1 Point: The student clearly displays one of the five behaviors.

1. Care in Collecting and Recording Data:

5 Points: The student exhibits great care and awareness in carrying out the experiment: the student ensures lab apparatus is set up and used safely; makes certain that the protocol is followed and that it will lead to accomplishing the goals of the investigation; makes measurements that reflect the appropriate level of precision for the instruments being used; in consultation with the other members of the lab group makes appropriate adjustments to the experimental setup to ensure the quality of all measurements; uses appropriate criteria for judging whether measurements should be discarded or made again.

4 Points: The student clearly displays four of the five behaviors.

3 Points: The student clearly displays three of the five behaviors.

2 Points: The student clearly displays two of the five behaviors.

1 Point: The student clearly displays one of the five behaviors.

1. Overall Understanding:

5 Points: The student’s work clearly demonstrates a full understanding of the appropriate concepts. The student uses appropriate terminology and makes connections.

4 Points: The student’s work somewhat demonstrates understanding of the appropriate concepts. The student uses appropriate terminology and makes some connections.

3 Points: The student’s work vaguely demonstrates understanding of the appropriate concepts. The student uses some appropriate terminology and makes some connections.

2 Points: The student’s work barely demonstrates understanding of the appropriate concepts. The student uses little appropriate terminology and makes few connections.

1 Point: The student’s work fails to demonstrate understanding of the appropriate concepts. The student uses no appropriate terminology and makes no connections.