# Aileen Beeler

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| **Text Set Title: Epigenetics** | | |
| **Text Set Grade Placement: 11th** | | |
| **Enduring Understandings** | | |
| We teach, in Bio I, that your DNA is passed down from your parents and the random pairings and mutations make you. It is now understood that your ancestors experiences can shape your DNA. | | |
| **Text and Resources**  (Indicate in what order the supporting works are to be introduced and taught.) | | |
| **Anchor Text** | **Title: http://discovermagazine.com/2013/may/13-grandmas-experiences-leave-epigenetic-mark-on-your-genes**  **Author: Dan Hurley** | |
| **Supporting Works** | **Book(s)**  1. Epigenetics: How Environment Shapes Our Genes by Richard C. Francis  2.The Epigenetics Revolution: How Modern Biology Is Rewriting Our Understanding of Genetics, Disease, and Inheritance by Nessa Carey  **Article(s)**  3.https://academic.oup.com/bioscience/article/61/8/588/336969/Behavioral-Epigenetics-How-Nurture-Shapes-Nature  4.https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1392256/  **Poem(s)**  1. Frenetic Genetics by Paul Butters  2. My Genes - Poem by George Bernard Hough  **Infographic(s)**  3.Introducing Epigenetics: A Graphic Guide by Cath Ennis  4. http://www.the-scientist.com/?articles.view/articleNo/29546/title/Infographic--Epigenetics---A-Primer/  **Other Media**  5.https://www.youtube.com/watch?v=kp1bZEUgqVI  6.https://www.youtube.com/watch?v=AvB0q3mg4sQ  **Supporting Works will be introduced/taught in the following order:** | |
| **Standards** | CLE 3216.4.4 Describe the relationship among genes, the DNA code,  production of protein molecules, and the characteristics of an organism | |
| **Knowledge** | | **Skills** |
| Know the DNA nucleotide base pairs | | Be able to construct the base pairs from 1/2 of a DNA strand |
| Know how a DNA sequence codes for an amino acid | | Be able to predict the amino acid sequence from a DNA strand |
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| **Rich, Authentic Task** | | |
| 888232 Firefly Gene Transformation Kit  Students can transfer firefly DNA to a bacterium | | |