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Gene Screen: By Cold Spring Harbor Laboratory
Eastport/South Manor School

Grade: 8th grade/Living Environment

CCLS: Since there is no Common Core learning standards adapted for secondary science, I will use the (NGSS) Next Generation Science Standards which may be adapted soon. <http://www.nextgenscience.org/next-generation-science-standards>.

NGSS: Students in high school develop understanding of key concepts that will help them make sense of life science. The ideas are built upon students' science understanding of disciplinary core ideas, science and engineering practices, and crosscutting concepts from earlier grades. There are four life science disciplinary core ideas in high school: 1) From Molecules to Organisms: Structures and Processes, 2) Ecosystems: Interactions, Energy, and Dynamics, 3) Heredity: Inheritance and Variation of Traits, 4) Biological Evolution: Unity and Diversity. The performance expectations for high school life science blend core ideas with scientific and engineering practices and crosscutting concepts to support students in developing useable knowledge that can be applied across the science disciplines. While the performance expectations in high school life science couple particular practices with specific disciplinary core ideas, instructional decisions should include use of many practices underlying the performance expectations. Number 3 core idea is addressed in the Gene Screen app

Description

Gene Screen is a fun way to learn how recessive genetic traits and diseases are inherited and how certain diseases are more prevalent in different populations. Gene Screen also provides information on some recessive genetic diseases and genetic screening programs.

Gene Screen was produced by the DNA Learning Center, Cold Spring Harbor laboratory, and was developed with support from the Marcus Foundation in partnership with the Victor Center for the Prevention of Jewish Genetic Diseases, Albert Einstein Healthcare Network, Philadelphia, USA.

Location of app: Education

Incorporation explanation of NYSLS: This app is perfect of the NYSLS. Almost all of the information contained in the app is covered through the NYSLS. This is a great app for students to see how genetic diseases as well as recessive traits like blue eyes are inherited. It also allows students to see how chromosomes separate during meiosis and 4 different possibilities are shown. There is a section about genes and how mutations are inherited. Students can also learn how to do a punnet square by practicing with different parent genes and having them mate to see the outcomes. .