Topic: Cellular Genetics

Biology Text Set

INFOhio Resources

- Science Online
- Points of View Reference Source
- Science Reference Source

Standards

Ohio's Learning Standards for Science and Model Curriculum

- Biology: Topic: Heredity
    - Content Elaboration: B.H.1 Cellular Genetics
        - Life is specified by genomes. Each organism has a genome that contains all the biological information needed to develop and maintain that organism. The biological information contained in a genome is encoded in its deoxyribonucleic acid (DNA) and is divided into discrete units called genes. Genes code for proteins. Different parts of the genetic instructions are used in different types of cells, influenced by the cell's environment and history. The many body cells in an individual can be very different from one another, even though they are all descended from a single cell and thus have essentially identical genetic instructions. (AAAS).

Ohio's Learning Standards for Literacy in History/Social Studies, Science, and Technical Subjects 6–12

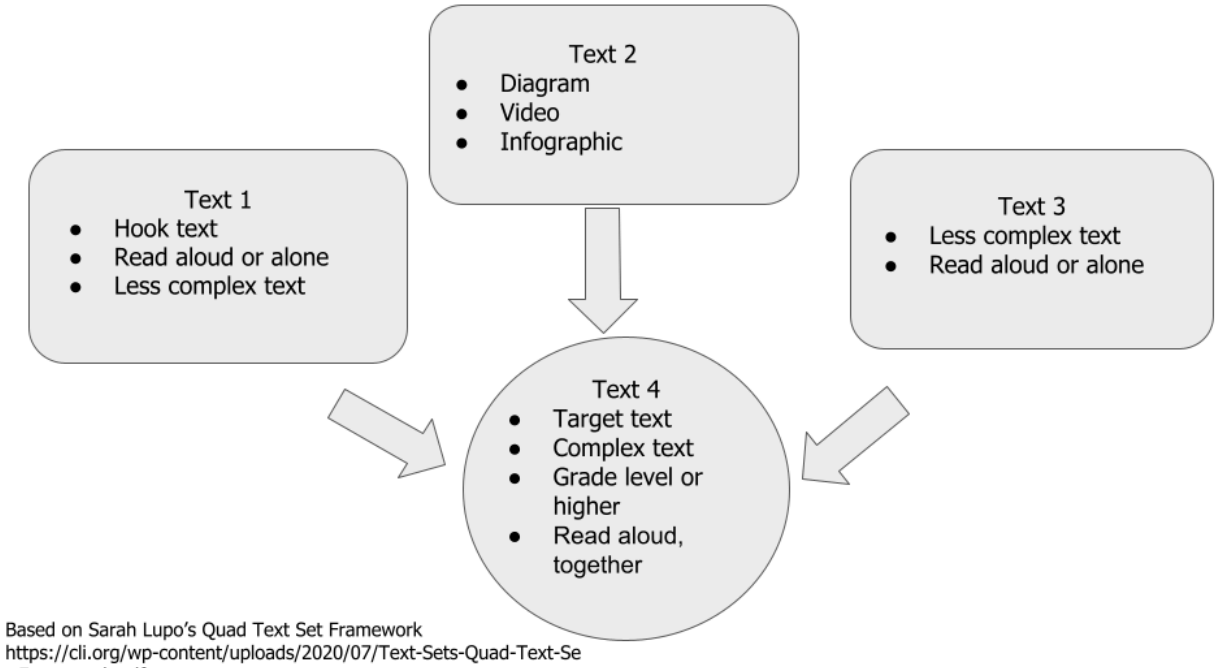
- Science and Technical Subjects
    - Key Ideas and Details
        - RST.9-10.1 Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.
    - Craft and Structure
        - RST.9-10.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9-10 texts and topics.
    - Integration of Knowledge and Ideas
        - RST. 9-10.9 Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts.

Guiding Questions

- How can human genetic information be used? (ancestry, health, etc.)
- What are the ethical implications of using genetic information?

Quad Text Set Framework

This text set was designed using the Quad Text Set Framework. Four texts are selected around a common theme. The target text is the most challenging. The remaining three texts are selected to scaffold students and prepare them for the reading of the target text.



Based on Sarah Lupo's Quad Text Set Framework
https://cli.org/wp-content/uploads/2020/07/Text-Sets-Quad-Text-Set-Framework.pdf

INFOhio Text Sets: Teacher Guide

INFOhio developed a Teacher Guide of suggested instructional activities and professional resources to support the development of teacher created text sets. The INFOhio Text Sets: Teacher Guide has instructional resources to support the following:

- Using text sets to promote equity in the classroom
- Building background knowledge and vocabulary with text sets through writing and discussion
- Scaffolding complex texts
- Using text sets to help students learn to read and build content area knowledge

Teachers will find a collection of instructional activities to pair with any text.

- Vocabulary
- Before, During, and After Reading
- Writing
- Discussion

Texts

Note: The activities listed below are suggestions only. For additional activities, be sure to review the collection available in the INFOhio Text Sets: Teacher Guide

Text 1: Video: Examination of Evidence: DNA

- Science Online
- Lexile Level: n/a
- Activity: Biology Vocabulary Vault
- Activity: Inquiry Chart

Text 2: eBook: Chapter 4: Using the Human Genome to Improve Health

- Science Reference Source
- Lexile Level: 1038L (estimate from hub.lexile.com/analyzer)
- Activity: Continue the Vocabulary Vault
- Activity Continue the Inquiry Chart

Text 3: Article: Your DNA seems to influence how much you like listening to music

- Science Reference Source
- Lexile Level: 1460L (estimate from hub.lexile.com/analyzer)
- Activity: Continue the Vocabulary Vault
- Activity: Continue the Inquiry Chart

Text 4: Article: Direct-to-Consumer Genetic Testing: Overview

- Points of View Reference Source
- Lexile Level: 1480L
- Activity: Continue the Vocabulary Vault
- Activity: Continue the Inquiry Chart. Follow up with a class discussion using the Listen-Read-Discuss method.