



DATE: March 16, 2022

TO: Board of Education

FROM: Mrs. Carmen Ghysels, Superintendent Chief Learning Officer

SUBJECT: First Read of Adoption of High School Science Materials

PRESENTED BY: Valerie Simpson, Executive Director of Educational Services

ACTION REQUESTED

First Read of Adoption of High School Science Materials

BACKGROUND INFORMATION

In 2016, the California State Board of Education adopted a new Science framework to align with the *Next Generation Science Standards (NGSS)*. NGSS provides a three-dimensional approach to K–12 science instruction. These standards represent a significant transition from previous state standards. Current TTUSD high school science instructional materials were adopted before NGSS and no longer align with science standards. Even though over the last several years, secondary teachers developed high-quality instructional materials to align with NGSS, additional resources were needed. Three Science publishers' materials were previewed. Savvas was selected to be piloted because it aligns with the NGSS and CA Science Framework.

Teachers piloted at least one unit of each Savvas textbook in the following subject areas: Biology, Chemistry, Physics, and Marine Ecology. Based on teachers' feedback, this publisher's instructional materials:

- Provides sufficient phenomena throughout the units (both anchoring and investigative). Phenomena-based teaching is a significant focus within NGSS.
- Uses the NGSS 5E framework (Engage, Explore, Explain, Elaborate, and Evaluate) to structure lessons that move students effectively through the content.

As a result of the pilot process, the following textbooks are recommended:

- Course Name: Biology (THS, NTHS, SHS & CSA)
Miller & Levine Biology

Developed by two preeminent biologists and passionate educators, Ken Miller and Joe Levine, this blended print and digital curriculum immerses students in biological inquiry. Students think, investigate, and talk about biology. They interact with natural phenomena through problem-based learning, research, and lab experiments.

- Course Name: Chemistry (THS, NTHS, SHS & CSA)

Experience Chemistry

It gets students to investigate real, compelling phenomena – and experience how chemistry relates to their everyday lives. Is there chemistry in water, food, medicine, or the latest sports shoe? Hands-on and digital activities encourage students to figure things out. Experience Chemistry is the science of doing.

- Course Name: Physics (THS, NTHS, SHS & CSA)

Experience Physics

This modern program implements a learning model that organizes learning around phenomena giving students an authentic, real-world experience. Experience Physics includes various hands-on and digital activities designed to reach every learner and partners with Flinn Scientific to deliver high-quality inquiry labs, engineering workbenches, and performance assessments.

RESOURCES REQUIRED: Lottery

PREPARED BY: Mindi Brenner for Valerie Simpson, Executive Director of Educational Services