

Science Adoption Selection Process

High School



Board Presentation

April 13, 2022

Why are we adopting science materials?

- Students need **equitable access** to NGSS-aligned materials in order to meet the performance expectations outlined in the NGSS
- Next Generation Science Standards (NGSS) curriculum framework adopted by the state of California in Nov. 2016
- MDUSD purchased supplementary materials for some courses in 2018
- California Science Test (CAST) is a cumulative measure of student proficiency in the NGSS (taken in 5th grade, 8th grade, and once in high school)

Steps in the Materials Selection Process

- **Survey sent to publishers** requesting information regarding non-negotiables for the three NGSS courses (Living Earth, Chemistry in the Earth System, and Physics of the Universe)
- **Staff collected adoption information** from neighboring districts
- **Adoption committee created** - teachers could opt to be on the team, meetings held outside the work day with compensation, mostly on Zoom
- **Internal team reviewed** survey responses and sent invitation to publishers for demonstrations
- **Publishers presented** (virtually) their materials to adoption committee members
- **Materials review** - committee members, teachers, community members evaluated each vendor at Willow Creek Center using a modified version of the CA NGSS Toolkit for Instructional Materials Evaluation (TIME) tool



Steps in the Materials Selection Process



- Adoption committee discussed (in-person!) materials review responses and **selected two publishers to pilot**
- **Committee members were trained by the publishers** in each program
- **Committee members piloted both programs** and evaluated specific areas relating to the TIME tool and the programs' ability to all support students in accessing the NGSS
- **Data collected from committee members and students** via surveys about their experiences
- **Committee members met** to discuss their experiences and review data from both publishers and **voted individually for one program**
- **Staff worked with vendors to finalize quotes**

Who was involved in the high school materials selection process?

- Committee participation was voluntary and open to all high school teachers
- Meetings were held after school, mostly on Zoom, due to COVID

Teachers

Marcella Barrios - College Park
Todd Bauleke - Northgate
Dylan Bland - College Park
Laura Chantri - Mt. Diablo High
Jessica Clark - Mt. Diablo High
Andrew Francis - Concord
Anna Gurevitz - Ygnacio Valley High
Sevim Hancioglu - Ygnacio Valley High
Robert Miller - Northgate
Kipp Penovich - Northgate
Minnie Sudarsanam - Concord
Lynn Young - College Park
Felicia Yu - Concord High

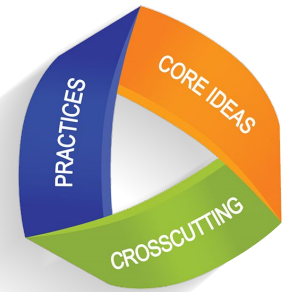


Facilitators

Sarah Bricker - Science TOSA
Megan Gerds - Curriculum Specialist



Criteria for High School Selection



Students Interaction with Phenomena

- Engage with phenomena as directly as possible to ask and answer questions
- Experience phenomena directly or through rich multimedia
- Facts/terminology are learned as needed while developing explanations

Students Demonstration of Knowledge

- Students have ample opportunity to demonstrate their knowledge through various forms of assessment
- Assessments match the targeted learning goals
- Elicit evidence of students' use of the 3 dimensions. Makes sense of phenomena and design solutions to problems.

Provides Support for Diverse Learning Needs

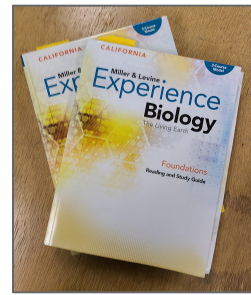
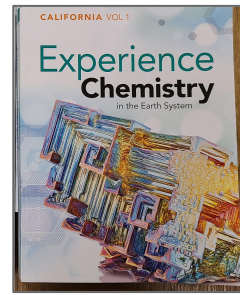
- Sufficient and Appropriate
- ELL
- Learning Differences

Teacher Usability

- Ease of Use
- Readability
- Materials

- Used a modified version of the TIME tool provided by the CDE
- Teachers from each of the three major courses reviewed materials independently

Rationale for the High School Decision



Living Earth and Chemistry in the Earth System - Savvas

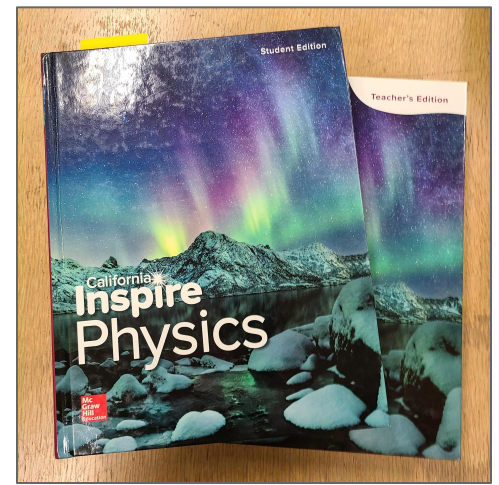
“Savvas provided a much more usable baseline for curriculum than HMH. It allows for teacher flexibility and personalization while still hitting core standards effectively. New teachers to the district would benefit more ... usability of Savvas is very strong, as well as integration with Google Classroom. Online resources are editable and flexible to meet diverse student needs.”

- ▷ Chemistry teachers requested the opportunity to inventory materials and purchase items as needed rather than purchasing full publisher-provided kits

Rationale for the High School Decision

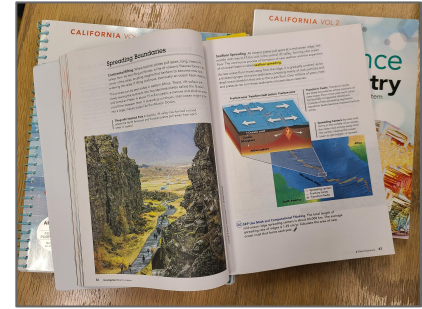
■ Physics of the Universe - McGraw Hill

- ▷ McGraw Hill provided a more access to complex concepts for all learners
- ▷ Presentation of material to students is easy to navigate, problems require critical thinking
- ▷ SyncBlasts (online) provided multiple lexile levels
- ▷ Online labs were accessible and easy to complete



High School Program Costs

- 8 year adoption
- Teacher's guides and access to online curriculum
- Student print & online materials - textbook and consumable notebook (if applicable)
 - ▷ Consumable notebooks sent yearly
- Professional Development for both the initial rollout and ongoing needs
- Total Estimated Cost for 3 courses for 8 years
 - ▷ Living Earth and Chemistry in the Earth System - Savvas - \$752,956.06
(Living Earth - 2,050 students, 30 teachers; Chemistry in the Earth System - 700 students, 25 teachers)
 - ▷ Physics of the Universe - McGraw Hill - \$91,080.65
(450 students, 10 teachers)





Board Q&A