



K-12 Science Instructional Materials Adoption Process and Final Recommendation Final Review

Pleasanton Unified School District
Board of Trustees Meeting
May 7, 2019

PUSD Science Adoption Timeline

April 2013	Nationally, NGSS is released for State Adoption
September 2013	California SBE adopted Next Generation Science Standards (NGSS)
November 2013	California SBE adopted preferred integrated model for grades 6-8
PUSD 2013-14	Creation of a K-12 Science Committee: To study shifts in teaching practices from former standards to NGSS
PUSD 2014-15	Continued NGSS study & professional development of NGSS teaching practices with the Science Committee
PUSD 2015-16	Continued NGSS study & professional development of NGSS practices with the Science Committee * California SBE pushed NGSS materials adoption one more year.
PUSD 2017-18	Creation of NGSS Instructional Materials Adoption Committee to study NGSS instructional materials
PUSD 2018-19	Instructional Materials Adoption Committee provided with professional development around instructional materials evaluation rubric. Committee evaluating materials for adoption and implementation in 2019-2020

Grade levels and science course titles

Instructional Materials recommended for a seven-year adoption period, beginning in 19/20 for the listed grade levels/courses.

Conceptual Physics (P) will be discontinued after the 19/20 school year and replaced with an Earth/Space Science course.

Course/Grade Level
K - 12 Science
6 - 8 Science
Biology (P)
Chemistry (P)
Physics (P)
Botany (P)
Anatomy & Physiology (P)
Zoology (P)

Adoption Committees Overview

- All teachers invited, participation was voluntary.
- Reviewed all materials on the State of California K-8 list of approved instructional materials.
- Publishers presented instructional materials.
- Narrowed to two-three to formally pilot.
- Received publisher training for materials to be piloted.
- Reviewed and piloted using an [NGSS aligned rubric](#).
- Updates provided monthly to all elementary staff via the monthly curriculum update. Grades 6-12 staff provided updates and progress to their teams.

Committee Recommendations



TK-5 Twig Science



- 8-year adoption
- Online resources, print and hands-on lab kits

“TWIG phenomena is based on a storyline for each unit that students unpack through investigation, research, and driving questions. They have provided ways through this investigation for students to make sense of the phenomena or design solutions through engineering (SEP).” PUSD Science Specialist

	DATA COUNT	All	National Geographic Exploring Science	Twig Science	Accelerate Learning STEMscopes CA NGSS 3D
> NGSS Support for Individual Learning ⓘ	47	2.9	2.6	3.3	3.3
> NGSS 3D Design ⓘ		3.0	2.6	3.4	3.3
> NGSS Instructional Support ⓘ		3.0	2.7	3.3	3.7

6th-8th Grade Amplify Science

AmplifyScience

“Students spend an entire unit investigation a very engaging phenomena that is often solving a problem. The SEPs, DCIs, and CCCs are nicely woven into their storyline as they are on their mission to solve the mystery of coming up with a solution to a problem.”

7th Grade Science Teacher Hart MS

- 8-year adoption
- Online resources, print, and hands-on lab kits
- Ed Reports only curriculum to meet NGSS expectations

6-8 Curricular Materials

[See Rubrics](#)

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NGSS INSTRUCTIONAL SUPPORT, NGSS 3D DESIGN, NGSS SUPPORT FOR INDIVIDUAL LEARNING

AVERAGES

PERCENTAGES

GROUP BY

CURRICULUM

DURING

03/29/2019 - 03/29/2019

	DATA COUNT	All	Pearson Education California Elevate Science	Accelerate Learning STEMscopes CA NGSS 3D	Amplify Science: California Integrated Course Model
> NGSS Support for Individual Learning		2.6	2.2	2.6	3.0
> NGSS Instructional Support		2.8	2.2	2.5	3.6
> NGSS 3D Design		2.8	2.3	2.6	3.7

9th - 12th Grades - Biology



- Pearson - Miller & Levine Biology
- 8-year adoption
- Blended, online and print
- Copyright 2019

"There is a lot of online material to teach and supplement. Lots of supplemental material including videos. Visuals in the book are great and draw the reader in. Whole-page diagrams are great for explaining things. Topics are introduced with a case-study that they keep referring back to." Amador Biology

9th - 12th Grades - Chemistry



- Pearson - Wilbraham
- 8-year adoption
- Blended, online, and print
- Copyright 2017

“Additional support in teachers edition, in student edition “Reading Support” and Some cool connections to environment, literature, and history but very brief. “ Amador Chemistry

9th - 12th Grades - Physics

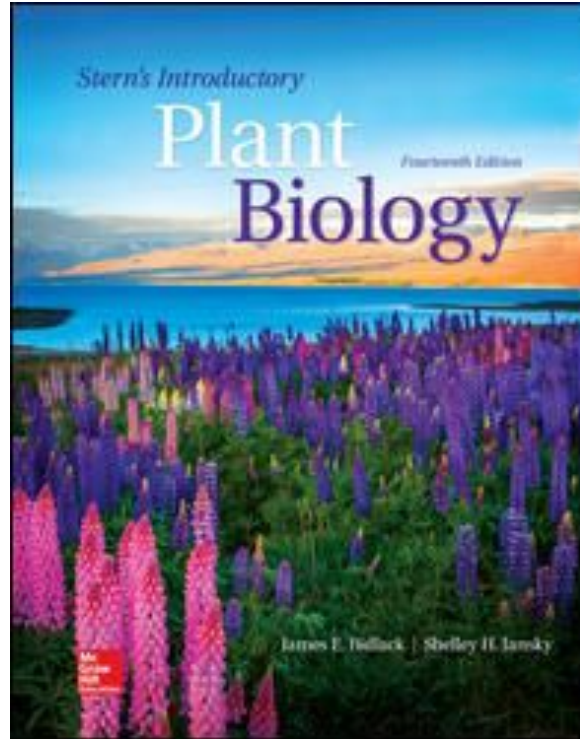


- Pearson - Walker
- 6-year adoption
- Blended, online, and print
- Copyright 2014

“There are several (NGSS) mentions, marked with the 3 dimensional learning symbol and far more problems to solve”

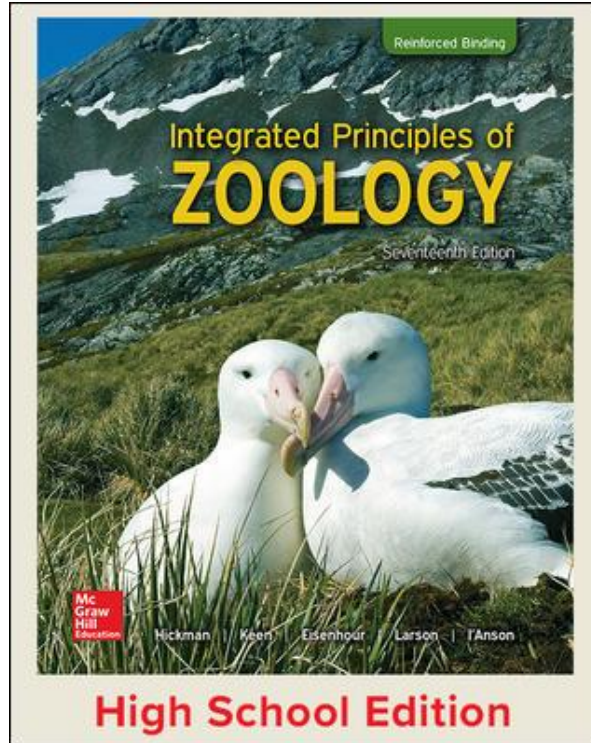
Amador Physics

9th - 12th Grade - Botany



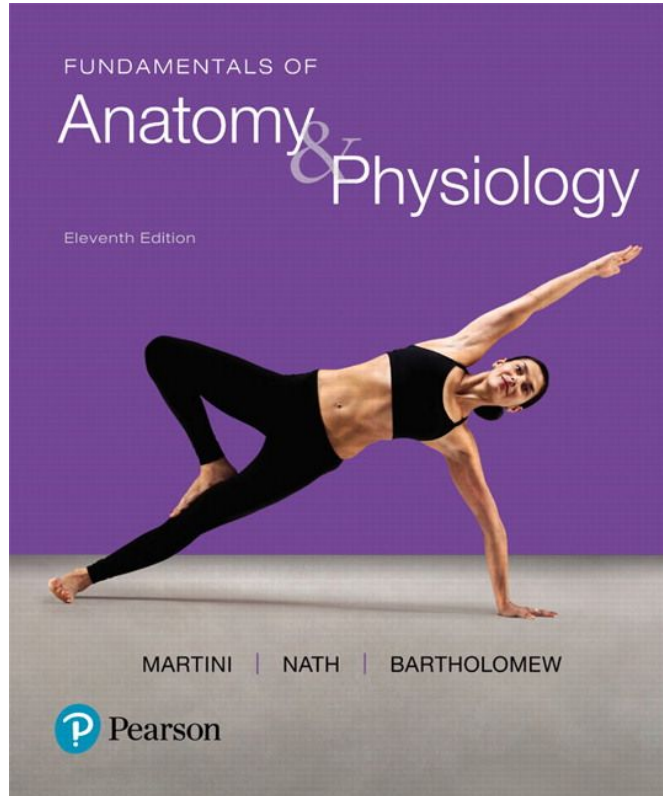
- McGraw Hill- Bidlack
- 7-year adoption
- Digital and print resources
- Copyright 2018

9th - 12th Grade - Zoology



- McGraw Hill- Hinkman
- 7-year adoption
- Digital and print resources
- Copyright 2017

9th - 12th Grade - Anatomy & Physiology



- Pearson- Martini
- 6-year adoption
- Digital and print resources
- Copyright 2018

"You can push out homework and review assignments with this book and I could see myself utilizing it a lot of it."

Foothill Anatomy & Physiology

Next Steps/Timeline

May 2019 - July 2019 ~ Final approval from the Board of Trustees; Staff orders, receives, and delivers instructional materials. Current instructional materials are declared obsolete and disposed of.

2019/2020 School Year

- Ongoing support and training in the use of the NGSS instructional materials.
 - Summer Institute
 - Grade level/subject matter training 2-4 days in 2019/2020
 - Ongoing SDR (Staff Development Reform) opportunities
- Creation & adoption of the fourth course for 9-12 in the Earth and Space sciences. Pilot and purchase instructional materials.

2020/2021 School Year

- Earth and Space sciences course debut.
- Retirement of Conceptual Physics course.

Resources

[California Dept. of Education](#)

[Next Generation Science Standard website](#)

[National Science Teacher Association](#)

[California Science Teacher Association](#)

[CAST](#)

[PUSD Science Instructional Materials Adoption Survey](#)

[9-12 Kick Up Data](#)

Prior updates & reports to the Board of Trustees.

[June 2015 Update to the Board of Trustees](#)

[February 2018 Update to the Board of Trustees](#)

[August 2018 Update to the Board of Trustees](#)

[November 2018 Update to the Board of Trustees](#)

[December 2018 Update to the Board of Trustees](#)

[February 26, 2019 NGSS Board Report](#)

