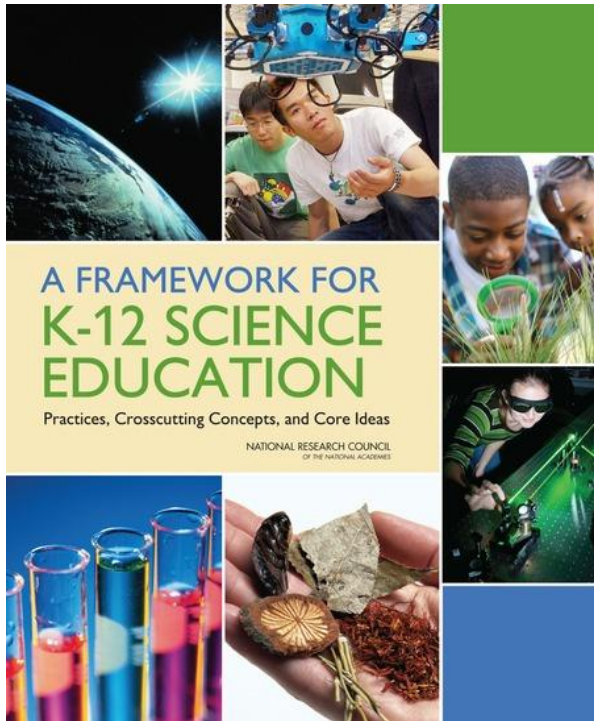


NGSS Update

Horner Junior High
February 19, 2016



A New Vision for Science Education



NGSS Timeline

2011-2013

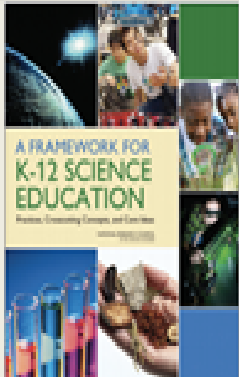


2013-14



2014-15

Design Phase



Awareness Phase

CA State
Adoption
of NGSS

Drafting California Science Framework

Public Review of CA
Framework Summer 2015

Grades
5, 8, 10
Science
CST

Grades
5, 8, 10
Science
CST

2015-16



2016-17



2017-18



2018-19

Awareness Phase

Transition Phase

Implementation Phase

CA Science Framework

Grades 5, 8, 10 Science CST

Scores are NOT used for course placement.

Grades 5, 8, 10 Science CST

NGSS State Assessment Pilot

Assessments likely given in grades 5, 8, & 11

NGSS State Assessment Field Test

NGSS State Assessment **Operational**

CA NGSS-Aligned Curricula

Traditional Middle School Science

6th Grade

Earth Science

7th Grade

Life Science

8th Grade

Physical
Science

Middle School Science- Integrated Model

6th Grade

Earth Science

7th Grade

Life Science

8th Grade

Physical Science

Life Science

Physical
Science

Life Science

Physical
Science

Earth Science

Earth Science

FUSD Middle School Implementation Plan

	6 th Grade	7 th Grade	8 th Grade
Year 1 2015-2016 '98 Standards/NGSS	Heat (NGSS) Weather/Climate Natural Resources/ Human Impact (NGSS) Geology	Cells/Organisms (NGSS) Genetics Evolution/Earth History Ecosystems (NGSS)	Chemistry (NGSS) Physics Astronomy (NGSS)
Year 2 2016-2017 NGSS with Content Shifts	Heat (NGSS) Weather/Climate (NGSS) Human Impact (NGSS) Cells/Organisms (NGSS)	Cells/Organisms (NGSS) Ecosystems (NGSS) Chemistry (NGSS)	Chemistry (NGSS) Physics – Waves and (NGSS) Energy Astronomy (NGSS) Engineering (NGSS)
Year 3 2017-2018 Full Implementation of Integrated NGSS model	Heat (NGSS) Weather/Climate (NGSS) Human Impact (NGSS) Cells/Organisms (NGSS) Engineering (NGSS)	Ecosystems (NGSS) Chemistry (NGSS) Natural Resources/Geology (NGSS) Human Impact (NGSS) Engineering (NGSS)	Physics – Waves (NGSS) and Energy Astronomy (NGSS) Engineering (NGSS) Evolution - Genetics, Earth History (NGSS) Human Impact (NGSS)

Proposed 7th Grade Transition Plan

	2015-16	2016-17	2017-19 Full Implementation
Chapter 1: What is Life Science?	Chapter 1: What is Life Science?	Chapter 1: What is Life Science?	<u>Instructional Segment 1:</u> <u>Organisms and Nonliving Things are Made of Atoms</u>
Chapter 2: Using Light	Chapter 2: Using Light	Chapter 2: Using Light	
Chapter 3: Cell Structure and Function	Cells <u>LS1.A: Structure and Function</u>	Cells <u>LS1.A: Structure and Function</u>	
Chapter 4: Cell Processes and Energy	Chapter 4: Cell Processes and Energy	Chapter 4: Cell Processes and Energy	
Chapter 5: Genetics: The Science of Heredity	Chapter 5: Genetics: The Science of Heredity	Chemistry <u>PS1.A: Structure and Properties of Matter</u> <u>PS1.B: Chemical Reactions</u> <u>PS3.D: Energy in Chemical Processes and Everyday Life</u>	<u>Instructional Segment 2: Matter and Energy Flows in Living Systems and Earth Systems</u>
Chapter 6: Modern Genetics	Chapter 6: Modern Genetics		

High School Plan

- “All standards, all students.”
- California Draft Science Framework presents a 3 year, 3 course model

3 year high school
science graduation
requirement for
Fremont?

High School Plan 2016-17

New Freshman
Science Class:
NGSS 1

Not mandatory

Applying for UC “d” credit

Integration of earth, life,
and physical sciences

- Honors Biology still offered

NGSS 1

- Laboratory-based science class.
- Integrated Science course focuses on introductory Chemistry, Biology, and Earth and Space Science concepts
- Aligned to the California State Standards for math and English language arts.
- Focused on Science and Engineering Practices using real-world, relevant examples
- Example: Water's importance to the Earth and living organisms, nutrient and energy flows.

Proposed Science High School Plan

	9th GRADE	10TH GRADE	11TH GRADE
2016-17	NGSS 1 Honors Biology	Course Offerings Remain the Same	Course Offerings Remain the Same
2017-18	NGSS 1 Honors NGSS 1	NGSS 2 Honors Chemistry	Course Offerings Remain the Same
2018-19	NGSS 1 Honors NGSS 1	NGSS 2 Honors NGSS 2	NGSS 3 Physics/ AP Physics

	9th GRADE	10TH GRADE	11TH GRADE
8th grade science	NGSS 1	NGSS 2	NGSS 3 & AP Biology
8th grade science	Honors Biology	Honors Chemistry	Physics & AP Biology
Honors 8th Grade Science	NGSS 1 or Honors Biology	NGSS 2 or Honors Chemistry	NGSS 3 or Physics/ AP Physics & AP Bio

- To enter Honors Biology as freshman:
 - GATE Identified or
 - “A” in all semesters of 7th/8th grade science
- To continue in Honors Biology as freshman:
 - Grade of C or better in Honors 8th grade science