

NGSS Thurston's Exploration

Preferred
Integrated
Model Exploration

Board of Education
April 11, 2017



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MIDDLE SCHOOL

Our First Question

What Is Best For Our Students?

- Deeper Understanding Of Science
- Exploration of Science
- Educated Consumers Of Scientific Facts
- Career and College Readiness



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TMS Staff Site Visits

- San Dieguito UHSD
 - Pacific Trails Middle School
- Torrance USD
 - The Professional Development Center for Adult Education
- Vista USD
 - Vista Innovation and Design Academy



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Our Discovery



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Coordinated Science

Unit 1

Life
Science

Unit 2

Earth-
Space
Science

Unit 3

Physical
Science

Unit 4

Engineering

6th Grade Integrated Science

Unit 1: A cell, person, and planet Earth are systems made of subsystems

Life
Science

E-S
Science

Physical
Science

Eng

Unit 2: Weather conditions result from interactions among Earth systems

Earth-Spac
e Science

Physical
Science

Engineering

Unit 3: Regional climates influence plant & animal structures & behaviors

Life
Science

Earth-Space
Science

Physical
Science

Unit 4: Human activities can change global warming & its impact on plants & animals

Life
Science

Earth-Space
Science

Engineering

TMS Team Discussion

What is Best for Our Students?

- NGSS Appendix K
 - All Students All Standards
 - Performance Expectations
 - Engineering Practice
 - Crosscutting Concepts



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Why Go Preferred Integrated?

California' Next Generation Science Standards

- Yearly Progression
- Common Core Literacy and Math
- Skills for College
- STEAM Careers
- Critical Thinkers



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Career Ready

Integrated NGSS teaches students with life skills for all careers

Employers seek employees:

- Think critically
- Analyze information
- Solve complex problems
- Communicate effectively



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Prepare for STEM Opportunities

25% of new jobs involve Science, Technology, Engineering & Math (STEM)

Students Who Carry Out Investigations Through memorable, hands-on experiences, where they do activities like a scientist does, are more likely to consider science and engineering careers.



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Less Of

- Following step-by-step instructions
- Teachers presenting models explaining what happens in the natural world
- Discussions seeking one right answer
- Learning facts not connected to real science and engineering work
- Unrelated learning from Year to year

More Of

- Creating their own investigations
- Developing models to explain phenomena and solve problems
- Reasoning and supporting their conclusions with evidence
- Using science to solve real problems
- Learning connected engineering and science practices and concepts

