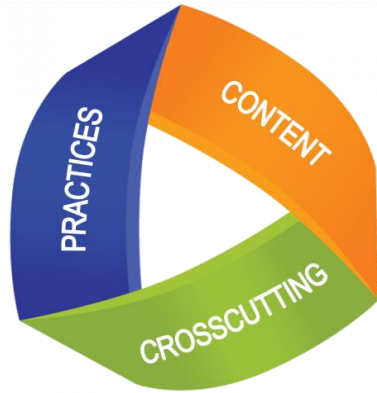


LCUSD's NGSS Implementation Plan

May 10, 2016



The Next Generation Science Standards are...

- Developed through a collaborative, state-led process
- Rich in content and practice
- Arranged in a coherent manner across disciplines and grades to provide all students an internationally benchmarked science education
- Based on the *Framework for K–12 Science Education* developed by the National Research Council.

The NGSS are intended to
reflect a new vision for
American science education.

...focus on what *students* know and are able

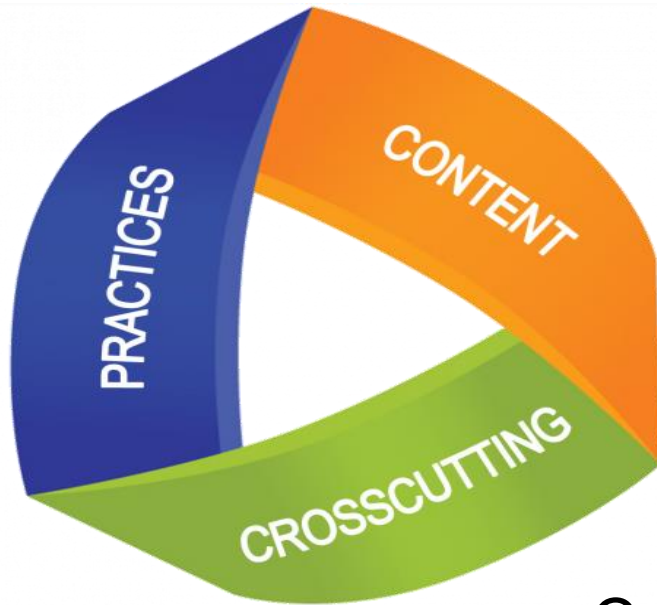
to do

Conceptual Shifts in the NGSS

- K-12 Science education should reflect the interconnected nature of science as it is experienced in the real world
- The NGSS are student performance expectations, not curriculum
- The science concepts in the NGSS build coherently from K-12
- The NGSS focus on deeper understanding and application of content
- Science and Engineering are integrated in the NGSS from K-12
- The NGSS are designed to prepare students for college and career
- The NGSS and Common Core State Standards (ELA and Math) are aligned

Next Generation Science Standards: 3D Learning Model

Science and
Engineering



Disciplinary
Core ideas

Concepts across
disciplines

Science and Engineering Practices

- Asking questions (for science) and defining problems (for engineering)
- Developing and using models
- Planning and carrying out investigations
- Analyzing and interpreting data
- Using mathematics and computational thinking
- Constructing explanations (for science) and designing solutions (for engineering)
- Engaging in argument from evidence
- Obtaining, evaluating, and communicating information

Crosscutting Concepts

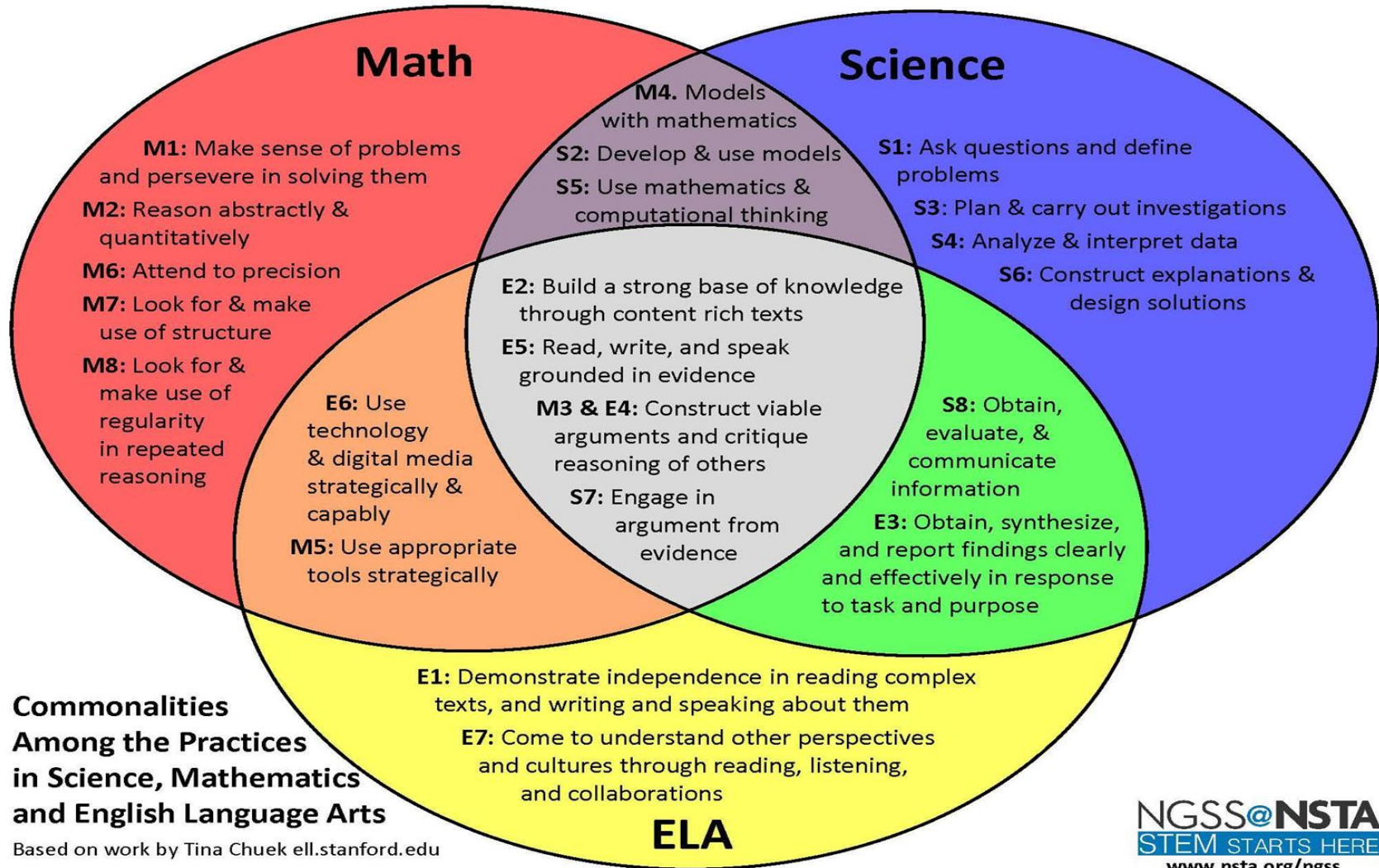
- . Patterns
- . Cause and effect
- . Scale, proportion and quantity
- . Systems and system models
- . Energy and matter
- . Structure and function
- . Stability and change

NGSS Performance Expectations

Elementary School: State has determined the performance expectations to be taught by each grade level.

Middle School: State has determined the performance expectations to be taught between grades 6-8, leaving the order they are taught (two options) up to individual school districts.

High School: State has determined the performance expectations to be taught between grades 9-12, leaving the order they are taught up to individual school districts.



**Commonalities
Among the Practices
in Science, Mathematics
and English Language Arts**

Based on work by Tina Chuek ell.stanford.edu

Standardized Assessments

- 2017- Pilot test will be administered (early adopters)
- 2018- Field test will be administered
- 2019- Operational test will be administered

LCUSD's NGSS Steering Committee

- 10 teachers (5 elementary, 2 middle school, 3 high school), 4 administrators participated in 4 meetings held in Spring 2016 working with the K-12 Alliance at WestEd.

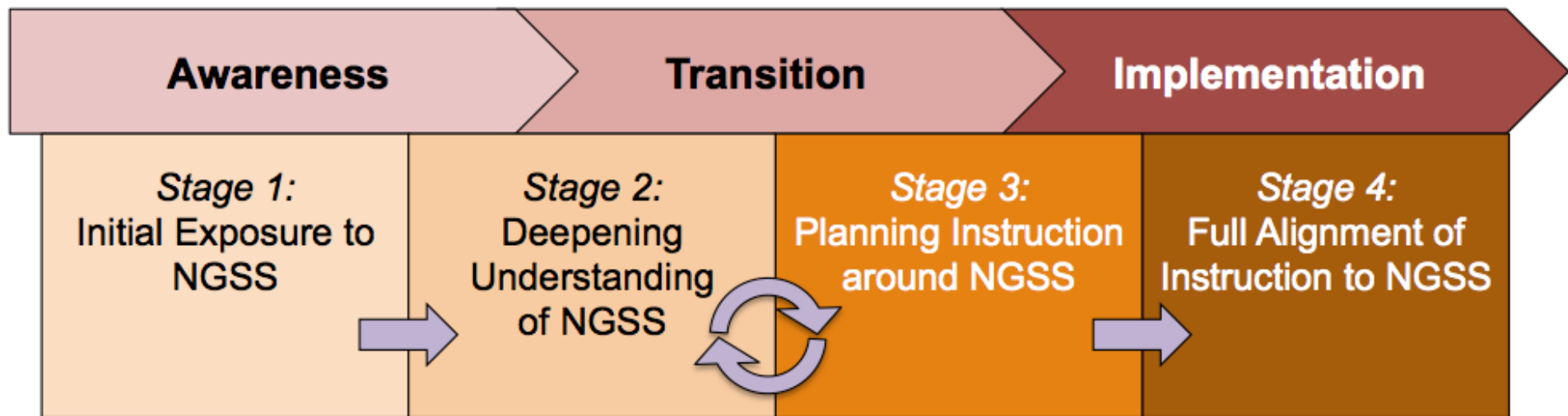
Teachers: Richard Weld, Tom Traeger, Ryan Hainey, Christine Werner, Andrew Arthur, Grace Lee, Amy Wawrychuk, Jennifer Meikle, Debbie Bedell-Au, and Carrie Adkins

Administration: Emily Blaney, Ian McFeat, Jim Cartnal, and Anais Wenn

LCUSD's NGSS Steering Committee

- They were trained in the basics of NGSS and designed the draft of the NGSS implementation plan.
- They will serve as the NGSS Steering Committee in the 2016-17 and meet quarterly to monitor the progress of the implementation and make adjustments to the plan.
- The Steering Committee will invite a Board member and a parent to be part of this work.

CDE NGSS State Implementation Plan



LCUSD's NGSS Implementation Plan Components

- Instruction (Teaching and Learning)
- Professional development
- Curriculum and Resources
- Assessments
- Community and parent engagement
- LCAP and budget

Questions?