

AUSD Theory of Action for Instructional Programs: BaySci

Terri Elkin, Coordinator of Instructional Initiatives and
BaySci & Science Teacher Leaders

10.28.14

BaySci History & Status

- ▶ Third year of implementation
- ▶ 26 teachers trained, 21 currently active (K-5)
- ▶ Teacher leadership training through Lawrence Hall of Science
- ▶ Teacher leaders provide site based support and science professional development
- ▶ Additional secondary science teachers participating in leadership

NGSS Science and Engineering Practices

Practice 1: Asking Questions and Defining Problems

Practice 2: Developing and Using Models

Practice 3: Planning and Carrying Out Investigations

Practice 4: Analyzing and Interpreting Data

Practice 5: Using Mathematics and Computational Thinking

Practice 6: Constructing Explanations and Designing Solutions

Practice 7: Engaging in Argument from Evidence

Practice 8: Obtaining, Evaluating, and Communicating Information

AUSD Vision & Mission for Science

VISION

- ▶ AUSD will provide a comprehensive and high quality science program that prepares all students for success in rigorous post-secondary science courses or careers. AUSD students will use their understanding of the natural world to solve important problems, improve their lives and make their world a better place.

MISSION

- ▶ AUSD teachers and administrators must plan together to realize this vision. We know that students need a high level of scientific understanding to succeed in school and to be prepared for the demands of the 21st Century.

What Scientists and Engineers Do

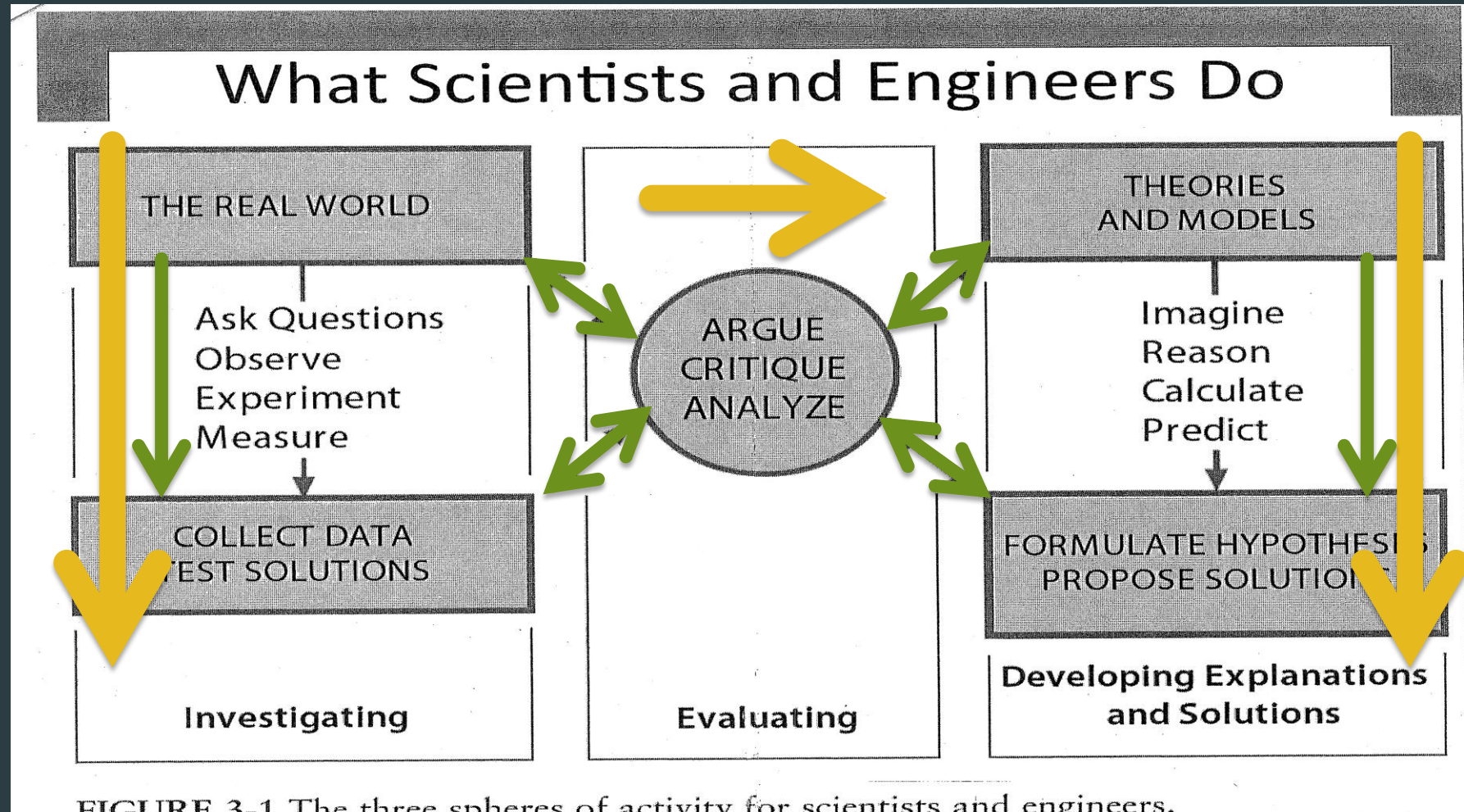
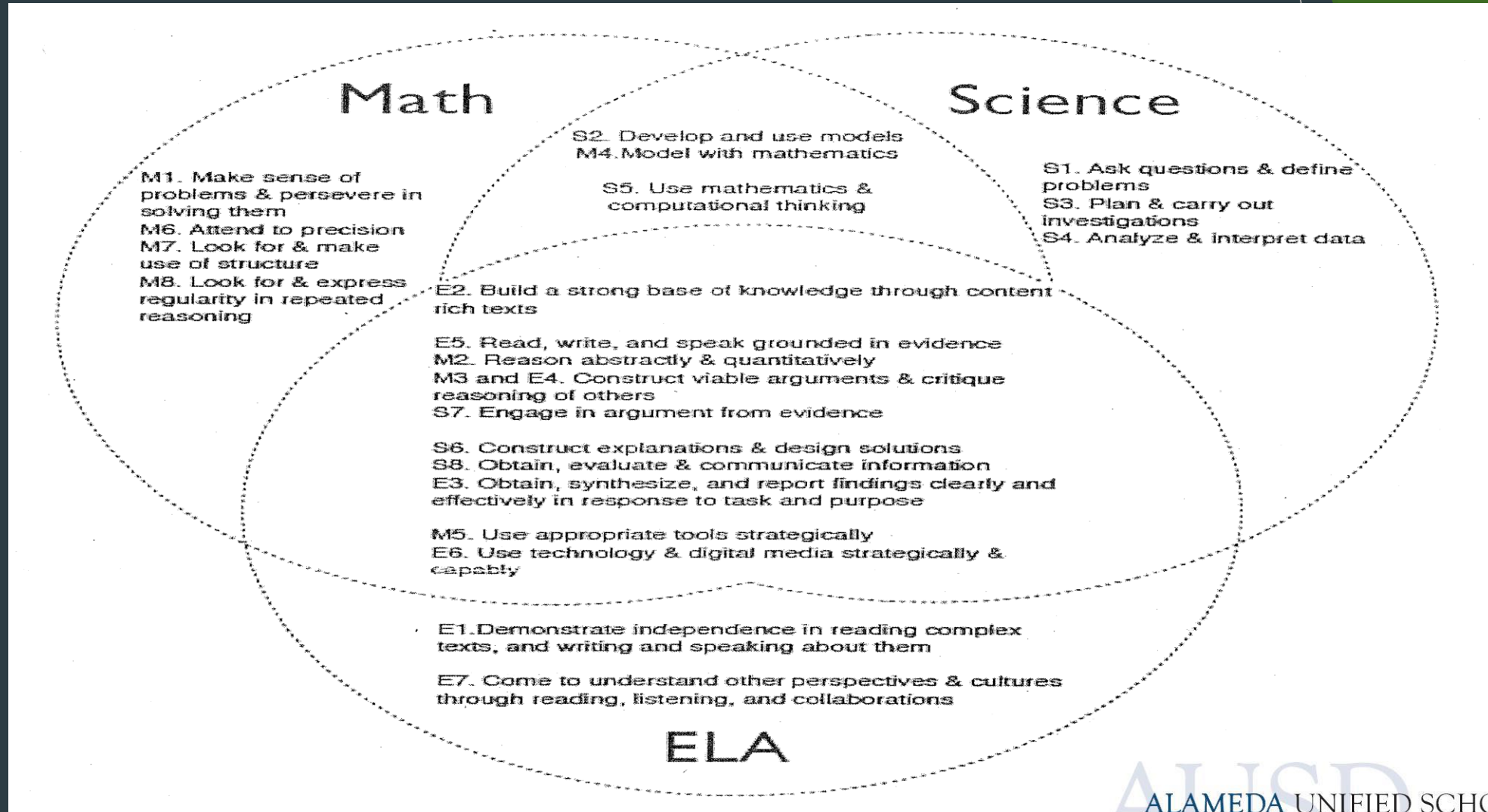


FIGURE 3-1 The three spheres of activity for scientists and engineers.

CCSS Overlay



Example FOSS Lesson

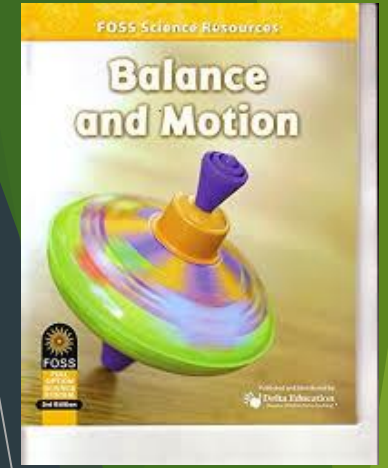
2nd Grade Physical Science Strand Balance and Motion Module

FOCUS QUESTION

Which top design will spin for the longest period of time?

Words to Use

top rotational motion spin torque axis
stable balanced static



Prior Focus Questions

How do you know when something is balanced?

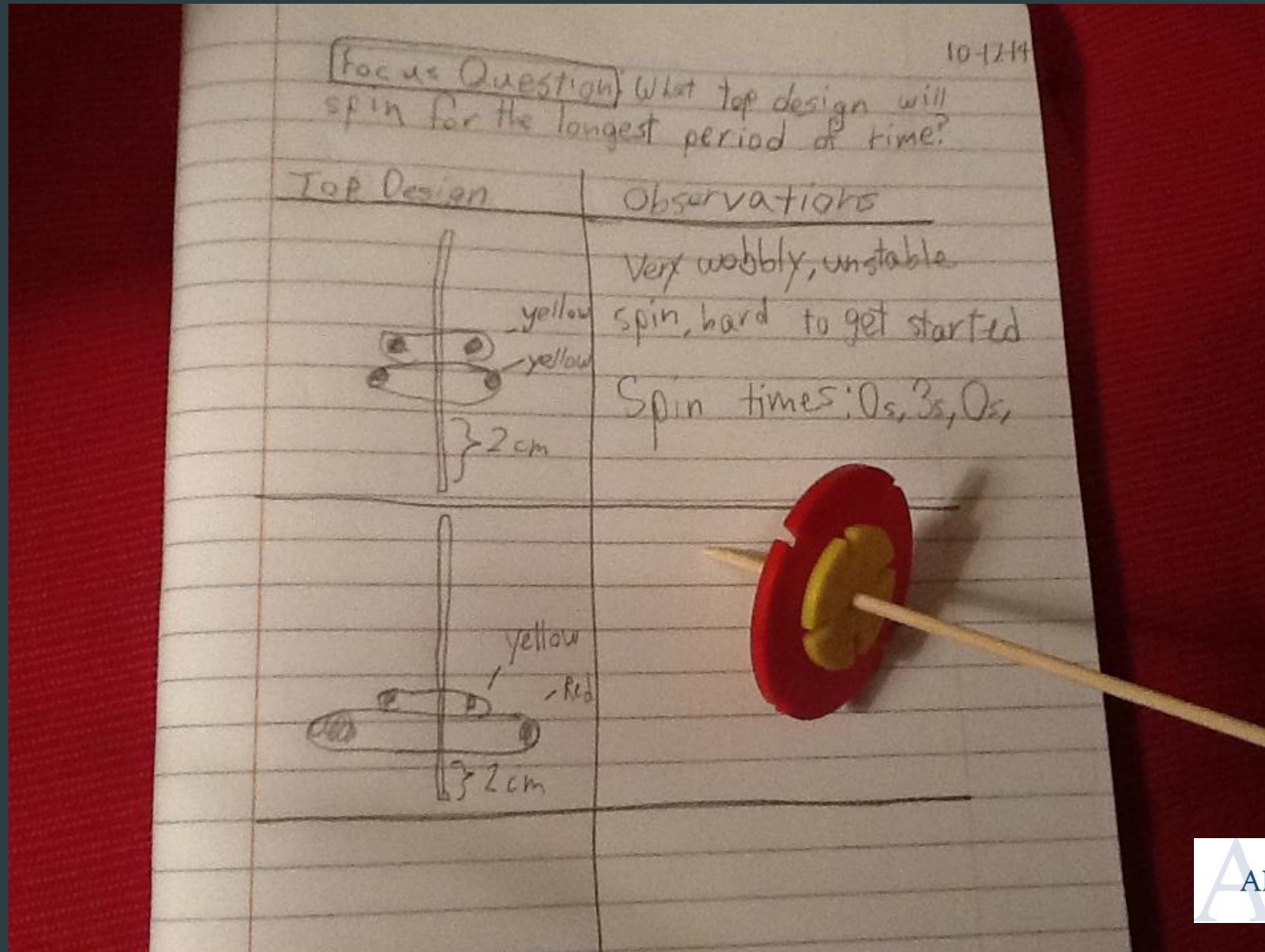
How many ways are there to make a stable position?

How do you balance an object on a single point?

What are tops and how do you get a top to start rotating?



DATA/EVIDENCE COLLECTION What will it look like?



Next Steps: Implementing the Vision and Mission for Science

- ▶ Share vision with stakeholders
- ▶ Principals walking classrooms
- ▶ Science focused Instructional Rounds
- ▶ Continue Professional Development
 - ▶ Includes site administrators and teachers
 - ▶ New Foss materials
 - ▶ Intersection of science and NGSS with CCSS ELA and Math
 - ▶ Notebooking best practices
- ▶ System of materials management in place

Instructional Materials Update

	13-14	14-15	15-16	16-17
K-5 FOSS rollout: CCSS/NGSS aligned	Physical Science ≈\$78,500	Life Science ≈\$89,450	Earth Science ≈\$75,000	≈\$4,000
6-8 FOSS rollout: CCSS/NGSS aligned	Phase I ≈\$52,000	Phase II ≈\$18,000	Phase III ≈\$18,000	≈\$4,000
K-8 Sustainability: Consumable supplies, live organisms	≈\$10,000	≈\$10,000	≈\$10,000	≈\$10,000
PD Preparation and substitute or hourly payment	≈18,950 \$18,000 Reimbursed by grant from LHS*	≈24,350 \$20,700 Reimbursed by grant from LHS*	≈\$15,000 ≈\$7,000 Reimbursed by grant from LHS*	≈\$10,000 Reimbursement from LHS* is currently unknown
Total	≈\$136,450	≈\$116,100	≈\$101,000	≈\$28,000

Expenditures to support implementation of K-8 inquiry-based science program.

*LHS = Lawrence Hall of Science BaySci Program

Conclusion

- ▶ The Board of Education is an essential component in the vision and mission to make science more visible to our community and fostering support.
- ▶ There will be a Board of Education update in May 2015.