

What do we KNOW about Science Best Practices

Why This Work Now...

- New Next Generation Science Standards
- Focus on College and Career Readiness
- Roll of Science in shifting workforce demands

Students should...

- engage in inquiry activities
- engage in collaborative, project-based, Engineering Design activities
- engage with “cross-cutting concepts”
- ask questions and design problems
- plan and carry out investigations
- obtain, evaluate, and communicate information in a variety of ways
- analyze and interpret data
- think critically
- argue with evidence
- develop and use modeling
- construct possible explanations
- use math to make predictions

Teachers should use...

- metacognitive thinking and modeling
- open-ended questioning
- collaborative, problem-based facilitation
- compare and contrast instructional strategies
- examples from scientific history
- technology to facilitate the acquisition of data and analysis
- technology to engage students
- technology to foster critical and creative thinking
- cross-discipline integration strategies

What we WONDER about Science Best Practices

- How do we integrate the science standards with the CCSS Literacy for Science?
- How do we integrate ELP standards in Science to increase student achievement in Science?
- Does having our students study current science events increase relevancy?
- How does reading about current events in science relate to the science CCSS?
- How can we use technology effectively to teach science?
- What technology is needed to teach science effectively?
- How do we best prepare our students for success in science-related college courses and careers?
- What are the best practices for science assessment?
- Should we focus on project-based or content-based science?
- Is there a balance between project-based and content-based science?
- How does child development impact science instruction?
- How does learning style impact science instruction?
- How do cultural differences impact science instruction?
- How do societal beliefs impact science instruction?
- What materials are available to teach the new science standards?
- What materials are best?
- What is the role of written material? (Informational Text and Science CCSS)

Proposed PLAN

Desired Outcomes for the Science Study Team...

- Science Best Practices
- Critical Science Content and Skills
- Discipline Integration and Connections
- Career Readiness/Alignment
- Form, maintain, and grow Community Partnerships
- Roll of Science during and outside the school day
- Professional Development plan for all science teachers with continued, classroom-based follow-up support
- Materials Adoption or Curation plan
- HSD Belief Statements about Science Education
- Public Communication

Science Study Leadership Team...

- Teachers: 2 Primary, 2 Intermediate, 2 Middle, 2 High, 1 ELL, 1 SpEd
- Admin: 1 Elementary, 1 Secondary
- 2 Community Partners
- 2 T&L Facilitators

Science Study Team (with clear selection criteria, and job description/work load expectations)...

- Teachers: 8 Primary, 8 Intermediate, 8 Middle, 8 High (includes ELL and SpEd)
- Admin: 4 Elementary, 4 Middle, 4 High
- Community Partners: 2 Parents, 2 Students, 1 Science-Related Business, 1 Post-Secondary, 2 Board Members/Elected Officials
- 6 T&L TOSAs

When (work with HEA along the way)...

- After NGSS
- Leadership Team: Spring 2013, Science classroom walkthroughs, Summer 2013 planning (9 hours), SY 13-14 (10 plan sessions)
- Study Team: NSTA Conference Oct 2013, SY 13-14 (10 half days)