

EDUC 511

March 15, 2011



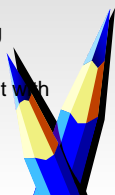
Agenda

- Items for the good of the order
- Exemplary EI Science Programs
- Learning Centers
- Graphic Organizers
 - Foldables
- Lab Kit time



Exemplary Science Programs

- Def. Programs as defined by Nat. Acad of Science as meeting the goals proposed by NSES; namely:
 - The materials address the goals of elementary science teaching and learning
 - Inquiry and activity are the basis of learning experiences
 - The instructional approaches are consonant with the goals of the program.



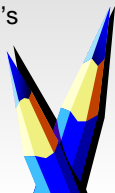
Do the materials:

- Focus on concrete experiences with scientific phenomena?
- Enable children to investigate important science concepts in depth and over an extended period of time?
- Contribute to the development of scientific reasoning and problem solving skills?



Do the materials:

- Stimulate students' interests and relate to science learning in daily life?
- Build conceptual understandings over several lessons through a logical sequence of related activities?
- Include opportunities to assess children's prior knowledge and experience?



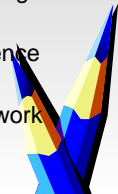
Are the basis of learning experiences:

- Student inquiry that engages the students in the process of science?
- Opportunities for students to gather and defend their own evidence and express their results in a variety of ways?

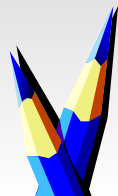


Does the effective instructional approach:

- Include a balance of student-directed and teacher-facilitated activities as well as discussions?
- Incorporate effective strategies for the teacher and/or students to use in assessing student learning?
- Suggest opportunities for integrating science with other areas of the curriculum?
- Provide for opportunities for students to work collaboratively or alone?

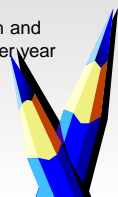


EXAMPLE PROGRAMS



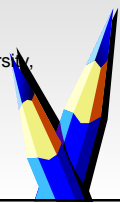
Exemplary Science programs

- **Full Option Science System [FOSS]**
 - Lawrence Hall of Science UC Berkeley.
 - K-6 Curriculum-27 modules
 - 5 K modules on Life or physical science
 - 6 modules for grades 1 & 2 on life, physical and earth science (3 modules per year)
 - 16 modules for grades 3-6 on life, physical, earth and scientific reasoning and technology 4 modules per year



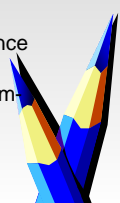
Exemplary Science Programs

- ***Insights: An inquiry-based elementary school curriculum.*** Education Development Center, Newtown, MA
 - 21 units contain up to 20 interactive learning experiences.
 - Six major science themes are represented:
 - systems, change, structure and function, diversity, cause and effect, and energy.



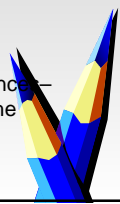
Exemplary Science Programs

- ***Science and Technology for Children (STC).*** National Science Resource Center Smithsonian Institute, Washington, DC
 - grades 1-6.
 - 24 units four for each grade level
 - experiences in life, earth and physical science and technology, 'while simultaneously developing their critical thinking and problem-solving skills.'

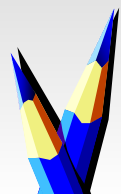


Exemplary Science Programs

- ***Science Curriculum Improvement Study (SCIS).*** Lawrence Hall of Science, University of California at Berkley, CA
 - a thematic approach to science literacy that emphasizes depth of understanding and conceptual development.
 - 13 science units. The introductory unit, "Beginnings", leads into two six-unit sequences—the physical-earth science sequence and the life-environmental science sequence

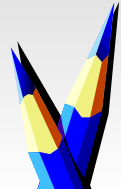


LEARNING CENTERS



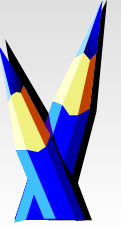
Foldables

- A form of graphic organizer that students can use for:
 - Note-taking activities
 - Student directed projects
 - Alternative form of assessment
 - Science lab journals
- A visual and kinesthetic tool to help students communicate what they have learned, observed and experienced



Foldables

- Booklets-an interactive graphic organizer
 - Front tabs
 - General info
 - Titles, vocab, concepts
 - Specific info under the tabs



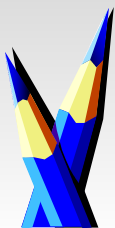
Benefits

- Allow students to quickly organize, display and arrange data.
- Provides a multitude of creative formats for presentations
- Allows for the incorporation of skills such as comparing and contrasting
- Provides for an alternative assessment to be used by both teachers and students



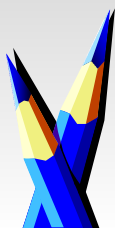
Fold shapes

- Hamburger
- Hot dog
- Taco
- Burrito
- Folds
 - Valley
 - Mountain
 - shutter



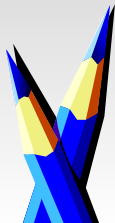
Examples

- Bound Book
 - Use as a journal
- Two Tab Book
 - Data in 2s
- Three Tab Book
 - Data in 3s
- Four Tab Book
 - Data in 4s
- Layered Look Book



Break time

- When we come back let's look at the kits



Next Time

- Kit Lesson Presentations
- Learning Center Topics

