



Science

Summary of the Strands and Substrands

Scientific Inquiry

(skills and language related to science)

- 1.0 Observation and Investigation
- 2.0 Documentation and Communication

Physical Sciences

- 1.0 Properties and Characteristics of Nonliving Objects and Materials
- 2.0 Changes in Nonliving Objects and Materials

Science: Unit 3, Key Topic 1 <http://facultyinitiative.wested.org/> 2

Science

Summary of the Strands and Substrands

Life Sciences

1.0 Properties and Characteristics of Living Things

2.0 Changes in Living Things

Earth Sciences

1.0 Properties and Characteristics of Earth Materials and Objects

2.0 Changes in the Earth

Science

Read pages 136–138 and 151–152 of the *California Preschool Curriculum Framework, Volume 3*

- Why is it important that children’s natural curiosity be nurtured in preschool? What is the long-term advantage of that for the child?
- Why is it important to organize sciences experiences and think about intentionally teaching science with young children?

Science

Outline the strand (physical, life, or earth sciences)

- Substrand title
- Vignette
- Teachable moment
- Interactions and strategies
- Planning opportunities
- Research strategies
- Bringing it all together
- Engaging families

Science: Unit 3, Key Topic 1

<http://facultyinitiative.wested.org/>

5

Science

Organization of the Science Domain

- Why do you think there are 4 strands, with Scientific Inquiry being so different from the other 3?
- Why would the 3 content area strands have the same substrands? Does this help you think about how to organize science learning experiences for young children?
- Are there other ways this domain could have been organized?

Science: Unit 3, Key Topic 1

<http://facultyinitiative.wested.org/>

6

Science

Guiding Principles for the Science Domain

- The preschool environment supports children's curiosity and encourages inquiry and experimentation.
- Content of inquiry is developmentally appropriate and builds on children's prior experiences.
- Scientific inquiry experiences are interesting and engaging for children and teachers.

Science: Unit 3, Key Topic 1

<http://facultyinitiative.wested.org/>

7

Science

Guiding Principles for the Science Domain

- Children explore scientific concepts directly through active, hands-on, minds-on playful experiences.
- Children explore scientific concepts in depth through multiple, related learning experiences over time.
- Children construct knowledge through social interactions with peers and adults.

Science: Unit 3, Key Topic 1

<http://facultyinitiative.wested.org/>

8

Science

Guiding Principles for the Science Domain

- Children use language and other forms of communication to express their thoughts, describe observations, and document their work.
- Teachers support children who are English learners in understanding and communicating scientific knowledge and skills.

Science: Unit 3, Key Topic 1

<http://facultyinitiative.wested.org/>

9

Science

Guiding Principles for the Science Domain

- Science is embedded in children's daily activities and play and provides a natural vehicle for integrating mathematics, literacy, and other content areas.
- Individual differences are recognized, and all children are included and supported.
- The preschool environment, home, and community are connected through science.

Science: Unit 3, Key Topic 1

<http://facultyinitiative.wested.org/>

10



- What stands out for you in this experience?
- What did you learn about your connection to science in your life?
- What is something that you would like to learn more about? How can you do that?