



CHAPTER 10:

Science and the Creative Arts

***Creative Materials and Activities for the Early
Childhood Curriculum***

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Science Content in the Early Childhood Classroom

Science Standards

- Disciplinary core ideas are the key topics of study:
 - Physical Science
 - Life Science
 - Earth and space science
 - Engineering, technology, and applications
- STEM/STEAM Education
 - STEM = Science, Technology, Engineering, and Mathematics
 - STEAM = STEM + Art

Developmentally Appropriate Science

Developmental Characteristics

- Infants and toddlers learn about science through exploration of their environment
- Preschoolers and kindergartners play and show a sense of wonder and curiosity about their environment
- School-age children are naturally curious and want to know how everything works

Science and Nature

- Nature explorations tap into children's naturalist intelligence

Developmentally Appropriate Science Continued

Inquiry Learning

- Solving authentic problems through questioning and testing
- Active learning

The Science Center

- Locate in space with plenty of room
- Organize
- Provide culturally appropriate materials, activities, and conversation

The Creative Arts and Science

- Arts, Constructions, and Science
 - Visual/spatial intelligence
 - Logical/mathematical intelligence
 - Naturalist intelligence
- Drama and Science
 - Bodily-kinesthetic intelligence
- Music and Movement and Science
 - Musical intelligence

Science, The Arts, and Diverse Learners

Modifications for specific exceptionalities:

- Modifications for English Language Learners (ELLs)
- Modifications for Children with Gifts and Talents
- Modifications for Children with Other Special Needs

Practical Creative Arts Activities for Science

- Infants and Toddlers (birth-age 2)
 - Dramatic Arts
 - Visual Arts
 - Music and Movement
 - Books to Support Science
- Preschoolers (ages 2-4)
 - Dramatic Arts
 - Visual Arts
 - Music and Movement
 - Technology
 - Books to Support Learning

Practical Creative Arts Activities for Science Continued

- PreK-Kindergarten (ages 3-6)
 - Dramatic Arts
 - Visual Arts
 - Music and Movement
 - Technology
 - Books to Support Learning
- Kindergarten – Third Grade (ages 5-8)
 - Dramatic Arts
 - Visual Arts
 - Music and Movement
 - Technology
 - Books to Support Learning

Practical Creative Arts Activities for Science Continued

- Elementary Grades (ages 8-10)
 - Dramatic Arts
 - Visual Arts
 - Music and Movement
 - Technology
 - Books to Support Learning