NSTA Position Statement

Elementary School Science

The National Science Teachers Association supports the notion that inquiry science must be a basic in the daily curriculum of every elementary school student at every grade level. In the last decade, numerous reports have been published calling for reform in education. Each report has highlighted the importance of early experiences in science so that students develop problem-solving skills that empower them to participate in an increasingly scientific and technological world.

- The elementary science program must provide opportunities for students to develop understandings and skills necessary to function productively as problem-solvers in a scientific and technological world.
- Elementary school students learn science best when -
    a. they are involved in first-hand exploration and investigation and inquiry/process skills are nurtured.
    b. instruction builds directly on the student's conceptual framework.
    c. content is organized on the basis of broad conceptual themes common to all science disciplines.
    d. mathematics and communication skills are an integral part of science instruction.
- The learning environment for elementary science must foster positive attitudes towards self and society, as well as science.
- Elementary school students value science best when -
    a. a variety of presentation modes are used to accommodate different learning styles, and students are given opportunities to interact and share ideas with their peers.
    b. the scientific contributions of individuals from all ethnic origins are recognized and valued.
    c. other subject areas are infused into science.
    d. inquiry skills and positive attitudes are modeled by the teacher and others involved in the education process.
- Teacher preparation and professional development must enable the teacher to implement science as a basic component of the elementary school curriculum.
- Teacher preparation and professional development must provide for -
    a. experiences that will enable teachers to use hands-on activities to promote skill development, selecting content and methods appropriate for their students, and for design of classroom environments that promote positive attitudes toward science and technology.
    b. continuing science inservice programs based on current educational research that encompass content, skills, techniques, and useful materials.
    c. participation in workshops, conferences, and meetings sponsored by local, state, and national agencies.
- The school administrators must be advocates for elementary science.
- Administrators must provide instructional leadership by -
    a. building consensus for an elementary science program that reflects state and national standards.
    b. implementing and monitoring the progress of the science program.
- Administrators must provide support systems by -
    a. supplying appropriate materials, equipment, and space.
    b. recognizing exemplary elementary science teaching.
    c. encouraging special science events.

- The instructional implementation and support system for elementary school science must include the combined efforts of all aspects of the community: parents, educators, businesses, and other organizations.
- The community must be advocates for elementary school science by -
    a. participating in ongoing planning, assessment, and funding of elementary science programs.
    b. promoting informal science learning experiences.
- Assessment must be an essential component of an elementary science program.
- Assessment must be aligned with -
    a. what is of value, i.e., the problem-solving model of instruction: concept application, inquiry, and process skills.
    b. the curricular objectives and instructional mode.
    c. the purpose for which it was intended: grading, diagnosis, student and/or parent feedback, or program evaluation.
- Elementary school science instruction must reflect the application and implementation of educational research.
- Elementary school science programs are improved when -
    a. teachers keep abreast of appropriate science education research.
    b. educational research becomes the premise for change or innovation in elementary school science, and teachers participate in action research in elementary science.

--Adopted by the
Board of Directors
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