



Center for Collaborative Research & Education

K-12 Science Initiative Brief Secretary's Summit Goal 3: Improving Teacher Knowledge

The Delaware Elementary Science Initiative (DE ESI)

Initiated: 1995

Grade Levels: K-5

Location: Delaware (statewide: all 19 school districts)

Primary Partners: DuPont, AstraZeneca, Agilent Technologies

Number Affected: 3000 K-5 teachers; >200,000 professional development hours.

Project Purpose

Goals: To ensure that today's students in Delaware achieve the level of competency in science required to become tomorrow's knowledge intensity employees and informed consumers of science-based products and services.

Primary Activities: School District Strategic Planning; K-5 Teacher Professional Development; Targeted Curriculum Development; Statewide Materials Center; Technical Support for Implementation and for Assessment; Legislative Interface.

Project Summary

The DE ESI is a conceptual framework for implementing systemic reform of K-8 science education in Delaware's public schools. (The framework traces its roots to 1972 when DuPont partnered with the NSF in the pilot of the Delaware Model, a "systems-oriented" model for science education reform.) The framework provides an integrated, collaborative approach for implementing inquiry-based science instruction and hands-on science materials; for improving K-5 teachers' science content knowledge and pedagogical skills; and for aligning assessment with instruction.

Project Accomplishments/ Results

1995: Created the **Delaware Science Coalition** (DSC) to plan, pilot, and coordinate statewide implementation of the DE Science Standards.

1995: Founded the **Delaware Foundation for Science & Mathematics Education** to engage business stakeholders in science education reform.

1996: Instituted **Science Resources Center** to house, distribute, and refurbish materials.

1997: Received **\$6.2 million NSF grant** to institutionalize K-5 science reform statewide.

2002: Reported **90% of 4th graders, 74% of 6th graders met or exceeded grade-level standards** on DSTP statewide assessment.

Awards: 1997: Superstars in Education Award (DE State Chamber of Commerce)

1998: Best in Class Award (The Conference Board)

Forward Plans

Presently extending DE ESI to grades 6-8.

Seeking NSF MSP funding to address under-certified teachers (grades 6-8); to develop core curricula (grades 9-10); and to develop advanced curricula (STEM career pathway).