

NASA Explorer Schools Sample Responses to the Application Question 3

Question 3: List your district's school and staff improvement goals for science, mathematics, technology, and geography. Include a description of the improvement efforts that are currently underway and how they support meeting your state standards. . (20 points possible)

Sample response 1:

Our school improvement goals include the utilization technology as an instructional tool for student projects, integrate technology into daily lessons, and conduct ongoing training on resources from NASA. We also want to provide more real life experiences and distance learning opportunities to give students the background knowledge to process information. We want to encourage and develop higher level thinking skills via hands on inquiry-based exploration of science at all instructional levels using resources from NASA. We will further expand these activities to include and incorporate The National Science Education Standards, such as Science as Inquiry (Strand A). We envision our students engaged in scientific inquiry opportunities as well as distance learning.

Consistent with state law, the school established performance criteria, which must be achieved within 5 years. Students must meet state standards in science, math, social studies, English/language arts, and reading. However, performance in Year 1 was low and has resulted in the school being labeled as Needs Improvement. As a result, staff development goals have been established.

Topics were identified prior to the opening of school including state curriculum, constructivist teaching, multicultural education, classroom management, character education, technology, culturally responsive pedagogy, multicultural education, and leadership/team building. Through partnerships with local universities, many of these topics have been addressed during school-based workshops. Of particular need, however remains training in science, math, and technology. Despite limited resources, the school is working to improve. Staff has analyzed data and has established yearly targets.

Considering the low math scores, the principal has designated Wednesdays as Math Interdisciplinary Day where teachers focus on math applications all day. Tuesdays are Science Interdisciplinary Days. Now in its second year and with expenses and one-time investments completed, funds can now be redirected to instructional initiatives. Consequently, math manipulatives were ordered, and the textbook publisher has promised to arrange training. A small number of computers have been ordered so that each teacher will have an Internet computer.

Training on computer-supported instruction and research will accompany the technology. While these activities are a start, the administration recognizes that they are only a beginning. Science instruction and hands-on materials are neglected. While the school has sufficient textbooks, manipulatives and laboratory materials are essentially non-existent. Science instruction is focused on textbooks, discussions, projects, and library research. Manipulatives would provide needed concrete experiences and real-world connections.

The school is cognizant of the national agenda to improve performance and comply with the Federal No Child Left Behind Act. School targets in the core subjects have punctuated to staff

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the need for improvement. New math manipulatives have been ordered and will be accompanied by training. A small number of computers been ordered and will support instruction and effective communication among students, teachers, and parents. These efforts are a small beginning of what is needed to make teaching and learning effective so that student performance reaches acceptable levels.

Sample response 2:

Our improvement goals are linked to the State Department of Education's accountability system and the "No Child Left Behind" Act.

Goal #1 Increase Leadership Capacity of School Community

Parents and community members have the following opportunities for leadership: Site Council to help with decision-making and budgeting, School C's School Association and PTO exist to help them gain more understanding of school procedures and to increase communication. This goal also includes removing barriers to engage all parents to directly support student achievement.

Goal #2 Improve the Quality of Instructional Programs

Science: We use an inquiry-based approach. The standards are correlated with the National Science Education Standards and the National Science Foundation. We specifically use the Full Option Science System (FOSS) developed at the University of California, Berkeley.

Math: Investigations, a series for Kindergarten, was developed with the support of the National Science Foundation. Everyday Mathematics, in grades 1-5, is a comprehensive research based curriculum. The program uses a wide range of skills using a variety of strategies. Students are encouraged to restate or show how they arrived at conclusions or answers. CMP is used at the 6th grade level.

Technology: K-2 students begin with keyboarding and appropriate software as an introduction. They quickly move to the use of the Internet with interactive websites for classroom instruction. Digital cameras, ebooks, scanners and video production equipment are used to support classroom projects.

Geography: Students are required to understand basic directions including the use of the compass. They must learn the location, time zones, climate, major customs, industry and contributions of major cities and countries of the world.

The State Dept. of Education is currently revising social studies and science standards for all students.

Goal #3: Implement Staff Development programs to improve teachers' knowledge of best practices, effective instruction, integrating high standards, teaching diverse learners, at-risk groups and using assessment tools effectively.

The new legislation requires that a "highly qualified teacher" be in every classroom. Through study groups, seminars, field experiences, workshops and mentoring, our teachers will engage in training sessions dedicated to the improvement of instruction and implementing a standards based reform effort, leadership and community involvement.