

**NASA Explorer Schools**  
**Sample Responses to the Application Question 5**

**Question 5: How will your team's involvement with the NASA Explorer Schools program help to accomplish your school and staff improvement goals in science, technology, and mathematics? Describe the possible benefits to your school from a partnership with NASA Explorer Schools. (20 points possible)**

Sample response 1:

Our team's involvement will enable use to acquire the professional development needed to better prepare students in the area of math, science and technology. We are eager to learn innovative and proven approaches to teaching in the content areas. Our students lag behind others and this would give us the technical and expert consultation from master level scientist and mathematicians. We currently work closely with the State math department to prepare our high school students for college entrance exams and we would like to offer a stronger foundation for middle and elementary students and faculty. Currently, a study conducted by Dr. John at University concludes that our students are not prepared for high school math and science courses and they are struggling to compete with other students. We would like to build the foundation at the lower level to ensure a positive high school experience. Compared to national scores of other students, our students rank far below the median in all areas. It is not that our students cannot achieve, it is that we as teachers need help in the mastery, delivery and evaluation of the curriculum. Elementary and middle school teachers are expected to be experts in all content areas and are faced with high stakes testing at the 4th and 8th grade level. The teachers' lack of content specific areas such as math and science have an adverse effect on the students. With over 35% of teachers new to teaching or the district, we have an opportunity to set curve and raise the bar.

Our team's involvement in the NASA Explorer School program will help accomplish the goals of our improvement plan through intensified staff development opportunities, an increase in student, family, and community involvement and experiences with NASA resources, and grants to assist with the implementation of our action plan.

Teachers believe the science focus enables them to create a connection between a focused curriculum and highly intellectual classroom instruction linked to proven practices. As students become involved in our NASA action plan, they will have the opportunity to increase their knowledge of math, science and technology concepts. Our population, which is historically underserved in these content areas, will be given opportunities for learning with professionals which will create an awareness and help them envision possibilities for their future careers. They will be able to be directly involved with NASA research and connect to others around the globe. This will illustrate the need for cooperative learning while collecting and comparing data. At the same time, they are kept up-to-date with current issues around the world via teleconferencing with other parts of the world, or from communicating with astronauts, engineers, authors, pilots, etc. via email.

All members of the staff require continuing professional development. A continued relationship with the NASA will facilitate introduction and use of teaching materials and activities that are challenging, investigative, and aligned with standards. It will be essential to include training in the use of technology and Internet resources. We want to build the capacity for teleconferencing, video/web casts, distance learning, and interactive technology-based projects and productions. Additional equipment like digital video cameras, and staff training in equipment use, will allow

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students to produce iMovies, learning to organize, edit, and arrange materials appropriately for production.

Increased parent and community involvement, representing the diversity of the school community, has been identified as a need at our school. Efforts will be made to enhance participation in NASA activities and technology skill building opportunities. The unique learning opportunities that involvement in the NASA Explorer School program can provide will help our students and families interact together while learning.

Community partnerships will continue to be cultivated and enhanced with the help of NASA resources and also other professional organizations.

Involvement in the NASA Explorer School program will celebrate our K-6 science focus, help us examine our needs and explore new ways of addressing those needs and allow us to soar to new heights and together, “inspire the next generation of explorers”

#### Sample response 2:

The NASA Explorer School team is committed to enhancing instruction, specifically focusing on science, math, and technology. Each member recognizes the needs of the students and the opportunities provided by the program. As a NASA Explorer School with the resources and training provided, the team is prepared to lead a state-of-the-art instructional program in the related disciplines. The entire team, including the principal, recognizes the need for improvement and is committed to delivering real-world instructional activities, computer and Internet enhanced activities and research, and concrete experiences. The team anticipates that by participating and fully implementing the program including NASA enhanced instruction, materials, and training, the school will move toward meeting the established goals described above. Furthermore, as instruction and performance improve, staff anticipates that more students will be attracted to the school, which will exponentially increase revenues to the school. Ultimately, the increased enrollment and revenue will provide greater flexibility and options for program enhancements and staff additions. Finally, as the school flourishes, we expect parents to gain confidence in the school and faculty and begin believing in their children and their academic potential. The NASA Explorer School program will most certainly serve as a turnaround event in a needy and deserving community that has not given up but turned to a charter school to make a difference for their children.

We are confident that our team's involvement with the NASA Explorer Program will not only help us improve student learning in math, science, technology, geography, and reading, but it will also serve to instill in our students an appreciation, excitement, and love of learning that will help them become independent inquirers and decision makers.

With NASA's assistance, our plan to accomplish this is three-fold:

#1) Provide professional development opportunities for our teachers -

"Teachers must know the content they will teach, understand the nature of learning, and know how to use a range of teaching strategies." To this end, we seek NASA's help in providing our teachers with opportunities to develop and enhance the needed capabilities for effective teaching. Some of these opportunities could include: study trips for our teachers to expose them to modern technology and career options, establishing mentor-teacher relationships with NASA scientists and researchers, providing our teachers with the opportunity to attend

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math/science/geography/technology workshops and conferences, and providing job "shadowing" opportunities for our teachers.

#2) Provide our students with a wide range of equipment, materials, supplies, and other resources - Having the appropriate equipment, materials, supplies, and resources is central to achieving student success. It is critical for our school to identify these materials, obtain them, and make them accessible to teachers. Some of these materials include: a school computer lab, classroom computers, computer projection equipment, measurement tools, lab equipment, maps and globes, and print/video/software sources of information.

#3) Provide access to the "world beyond the classroom" for our students - Our students have limited knowledge of (and access to) what exists beyond our small school community. It is imperative for us to provide opportunities for them to investigate the world outside the classroom. Some of these opportunities could include: study trips to NASA, local science centers, and museums; establishing mentor-student relationships with NASA scientists and researchers, establishing internet "buddies" with NASA scientists and researchers, providing Family Science and Math Nights on a regular basis, holding regular Star Watches, and establishing an after-school science/math clubs.