

ENGAGING PARENTS AND THE COMMUNITY IN SCIENCE EDUCATION: A COLLABORATIVE APPROACH TO STUDENT SUCCESS

by:

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Science education is not only about teaching students the fundamentals of physics, chemistry, biology, and earth science, but also about fostering curiosity, critical thinking, and problem-solving skills that can benefit learners in all areas of life. While teachers play a central role in science instruction, the involvement of parents and the broader community can significantly enhance student engagement and achievement in science. Collaborative efforts that include parents, community members, and local organizations can help create a supportive, enriched learning environment, bridging the gap between school and real-world applications. This article explores strategies for engaging parents and the community in science education and the benefits of such partnerships.

Research indicates that parental involvement in education leads to improved student performance, better behavior, and increased motivation (Henderson & Mapp, 2002). When parents engage in science education, students benefit from reinforcement of classroom lessons and exposure to real-world applications of scientific concepts. Beyond academic success, engaging parents in science education can help demystify science and make it more accessible, fostering a positive attitude toward learning.

Similarly, community involvement offers additional resources and learning opportunities that extend beyond the classroom. Local businesses, museums, universities, and other organizations often provide valuable expertise, materials, and experiences that can enrich science curricula. Collaborative projects, mentoring programs, and community-led science events can provide students with a broader

perspective on how science is applied in various fields, reinforcing the relevance of their studies.

Effective communication is the cornerstone of any successful partnership between parents, schools, and communities. Teachers can use newsletters, emails, parent-teacher conferences, and school websites to keep parents informed about the science topics their children are learning. Offering regular updates on upcoming projects, field trips, or science fairs also keeps parents engaged. Additionally, hosting informational sessions where parents can learn about the curriculum and how they can support their children's learning at home can foster a greater sense of partnership.

Family science nights are a fun and interactive way to engage both parents and students in hands-on science activities. These events can be structured around experiments or demonstrations that highlight scientific concepts in a way that is easy to understand and enjoyable for all ages. Engaging parents in these activities not only helps them support their child's learning but also strengthens the bond between home and school.

Schools can enhance science education by inviting local scientists, engineers, environmentalists, or other STEM professionals to speak to students. These experts can share their experiences, discuss the practical applications of science, and inspire students to pursue careers in science, technology, engineering, and mathematics (STEM) fields. Additionally, virtual guest speakers can be invited, allowing for greater flexibility and access to a wider range of experts.

Schools can collaborate with local science-based organizations, museums, and companies to create volunteer opportunities that allow parents and community members to share their expertise. For example, a local science museum might partner with schools to lead field trips or hands-on workshops. These partnerships can expose students to real-

world science and help them make connections between academic knowledge and professional practices.

In today's digital age, online platforms can help bridge the gap between home and school. Parents can access resources such as educational videos, interactive science simulations, and discussion forums that allow them to participate in their child's learning. Additionally, teachers can use social media or apps like Seesaw to share student work, science news, and updates on class activities, inviting parents to comment, ask questions, and offer feedback.

Schools can encourage collaborative science projects that involve both students and parents. For example, students could work with their parents to design and conduct an experiment at home, or families could work together on a science fair project. These types of collaborative projects allow parents to take an active role in their child's education and help reinforce the importance of science in everyday life.

Partnering with local organizations such as universities, science centers, and businesses can create valuable opportunities for students to engage in real-world science. These partnerships could include internships, apprenticeships, or mentorship programs where students work alongside professionals in STEM fields. Community involvement in the classroom can also take the form of sponsoring field trips or providing students with access to scientific tools and equipment.

Students who see their parents and community members actively involved in their education are more likely to take ownership of their learning. Studies have shown that when students feel supported by their families and communities, their motivation and academic performance improve (Jeynes, 2007). Additionally, exposure to diverse perspectives on science can spark curiosity and drive students to explore STEM fields further.

One of the most valuable aspects of parent and community involvement in science education is the opportunity to connect classroom learning to the real world. Whether through field trips, guest speakers, or community-based projects, students gain a deeper understanding of how scientific concepts apply to everyday life and future careers. These experiences can help students see the relevance of science, making it more engaging and meaningful.

By involving parents and community members in science education, schools can create a culture of lifelong learning. When parents take an active role in their child's education, they demonstrate the value of continuous learning and intellectual curiosity. This attitude can extend beyond childhood education, influencing parents' and students' lifelong engagement with science.

Engaging parents and the community in science education is a powerful way to enhance student learning, foster a love for science, and bridge the gap between school and real-world applications. By creating collaborative partnerships that include open communication, family events, community involvement, and access to real-world resources, schools can build a rich, supportive environment for science education. The benefits of such engagement are clear: increased motivation, improved academic outcomes, and a deeper understanding of how science shapes our world.

References:

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