After School Science Fact Sheet

Of the fastest growing occupations, more than half will require substantial math or science preparation.[1]

Scientists do not all work in labs, and not all engineers build bridges. Science and math are needed in diverse careers—from doctors, nurses, and lab technicians to architects, designers, and construction workers. If children think science and math are not for them, they could find themselves left out of many, if not most, careers.

Being interested in science may be more important than being good at science.

Interest in science among 8th graders has been shown to be a better indicator than test scores for predicting future career choices.[2] Although grades and test scores are important, children must also make the connection between the material they learn and their futures.

Schools alone cannot create future scientists and engineers.

Science in school is necessary but not enough to engage the interests of every student. Children need time and space to discover on their own. Afterschool programs are an ideal complement to foster this exploration. Informal environments beyond the school day promote flexibility that lets children engage in science in the same way they play sports or create art. Playing with bubbles, blocks, robots and plants will not only help students when it comes time to learn physics, chemistry and biology—but it will also help them maintain long-term interest in science. High-quality afterschool experiences are fun and engaging, and they spark an interest that translates to future classroom and career success.

How can parents support science learning outside of school?

- Ask your child about their ideas and how they think things work; encourage your child to ask questions
- Take your child to a park or museum; encourage them to "play" with science
- Encourage your child's afterschool program or summer camp to include science
- Volunteer to build relationships between afterschool programs and local science resources, such as hands-on science centers, museums, and universities.
- Educate public officials about the powerful potential of afterschool science learning

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[1] U.S. Department of Labor, Bureau of Labor Statistics. 2000. *Occupational Outlook Handbook, 2002-03 Edition.* Washington, DC: GPO. Table 3.

[2] Tai et al. *Career Choice: Enhanced: Planning Early for Careers in Science*. Science 26 May 2006: 1143-1144 DOI: 10.1126/science.1128690

How can afterschool programs include science?

- **Commit to science as part of regular programming.** Program staff can and should teach science. There is a lot of "fun" stuff on the internet to help. When it comes time to teach kids science, evidence shows that sequential and focused programs are most effective. The important thing: Focus on kids' questions and ideas rather than specific facts.
- **Find a partner.** Your local science museum is probably eager to help. Also, many youth-serving organizations now have science components, such as *4-H* Science, Engineering and Technology*, Girls Incorporated* Operation SMART and *Girl Scouts* Design and Discovery.
- **Get help.** Seek training opportunities at national and regional conferences. There are also resources available online specifically to help afterschool organizations with science programming. The Coalition for Science After School (www.afterschoolscience.org) provides a starting point for your search.
- **Contact the Coalition.** If you need support in your efforts to improve the quality and quantity of afterschool STEM education for all, contact the Coalition for Science After School: **info@afterschoolscience.org**.