Resources to host your event:

- 5 engineering challenges
- A planning checklist
- Tips for working with kids and volunteers

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Dear Engineers and Educators,

Intel welcomes you to the new reality-based PBS series, *Design Squad™*! Our sponsorship is the newest component of our Intel® Education Initiative, committed to 21st-century teaching and learning through the effective use of technology and excellence in mathematics, science, and engineering.

*Design Squad*’s substantive focus on math, science, and the design process sparks children’s curiosity about the world and hones their problem-solving skills. By showcasing engaging, real-life applications of engineering, we believe that *Design Squad* will increase students’ interest in the subject. Engineering will be presented as the creative career we know it to be, enabling young viewers and participants to turn science into reality.

We encourage you to use the *Design Squad* Event Guide—in concert with the television series and the Web-based outreach components—to help children investigate and solve challenging problems. The goal is to pique the next generation’s interest in engineering as a career, and in science and mathematics as the fascinating means to intriguing ends. The ripple effect you create will change lives.

Sincerely,

Brenda Musilli
President, Intel Foundation
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### INTRODUCING... DESIGN SQUAD!

Getting kids excited about engineering is easy when you have the right ingredients, and *Design Squad* definitely does. *Design Squad* is more than a television show—it’s engineers, families, and youth-serving organizations working together to use the show, the educational materials, and the Web site to connect kids to engineering. With the help of real-life engineers (that’s you), *Design Squad* can reach kids everywhere through events and workshops that offer hands-on engineering challenges inspired by the show. Just read on and find out how you can get involved. We’ll help you every step of the way.

*Design Squad*, a new PBS television show, gets real kids thinking like real engineers.
Besides being highly entertaining television, *Design Squad* shows kids that engineering is fun, creative, and exciting. The show presents engineering concepts and methods in an accessible way that encourages kids to be innovative and think like engineers.

**DESIGN SQUAD: THE SERIES**

*Design Squad* features two teams of high school kids who use their problem-solving skills to design, construct, and test engineering projects, such as a machine that automatically makes pancakes. In the show, each contestant earns points for successfully solving engineering challenges. After completing 13 challenges, the contestant with the most points wins a college scholarship provided by the Intel Foundation.

**DESIGN SQUAD: THE WEB SITE**

The *Design Squad* Web site offers behind-the-scenes information, games, descriptions of the show’s engineering challenges and solutions, plus an e-Zine that highlights the role of engineers in society. The Web site also offers downloadable resources for your events such as video clips and printable signs. Visit the *Design Squad* Web site at pbskidsgo.org/designsquad/engineers.

**DESIGN SQUAD: THE OUTREACH CAMPAIGN**

Through events, trainings, and educational activity guides, the *Design Squad* outreach campaign goes beyond the television show into the community. Partnering with engineers and informal educators across the nation, we deliver activities to places where kids, ages 9–13, can be found: in afterschool programs, schools, museums, even your local mall.
Design Squad is building a community committed to fostering a positive image of engineering. When this guide was printed, Design Squad had partnered with:

**Engineering Organizations**
- American Society of Civil Engineers
- American Society of Mechanical Engineers
- IEEE
- Intel
- National Academy of Engineering
- National Engineers Week Foundation
- National Council of Examiners for Engineering and Surveying
- Society of Manufacturing Engineers
- Society of Women Engineers
- Tyco Electronics

**Informal Education Organizations**
- 4–H
- Boys & Girls Clubs of America
- Girl Scouts of the USA
- Museum of Science, Boston
- National Afterschool Association
- Tufts University
- YMCA of the USA

**DON’T FORGET**
To display the design process sign at your event so kids will learn all about it. Download it at pbskidsgo.org/designsquad/engineers.

**THE DESIGN PROCESS**

Every aspect of Design Squad—the television show, the Web site, and the outreach campaign—reinforces the design process, which is central to engineering.

Use the design process to encourage kids to expand their thinking, become more innovative, and learn from their mistakes. Since you can approach almost any challenge using the steps of the design process, share this with the kids at your events and workshops.

**JOIN US!**
For a current list of partners, and to join this growing community, visit the Design Squad Web site at pbskidsgo.org/designsquad/engineers.
Want to share your own excitement about engineering to inspire a new generation of engineers? Here’s how you can use Design Squad™ in your community.

**STAY CONNECTED!**

Sign up for the Design Squad e-newsletter for updates on the show, Web site, nationwide events and trainings, and resources. Send your name, organization, and e-mail address to designsquad_feedback@wgbh.org.

**ATTEND A DESIGN SQUAD TRAINING SESSION**

We’re hosting a series of nationwide trainings for engineers and informal educators on how to connect kids to engineering. Whether you’re inspired or intimidated by the idea of gathering a crowd together to try out engineering challenges, a training will help you understand how to organize an event or workshop, find volunteers, work directly with kids, and train others. To learn more, contact Design Squad’s Outreach Coordinator at designsquad_feedback@wgbh.org.

**HOST AN EVENT**

Spark kids’ interest and confidence in engineering with a lively, fun-filled event. Whether your event is for lots of kids or just a few, this guide provides you with tips, reproducible handouts, and an evaluation form that will help you plan and organize your event from beginning to end. You’ll find additional resources such as signs, the Design Squad Educator’s Guide, and Challenge Sheets in English and Spanish on the Design Squad Web site at pbskids.org/designsquad/engineers.

**BE A VOLUNTEER**

Don’t have time to plan your own event? Volunteer at one of our regional Design Squad events. Contact Design Squad’s Outreach Coordinator at designsquad_feedback@wgbh.org to learn more.

Meet the hosts of Design Squad. Nate Ball is an MIT mechanical engineer grad student, entrepreneur, and pole vaulter. Deanne Bell is a mechanical engineer who travels the globe when not designing aerospace gadgets. Like them, you can have fun hosting events with engineering challenges for kids.
**VISIT SCHOOLS OR AFTERSCHOOL PROGRAMS**

Bring engineering to small groups of kids by visiting classrooms or afterschool programs. Try doing the challenges in this guide, tell kids how you became interested in engineering, answer their questions, and encourage them to try more engineering challenges in the future. You can use the Challenge Sheets in this guide or for even more ideas, check out the Design Squad Educator’s Guide, available at pbskidsgo.org/designsquad/engineers.

**SPREAD THE WORD**

Help us get more people involved in Design Squad.

- **Publish** an article about your successful Design Squad event or workshop in your organization’s print and electronic publications. It will bring recognition to your program and may inspire others to try an event or workshop. For additional press materials, images, and other media opportunities, contact Design Squad’s National Publicist at design_squad@wgbh.org.

- **Link** your Web site to the Design Squad Web site at pbskidsgo.org/designsquad/engineers.

- **Share** how rewarding it is to get kids excited about engineering. Motivate your colleagues to get involved by telling stories about working with the kids and about the fun of doing the challenges with them.

**DESIGN SQUAD EDUCATOR’S GUIDE**

A great thing about 9- to 13-year-olds is their curiosity and interest in doing hands-on projects. The Design Squad Educator’s Guide, geared to afterschool programs, provides four multi-session engineering challenges that you can use with fifth to eighth graders over a 10-week period. Each challenge takes two to three meetings to complete and includes leader notes, science and engineering background, and group management strategies. Download the Design Squad Educator’s Guide at pbskidsgo.org/designsquad/engineers (available January 2007).