



Volunteer Event Tips

Large-scale engineering events are a great way for volunteers to reach lots of kids and for kids to try lots of activities. However, your one-to-one time with individual kids will be limited as a result. **You may have only 5 to 10 minutes to make an impression on a child.** Make this time count by following these tips. Here's how you can make a difference:

Introducing the activity:

Try every challenge yourself before doing it with kids. This will help you respond to kids' questions and anticipate where they might need help.

Be friendly and patient. People of all ages may feel shy about joining in the challenge. Smile and encourage them to take part.

Enlist the help of the adult who came with the children. Ask them to read instructions and help younger kids with cutting, taping, and folding.

Adapt instructions to fit your audience. Younger children may need to have you show them how to do the challenge step-by-step.

While kids are working:

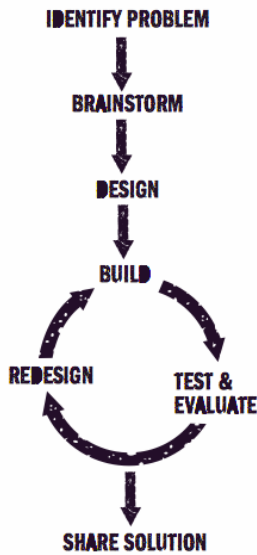
Let kids explore freely as they investigate. They will come up with lots of interesting solutions and learn from their mistakes.

Talk to the kids about the engineering, science, or math concept behind the activity in kid-friendly language after they have had the opportunity to explore it themselves.

Talk to the kids about what you do, what projects you are working on, and the people you work with—all in kid-friendly language. Rather than talking about the process of becoming an engineer, focus on the rewards of being an engineer. Ask kids what they like to do and see if you can link their career interests to engineering.

Visit www.DiscoverE.org for activities, giveaways, and trainings!

THE DESIGN PROCESS



While kids are working (continued):

Point out to kids which part of the design process they are doing as they progress through the engineering challenges, particularly as they test their designs.

Testing/retesting is not only crucial to the design process, but it's a great opportunity to take the pressure off kids if they don't "get it right" the first time.

Design Process image provided by Design Squad Nation: pbskids.org/designsquad

Ask kids questions to guide them (see examples below).

Maximize your time:

Keep in mind the **5 to 10 minute time constraint as you interact with kids**. It might be a good idea to have three main points you plan to make each time so that each kid you meet is likely to have a positive hands-on engineering experience.

1. Share at least one way they are following the **design process**.
2. Provide a simple explanation of the **science or math** behind the activity.
3. Talk about **your job** as an engineer and/or how this activity links to the **real world**.

Questions to Guide Kids:

To help a child stay focused on the activity, ask:

"What do you need to do now?"

"How does your idea work?"

To help a child answer his/her own question, ask:

"Interesting question! How can we find out?"

"Why do you think this happened?"

To help a child problem-solve or try another approach, ask:

"Is there another way to look at this?"

"Why do you think this is happening?"

To help a child make real-world connections, ask:

"What does this remind you of?"

"What are other examples where this happens?"

To help a child improve his/her design, ask:

"Could you change something to make it work better?"

"What else would you like to try?"

"Do you have any questions?"