

Mix it Up!

Guiding Middle School Girls to Success



THROUGH YOUR EYES

Activity Objective: Girls are introduced to the basic concepts of product design.

Toward Leadership Outcomes:

Through this activity, girls will:

- ✓ Become resourceful problem solvers—Girls can use their knowledge and skills to set up and implement creative and effective “action plans,” locate tools and resources they need, and know when, where, and how to enlist help from others. **(Take Action)**

Experience Overview:

2 minutes	<i>Introduction (Talking Points)</i>
15-20 minutes	<i>The Good Life</i>
30 minutes	<i>Through Your Eyes</i>
10 minutes	<i>Reflection/Discussion</i>

Supplies Needed:

- ✓ Paper (or journals) and pens or pencils (enough for each girl)
- ✓ Large pad (or chalkboard)

Prepare Ahead:

- ✓ Make copies of the “Do It Yourself” handout.
- ✓ Read over the entire activity before meeting with girls.

SCIENCE & TECH ACTIVITY 3

TAKE ACTION:

- » Become resourceful problem solvers

Step-by-Step Instructions:

» Introduction (Talking Points) (2 minutes)

- ✓ Say something like this: “We have been thinking and talking about scientists—what types of qualities a scientist has and what kinds of skills she or he applies to different jobs. Today we are going to think about applying some scientific concepts to design. We will begin to think more like an engineer and consider how we can make our own lives, and the lives of others, better through design.”

» The Good Life (15-20 minutes)

- ✓ Distribute paper (or journals) and pens or pencils.
- ✓ Say something like this: “This first activity requires some visualization—imagine yourself moving through your day. We will each create a ‘Making It Better’ list— all the products we use in a day that make our lives easier or better. For example, start with when you first wake up. What products have already been designed that you use on a daily basis, such as an alarm clock, toothbrush, or hair dryer?”
- ✓ Next to each product on their lists, have girls write what “need” that product serves (For example, next to “tooth brush” a girl might write “better oral hygiene.”)
- ✓ Say something like this: “Now we will create a ‘Making the World Better’ list—all the products or inventions we can think of that have made the world a better place for ourselves and everyone.” Girls can create this list in their journals, or you can ask for a volunteer to create a list on a large piece of paper or chalkboard.

GOT MORE TIME?

Introduce girls to design research. For example, how were Post-Its, Velcro, or bubble gum invented? Make it fun. Encourage girls to think of other products relevant to their own lives, or of some off-the-wall or wacky things, and to find out the stories behind their creation.

» Through Your Eyes (30 minutes)

- ✓ Say something like this: “How many times have you growled, ‘I wish someone would design a product that would help me do this faster (or better or easier)?’ Your own idea might be the solution to your (or someone else’s) biggest problem. And it does not have to be a new idea, because you can always improve on what already exists. Today we will think about what you might invent or design. And later, we will have a chance to explore some basic design and engineering skills and to think about how we could actually make the things we will be talking about today.”
- ✓ Distribute a copy of the “Do It Yourself” handout to each girl. Tell girls they will have about five minutes to fill in this handout.
- ✓ Divide the girls into small groups. Using the girls’ ideas from their handouts, have them brainstorm products or services that solve these problems. Each group must come up with at least three ideas. (Girls can record their ideas on their handouts.) Tell them they have about 20 minutes for this activity.
- ✓ Each group shares one of their ideas with the other groups.

» Reflection/Discussion (10 minutes)

Ask girls:

- ✓ “Can you think of any jobs that require good designing skills?”
- ✓ “What is an engineer? What kinds of things does an engineer do?”
- ✓ Say something like this: “Think of yourself and how you are designed! Some of the ways you are made you cannot necessarily change—like your skin color or maybe how you sound when you talk or laugh. Take a moment and think about your best quality—the thing you like best about how you are designed.” Ask each girl to share one thing aloud with the group.
- ✓ Say something like this: “There are other things that you can change about yourself.” Give girls the journal prompt: “One thing I would do or change to improve myself would be...” If time allows, ask each girl to share one thing aloud with the group.