



MACGILLIVRAY FREEMAN'S

# DREAM BIG

## GIRLS NIGHT OUT PLANNING GUIDE

An important goal for the entire *Dream Big* project is to engage young people in engineering and to help reframe their understanding of engineering and how it impacts their future, whether they choose this career path or another. Girls, minorities, and underserved kids in particular are important to reach with this project, especially because they are underrepresented in engineering fields. The *Dream Big* team has designed this event to reach girls of all backgrounds.

### GIRL POWER!

The film *Dream Big* introduces audiences to female engineers who are powerful role models. You can show the girls in your community what careers in engineering look like by hosting a *Girls Night Out*. Following are listed some guidelines and ideas for creating a fun event that's sure to spark a girl's imagination. Feel free to adapt this program for other target audiences. With help from museum staff who have already conducted this event, a timeline has also been created to help you plan.

### NIGHT OR DAY—MAKE IT WORK FOR YOU AND YOUR GUESTS

Though *Girls Night Out* was conceived as a private event in the evening, it might work best in your community as an afternoon or after-school event or something special for a Saturday morning. You could also combine this event with a public exhibition of the film.

The following Sample Agenda should work for a day or evening event that lasts approximately 2.5 or more hours, as you'll also have to allow for transition time to each location in your institution.

## **SAMPLE AGENDA**

### **Welcome in Theatre Lobby (5 minutes)**

### **Dream Big Film Screening (1 hour, 10 minutes)**

Women Engineers Introduce Film (10m)

View Film (45m)

Q&A with Women Engineers in Theatre (15m)

### **Reception with Light Refreshments (20–30 minutes)**

Meet Women Engineers and Students Attending

Instructions for Next Activity

### **Hands-On Activities (30–40 minutes) \*\*\*\***

Girls and Mentors Share Challenges and Conversation about Engineering

### **Closing Activity / Remarks / Event Survey (15 minutes)**

\*\*\*\* An alternate program idea is to have local engineers visit the girls at their school or club meetings to conduct the hands-on activities instead of at the film event. Then, conduct a “speed-dating” style social during the Reception/Refreshments time to allow girls to meet and ask questions of lots of engineering students and professionals.

## **BUDGET**

*Girls Night Out* is designed as a low-cost event. The only expenses may be for refreshments, museum planning and staffing, and tickets to see the film. As you plan, remember:

- Engineering societies will volunteer to help plan the events.
- No fees should be needed for speakers or for travel. Participating engineers should all volunteer and be local.

## **WHO TO INVITE—GIRLS!**

- For maximum impact, your target should be high school students who have not finalized their college and career decisions. These girls are getting serious about their future careers. However the suggested activities and event outline would be appropriate for middle school girls as well—a critical time in keeping girls on the STEM pathway.
- Inviting girls who have already shown interest in science and engineering for their careers is a slam dunk; however, girls who have aims in fashion, music, or design could be captivated by the idea of engineering once they learn more about it.

- If possible, the girls should attend with a significant woman in their lives—moms, aunts, someone personal to them so they can help the girls maintain enthusiasm and interest in engineering beyond the event. This works best for an evening or weekend event and may not be possible for a daytime activity. These adults are important career influencers, and often have outdated or stereotypical views of engineering. See Notes about Parents and Chaperones below as well as ideas for activities for the parents and chaperones in the TIPS FOR MUSEUM HOSTS Section.
- Consider working with organizations like Girls, Inc., Girl Scouts, or National Girls Collaborative Project, to reach underserved girls in your community.
- Minimally, host 50 girls. Maximum 100.

### Notes about Parents and Chaperones

- Whether you are conducting a day or an evening event for girls, and whether you have several parents attending or just a few chaperones, give them something to do or learn. Not all chaperones will feel comfortable participating in the Hands-On Activities portion of the program. Consider providing a separate discussion for parents during this time, providing opportunities for parents to learn about engineering careers or how to prepare their daughters for college. See the ideas provided in the TIPS FOR MUSEUMS Section.
- Some parents may not be able to attend unless they can bring other family members. You may need to plan for this and include siblings in the film screening and provide other activities for them during your event.

## WHO TO INVITE—WOMEN ENGINEERS!

- If you need ideas for how to connect with engineers, contact Gwen Hearn at DiscoverE ([Gwen@DiscoverE.org](mailto:Gwen@DiscoverE.org)), who can also connect you to partner organizations who could recommend women engineers in your community.
- Start early. Call often. Engineers are busy, so it may require some persistence and significant lead time to get the attention you need to recruit female engineers for your event.
- Find the gems in your community, women who are passionate about their careers and who are skilled at sharing that enthusiasm with others. Share the event's agenda in advance and prepare the engineers for their role.
- In addition to women already working in engineering, invite university engineering students. They'll be terrific role models. Their age can bridge the gap between the women engineers and the girls, and the experience at this event can reinforce their enthusiasm for their career choice. (See Recruiting Engineering Students section).
- ASCE (American Society of Civil Engineers) and SWE (Society of Women Engineers) are especially interested in this program and may be eager to work with you.
- If you already know engineers in *Dream Big* partner organizations like SWE or ASCE, contact them directly.
- Create an assembly of women engineers from a variety of disciplines and ethnic backgrounds for the event. Their experiences should be as diverse as possible to highlight the wide range of engineering careers.
- Invite at least one engineer mentor for every four to five girls attending. If you have 50 girls, invite 10 to 15 engineers/engineering students.

## Recruiting Engineering Students

- If you need ideas for how to connect with engineering students in your community, contact Gwen Hearn at DiscoverE ([Gwen@discovere.org](mailto:Gwen@discovere.org)).
- Some students may already be members of *Dream Big* partner organizations like ASCE or SWE, and have experience at engineering events.
- Start early. Call often. University students are busy, as are their professors, so it may require some persistence and significant lead time to get the attention you need to recruit female engineering students for your event.
- Be specific about your needs as it relates to the personality of the engineering student. Because you want them to interact and share experiences with the younger girls, it's important that you seek out engineering students who have leadership qualities and/or are talkative and energetic.
- Help your engineering student recruits understand their role and what you expect of them at the event. Share the event's agenda in advance and outline their role for each portion of the program. (Give them something to do!)
- Connect engineering students with websites that can help them “train” to be a role model, including: [discovere.org/online-training](https://discovere.org/online-training) or [techbridgegirls.org/rolemodelsmatter/toolkit/](https://techbridgegirls.org/rolemodelsmatter/toolkit/)

## TIPS FOR SHOWING THE FILM

- Show the film first as it sets the tone, inspires conversation about what engineering is and does, and opens pathways for connecting with the women engineers present.
- To introduce the film, choose a woman engineer who is most like the women engineers in *Dream Big*. Below are possible talking points for that introduction:
  - My name is \_\_\_\_ and I'm an engineer.
  - I'm excited to introduce the film to you tonight.
  - You'll see women in the film that I admire because...
  - My story is like their story because...
  - I was inspired to become an engineer when or because...
  - Today I work (building, designing, etc.)...
  - Enjoy the film and we'll have a short discussion after.
- Conduct a 10 to 15 minute Q&A after the film with one to three of the engineers present.

## TIPS FOR THE MUSEUM HOSTS

### Signage

- Use *Dream Big* signage on your tables and at the event. Templates are provided in the Media Assets section.
- Use *Dream Big* logos, photos, and artwork to enhance your event and promotional efforts. These materials are also available in the Media Assets section.
- Identify the women engineers and engineering students with *Dream Big* T-shirts or buttons. T-shirts can be ordered at [asce.org/templates/gm-product-detail.aspx?id=23697](https://asce.org/templates/gm-product-detail.aspx?id=23697). Provide nametags for the women engineers and engineering students.

## Refreshments

- Consider low-cost alternatives or an event sponsor for the refreshments.
- To save time in your agenda, perhaps provide popcorn or other movie-like snacks during the film.

## Create a Swag Bag for Girl Attendees to Include:

- *Dream Big* promo items, such as those provided by MacGillivray Freeman for the film, can be ordered in larger quantities at a low cost. The promo flyer can be found in the [Girls Night Out Resources Page](#).
- Download, print, and include a promo sheet for SWENext, an organization for girls and women engineers. The promo sheet is located in the [Girls Night Out Resources Page](#).
- Consider printing the “Engineer Your Life Test Drive,” from the [Girls Night Out Resources Page](#), to give girls ideas how to explore if engineering is the right career choice for them.
- Consider printing a poster, also from SWE, called “Be That Engineer.” The poster is in the [Girls Night Out Resources Page](#).
- Promotions for local resources or engineering events or competitions
  - Do you have a robotics group in your community?
  - Summer camps?
  - Do the local universities conduct STEM programs for youth?
  - Do you have a DiscoverE Future City Competition in your city?

Find out in advance if women engineers want to be available to event participants for future correspondence or support. Include contact information in the Swag Bag.

## Activities

- Include one or more *Dream Big* activities in your schedule. Pre-assembling materials, partially building some components, and making prototypes to serve as idea starters are all ways to shorten the time of activities.

Activities designed to take less than 30 minutes include:

- *Hidden Alarm*
- *Marble Run*
- *Puff Mobiles*

Consider adapting the following to keep the Activity to 30 minutes length, as you want to keep the event moving and the girls’ interest up.

- *Design a Shoe*
  - *Creepy Putty*
  - *Make Your Own Glue*
  - *Dance Pad Mania*
- Conduct the activities at a table where 2 to 3 girls with their chaperones are paired with at least 1 engineer to facilitate maximum engagement between engineers and the girls.
  - Consider a “speed dating” activity where engineers move from table to table and students and chaperones ask them questions about what they do and what they like about engineering. Provide the questions to the tables to get the conversations started. Make them fun! (Note that this could be part of your reception time, too.)
    - Possible questions for this activity: What inspired you to become an engineer? What do you work on? What do you do for fun? Where did you go to college and/ or how many years did you go to college?

## Parents or Chaperones

- While girls are engaged in the hands-on activities, perhaps create a panel discussion of engineers and/or school counselors to help parents learn about engineering careers and how to prepare their daughters for college, including scholarship possibilities.
- If you have a large number of parents for whom English is not their first language, consider having an interpreter on hand.
- If necessary, provide activities for young children who may attend with their parent.
- Connect parents to clubs or programs in their area.
- Provide a handout from Girls Inc to help parents talk to girls about STEM. This document is located in the [Girls Night Out Resources Page](#).
- Use the Parent Handout in the [Girls Night Out Resources Page](#) to encourage parents to find a local club or program, learn about Society of Women Engineers (SWE), and discover tips for talking to kids about STEM careers. *Note: Consider putting this in each girl's Swag Bag in case their parents did not attend.*

## Follow-up

- Please use the provided survey for participants at the close of the event. **(This is required if you have received a small grant from MacGillivray Freeman Films Educational Foundation to help you conduct this event.)**
- Get contact information from the parents or adult chaperones so you can stay in touch.

## TIPS FOR THE ENGINEERS

- Review DiscoverE's Five Powerful Messages When Talking to Girls About Engineering ([discovere.org/our-programs/girl-day/powerful-messages](http://discovere.org/our-programs/girl-day/powerful-messages)). DiscoverE also has brief online materials that identify how to lead kids through a successful engineering experience and how to effectively talk to kids about engineering ([discovere.org/volunteers-educators](http://discovere.org/volunteers-educators)).
- Also check out the training toolkit at Techbridge ([techbridgegirls.org/rolemodelsmatter/toolkit/](http://techbridgegirls.org/rolemodelsmatter/toolkit/)) for tips on breaking the ice, the art of questioning, giving girls feedback, and more.
- Your role as a mentor at this event is for girls to be able to identify with you, learn from, and have fun with you.
- Communicate what inspired you to become an engineer, how you did it, and what you like the best about it. Avoid sharing information that reinforces stereotypes—focus on what you love about engineering!
- Have fun with the activities at this event, too. The film and this event celebrates women in engineering. You deserve it!
- If you enjoyed this experience, consider signing up for DiscoverE's Girl Day as a role model ([discovere.org/our-programs/girl-day](http://discovere.org/our-programs/girl-day)).

The [Girls Night Out Resources Page](#) can be found by clicking on the link at the bottom of the web page under “A Few More Details.”

