

### **USE INCLUSIVE LANGUAGE**

Watch the pronouns you use. When speaking about a scientist, do you say “he” or “his”? Make pronouns gender neutral whenever possible.

### **FEATURE FEMALE ROLE MODELS**

Feature images and stories about women in the information you share while facilitating the activity. Showcase real female nanoscientists. Learning about women role models is inspiring for girls, and it’s also important for boys and parents to see female scientists. Have female facilitators when possible—seeing women leading the activity can help empower girls to participate.

### **MAKE IT SOCIAL**

Encourage sharing and discussion of the activity with friends or family. Set up activities so that more than one person can participate at a time. Consider assigning roles so that every visitor has an active role to play.

### **ENGAGE THE SENSES**

Promote a multisensory experience with a variety of colors, sounds, smells, and textures. Take time to make sure the activity table remains aesthetically pleasing and inviting.

### **TELL A STORY**

Engage participants during the activity by telling a story they can relate to. This could be the story of the person who discovered the technology in the activity or a story of someone who might use this technology. Encourage visitors to tell their own stories.

### **HIGHLIGHT ALTRUISM**

Feature ways the nanotechnology in the activity has been used to help people, or ways that it may one day be used to help others. Encourage visitors to brainstorm ways they think the technology might be useful, or even express concern about ways it could do harm.

### **MAKE IT PERSONAL**

Find common connections between the activity and the everyday lives of girls. Ask girls where they would see or experience a similar phenomenon. Encourage them to tell you about a time they saw something similar, or where they might imagine using a related product in the future.

### **ENCOURAGE CREATIVITY**

Find ways to allow for creative self-expression in the activity. Invite girls to draw, paint, make, or act!

### **MAKE SURE THERE ARE MANY “RIGHT” ANSWERS**

Encourage open-ended investigations by finding ways for girls to explore, discover, and try ideas without any one single “right” answer.

## Exploring Materials—Thin Films

### ENCOURAGE CREATIVITY

- Participants may choose to **create** a greeting card, bookmark, or similar item out of the black paper. Encourage visitors to draw a design or write a special message and to cut their paper into a shape of their choosing.

**Plan ahead:** To promote creativity provide larger pieces of black paper. In addition to the activity materials, you'll also need to provide scissors for this extension. We suggest using Bristol paper as the dye in the paper doesn't bleed when it gets wet the way regular black construction paper does.

### MAKE IT PERSONAL

- Encourage participants to **brainstorm** places they have seen iridescent colors before. Some examples are soap bubble, an oil slick on water, and even butterfly wings; all of which are examples of thin films.

### HIGHLIGHT ALTRUISM

- **Oil spills** are a big problem for ocean life and the health of our planet. You saw how quickly one drop of nail polish could spread and create a nanofilm on the surface of water. How did the size and shape of the droplet change when it came in contact with the water's surface? Can you measure it? Imagine you were tasked with cleaning up an oil spill in the ocean. How would you use the iridescent properties of the oil film to detect where the affected areas were located? What tool would you invent to carefully remove nanofilms from the water's surface?

### MAKE ACTIVITIES OPEN-ENDED WITH NO "RIGHT" ANSWERS

- Let visitors **experiment** with different colors of nail polish to see how the thin film changes.

**Plan ahead:** You'll have to provide various colors of nail polish for this extension.