Activity 1

Robot Body Language

CAN YOU CONVEY AN EMOTION WHILE YOUR FACE IS HIDDEN?

These days social robots designed to interact with people are sold in stores as pets, house cleaners, and even healthcare assistants! To make these robots seem more humanlike, designers give them personalities using sounds, digital displays, and gestures.

You'll Need (per small group):

- paper and pencil
- large paper grocery bag
- optional: digital camera or video recorder

1 hour

Here's how:

1. **Introduce the challenge.** Ask girls to think of ways they can tell when someone is happy (tone of voice, facial expressions, body language). Then ask them how a robot might convey emotion. Introduce the **SciGirls Challenge:** Find ways to express emotions and feelings using only body movements.

2. **Brainstorm.** Divide girls into small groups [1] and ask them to brainstorm different emotions and feelings (happiness, impatience, dejection, concern, friendliness) and the body movements that could convey them [3] (shoulder shrugging, head nodding, arm crossing, finger pointing, foot tapping). Remind girls that facial expressions and/or voice should not be included.

Watch SciGirls brainstorm personalities and movements for their robots on the *SciGirls Get Tech* DVD. (Select Robots to the Rescue!: Brainstorm & Prototype.)

3. **Test.** Have one girl from each group cover her face with a large paper bag and act out the movements for one emotion from their list to see if the others can determine which is being conveyed. (Alternatively, have another girl take pictures or shoot video of the actions and then present them to the other teams.)

POINTER: Some girls may be shy about acting in front of the group. Encourage the timid to watch first before taking the stage, and have all girls practice being supportive. [5]

4. **Discuss.** Ask girls to talk about which emotions were easiest to convey. Most difficult? Which might be expressed more easily with tone of voice or facial expressions? Why?

Watch Robin and the girls test rescue robots in Disaster City on the *SciGirls Get Tech* DVD. (Select Robots to the Rescue!: Mentor Moment). [7]

Mentor Moment Dr. Robin Murphy is a computer scientist and engineer who designs rescue robots to help victims of disasters. She thinks about not only how the robot functions, but also its personality. Robin is a professor at Texas A&M University and works with teams of other scientists, including psychologists, to design the most "friendly" robots possible.

[1-7] See **SciGirls Seven** strategies on page 3.