



SciGirls



Discover the fun of science with your entire family!

Robot Body Language

These days social robots designed to interact with people are sold in stores as pets, housecleaners, and even healthcare assistants! To make these robots seem more humanlike, designers give them personalities using sounds, digital displays, and gestures. Can you **communicate an emotion** without using your face or voice? Find out with your family in this activity!

Here's How:

1. Think of ways you can tell when someone is happy (i.e., using tone of voice, facial expressions, body language). Then consider how a robot that lacks facial expressions might convey emotion. Your challenge is to find ways to express your feelings using only body movements!
2. Brainstorm different emotions and feelings (e.g., happiness, impatience, concern, friendliness). Then list body movements that could convey them (e.g., shoulder shrugging, head nodding, arm crossing, finger pointing, foot tapping). Remember: facial expressions and/or voice should not be included!



You'll Need:

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

3. Have each family member take turns covering their face with a large paper bag and acting out the movements for one emotion to see if anyone can guess which emotion is being expressed. (Or, take pictures or shoot video of the actions, and then look at them together to try and guess the emotion.)
4. Talk about which emotions were easiest to express. Most difficult? Which might be expressed more easily with tone of voice or facial expressions? Why?



Mentor Moment

As a kid, ground-breaking robot designer **Cynthia Breazeal** was inspired by the movie *Star Wars*. The first sociable robot she built at MIT, where she's now a professor, was called Kismet. Cynthia remembers that Kismet had a really expressive face. She's now working on Leonardo, who's all about character and personality. While Cynthia's work is with robots, her goals are much larger. "Technology is something you create to improve the human condition, to contribute to a better quality of life for everyone," she says.

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