Scientist Drawings and Gender Stereotypes

Table Talk: Family Conversations about Current Events

Topic Summary

In 1983, a social scientist named David Chambers published a research study on children's drawings. The study gathered information from the late 1960s and 1970s in which teachers asked 5,000 children (in three different countries) to "draw a scientist." One pattern appeared strongly: almost all of the scientist drawings depicted men.
Through the study, Chambers was able to show that children begin to develop assumptions and generalizations about scientists from a very early age. Of the 5,000 students in the survey—which included about half boys and half girls—only 28 students in total drew women as scientists. This represents less than 1% of all the students in the study. [Note: To explain this to younger children or visual learners, it may be helpful to create a visual of 1% by showing 99 objects of one color and one object of a different color, or create a pie graph.]

Recently, researchers looked at seventy-eight more recent “draw-a-scientist” studies (from 1985-2016) that included 20,000 children in total. Of these, 28% (about 3 in 10) of students drew women as scientists. Younger children, girls in particular, were the most likely to sketch female scientists. This means that over the past 35+ years, the way children draw scientists in these studies has changed a lot. In the 1960s and 1970s, very few children drew female scientists but starting in 1985 up until recently, 3 in 10 children drew female scientists. The researchers also found a change in children at around age 8. Before that age, most girls drew women scientists and most boys drew men scientists. But as students grew older, they all began to draw more men than women.

Age
7 and up

Questions to Start the Conversation

- What do you think about the Draw-a-Scientist tests?
- Why do you think children drew more men than women as scientists?
- What surprises you about this and what doesn’t surprise you?
- Why do you think the results changed over time (from the 1960s/1970s to today)?
- If the Draw-a-Scientist tests were done in your class, what do you think would happen?
Questions to Dig Deeper
(See the Additional Resources section for articles and information that address these questions.)

- What are stereotypes and what do they have to do with this study? (Define stereotypes as: “the false idea that all members of a group are the same and think and behave in the same way.”)

- What other kinds of stereotypes do you see and hear around you (in school, in the media, among people, etc.)?

- How do stereotypes affect how we think about ourselves and others?

- Why do you think that as the children got older, they drew more men than women?

Ideas for Taking Action
Ask: What can we do to help? What individual and group actions can help make a difference?

- Talk with classmates and teachers at school about conducting a “Draw-A-Scientist” test either in your classroom or in the school. Then, analyze the results and share them in an assembly.

- Have a classroom or school discussion about stereotypes in general and what can be done about them on a personal or institutional level.

- Write a letter to a company about gender (or other) stereotypes that you have seen either in the media or in the advertising of a product (i.e. toys, games, clothes, movies, television programs, digital games), pointing out the stereotype, what impact it has and a request to create something different.

Additional Resources

- What "Draw-A-Scientist" Reveals about Gender Stereotypes (ADL Lesson Plan)
- Mo'Ne Davis and Gender Stereotypes (ADL Lesson Plan)
- Stereotypes of Girls and Women in the Media (ADL Lesson Plan)
- How Can I Prevent Gender Bias in Young Children?
- Toward Communication Free of Gender Bias