

TEACHER-FACILITATOR MATERIALS FOR CORNELL INSTITUTE FOR WOMEN IN SCIENCE VIDEO SERIES

THREE GIRLS DISCOVER THEIR LOVE OF SCIENCE

In the video there are two striking points. First, all three girls reflect what researchers term an “incremental” view of science. This means that they have at least an implicit understanding that being good at math and science is not something that just happens; it requires hard work. The girls state “I like getting better at things and I work as hard as I can. Though I’m not good at math, I think that if you try hard that would be the key”; or “practice, practice, practice makes perfect”. What is the alternative to an incremental view? It is called an “entity” view, and it reflected in the belief that you either have math and science talent or you don’t; it is something you were born with (or not), and hard work has little to do with it. Research shows that having an entity view is associated with poorer performance in math and science than having an incremental view. For example, Carol Dweck’s work shows that of two equally talented students, the one who has an entity view fails to rebound from poor performance on tests, whereas those with an incremental view try harder for the next test and end up doing well.

The second striking point in this video is what researchers call the “people-things” distinction. On average (with lots of exceptions, of course), girls are more attracted to careers that involve people and other living things whereas boys tend to be more attracted to fields that involve things such as symbols, blocks, motors, etc. This sex difference can be seen in early adolescence, if not earlier. When adolescents are asked what they want to be when they grow up, girls are more likely to say physicians, veterinarians, biologists, lawyers, psychologists, and boys are more likely to say they want to be engineers, physicists, and computer scientists. Recall that in the video one little girl states she wants to take care of animals and another says she wants to be a clinical psychologist and serve her clients ice cream!

Some Questions for Discussion:

- Why do you think girls prefer people and boys prefer things? Is this due to the way we raise children—for example, are boys socialized from infancy to nurture and take care of others? Are boys rewarded for being proficient at mechanical endeavors?
- Is it “bad” that girls are drawn into careers that involve people? Isn’t it just as important to be a lawyer who works on environmental issues as it is to be a computer scientist who develops games?
- Related to the above, is it wise to push a girl into math-based fields if they are not naturally attracted to them? Isn’t this a recipe for failure? No one says that boys

should be encouraged to work as nurses or preschool teachers, so why should girls be prodded into careers that do not attract them?

Further Readings:

Carol S. Dweck (2007). Is Math a Gift?: Beliefs That Put Females at Risk. In Ceci, S. J. & Williams, W. M. (Eds.) *Why Aren't More Women in Science?* APA Books.

Su R., Rounds J., Armstrong P. (2009) Men and things, women and people: A metaanalysis of sex differences in interests. *Psychological Bulletin*, 13, 859–884.

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