

## The Nature of Science > The Scientific Community

### Research on Student Learning

When asked to describe their views about science in general, high-school students portray scientists as brilliant, dedicated, and essential to the world. However, when asked about science as a career, students respond with a negative image of scientific work and scientists. They see scientific work as dull and rarely rewarding, and scientists as bearded, balding, working alone in the laboratory, isolated, and lonely. [1] This image of scientists has also been frequently documented among elementary- and middle-school students. [2] Some research suggests that this image may represent students' knowledge of the public stereotype rather than their personal views and knowledge of science and scientists. [3] Some students of all ages believe science mainly invents things or solves practical problems rather than exploring and understanding the world. Some high-school students believe that moral values and personal motives do not influence a scientist's contributions to the public debate about science and technology and think that scientists are more capable than others to decide those issues. [4]

### References

- [1] Mead, M., Metraux, R. (1957). Image of the scientist among high-school students: A pilot study. *Science*, 126, 384-390.
- [2] Fort, D., Varney, H. (1989). How students see scientists: Mostly male, mostly white, and mostly benevolent. *Science and Children*, 26, 8-13.
- Newton, D., Newton, L. (1992). Young children's perceptions of science and the scientist. *International Journal of Science Education*, 14, 331-348.
- [3] Boylan, C., Hill, D., Wallace, A., Wheeler, A. (1992). Beyond stereotypes. *Science Education*, 76, 465-476.
- [4] Aikenhead, G.S. (1987). High school graduates' beliefs about science-technology-society III. Characteristics and limitations of scientific knowledge. *Science Education*, 71, 459-487.
- Fleming, R. (1986). Adolescent reasoning in socio-scientific issues. Part I: Social cognition. *Journal of Research in Science Teaching*, 23, 677-687.
- Fleming, R. (1986). Adolescent reasoning in socio-scientific issues. Part II: Nonsocial cognition. *Journal of Research in Science Teaching*, 23, 688-698.
- Fleming, R. (1987). High school graduates' beliefs about science-technology-society II. The interaction among science, technology, society. *Journal of Research in Science Teaching*, 71, 163-186.