

NATURALLY OBSESSED: THE MAKING OF A SCIENTIST
Science Teachers Workshop -- Westchester County (NY)

Date: May 13, 2009

Program: Special Screening for Science Teachers

Organization: Putnam/Northern Westchester BOCES, an educational services provider for a consortium of local school districts. www.pnwboces.org

**Moderator: Dr. Abby Bergman, Regional Science Coordinator
Board of Educational Services**

Attendees: 24 Putnam/Westchester High School Science teachers and two honor students.

1. In our schools, with all of the curricular demands that our student's face, do we create situations for students to persevere if they don't succeed in their first attempts?

We are concentrating on teaching students to do well on State exams. That is the focus. With the "dumbing down of the curriculum," curiosity is not rewarded. Perseverance is not common in our society, which is geared towards instant gratification. Society does not prepare students to feel that failures are positive. In "Authentic Research Courses" (which are offered in some high schools) perseverance is rewarded. Smaller classes can lend themselves to more open-ended time. Other countries have even greater curriculum demands, yet they do turn out students who can persevere. Our students give up too easily. Job pay does not always make scientific research seem like a rewarding career. In schools we tend to tell students what to do; haven't got the time for all of the failures that might eventually lead to success.

2. What personal qualities would help or hinder a science student's progress?

The need for instant gratification can hinder students' progress. Working for glamour or glory can also hinder students' ability to persevere. Pressure for conformity can hinder a students' sense of perseverance. An analytical mind can help. We need trust and honor intuition. Inquiry is not always nourished in our schools.

3. In what ways did the film change your view of how science is done?

Most did not realize the amount of tedium involved in authentic research as well as the need to truly persevere. Science is a lot about failures. How much of science is art (the "pickle juice" segment)? Where are the discoveries coming from? We have funding here in the U.S. Will that change? The film showed that pursuing science research can truly affect one's personal relationships.

4. If you could ask any of the characters questions about life as a scientist, what would you ask?

I would ask Kil, if he had to do it all over again, would he? At what moment did they realize that this (science research) was what they wanted to do? I would ask Gabe, "How do you balance what you're doing with being a great scientist? I would ask Larry how he creates the environment in his lab where people are focused and try to do their best work? How does he go about promoting the cooperative environment?"