

Session 2 - Elementary Science Methods
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Location: Rasmussen 212

NOTES:

Discussion Prompt: Please share your successful practices during teaching science methods that drive a positive change in student attitudes toward science.

- **Start Early.** It is important to assist girls in developing interests and a knowledge base for science so they are prepared for the classes in college. One way to build the positive attitude is to expose younger girls to older students who are able to model for them in situations like the Girls Scouts.
- **Active involvement.** Students need to be involved in the activities of science - not just passively listening.
- **Positive attitude.** Teach methods and if students can leave saying that they can teach elementary students and feel good about their ability to teach science, then that is a success. One should not be as concerned about content as attitude. Pay attention to attitudes and dispositions and not perpetuating the ideas of negative science experiences.
- **Model Enthusiasm.** The science instructor must tell students how he/she became interested and exciting things he/she has been involved in. He/she must enjoy science and let this be visible.
- **Creativity.** Science needs to have a creative component. Students lose their interest as they get older because we stifle creativity in students. Science should have poetry, artwork, and music integrated into it. Contemporary arts like rap can be a part of science. Incorporate multiple intelligences into science so that all students can be interested.
- **Inquiry Involvement.** Try to work on looking at what it means to inquire and have conversations about what is going on and the process. It is important to talk about what is going on. Conversation is important and they need to understand how to question what is happening. Have students realize what questions are good for investigation and are able to find answers. Find hands on activities to teach the answer to others.
- **Help them plan and execute good lessons.** Have conversations with students during ongoing observations. This is also a way to plan good science lessons and the foundation of why hands on is good. Then take out for science day where they do 3 hands on activities with classrooms in the community. Have them teach small groups and this helps them feel they are able to teach science in the schools. Students can also plan lessons and teach them to each other.
- **Inspire students.** Find when student first had their positive, satisfying “science” experience. The book, Falling for Science: Objects in mind, by Sherry Turkle and

published by MIT press has great stories of how scientists and students first developed a love for science through objects such as mud pies, dice, or a fishing rod. These stories can be very inspirational.

- Authentic real-world experiences. Tie the real world to the science concepts. Make the science real to the students.
- Nature Experiences. Students need to reconnect with nature through their senses and develop an appreciation for its beauty. They need to realize that nature appreciation is science. Students can write about a nature experience (300-400 words) and share these with classmates.
- Expert Debriefing. Debrief their field experiences and help them see appropriate science practices without heavily criticizing teachers. How could the lesson you witnessed be improved? What were its strengths?