

Sarah Hein, Nurse Practitioner

Alignment with the NGSS Science and Engineering Practices for K-12 Science Classrooms

Practice	Description	First Person Story Example
Asking questions and defining problems	A basic practice of the scientist is formulating empirically answerable questions about phenomena, establishing what is already known, and determining what questions have yet to be satisfactorily answered.	How did I maintain my interest in medicine without following my passion and becoming a doctor?
Developing and using models	Involves construction of a wide variety of models and simulations to help develop explanations about natural phenomena.	N/A
Planning and carrying out investigations	A major practice of scientists is planning and carrying out a systematic investigation, which requires the identification of what is to be recorded and what are to be treated as the dependent and independent variables. Observations and data are used to test existing theories and explanations or to revise and develop new ones.	I really wanted to be a doctor, but people told me I couldn't because I was deaf. Instead, I tried research, and I wasn't passionate about it, so I decided to go back to school to become a nurse. After about five years, I became a nurse practitioner.
Analyzing and interpreting data	Scientists use a range of tools—including tabulation, graphical interpretation, visualization, and statistical analysis—to identify the significant features and patterns in the data.	I thought that I was going into medicine by going into research because I thought I could contribute to the medical field by doing research to help the doctors so the patients would be better.” It just wasn't my thing. I didn't feel it in my gut, and I wasn't really passionate about it, so shadowed some doctors nurses., The first couple of times I shadowed I just felt awesome about it. I knew I was home and that's what I wanted to do. I would say that if you're very passionate about something, and you know it's something that you want to do, be patient because sometimes it takes a little longer to get where you want to go
Using mathematics and computational thinking	Scientists use a range of computational devices for data collection and analysis.	N/A
Constructing explanations and designing solutions	Scientists construct explanations of phenomena that incorporate their current understandings and are of consistent with available evidence.	Always trust your gut. I wanted to be a doctor, and then I didn't end up doing that, and I didn't trust my gut and I didn't trust my passion. I advise my younger self and younger kids to trust your gut and trust what your passion is,

		and to go after it, and don't let people get in your way.
Engaging in argument from evidence	Scientists defend their explanations, examine their own understandings, examine their own understandings, and collaborate with peers in searching for the best explanation for the phenomenon being investigated.	I'm very big on advocating for myself so I make sure that my boss and my coworkers know what I need. I tell them to look at me and let me read your lips. I use interpreters when we have a big nursing meetings, but not in day to day operations.
Obtaining, evaluating, and communicating information	Scientists read and write texts and communicate orally.	Communicates via lip reading, speech and, in some cases, an interpreter.