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The Wonder Journal

The following assignments are designed for use with future elementary science teachers and having them notice the natural world and how science phenomena surround them in their day-to-day lives. However, these approaches can be adjusted for just about any content area with the correct framing for that area of study. The following syllabus excerpt explains the approach.

Wonder Journal

Think about the science that you see in the everyday. Ask yourself questions, feel the movements and forces while you drive, look at the sky, watch your pet, engage with another human, think about your place in this world, go for a long walk and just think...no phone, no worries, just get lost in your thoughts. This is homework, so you have an excuse. Over the course of the semester...use a composition book/journal to make note of various things that you observe in the natural world around you and list, sketch, question, observe and record those things that capture your attention and imagination.

These wonderings about the natural world are just that...what do you see, feel and think about those things that fascinate and/or confuse you, questions or thoughts that move into and out of your mind. We will intentionally slow down and use old technology (paper and pen/pencil) to engage with our wonders. 1) Complete 10 entries total over the course of the semester (more is fine); 2) spend time wrestling with your thoughts, describe your wonder, what are your lingering questions, what possible ideas & hypotheses might you have that could shed light on the wonder, if inclined after a few days look up an answer (that is up to you, but give yourself a few days to think about it first), and lastly, 3) we will turn in our journals at some point near the end of the semester. Your wonders are yours and unique to how you envision the world around you. "Dance like nobody is watching" while you build your entries.

Wonder Project Investigation

Science often generates negative feelings associated with memorization and mind-numbing procedural approaches, which is not the norm in typical/real science contexts. The goal of this project is to pursue an idea that you find interesting. You will choose a topic from your wonder journal (or a new and different wonder) and pursue some answers, ideas and most importantly further questions related to that wonder.

The goal is not necessarily to prove one single answer, but to understand something to a greater degree and then consider all the new questions that come along with that wondering and investigating.

The project will entail the following:

- A public presentation (poster, museum display or other visual form), consider it a chance to have a conversation about a topic or idea you find vexing or fascinating that will highlight:

a) the wonder itself

b) the information identified to make more sense of that wonder (diagrams, sketches, etc.)

c) create a wonder map

d) list key scientific concepts behind that wonder (definitions, models, etc.),

e) list further questions and hypotheses related to that wonder,

f) how might you design an experiment or process to answer those further wonders,

g) provide a few ways you might consider using wonder in a classroom context.