

## **In which a graduate student frets over her forgetfulness and writes in the 3<sup>rd</sup> person**

It was a warm summer night when our protagonist set out to right a wrong. She set out her Leuchtturm notebook beside a roll of decorative dinosaur tape; cerulean flair pen in hand. The chosen seat was in the salon, as the study was giving her work anxiety. This, this would be the moment she would prove her remorse for an absence, and her excitement for a course.

The prerecorded video began with an immediate salve for the protagonist's worries, Dr. Arnone, the professor, was reassuring the class that she understood what a difficult time period everyone was living through. The professor delighted in the opportunity to have a small cohort, and gave everyone a chance to share their backgrounds and connect as a group. Our protagonist gave thumbs ups, and signed "me too" as if she was a part of the live discussion, wishing she could connect verbally with these impressive young women. This cohort was small, but it was also mighty.

After briefly discussing the topics to be covered, Dr. Arnone brought out the big guns, so to speak. She began presenting the mission directorates of the National Aeronautics and Space Administration. Each one seemed more exciting than the last, and our protagonist quickly began pausing and taking screenshots of the visuals. It wasn't until later that she would realize they were probably readily available on NASA's website. The thought of asking students to solve real world (and off-world) problems that connected to space travel seemed too good to be true. Connections between space technologies and current environmental enigmas were bound to appear. The year of remote learning was looking brighter every moment with all of these new resources.

When Dr. Arnone asked for a definition of STEM, our protagonist paused the video and loudly proclaimed her original definition to her on-looking cats. As she pressed play again she discovered that her definition was only one of many! She felt at ease knowing that her school would 100% support this approach to learning and teaching. The philosophical stance of the school was already aiming to be as transdisciplinary and conceptual as possible, and this would only serve to further that goal. As Dr. Arnone asked questions of the group, our try-hard protagonist shook in her boots, wishing she could unmute her own microphone and be a little too much like Hermione Granger. This was probably for the best though, as being a better listener was high on her priority list and vision board.

When discussing the elements of good vs. poor STEM education, the aspect of engineering design really stood out to our protagonist. Design learning has always been a big part of her classroom you see. One year she had her students brainstorm what physical needs were required in a classroom (light, oxygen, writing utensils) and then asked them to design classrooms on the moon, underwater, in the ice, on a cloud, in a space station, and in a cave. It was unforgettable, the designs stayed up all year. The analogy of silos resonated deep, as truly all disciplines are related. Contextual, authentic learning is, of course, most prevalent during inquiry that is student generated, and involved all of the skills built throughout a unit.

When brainstorming phenomena that had excited her as a child, our protagonist remembered long nature walks; learning the names of flowers. She was fascinated by Mayan number systems and secret codes. And she would stay up late with her mother to watch a CSI team determine time of death based on corpse rigidity. "Perhaps," she pondered, "some of those could be appropriate for 3rd and 4th graders."

One of the most exciting ah-ha moments within the whole video was connecting the word data to imagery. This made fulfilling her state standards much easier (and kid friendly). The video seemed to end as quickly as it had begun. Just as we were getting to incredible resources like Google Mars, and Sooty Shearwater tracking! Overall, the introduction felt like just a taste of what was about to be, a really informative cake.