

## Nature of STEM Assignment

My primary focus is Nature of Technology. I am a technology teacher for elementary students, Kindergarten through 5th grade. I teach different kinds of technology, including Chromebooks, Apple iPads, and various kinds of robots. We focus on applicable skills they will need when on a device, such as digital citizenship, typing skills, navigating the devices, camera skills, coding skills, troubleshooting skills, and problem solving skills. Students work independently on projects and assignments, as well as collaboratively with a classmate.

I have incorporated and addressed many of the tenants in my technology class. Students are constantly innovating and designing with their assignments. They are problem-solving when it comes to their device, or the activity itself. During my coding unit, students are always creating and designing different types of programs, testing out those programs, and then editing or revising their program to make it better. They have the ability to be as creative as they want to be when it comes to their projects and assignments. Students have different levels of comfortability when it comes to technology, so I give them the baseline of what is expected and they take it from there. Students have the ability to work with others to collaborate and create something better together. I have my students create models with technology based on some type of data they collected, and then they present their information or findings through graphs or images. My students complete a lot of project-based assignments where they can solve real-world problems that encourage them to apply scientific principles, engineering practices, and mathematical reasoning. I have a lot of tenants for technology, engineering, and even math. Science is the one tenant that I do not represent much through my activities and lessons.

I want to integrate even more of the other tenants throughout my classroom. I need to incorporate more scientific claims that include a hypothesis and have the capability of being proven true or false. I want to have my students think more about the scientific process when working through assignments or activities, as well as incorporating the design process when they are creating different things on their devices. Having more abstract thinking problems and logical

structure activities will help my students with being able to have more of a math approach when it comes to my lessons and assignments. I need to encourage my students to reflect more on their learning experiences. Having them share their insights on what worked, what didn't, and how they can improve their projects or assignments. I incorporate a lot of the tenants in my class to begin with, so enhancing the ones I already have, and trying to integrate more of them in my class can help it become more of a STEM thinking classroom rather than just a technological one. Embedding these tenants into my classroom practices, will help me create a dynamic and enriching STEM learning environment that prepares students for future challenges and opportunities.

There are some similarities between the articles 'Is There a "Nature of STEM"?' and 'Principles and Standards for School Mathematics'. The first article was an overview of STEM and the goals for students in grades K-12. One similarity between the two articles, was focusing on the aim to do several things, such as setting forth a comprehensive and coherent set of learning goals, to serve as a resource for teachers, and a guide for the development of the frameworks. The articles also talk about how students get something more academically than the knowledge from the individual subjects of science, technology, engineering and math. There is more to the whole of STEM than just the individual parts of it. Putting together all of the tenets of STEM help anticipate outcomes based on background knowledge, making sense of what is observed, the use of logical reasoning, approaching unknowns systematically, and the necessity of transparency for the purposes of replicability and evaluation. These two articles discussed the importance of the Nature of Math, and how important it is to incorporate all the disciplines for the betterment of students.

Nature of STEM Articles

[Nature of Math](#)

[Peters-Burton \(2014\)](#)