

## Case Study I: STEM is everywhere

"Pick up a pen and take a close look at it. Do you think this is a piece of technology? If you're like most people, you probably answered no. We tend to think of technology as just things we plug in; in fact, however, technology is anything that is made by humans and used to solve a problem.

The pen certainly solves a lot of problems, and it's very convenient. Let's look at this pen a bit closer. Are there different parts that make up the pen? How many would you get if you took it apart? What happens if you touch the point of the pen to your tongue? Do you think that ink would harm you? (It would not, because this ink was developed and tested by biochemists who made certain the ink was not toxic.)

The physical properties of your pen (hardness, durability, and mass) and the way the parts function together result from the calculations of mathematicians and the design choices of engineers who worked in interdisciplinary teams to develop it. The humble pen in your hand is an excellent example of technology based on science, engineering, and mathematics.