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STEAM Paper Reflection

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STEM is a curriculum based on the idea of educating students in four specific disciplines- science, technology, engineering, and math. STEAM builds upon STEM and is a curriculum that integrates science, technology, engineering, art, and math.

STEM and STEAM are now being integrated into various grade levels’ curriculum. As an elementary teacher, I see STEM and STEAM being explored in Stellar class (media and library), as well as in the general education classes. In the middle school and high school, STEM and STEAM are being utilized in Technology classes, Woodshop, and Coding classes and all grade levels, STEAM is being explored in the arts classes.

As an artist and art teacher, my personal interests lie heavily in science. I love botanicals, anatomy, microscopic images, and insects to name a few. Each subject is so richly filled with visuals and colors that it’s an artist’s dream reference for art making. In addition to using these subjects as imagery, I believe it’s important to learn and teach about each subject’s history, purpose, and what makes them special and unique.

I have written several grants through my districts’ grant program, the RVC Ed Foundation for Bio Art- the Merging of Science and Art. Through these grants, I was awarded handheld Celestron microscopes, insects in resin, skulls, and mineral specimens. These tangible tools provided the students with a hands on experience where they could examine the subject matter in a new way. For example, at the completion of the Insect lesson my wish is for the students to realign their thinking. Rather than thinking of insects as gross or an inconvenience, students will hopefully gain the empathy and understanding that insects serve a purpose, and are intricately designed creatures that deserve our respect.

STEAM is an integral component of 21st Century Education. STEAM relates to the 4 C’s on many levels. First, Critical Thinking and Problem Solving is extremely important and STEAM allows students to learn by doing. They can tinker and try out several different applications and learn from the process. With anything, practice makes you better (not perfect!) and STEAM allows students to practice, create and problem solve on their own. Second, Communication is encouraged by STEAM by utilizing the technology available. Through applications and varying delivery methods, students can gain a better understanding of what they are working on. Third, Collaboration is a very large component in STEAM. As with anything in life, people learn at different rates and are coming to the table with varying knowledge bases. STEAM offers many opportunities to collaborate with classmates and peers. Whether it is working on a project together or helping one another with their own work. And lastly, Creativity and Innovation are at the core of STEAM. By setting basic parameters or teaching specific goals, students can use their creativity and originality to make a project their own. This is one of my most treasured goals as an artist and art educator. I believe more STEAM and STEM tools such as 3D printing, coding, certain apps on the ipad or computer can only enhance any curriculum.