

Stephanie Meadows
Art in STEM
Spring 2025

Art Integration Paper

The artform that I chose to use is digital artmaking. I chose this format because students are very technological and have ready access to computers. I plan to have students use their computers to create 3D digital molecule representations.

In the chemistry curriculum, students learn how atoms bond together to form molecules. The initial explanation of this topic requires the students to draw Bohr models and Lewis Dot structures and leads to molecular representations that require the students to use and understand concepts about the geometry of the molecules, polarity, bond angles, electrons, attraction, repulsion, etc. I think that integrating technology and art will help enhance student comprehension as well as a deeper understanding of the concepts.

For this activity, students will use the website, www.phet.colorado.edu. On this website, students are prompted to pick atoms and bring them together to form the molecules being sure to adhere to the octet rule which can result in single, double, or triple bonds, with geometries that are linear, trigonal planar, trigonal bipyramidal, tetrahedral, octahedral, etc. Students can view the molecules in the ball and stick format as well as a 3D space filling view.

This lesson connects easily to math when talking about bond angles (90° , 180° , 37.5° , etc). This also connects to digital art classes where students are using computers to create their designs. The cross curricular connections drive deeper connection to chemistry content but also the other contents.