



# WHY THE [A] IN STE[A]M?

STE[a]M is an acronym representing Science, Technology, Engineering, [Arts], and Math.

At the heart of research into both STEM and STE[a]M is the understanding that subjects cannot and should not be taught in isolation, just as they do not exist in isolation in the workforce.

## TWO SCHOOLS OF THOUGHT:

- ❖ STE[a]M is an INTEGRATION of disciplines. By studying all of these academic subjects and looking at their connections, students can become more scientifically literate.
- ❖ STE[a]M is related disciplines that do not need to be taught together as an interconnected curriculum. The main goal is to create a broadly science-literate public, capable of understanding the natural world.

*BOTH* perspectives require students to make decisions, solve problems, and seek innovation that will prepare them for the 21<sup>st</sup> century workforce.

## ADDING THE [A]:

STE[a]M is NOT art education; It is not meant to take the place of art education. Rather, the lower case [a] emphasizes the fact that STEM learning goals remain the primary focus.

Adding the [a] to STEM does not mean sacrificing STEM learning time for more art time. Rather, it's more about integrating creative thinking into STEM projects and stimulating students' scientific creativity and imagination through the arts.

The arts provide another access point to reach visual, auditory, and kinesthetic learners, teaching students to make transdisciplinary connections and solve problems in creative ways.

STE[a]M provides an opportunity to engage students who may not have otherwise shown any interest in STEM opportunities, playing upon their strengths to create more interest and motivation in a STEM-related field. For example, a student who thinks science is boring but loves to sing might be asked to create a song that will serve as a mnemonic device to help her remember a scientific principle.

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Sources/Resources:

<https://smithsystem.com/smithfiles/2016/01/22/stem-vs-steam-education-debate/>

<http://stemtosteamm.org/>

Rood, Erica. "Stellar STE(A)M Strategies." *What Really Works in Elementary Education*. Ed. Wendy W. Murawski and Kathy Lynn Scott. Thousand Oaks: Corwin, 2015. 73-85. Print.