

## **Program Information**

**Name of Program:** e-STEAM-ed Individuals: The significance of Art in STE(A)M

**Created by:** Kristen Feigel

**Target Audience:** All grades

**Strategy for Implementation:** Video, Slideshow, Art Stations, Bulletin Board

**Time of Year to Implement:** Any time of the year

**Relevant Learning Goal:** Goal #4: Intrapersonal Intelligence

**Specific Lesson Outcomes:** Students will explore personal values and identity. Students will identify ways to support their emotional wellness.

**Purpose:** To expose students gifted with academic and/or STEM proficiency to the benefits of Art into their education and daily lives. To offer students opportunities to try different types of art to encourage creativity and different ways of thinking.

### **Planning and Preparation:**

- Please read through curriculum sheet
- Decide how to best make this program applicable to your students
  - Feel free to make this a bulletin board, synchronous, asynchronous, virtual, or in-person program. Adapt it to fit your needs.
- Understand discussion questions and material
- Create a Canvas quiz/survey with the assessment questions at the end.

### **Program Agenda**

This program is designed to help students discover and explore artistic outlets for mental health and personal growth.

Below is the important information that I gathered. It should be versatile enough that you can share it with them via a quick presentation, a bulletin board, a handout infosheet, and/or a discussion in a large or small group.

Use the information and suggestions below to best fit your community.

### Here is what information is important to share:

- STEM = Science Technology Engineering Mathematics
- STEAM = Science Technology Engineering Art Mathematics
  - STEAM allows students to experience more inquiry-based learning due to more freedom in questions and flexibility in curriculum.
  - STEAM gives context to what basis of what students learn.
  - STEM gives the “what” and the “how” and STEAM gives the “why”
  - Students often think they need to choose STEM or the arts and humanities...That is not the case!
- Explain the difference between Project-Based Learning and Problem-Based Learning
  - Project-Based Learning: Open-ended room for students to explore
  - Problem-Based Learning: Often can be described or understood as:  
Confining learning to the predetermined ideas and opinions
    - There’s definitely room for creativity in both situations and types of learning, but project-based learning typically allows for more flexibility and creativity than the traditional “here’s a problem, go and solve it” mindset of STEM learning. Obviously, this mindset is not applicable to every situation and there is certainly room for creativity with problem-based learning. Project-based learning just typically allows for more student-centric learning as students follow their interests surrounding a situation or prompt.
- It doesn’t have to be either STEM or art; we can and *should* have art integrated into what we do. Art, no matter the medium, allows us to express, learn about, and understand culture and history, and it gives us the opportunity for self-expression and stress relief. Art allows us to deepen our understanding of the human condition by forcing us to think differently to come to conclusions.
- Having an artistic outlet is a way to help manage and improve mental health. Specifically, it allows people to create something that reflects how they are feeling and work through their inner emotions in a physical and outward way, thus making it more accessible to them than if those feelings were to remain bottled up and unacknowledged.
  - Some examples: someone who deals with anxiety might have a coloring book that they color in when they feel stressed; someone who has depression might go to a dance class to get out and move, which helps release different chemicals in the brain that make them feel happier; etc.

## Different Ways to Give this Program

### Virtually:

- Discuss in a forum-style some of the following questions:
  - *What experience do you have with art? \**
  - *What is your favorite or least favorite way to experience art? \**
  - *What is something you've been curious about regarding art? \**
  - *How is art represented in your culture? \**
  - *Why do you think students gravitate towards STEM **or** the arts? Where do you fall in this category? \**
  - *How could we better integrate art into each core class (English, Math, Science, History) in schools at different grade levels in curriculum? \**
- Host a virtual art show and follow up with some questions (above).
  - Give a prompt and let students choose how they want to artistically respond to the prompt.
    - Example: “A ROCK-in Art Show” where students make art that incorporates a rock. (Students could paint a pet rock, write a parody to a Rock and Roll song, make a sculpture out of rocks, etc.)
    - The biggest thing to think about with this is to make the prompt accessible to everyone since we don't know what resources students have access to at home.
- Play virtual games with the students such as Scribbl.io or open up virtual coloring pages and color/paint virtually, then have students share with the group.

### In-Person:

- Set up the space (Wing Commons or a reserved room) with different stations around the room. Those stations will have different art materials, such as coloring pages, colored pencils, markers, paint, canvas, beads, string, yarn, crochet hooks/knitting needles, Play Dough/modeling clay, construction paper, etc. Use what you have in your hall/wing, and use some wing funds to gather a large variety of supplies to set up those stations.
- Once students arrive, give a prompt or a motif (“Spring” , “Favorite Color” , “Hope” etc) as inspiration as they move through the stations. Set a timer for 3-5 minutes per station (adjust time as necessary) and play some music (or have a Wing Liaison manage the playlist) and let students create on their own, whatever they want. Have students rotate through the stations so they can experience each type of art at each station. Take pictures to build a bulletin board at a later time that week to showcase what everyone did at the program.
- Gather in a group and discuss some of the questions listed *above* \*

### Assessment Questions (Canvas)

- How can art impact mental health?
  - How can art improve performance in STEM classes?
  - Please describe your experience with art: What have you tried that you enjoy? What is something you want to try? How is art part of your culture?
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- \*Adjust these as needed, and feel free to use some of the questions from above, too, in this section. Whatever works best for your community of learners.\*

### Sources Utilized

- Connor, Andy, Sangeeta Karmokar, and Chris Whittington. "From STEM to STEAM: Strategies for enhancing engineering & technology education." (2015): 37-47.
- Hollinger, David A. "The Rift: Can STEM and the Humanities Get Along?" *Chronicle of Higher Education*, vol. 60, no. 7, Oct. 2013, pp. B6–B9. *EBSCOhost*, [search.ebscohost.com/login.aspx?direct=true&db=mzh&AN=2014288305&site=ehost-live](http://search.ebscohost.com/login.aspx?direct=true&db=mzh&AN=2014288305&site=ehost-live).
- Quigley, Cassie F., and Dani Herro. "‘Finding the Joy in the Unknown’: Implementation of STEAM Teaching Practices in Middle School Science and Math Classrooms." *Journal of Science Education and Technology*, vol. 25, no. 3, 2016, pp. 410–426., [www.jstor.org/stable/43867761](http://www.jstor.org/stable/43867761). Accessed 1 Mar. 2021.