Part 1

The term STEM stands for science, technology, engineering, and mathematics. STEM education is the amalgamate of subjects containing Science, Technology, Engineering, and Math that teaches the four subjects tied together into one program. According to Elisabeth McClure, STEM is important for all children in all subject areas in the article, [“4 Things Everyone Should Know About Early Stem Learning.”](https://www.commonsense.org/education/articles/4-things-everyone-should-know-about-early-stem-learning) This framework provides students with conceptualization and real-life instructions that offer critical thinking experiences and problem-solving skills that will be relevant in real world problems. Children of all ages can have the opportunity to learn STEM skills and habits from everyday play or learning activities.

At a young age, a child can begin to collect data, develop different approaches to problem solving, and adjust to tough situations. Engaging students in STEM instructions early increases rate of language and literacy outcomes. When learning new skills this feeds the brain to problem solve, meet challenges as well as make connections, and compose conclusions.

In the article, “Why Is STEM Important? Why Do We Keep Talking About It?” by Ryan, he makes the comment, “We need to first educate in order to educate.” This boils down to if parents aren’t educated enough about STEM, then the children will not be educated either. Children are curious and crave adventure. In the same article, Ryan states that [computer science and coding classes are only offered to a quarter of all school’s grades K-12 in the U.S.](https://www.idtech.com/blog/why-is-stem-important)

With daily lives becoming reliant on digital devices and different software’s, careers in computing will be predominant. There are many STEM jobs out there and they will continue to evolve. [The second largest category of STEM careers is engineering.](https://pearsonaccelerated.com/blog/stem) These occupations involve more laborious, hands-on work that consist of your orthodontists, nurse anesthetists and biochemist. Multiple opportunities can be found all around in the real world that can jump start STEM learning and it’s up to parents, and teacher to introduce and educate the young ones. The beliefs of adults play a role in a child’s beliefs. The attitudes from adults about STEM can influence the outcome on children and prepare students for school and future career. According to Elisabeth McClure, incorporating spatial language in block play at a young age can increase spatial abilities of the child when they get older. She also suggests offering necessary tools children need to encourage them to continue trying and build connection. To receive output, there must be input somewhere.

Part 2

As the world progresses, STEM skills need refreshed to remain contemporary with the modern-day society. In the article, “Why We Need More Young People In Stem- And How We Can Do It” by Alistair Cox discusses the different approaches to take in order to influence more opportunities towards a STEM education as well as the importance. The article further explains the needs for revision in the curricula to remain relevant to the 21st century. Some revisions include adequate time educating students on the copious work labor industry and applying the skills learned into the work industry. Without the revision new apprenticeships such as the UKs are at risk of delivering a bad reputation towards STEM education.

The author begins to use emotions to persuade readers by influencing the change to help countless young individuals with having a better work industry then previous generation. The author makes the bias statement that more students that are female need to be interested in STEM because a percentage of the female population in STEM has decreased even though the jobs have increased since 1990. Another bias statement the author makes is that individuals are resistance to the subject’s math and science because they are seen as uninteresting or to challenging. Readers can see this as bias because later in the article, Alistair emphasizes the growth from individuals with quality skills in science, technology, engineering, and mathematics by crossing subjects and discovering new ways to forecast the weather with data and detecting illnesses with wearable technology.

Alistair shows credibility by sharing an experience with a student. Student expressed appreciation in video games but dispersed STEM employment opportunities. After detailed conversation over creation of video games, this resulted in students’ connection and interest in engineering. He also shows credibility by sharing the apprenticeship he was a part of, the British Aerospace, aeronautical engineering and sharing the emotions and benefits from the aerospace. The author uses different strategies to reel in readers and ways of encouraging STEM. One strategy the author suggested was creating opportunities in workplace for those still in education. According to the article, students that job-shadowed in STEM environments had a higher chance of path in STEM career. Along with job-shadow, companies can integrate ‘Bring Your Child to Work’ days. This will be introducing the children of the employees to the STEM workplace at an early age.

In 2001, acronym STEM was first introduced at the U.S National Science Foundation by the scientific administrators, previously went by SMET. Joseph Lanthan defines STEAM as the educational subjects that intrigue students in Science, Technology, Engineering, the Arts and Math in the article titled “Why STEM Is So Important To 21st Century Education.”

Students educated under the STEAM framework are introduced to other helpful skills besides just the subjects of STEAM such as gaining understanding how to learn, asking questions, and ways of creativity and experimentation. This composes students to work in fields that are destined for growth. The arts were later added to STEM regarding recognition and creative ways to solve problems, combine propositions and convey information.

In this article the author shows biased by saying STEAM education prepares students with skills and to see the bigger picture with solutions because readers may develop emotions towards statement a traditional education was received by the reader. The author establishes credibility by offering many resources and activities to begin exploring the world of STEAM. The author also offers a list of opportunities to receive scholarships along with STEAM Grants for schools to incorporate STEAM education. Lastly the author expresses emotions by stating the faults in the education system. These faults including children unable to solve real-world problems, and lack of group activities.

In the Article “Stop Pushing STEM” by Dana Albert, the author proclaims the disbelief that a greater income doesn’t come from STEM, and the chances of finding a job with STEM education doesn’t increase. The article also gives doubts about STEMS importance to students. The author Dana Albert makes a biased claim that the children won’t be able to financially afford living in the same community unless they acquire an exceptional tech job and goes into detail about neighbors living in same community with little to no STEM education. Author’s emotions are shown to attract readers when the author begins making analogies to cats versus dogs by stating you wouldn’t treat a cat the same way as a dog so why do it to humans. Emotions are also used when the author expresses the mental health conditions obtained from constant pressure of opinions by adults. The author also mentions kids who are not given the opportunity to establish self-identity, more kids end up experiencing depression, anxiety, emptiness, and even substance abuse. This is credibly since the author also states the key factor for happiness in a person results from job security and the income it brings.

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| **Project Portion** | **Ideal Criteria** | **Overall Feedback** |
| Introduction | * Engaging * Shows importance of question * Indicates major parts and content |  |
| Background | * Uses credible, neutral sources * Effectively and sufficiently explains essential information * Written objectively in own words * Well organized and focused paragraphs with transitions * Minimal error | I see two sources but not three. It’s hard to tell without a bibliography of your sources. |
| Analysis | * Smooth transition from background * Summarizes accurately and in own words two opposing answers and one objective answer to the question * Recognizes bias * Reasonable observations about how all sources make their arguments impactful * Well-organized and focused paragraphs with transitions * Minimal error | Very nice summaries.  Bias is showing clear preference, clear value, of one thing over another. I’m sure the authors are biased, but I don’t see what you say as being biased.  You’re very close to having good analysis. |
| Response | * Smooth transition from analysis * Incorporates strong points from sources * Draws a reasonable and well-supported conclusion, answering the question * Provides satisfying conclusion to the project * Good transitions between focused paragraphs * Minimal error |  |