

Understanding STEM Education & What It Means for Your Middle School Child

Key Takeaways:

Science, Technology, Engineering, and Math make up STEM

STEM education is focused on developing deep problem-solving & analytical skills in students

It's important for middle schoolers to focus on STEM because it affects every part of our lives

Understanding STEM opens up an endless series of career options

We at Lamad Academy implement a hands-on approach to understanding technology's links to everyday life

What is STEM and Why Is It So Important?

Parents and teachers alike want our children to grow, thrive, and have great lives beyond their school years. The saying "knowledge is power" is only part of the process. For our kids to flourish, we need to give them the skills to use the knowledge they acquire in the real world. <u>STEM education</u> does just that.

STEM stands for Science, Technology, Engineering, and Math. Understanding each of these disciplines opens up opportunities for your child's job prospects for the future. Your child will benefit from STEM far beyond the four disciplines. STEM education gives students the ability to be part of the United States' next generation of innovators.

Career Opportunities for STEM Far Outpace Non-STEM Job Options

Data from the <u>U.S. Department of Commerce</u> in the last decade shows STEM career openings have increased by 24.4% compared to 4% for non-=STEM jobs. The department offers other encouraging news:

STEM-trained employees earn more than non-STEM employees, up to 29% higher wages

Almost three quarters of STEM workers have college degrees, indicating more opportunities for college-educated workers

STEM career opportunities are projecting an additional 8.9 increase by 2024

How Does a STEM Education Benefit Your Child?



As noted by the U.S. Department of Commerce's findings, students who obtain a STEM education benefit greatly in terms of earnings and career opportunities. Employers look to STEM educated workers because they also possess certain skills beyond the four disciplines.

The skills they will learn include:

Ingenuity – STEM-educated kids develop the ability to innovate and harness their creative skills.

Resilience – Things get tough sometimes, but STEM-educated students learn to roll with the punches and keep going when they hit a roadblock.

Teamwork – The old saying "two heads are better than one" is true. Kids with a STEM education quickly develop the ability to work well with others.

Critical Thinking – True education goes beyond just being able to remember facts and figures. STEM-educated workers are able to analyze or evaluate information.

Problem Solving – When things go wrong, trying harder is not enough. STEM-educated students gain the ability to figure things out when something goes wrong.

Employers value STEM-educated workers because they bring these skills (and more) to the table. Keeping the United States ahead of other countries in technology development and innovation doesn't happen by just doing what's tried and true. Thinking outside the box is valuable for advancement in STEM careers.

What Part of Our Lives Does STEM Affect?

Some kids may have trouble seeing just how much our <u>lives are affected</u> by STEM. It's no exaggeration to say STEM affects every aspect of our lives. If you look at each of the four disciplines, there isn't a part of our lives we couldn't connect back to STEM:

Science – Cooking is very much rooted in science. The changes that happen to food when ingredients are combined, cooked, or frozen is all science! The heat that is generated trapped inside your coat to keep you warm when it's cold outside is another example of daily science.

Technology – Do you or your child enjoy talking, texting, or playing games with your phones or tablets? Advances in technology are what makes such innovations possible. Some of you reading this may even remember a time before cell phones!

Engineering – Consider how your children gets to school. Do they ride the bus? Do you or another guardian drop them off from your car? Even if your children walk to school all of those options involve engineering. Engineering advancements make motor vehicles possible. Even shoes are created by engineers to not only protect our feet but making waking more comfortable.

Math – Who says math isn't useful in real life? A STEM education gives your child the ability to budget, balance a check book, and many other math-related skills.



<u>STEM affects many areas</u> of our lives, so it's important to get kids involved with STEM as early as possible. At Lamad Academy, we place an emphasis on getting your child involved not just with the knowledge, but the problem-solving aspects of STEM.

What Kind of Career Options Are There in STEM-Related Fields?

STEM-related career options are almost unlimited. Every part of our modern lives is dependent on STEM, so the sky's the limit on what fields your child could go into after their education is complete. A few common examples include:

Medical Field – doctors, dentists, nurses, and other health care professionals. These are often the first things someone thinks about when they consider STEM career options.

Gaming Technology – Does your kid love video games? Your child may enjoy a career designing games! The ability to design entire digital worlds could be an exciting and rewarding career for your habitual gamer.

Ethical Hackers – The digital age is truly upon us. Digital technology grows at a rapid pace, and so do the abilities of criminals trying to steal our personal information, finances, and more. Companies are now hiring highly trained hackers to pore over online security systems and coding to find weaknesses and alert their employers before the bad guys find those trouble spots.

Mobile App Designer – All of the apps you use on your phone or tablet have to be created. App designing requires both creativity and understanding of technology, including coding. Your kid could wind up designing the next iTunes!

There isn't enough space to list any more than a few examples of fun career options for STEM-educated candidates. Many people think of scientists as the most popular option for a STEM career, but chances are your child's deepest interests may have a STEM career option.

How Does Lamad Academy Teach STEM?

Lamad Academy understands that children learn in different ways. Some children learn best by doing, some best by hearing, and some best by seeing. Our approach is to get students involved in STEM. We use real products and teach by getting everyone to interact with each other and the processes.

Rolling up your sleeves and getting into a project is an effective way for kids to learn. This method also helps them develop teamwork, resilience, and the other skills mentioned earlier in addition to the four main STEM disciplines.

This is an Exciting Time to Be a Child

Advances in technology are happening at an incredible pace. We at <u>Lamad Academy</u> are committed to constantly updating what we teach our students to reflect these advances.



As our understanding of the universe increases, so will what we teach your child. We'll help your children prepare for <u>their future</u> and look forward to seeing what they achieve after their education at Lamad Academy is complete.

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