



**Science**

**Technology**

**Engineering**

**Math**

STEM education is an interdisciplinary approach that allows educators the ability to incorporate various subjects into one cohesive lesson. STEM education uses real world problems to teach critical thinking and problem solving skills through hands-on, minds-on activities.

## Why is STEM Important?

- 1 STEM is everywhere and shapes our daily lives from walking in nature to driving cars. STEM education helps children understand the world around them.
- 2 STEM prepares students for an ever increasing technological world by increasing science and technology literacy, preparing students as the next generation of innovators.
- 3 9 of the 10 fastest-growing jobs that require a bachelor's degree will require greater science or math training, STEM education provides students the skills they need for success.
- 4 Education is changing and focusing on how to think critically, evaluate information, apply knowledge, and be innovative. STEM reinforces these skills in a real world context.

## STEM in the Workforce

- 80% of US jobs require some STEM skills, 20% of which are considered "pure" STEM jobs.
- The number of vacancies in STEM positions is higher than the number of qualified candidates.
- The average STEM salary is 70% higher than the national average salary.
- By 2020 Greater Cincinnati will need 5000 more STEM employees.



# School Questions Specific to STEM:

- Is the school certified in STEM?
- How is technology used to support teaching and learning in the school?
- How many teachers in math and science are certified to teach these subjects?
- How are projects and hands-on activities used to teach science and math?
- How do field trips support science and math learning?
- What lab space and equipment are available for science and math classes?



Cincinnati is a STEM hub with plenty of child friendly experiences after school, on weekends and during the summer.

## Online STEM Learning and Apps

- Ask Dr. Universe
- Bedtime Math (Award Winning)
- Code
- Curiosity Machine
- Design Squad
- Discover Engineering
- Exploratorium
- Extreme Science (Weird & Wonderful)
- How Stuff Works
- Khan Academy
- NASA for Students
- National Geographic Kids
- PBS SciGirls
- Robot Factory App
- Scratch Jr. Coding
- Simple Machines Game
- Studio Code
- TED Ed
- The STEM Laboratory
- Tynker Coding

## Museums and Community Centers

- Cincinnati Observatory
- Drake Planetarium & Science Center
- Duke Energy Children's Museum
- iSPACE – the STEM Learning Place
- Museum of Natural History and Science
- Newport Aquarium

## Libraries

Cincinnati & Hamilton County Public Library  
Boone County Library  
Kenton County Library  
Lawrenceburg Indiana Library

## Maker Spaces

- Cincinnati Main Library
- Northern Kentucky Maker Space

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