



INDIANA  
DEPARTMENT of  
EDUCATION

# INDIANA'S PRIORITIES FOR STEM EDUCATION

## Why is STEM education so important?

As research shows that professional opportunities in STEM sectors are projected to grow exponentially, Indiana schools are preparing our future leaders to tackle tomorrow's greatest challenges, both in life and in the workplace. At the same time, we also know that the foundational skills developed through STEM education will benefit students regardless of their chosen career path.

Supporting schools to refine current STEM initiatives and establish new opportunities is vital to preparing the next generation of thinkers, creators, advocates, and entrepreneurs.

To ensure every Hoosier student receives the foundational STEM skills they need for lifelong success, the Indiana Department of Education (IDOE) is working to expand our state's STEM focus and initiatives for students through a collaborative process of professional development that promotes research-based practices. This will result in more students having access to engaging, integrated STEM education experiences that prepare them for emerging STEM careers and educational opportunities.

## VISION

IDOE will collaborate with Indiana educators and schools across the state to implement Indiana's Priorities for STEM Education, providing Hoosier students with the best access to STEM instruction and increasing student participation and achievement related to integrated STEM learning opportunities.

## MISSION

Indiana's Priorities for STEM Education seeks to provide high-quality, integrated STEM learning opportunities to students, as well as providing resources to educators through a direct coaching model and enhancing access to STEM curriculum that prepares students for emerging STEM careers and educational opportunities.

**STEM education is critical to meet the demands of a complex and competitive workforce reliant on critical thinking and communication across disciplines.**

- Current projections indicate 69,000 computer and math careers are needed by 2028. (Department of Workforce Development, 2021).
- Currently, only 3-5% of Black and Hispanic students engage in STEM degrees. (Commission for Higher Education 2021).
- Since 2016, 50% fewer STEM educators are transitioning to the classroom.

## Timeline for Engagement

- January 2022: Recruitment of Identified Schools
- February 2022: Recruitment of Additional Schools (Opt-in)
- March-April 2022: Confirmation of Engagement and Assurances
- June-July 2022: Kickoff and Training
- August 2022: Implementation Begins

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## WHAT IS THIS PLAN?

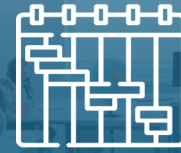
With the mission of maximizing student learning and achievement, Indiana's Priorities for STEM Education seeks to implement a sustainable program for preparing educators to provide high-quality, integrated STEM instruction across multiple content areas, including an emphasis on project-based learning.

This includes a collaborative process to support schools through professional development that promotes research-based practices, and ultimately results in more students having access to engaging STEM education experiences that prepare them for the future.



## WHAT DOES IMPLEMENTATION LOOK LIKE?

- **Refine STEM pedagogy with research-based practices:** This plan delineates STEM curriculum support using inquiry- and problem-based learning, as well as engineering design and modeling in mathematics and science to meet diverse student needs.
- **Develop STEM leaders and educators:** IDOE will procure, deploy, and oversee instructional coaches to provide guidance, support, and professional development and coaching in implementing research-based, integrated STEM content and pedagogy.
- **Increase access to STEM courses, programs, and resources:** This plan will target underserved communities in providing student populations with resources to directly improve STEM curriculum.



## NEXT STEPS

Chosen schools that are identified as high-need will be contacted directly by IDOE to indicate interest through a JotForm. Implementation of the coaching model will begin in fall 2022, with ongoing research efforts aimed at ensuring sustainability of this model long-term.

IDOE intends to offer the same opportunities to additional schools and corporations beginning in summer 2022. Corporations and schools outside of the high-need defined above may opt-in as part of a voluntary coalition.



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