



# THE STEM CENTER



The STEM Center is the hub of **curriculum design, training, and support** for educators in order to advance the goal of preparing all students with the skills and knowledge to participate in the high-demand, high-paying careers that are available and growing in the Dayton region.

Initially, the STEM Center will be focused on curriculum development. STEM Fellows – teachers from pre-school through grade 12, higher education faculty and researchers, and industry professionals – will work in teams to create cross-disciplinary, problem-based curriculum grounded in real world applications. Fifty-eight STEM Fellows and volunteer consultants are working to create curriculum across the pre-school through grade 12 continuum that maps to the real work being done in our region in the areas of sensors, power and propulsion, advanced manufacturing/materials, and medicine/human effectiveness.

This unprecedented partnership combines the strength of education professionals with the realities of industry needs, allowing students to make the connection between what they are learning and how it will be used in future careers.

For an entire community to substantially increase talent, focusing on one specialized school or program will not suffice. There must be a **systemic effort to transform teaching and learning in classrooms across the region – throughout all types of schools – traditional public, community, and private.**

## STEM CENTER WORK . . .

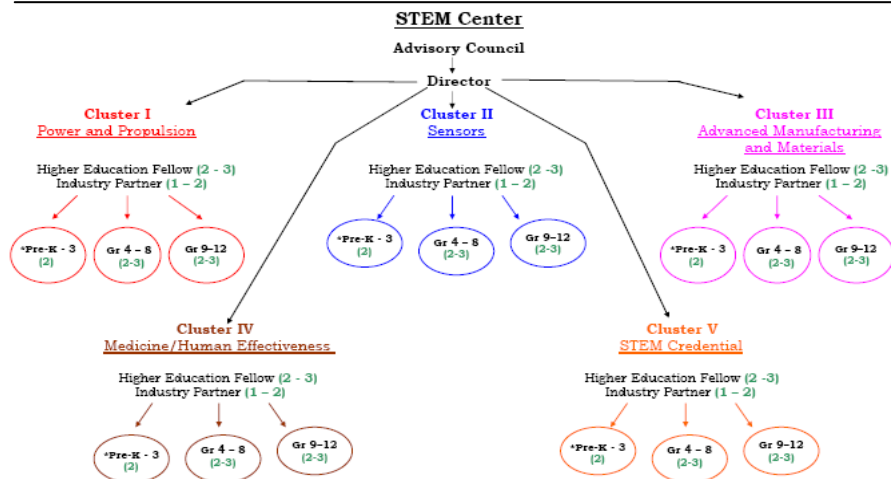
*P-12 STEM Curriculum*

*World Class Professional Development and Coaching*

*STEM Educator Credential*

*STEM Leadership Academy*

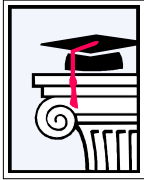
*Support Models Committed to the STEM Approach*



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## OUR DEFINITION OF STEM EDUCATION:

*Using science, technology, engineering, and math across disciplines to problem solve, create, innovate, and lead.*



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**Inquiry Support:** This course is designed to train teacher leaders in inquiry practices, use of accurate quality tools to measure inquiry, and coaching strategies to support teachers as they implement inquiry practices across the curriculum. Our training provides a complete calibration system including a field-tested measurement tool.

**STEM Institute for School Leaders:** Why STEM? Why Now? - An introduction to STEM. This dynamic three-day intensive training covers the critical issues around STEM implementation and support. Current research is analyzed and support is provided to leaders to design a building plan for successful STEM implementation. School leaders are trained to effectively evaluate inquiry-based lessons using the STEM Center tool. Practice time is included to enhance the leader's facilitation skills in order to foster discussion with teachers to enhance their skills.

**STEM Curriculum Development:** Using the STEM Center Fellows concept, schools, districts and communities can create a STEM curriculum team to design lessons around regional needs. This includes the use of the STEM Center framework and STEM Quality Tools.

**STEM Center Replication:** The STEM Center of Dayton, Ohio, is prepared to support regional replication of the STEM Center model. Part of the STEM Center's mission is to assist other regions of Ohio with building the capacity to support regional STEM education transformation.

**STEM Curriculum Modules:** The STEM Center is piloting inquiry-based STEM curriculum modules that were developed collaboratively with the Center's regional public education, higher education and STEM industry partners. The STEM Center welcomes opportunities to engage other regions of Ohio in this work.