

MIDDLE GRADES STEM

CAREER PATHWAY CURRICULUM



6TH THROUGH 8TH GRADE



MINNESOTA STATE
Engineering Center of Excellence

MIDDLE GRADES STEM

BY SREB



CAREER READINESS CURRICULA & PROJECTS

- Introduce students to the principles of scientific inquiry and the engineering design process.
- Each course consists of six heads-on, hands-on projects that require students to draw upon a full range of academic, technical, technological, cognitive and personal skills to complete.
- All projects require students to work in teams to conduct research, prepare written designs, keep an engineering notebook, develop and test prototypes, analyze data and make presentations.
- Taught as yearlong courses or as stand-alone projects.
- One-time fee with no annual cost for curriculum updates.
- Two courses currently available.

PROJECT TOPICS

- Health Science
- Biotechnology
- Energy and Power
- Informatics

- Logistics
- Renewable Energy
- Food Science
- Engineering

- Manufacturing – 3D Imaging
- Materials Science Engineering
- Aerospace Engineering
- Computer Science

For more information contact the Minnesota State Engineering Center of Excellence.
ENGINEERING@MNSU.EDU | (507) 389-1201

WHAT IS SREB?

Southern Regional Education Board's (SREB) leadership in career and technical education spans decades and includes the nation's largest school improvement network, turnkey curricula, research, and statewide policy recommendations. SREB helps states, districts and schools design and build career pathways for the critical transition from high school to postsecondary studies and the workplace.

PROFESSIONAL DEVELOPMENT

Teachers attend Summer Teacher Training Institute (STTI), one week per course, and are:

- Taught to use the student-centered approach to teaching Pre-Advanced Career Middle Grades STEM courses.
- Trained to use the required academic and technical content, technology and project-based pedagogies associated with their courses.
- Empowered to deliver the curriculum to students and have a co-hort of fellow teachers to support their efforts for the success of the students.