

AEM Workforce Update

Carl Aakre

CASE 4 Learning

- Initiative of the ***National Council for Agricultural Education***
- Design inquiry-based agricultural curriculum for middle and high school classrooms
- Offer lifetime certification, training, and support for teachers
 - Prepare students for college and career readiness

Core Value Impact of AEM

Purposeful Curriculum

- *Ag Equipment Maintenance and Technology*
- *Small Gas Engines*
- *Ag Power and Technology*
- *CASE Safety Module*

Student-Centered Learning

- 6,250 students per year
 - 50% reporting
 - Estimate 12,000+ students

Teacher Professional Development

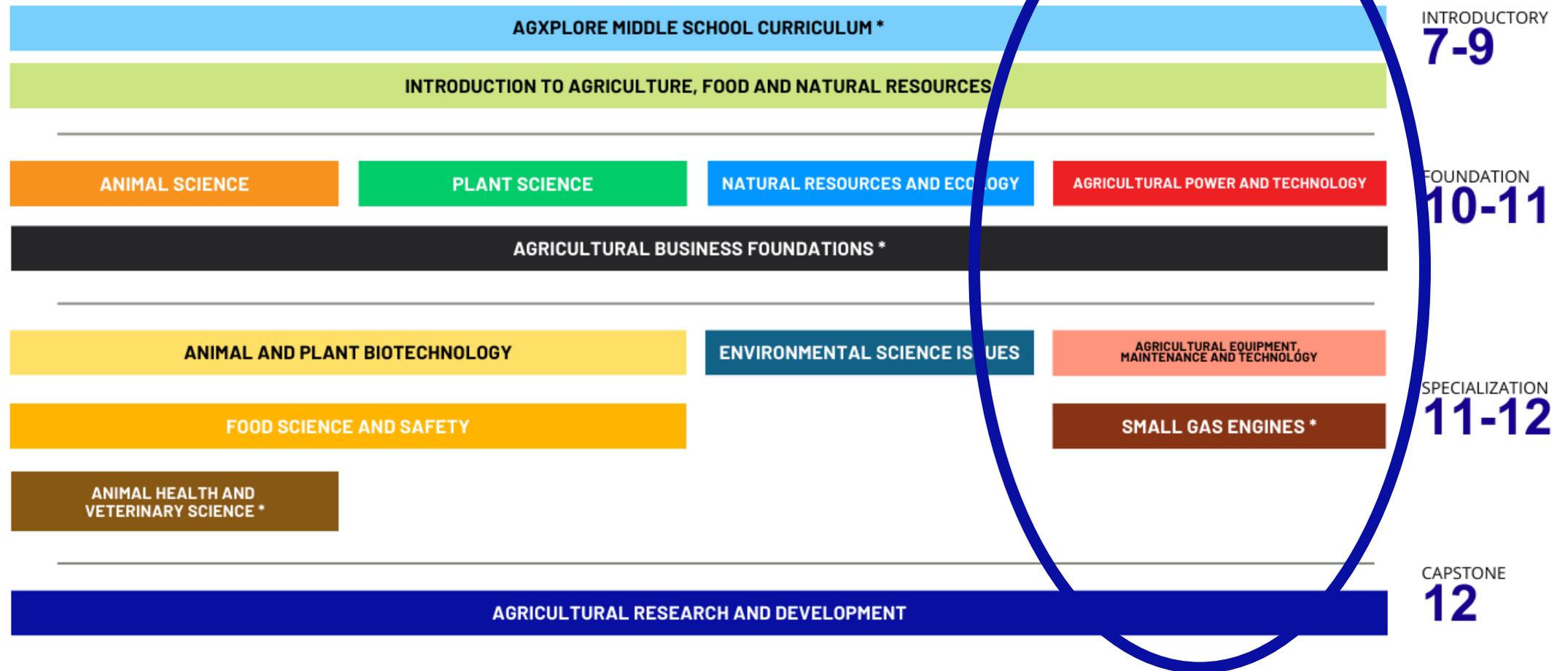
- 630 Certified teachers
- 225 Scholarships

Fostering Connection and Growth

- NSF ATE committees
- High School Recognition
- Industry-Teacher connections

Purposeful Curriculum

CASE Courses and Instructional Levels



Building Technical Skills

- Service Procedures
- Diagnostic Procedures
- Reading Schematics
- Reports and work orders
- Employability skills
- Safety Procedures



Teacher Professional Development



Professional Development Programming

- Teaching methods
- Lesson planning
- Hands-on training
- Technical skill training



Industry Connections

- Teachers connected with industry partners
- Materials and Equipment
 - Listed in the curriculum and sent to the industry partners
- Field trips
 - Integrated into the curriculum
 - Written for the industry partner

Example Curriculum Topics

- Technician Expectations
- Powertrains
- Precision Systems
- Electrical Systems
- Diesel Systems
- Fluid Power Systems
- Field Applications



Technical Applications in Agriculture Project

- 2020-2024
- Results
 - 180-Day *Ag Equipment and Maintenance Technology* Curriculum
 - 8-Day Professional Development Program
 - 48 Teachers provided PD and materials at no costs
 - Free Safety Curriculum available for all teachers
 - 136 Teachers Certified to Date



MINNESOTA STATE
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Ag Robotics and Automation Technologies Project

- 2024-2027
- Goals
 - 3 Automation Modules (Plant, Animal, and Food)
 - 3-Day Professional Development Program
 - Provide 64 Teachers PD and materials at no costs
 - Dual Credit/Certification



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Thank You!!!

Scholarship Program

- 8 years
- \$421,600
- 225 Teachers

In-kind Support

- Curriculum Development and Review Committees
- Industry connections
 - Student field trips
 - Materials
- 630 teachers educating over 12,000 students per year
- Safety Module available to 3,500 teachers

2025 Teacher Opportunities

Summer Professional Development

- Ag Power and Tech
 - Washington State University
- Ag Equipment and Maintenance
 - Tulare, CA
 - Dickenson, ND

Summer Field-Testing

- Ag Robotics and Automation
 - Staples, MN, - AgCentric

Opportunities for Growth

Secondary awareness of Industry Opportunities

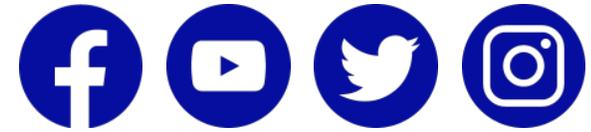
- Student Scholarships and Sponsorships
- Need for Technicians

Industry awareness of Educational needs

- Curricular requirements for preparing students
- Certification (program of study requirements)

NSF-ATE Agricultural Center

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