60 by 25 NETWORK

STARTING 1 PM

Implementing Team-Based Challenges in College and Career Pathway Endorsements

Education Systems Center
Illinois Health Occupations Students of America (HOSA)
Illinois Science and Technology Institute (ISTI)

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AGENDA

- Introduction of Panelists

- Team Based Challenge Background: CCPE, Competencies, Dictionary Definition, Things to Consider

- Illinois HOSA: Chapters and Conferences

- ISTI: STEM Challenge

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Forward Together | 60 by 25 NETWORK

THE ILLINOIS 60 BY 25 NETWORK CONFERENCE PRESENTS

Breakout Session 1

Implementing Team-Based Challenges in College and Career Pathway Endorsements

Tuesday, February 23 | 1:00 – 2:00pm

Becky Goldberg
Illinois Science and Technology Institute

Emily Cooper
Illinois Science and Technology Institute

April Sonnefeldt
Illinois Health Occupations Students of America

Dr. Nana Bonsu
Illinois Health Occupations Students of America

Juan Jose Gonzalez
Education Systems Center at NIU

TEAM-BASED CHALLENGE BACKGROUND

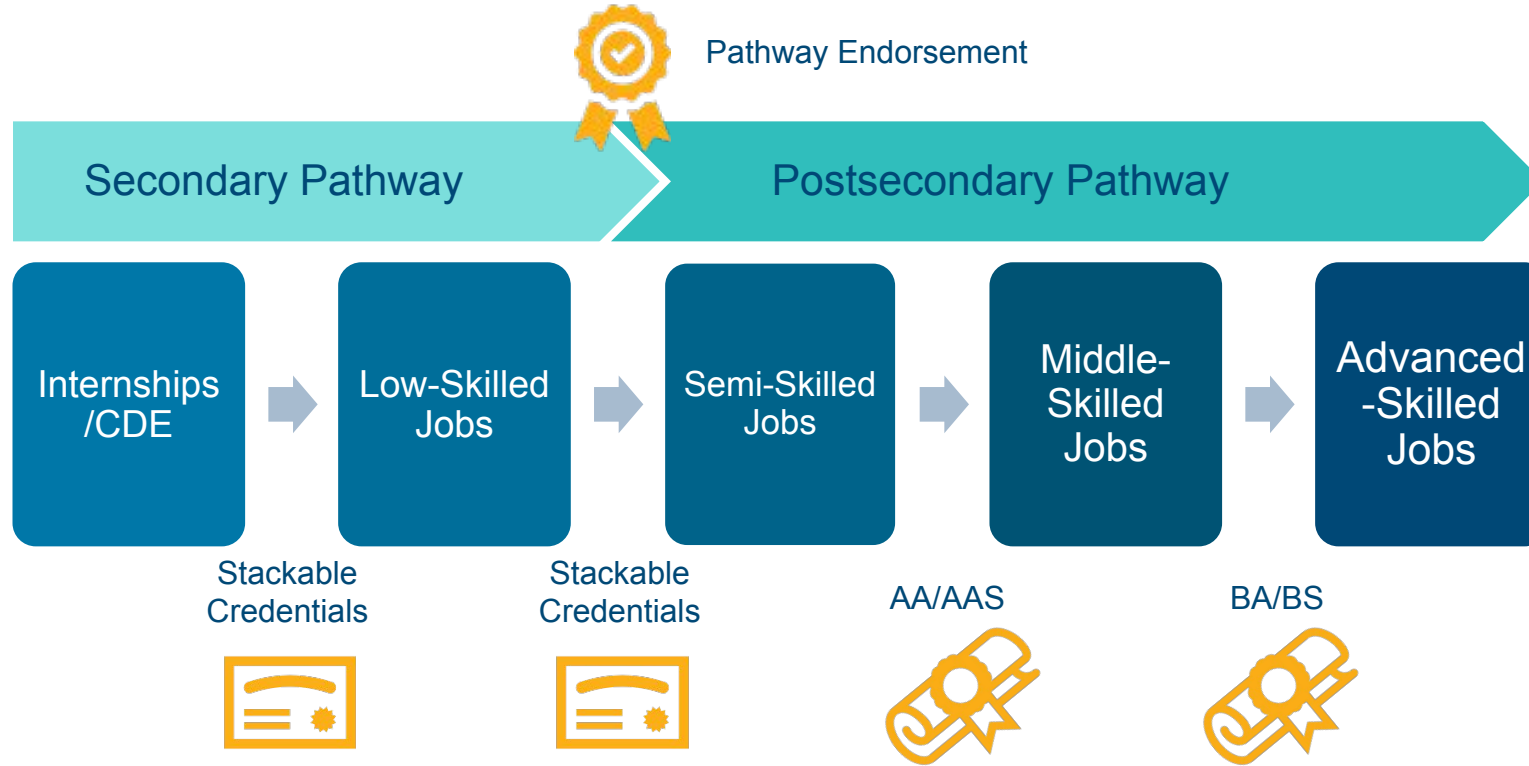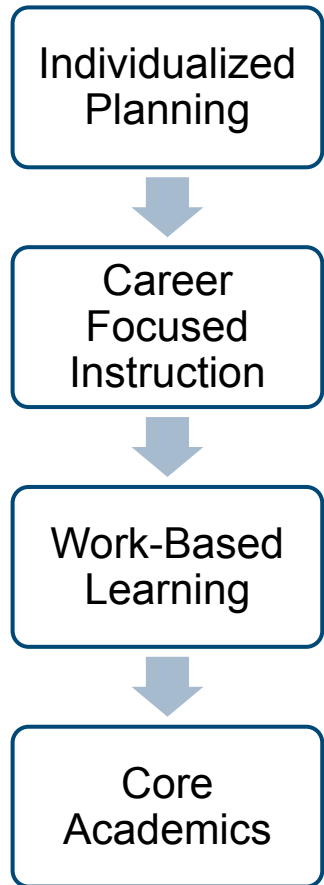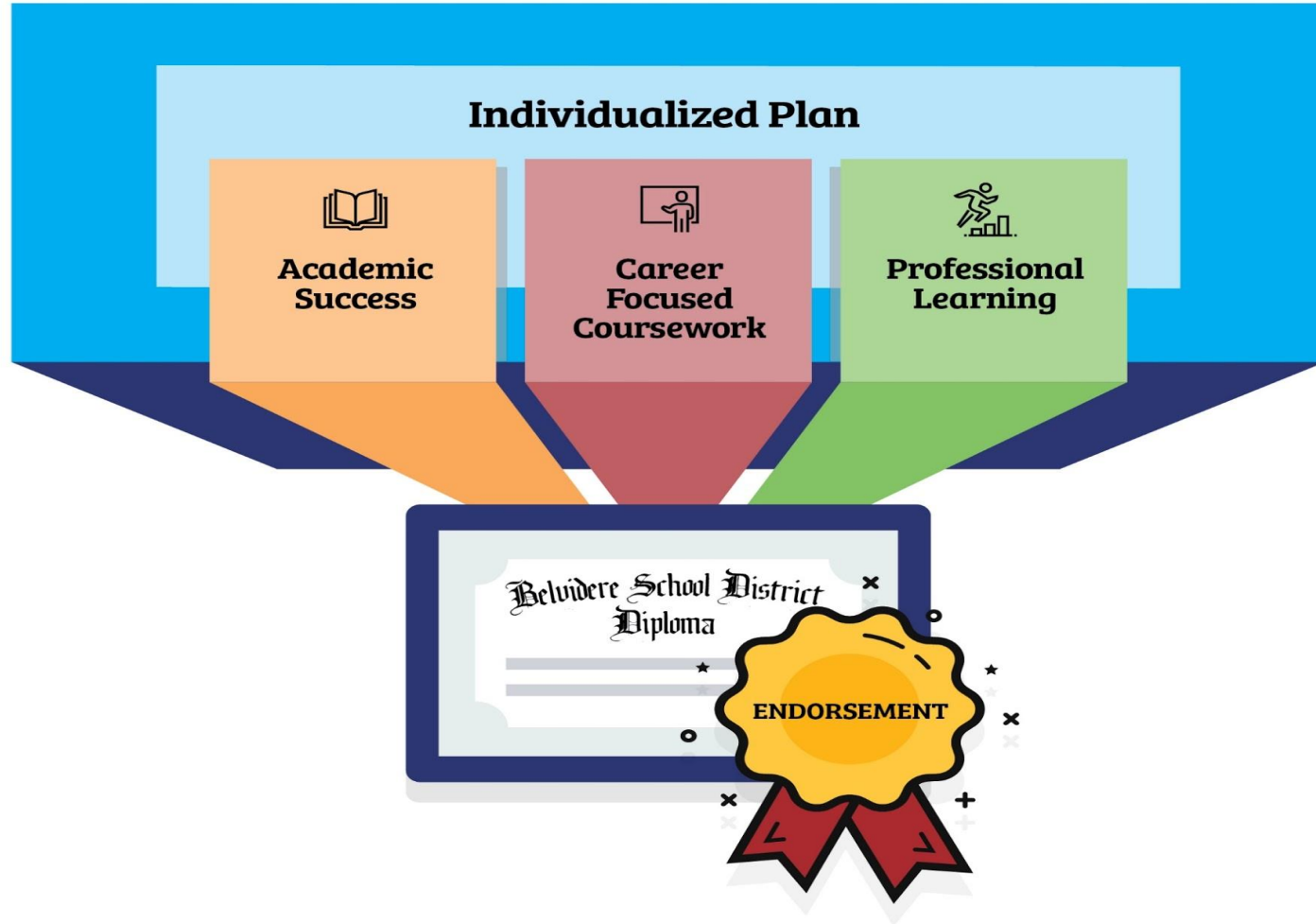CCPE, Competencies, Definition

STATE PATHWAYS FRAMEWORK

Individualized Planning

↓

Career Focused Instruction

↓

Work-Based Learning

↓

Core Academics

Pathway Endorsement

Secondary Pathway → **Postsecondary Pathway**

| Internships /CDE | → | Low-Skilled Jobs | → | Semi-Skilled Jobs | → | Middle-Skilled Jobs | → | Advanced-Skilled Jobs |

Stackable Credentials

Stackable Credentials

AA/AAS

BA/BS

OUTCOMES:

Credential Attainment

&

Labor Market / Economic Development

PATHWAYS ENDORSEMENT ON DIPLOMA

ENDORSEMENT AREAS

FINANCE & BUSINESS SERVICES

INFORMATION TECHNOLOGY

HEALTH SCIENCES & TECHNOLOGY

MANUFACTURING, ENGINEERING, TECHNOLOGY & TRADES

AGRICULTURE FOOD & NATURAL RESOURCES

HUMAN & PUBLIC SERVICES

ARTS & COMMUNICATIONS

RECOMMENDED TECHNICAL AND EMPLOYABILITY COMPETENCIES

Postsecondary & Workforce Readiness Act

Statewide Public-Private Steering Committees for
College and Career Pathway Endorsements

Recommended Technical and Essential Employability Competencies

July 2018

MANUFACTURING, ENGINEERING, TECHNOLOGY & TRADES

TOP 10 TECHNICAL COMPETENCY STATEMENTS FOR ADVANCED MANUFACTURING & ENGINEERING

Equipment Safety	Students can use their understanding of equipment usage, practices, and procedures to maintain a healthy, safe, and secure work environment.
Manufacturing Environment	Students can use their understanding of workstations, tools, and equipment operations to safely navigate a manufacturing environment.
Personal Health & Safety	Students can use their understanding of personal safety and environmental regulations to comply with local, federal, and company health/safety demands.
Spatial Reasoning	Students can use their understanding of objects in relation to one another to understand three-dimensional imaging.
Process, Design, & Development	Students can use their understanding of technical drawings and schematics to complete the design and development process.
Installation	Students can use their understanding of tools to assemble and disassemble simple tools.
Customer Focus	Students can use their understanding of communication and project management to understand client needs and complete project accordingly.
Quality Assurance & Continuous Improvement	Students can use their understanding of product and process to meet quality systems requirements as defined by customer specifications.
Digital Manufacturing	Students can use their understanding of digital manufacturing tools and computer-based programs to complete the design and develop implementation process.
Supply Chain Logistics	Students can use their understanding of materials, suppliers, and internal systems to plan and monitor movement and storage of materials and products.

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RECOMMENDED TECHNICAL AND EMPLOYABILITY COMPETENCIES

Postsecondary & Workforce Readiness Act

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College and Career Pathway Endorsements
Recommended Technical and Essential Employability Competencies

July 2018

TOP 10 CROSS-SECTOR ESSENTIAL EMPLOYABILITY COMPETENCY STATEMENTS
COLLEGE & CAREER PATHWAY ENDORSEMENTS

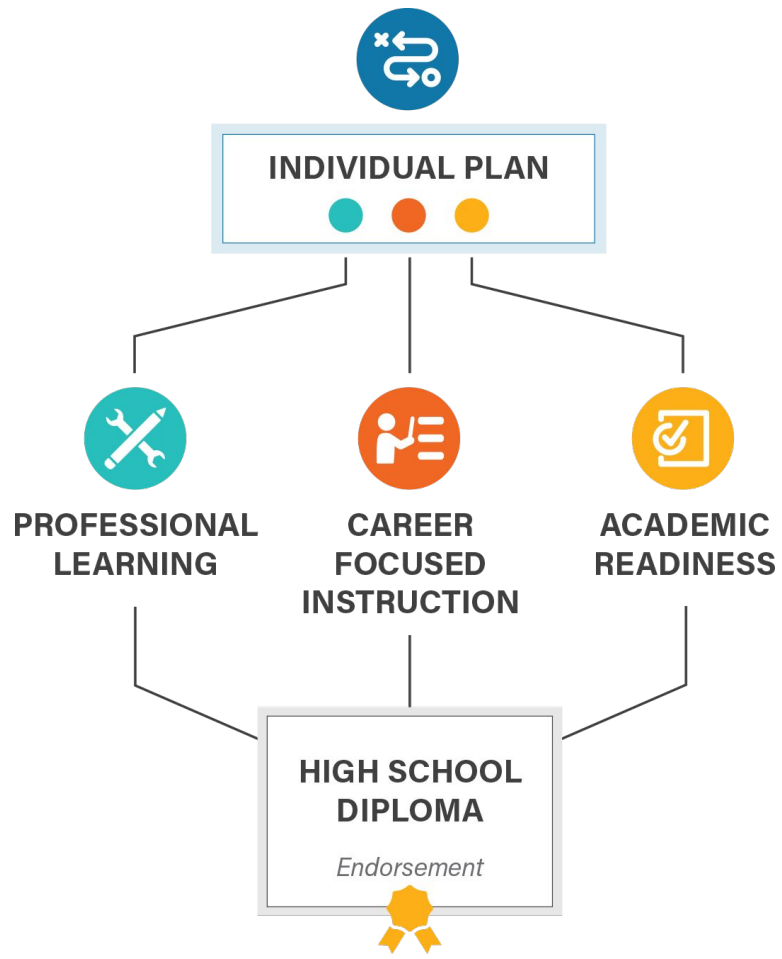|	
Teamwork & Conflict Resolution	Students can use their understanding of working cooperatively with others to complete work assignments and achieve mutual goals.
Communication	**Verbal:** Students can use their understanding of English grammar and public speaking skills to convey an idea, express information, and be understood by others. **Written:** Students can use their understanding of standard business English to ensure that written work is clear, direct, courteous, and grammatically correct. **Digital:** Students can use their understanding of email, keyboarding, word processing, and digital media to convey work that is clear, direct, courteous, and grammatically correct.
Problem Solving	Students can use their critical thinking skills to generate and evaluate solutions as they relate to the needs of the team, customer, and company.
Decision Making	Students can use their understanding of problem solving to implement and communicate solutions.
Critical Thinking	Students can use their understanding of logic and reasoning to analyze and address problems.

College and Career Pathway Endorsement Framework

INDIVIDUAL PLAN

- PROFESSIONAL LEARNING
- CAREER FOCUSED INSTRUCTION
- ACADEMIC READINESS

HIGH SCHOOL DIPLOMA

Endorsement

INDIVIDUAL PLAN

Each student completing an endorsement must have an individualized plan, which includes college planning linked to early understanding of career goals, financial aid, resume, and personal statement.

PROFESSIONAL LEARNING

Awareness, exploration, and preparation activities that provide opportunities for students to interact with adults in their workplace

9th	10th	11th	12th
At least 2 career exploration activities or 1 intensive experience		60 cumulative hours of paid or credit supervised career development experience with a professional skills assessment	
At least 2 team-based challenges with adult mentoring			

Through these experiences, a student gains essential employability and technical competencies in their identified sector.

CAREER-FOCUSED INSTRUCTIONAL SEQUENCE

Two years of secondary coursework, or equivalent competencies, that articulate to a postsecondary credential with labor market value. Must include at least 6 hours of early college credit.

9th	10th	11th	12th
Orientation / Introduction			
	Skill Development		
			Capstone / Advanced Courses

ACADEMIC READINESS

Ready for non-remedial coursework in reading and math by high school graduation through criteria defined by district and local community college

CAREER PATHWAYS DICTIONARY

WORK BASED LEARNING CONTINUUM

CONTINUUM OF EMPLOYER ENGAGEMENT & WORK-BASED LEARNING EXPERIENCES

Career Awareness → Career Exploration → Team-Based Challenge → Career Development Experience → Pre-apprenticeship / Youth Apprenticeship → Apprenticeship

Increasing Intensity of Employer Engagement

Team-based Challenges: A group problem-based learning project relating to an individual's career area of interest that involves a problem relating to employers within that area, including mentoring from adults with expertise in that area, and requires the individual to present the outcomes of the project.

TEAM BASED CHALLENGES – THINGS TO CONSIDER

- "Mentoring from adults with expertise in that area"
  - Employers partners, but also postsecondary experts

- "Present the outcomes of the project"
  - Think "Shark Tank", but with variance on the intensity and audience

- Could be Embedded Within Course Experience
  - ISTI STEM Challenge, INCubatoredu, NYC Dept of Education Workplace Challenges, CTSOs

- Could be Out-of-Class Experience
  - Educators Rising Conference, Robotics Competition, Mock Trial

ILLINOIS INNOVATION: EDSYSTEMS TBC FOR EDUCATION

Team-Based Challenge: Critical Research in Education

EdSystems is interested in serving as mentors for students in the Education pathway to begin to learn the tools of critical research through a Team-Based Challenge in which they can investigate their own schools and lived experiences. Critical research is usually collaborative and focused on producing knowledge in the pursuit of action for change. By engaging in their own social worlds, students develop core academic and essential employability competencies to prepare them for college and career readiness

Week #	Topic	Events	Deliverables
1	Welcome & Kick-off	Student teams meet their EdSystems Mentor Develop a question/problem to investigate, and an approach for completing the project	Project plan
2	Project Investigation	Deep dive into the project, conduct research to address the question/problem EdSystems mentor provides additional resources/guidance	Status update #1
3	Continued investigation/ Development of the Change They Wish to See	Continued research to refine how to address the question/problem Draft report/presentation that includes: - Question/problem - Overview of research completed - How the question/problem should be addressed and recommendations for changes	Draft report/ presentation EdSystems mentor provides feedback
4	Project Presentation	All student teams present their report/ presentation to EdSystems mentors All EdSystems mentors ask questions and offer additional feedback/guidance	Final report/ presentation

ILLINOIS INNOVATION: PRACTERA PILOT

Practera is a customizable, technology enabled platform for structured virtual and hybrid work-based learning. Link to Information Session

Illinois communities are piloting Practera to:
- Ensure equity and expand access to WBL
- Support a Team-based Challenge or Career Development Experience

Through a partnership with Practera, Illinois communities have free access to pilot Practera through SY21-22. **Participation as a pilot site will include**:
- Professional development opportunities
- Support and inspiration through regular community of practice sessions, and
- Technical assistance throughout

ILLINOIS WBL INNOVATION NETWORK (I-WIN)

- Highlight and explore innovative models for work-based learning with a focus this first year on virtual work-based learning
- Engage in conversations on creating sustainable, high-quality models that ultimately provide broader and more equitable access to work-based learning with a focus on building social capital for Black and Latinx students
- Build connections among communities to share best practices, learnings and resources
- Identify needs for state policy changes or support systems

- [Sign up here and be included in upcoming info sessions or join upcoming practera pilots](#) - April Session on innovations in TBCs and further resources

Illinois HOSA

Introduction

April Sonnefeldt - Executive Director Illinois HOSA

    29-year CTE teacher

    25-year HOSA advisor

    7th year as Executive Director of Illinois HOSA

Dr. Nana Bonsu, MD

    20+year CTE teacher

    7-year HOSA Advisor

    4th year on the Illinois HOSA Board of Directors

Mission

The mission of HOSA is to empower HOSA-Future Health Professionals to become leaders in the global health community through education, collaboration, and experience.

CTSO

HOSA is a Career and Technical Student Organization

It is a co-curricular organization, meaning that the activities are incorporated into the classroom curriculum.

- Introduction to Health Science/Health Careers (Orientation class)
- Health Science Technology (Entry- level Skill Development)
- Medical Terminology
- Nurse Assisting, Medical Assisting, Phlebotomy
- Project Lead The Way - Biomedical Engineering

Illinois HOSA Snapshot

Membership

46 Chapters Statewide

2051 Members

Events

Fall Leadership Conference

Preliminary Round of Competitions

State Leadership Conference

Competitive Events

Health Science Events:

- **Behavioral Health**
- **Cultural Diversities & Disparities**
- **Dental Terminology**
- **Health Informatics**
- **Human Growth & Development**
- **Medical Law & Ethics**
- **Medical Math**
- **Medical Reading**
- **Medical Spelling**
- **Medical Terminology**
- **Nutrition**
- **Pathophysiology**
- **Pharmacology**

Competitive Events

Health Professions Events:

- **Biomedical Laboratory Science**
- **Clinical Nursing**
- **Clinical Specialty**
- **Dental Science**
- **Home Health Aide**
- **Medical Assisting**
- **Nursing Assisting**
- **Personal Care***
- **Pharmacy Science**
- **Physical Therapy**
- **Sports Medicine**
- **Veterinary Science**

Competitive Events

Emergency Preparedness Events:

- **CERT Skills**
- **CPR/First Aid**
- **EMT**
- **Epidemiology**
- **Life Support Skills***
- **MRC Partnership**
- **Public Health**

Competitive Events

Leadership Events:

- **Extemporaneous Writing**
- **Health Career Photography**
- **Healthy Lifestyle**
- **Interviewing Skills***
- **Job Seeking Skills**
- **Organizational Leadership**
- **Prepared Speaking**
- **Researched Persuasive Writing and Speaking**
- **Research Poster**
- **Speaking Skills***

Competitive Events

Teamwork Events:

- **Biomedical Debate**
- **Community Awareness**
- **Creative Problem Solving**
- **Forensic Science**
- **Health Career Display**
- **Health Education**
- **HOSA Bowl**
- **Medical Innovation**
- **Parliamentary Procedure**
- **Public Service Announcement**

HOSA Team-based Challenges

- **Clinical Specialty**
  - This competitive event consists of three items: the development of a career portfolio, a video demonstration of a selected skill common to the chosen health career and a live presentation to the judges.

  - Mentoring opportunity:
    - Work-based learning
    - Interview with professional
    - Skill Development

  - Presentation
    - Portfolio
    - Presentation to judges

MRC Partnership

- MRC Partnership provides members with the opportunity to gain knowledge and skills required to initiate and maintain a partnership with their local/state Medical Reserve Corps units. This competitive event is designed for students to demonstrate the spirit and mission of both the MRC and HOSA in joint partnership activities

- Mentoring Opportunity:
  - Develop Partnership with local MRC
  - Plan events with local MRC

- Presentation:
  - Portfolio
  - Presentation to judges

Research Poster

- Research Poster provides HOSA members with the opportunity to think critically about a health-related issue in their community; pose a research question surrounding the chosen topic; and conduct research on that topic

- Mentoring Opportunity:
  - Health-related issue in the community (partner with local agencies/ public health dept., etc)
  - Surveys, interviews, scientific studies, etc.

- Presentation:
  - 36" X 48" poster presentation to judges

HOSA Team-based Challenges

Community Awareness

- Community Awareness provides HOSA members with the opportunity to educate their community about one health and/or safety related issue of local, state and/or national interest.

- Mentoring Opportunity
  - Select a topic that impacts the community
  - Involve local community organizations/ public health dept., etc

- Presentation:
  - Portfolio
  - Presentation to the judges

Chapter Affiliation

In order to affiliate a chapter you will need the following:

Chapter advisor (preferably a CTE teacher)

At least 5 members

Bylaws

Cost: (There is no fee to affiliate a chapter. All fees are individual)

$15 Membership - pays for national and state membership fees

$30 Fall Leadership Conference - full day workshop with lunch and t-shirt

$90 State Leadership Conference - 3-day conference includes 3 meals,

program, awards, tshirt, speakers, entertainment

(Transportation and lodging costs are the responsibility of the school)

Chapter Affiliation

Funding Sources:

Perkins Grant

Because HOSA is a nationally-recognized organization and recognized by ISBE as an approved CTSO, Perkins funding can be applied through local districts or EFEs

- Membership fees for special needs students (students with IEPs)
- Conference registration fees for CTE students

Resources

The best resource is: www.hosa.org
Local Advisor: http://www.hosa.org/LocalAdvisor
Competitive Events: http://www.hosa.org/guidelines

Contact Information:

April Sonnefeldt
illinoishosa32@gmail.com

The Illinois Science and Technology Institute

Team Based Challenges

ILLINOIS SCIENCE &
TECHNOLOGY INSTITUTE

The STEM Challenge

Goal Alignment

ISTI programming strategically builds student capacity for STEM and workforce skills. Through high dosage, high impact **industry partnerships**, student teams work alongside professionals in the field to blend classroom content with **real world context**.

Hands on Problem Solving

Lines of sight to career paths

Increased confidence in STEM Skills (Communication, Teamwork, Critical Thinking)

2020-21 Company Partners

Programmatic Elements

01 **Authentic industry challenges**

02 **Teacher PD-** Human centered design

03 **Mentor Training-** DEIA and Trauma Informed mentorship

04 **Student Teams -** 3-6

05 **Ongoing Mentorship-** The Mentor Matching Engine

06 **Pitch and Presentation-** Share out experience built in to receive live feedback

07 **Showcase-** celebration and exposure

Developing Student Identities within STEM

Every student is an innovator and can have a future in STEM. Developing an identity in STEM is not something that happens by chance. It is a strategic component of ISTI programming to offer a diverse representation of mentors to exemplify the idea that there is no one right way to be in STEM.

1700 students

58% students of color

56% female-identifying students

Creating the right groups

Every student has a strength, use it strategically.

01 Translator

02 Visualizer

03 Strategizer

GUIDES are...

- Responsible for ensuring team members are on track
- Responsible for "picking up slack" in the event of team member absence
- **Deliverable: MME & ...**

TRANSLATORS are...

- Responsible for communicating directions and procedures with teams
- Responsible for communicating mentor messages/feedback to team
- **Deliverable: MME (primary) & ....**

EXPECTATIONS

- Each individual will be responsible for submitting work to show the team's progress (see **Deliverable** under each role)

VISUALIZERS are...

- Responsible for ensuring a **creative** solution that meets the needs of the client
- Responsible for overseeing prototype and final presentation development
- **Deliverable:**

STRATEGIZERS are...

- Responsible for overseeing research and development
- Ensures group is on track with project timeline according to the team's Gantt Chart
- **Deliverable:**

90% of our participating students are more **confident** in their STEM skills

72% Of our program students reported working with a professional for the **first time**

100% of our STEM Challenge mentors agreed that they valued that their company provided an opportunity for **skills-based volunteering.**

100% Of our teachers reported that their students improved their overall STEM Skills

How to partner?

The STEM Challenge program model relies on supply and demand. If you have a company in mind to partner this is a great way to engage.

Recruiting companies on an ongoing basis.

Follow and Engage

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Events Coming up

Student Research
Showcase
March 18th

STEM Challenge
Showcase
April 29th

Contact Us

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