





Welding Revision

Purpose

- This proposal reflects a curricular revision to the Welding Technology Pathway
- Began in 2017-2018
 - Pathway culminates in students achieving the American Welding Society (AWS) Certified Welder certification

Rationale

- Updates current curriculum to include UbD Units
- Includes Common Core Readiness Standards for Scientific and Technical Text
- Includes Essential Employability Competencies as indicated in the Illinois Postsecondary Readiness Act
- Aligned to Standards-Based Learning and Assessment

The Process

- ▷ 3 Welding Teachers
- ▷ Teacher Leader for Pathway Design and Implementation
- ▷ Coordinator for Career and Technical Education

Aaron Styles	Welding Instructor, Elgin High School
Brad Datisman	Welding Instructor, Elgin High School
Luis Guerrero de Jesus	Welding Instructor, Elgin High School
Doreen Roberts	Teacher Leader, Pathways Design and Implementation
Tracy Stewart	Coordinator, Career and Technical Education

The Process

- ▶ Committee convened in July 2019
 - 1 Days Understanding by Design
 - 5 Days Curriculum Writing
 - Standard selection and alignment
 - Unit Design
 - Assessment Design
 - Resource selection
 - Professional Development identified



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Welding Technology Pathway: Scope & Sequence

	Fundamentals of Welding	Welding I	Welding II
Semester 1	<ul style="list-style-type: none"> • Safety • Math for Welders • Hand Tools & Power Tools • Oxy Fuel/Plasma Cutting & Base Metal Preparation 	<ul style="list-style-type: none"> • Safety & Math Review • SMAW Plate Welding F4 & G1-G4 	<ul style="list-style-type: none"> • Safety Review • GMAW Plate Welding G1-G4 • GTAW Plate Welding G1-G4
Semester 2	<ul style="list-style-type: none"> • SMAW Plate Welding F1-F4 • Basic Welding Symbols • Career Exploration 	<ul style="list-style-type: none"> • GMAW Plate Welding F1-F4 • Introduction to Blueprint Reading • Career Exploration 	<ul style="list-style-type: none"> • Career Exploration • Advanced Blueprint Reading • Advanced GMAW & SMAW Plate Welding

Standards Identified for Welding Pathway	
Welding Standards	Common Core State Standards
<ul style="list-style-type: none"> • Welding-1: Demonstrate and apply principles and practices of welding safety. • Welding-2: Demonstrate principles and techniques in welding, welding fabrication and materials processing. • Welding-3: Identify post-secondary educational and career opportunities. 	<ul style="list-style-type: none"> • CCSS.ELA.RST.9-10.3*: Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks, attending to special cases or exceptions defined in the text. • CCSS.ELA.RST.9-10.4**: Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9-10 texts and topics. • CCSS.ELA.SL.9-10.4*** Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task. <p><i>* CCSS.ELA-LITERACY.RST.11-12.3 for Welding Technology I & II</i> <i>** CCSS.ELA-LITERACY.RST.11-12.4 for Welding Technology I & II</i> <i>***CCSS.ELA-LITERACY.SL.11-12.4</i></p>

Proposal

- ▶ Committee recommends adoption of the revised Welding Technology Pathway Curriculum and identified resources
 - Welding Fundamentals - Sophomore Year
 - Welding Technology I - Junior Year
 - Welding Technology II - Senior Year

Recommended Resources

Textbook:

Welding Level 1 Trainee Guide. NCCER. 5th ed. 2016

Welding Level 2 Trainee Guide. NCCER. 5th ed. 2016

Welding Level 4 Trainee Guide. NCCER. 5th ed. 2016

Online Text:

NCCERconnect Welding Level 1 Trainee Guide. NCCER. 5th ed. 2016

NCCERconnect Welding Level 2 Trainee Guide. NCCER. 5th ed. 2016

NCCERconnect Welding Level 4 Trainee Guide. NCCER. 5th ed. 2016

Cost

Item	Quantity	Unit Cost		Total Cost
Textbooks	30/Level 1 30/Level 2 30/Level 4	\$94.00 \$124.00 \$122.00	Welding Level 1 Training Guide Welding Level 2 Training Guide Welding Level 4 Training Guide	\$2,820.00 \$3,720.00 \$3,660.00
Digital Licenses Goodheart Wilcox 6 year access	54 Level 1 54 Level 2 54 Level 4 (bundle of 5)	\$125.00 \$125.00 \$125.00	NCCERconnect Welding Training Guide Levels 1,2,4	\$6,750.00 \$6,750.00 \$6,750.00
Shipping				\$1,659.00
Professional Development	3	\$750.00	Certified Welding Educator Certification	\$2,250.00
	3	--	SBLA and Instructional Best Practice	--
TOTAL				\$34,359.00

Total Investment \$34,359.00

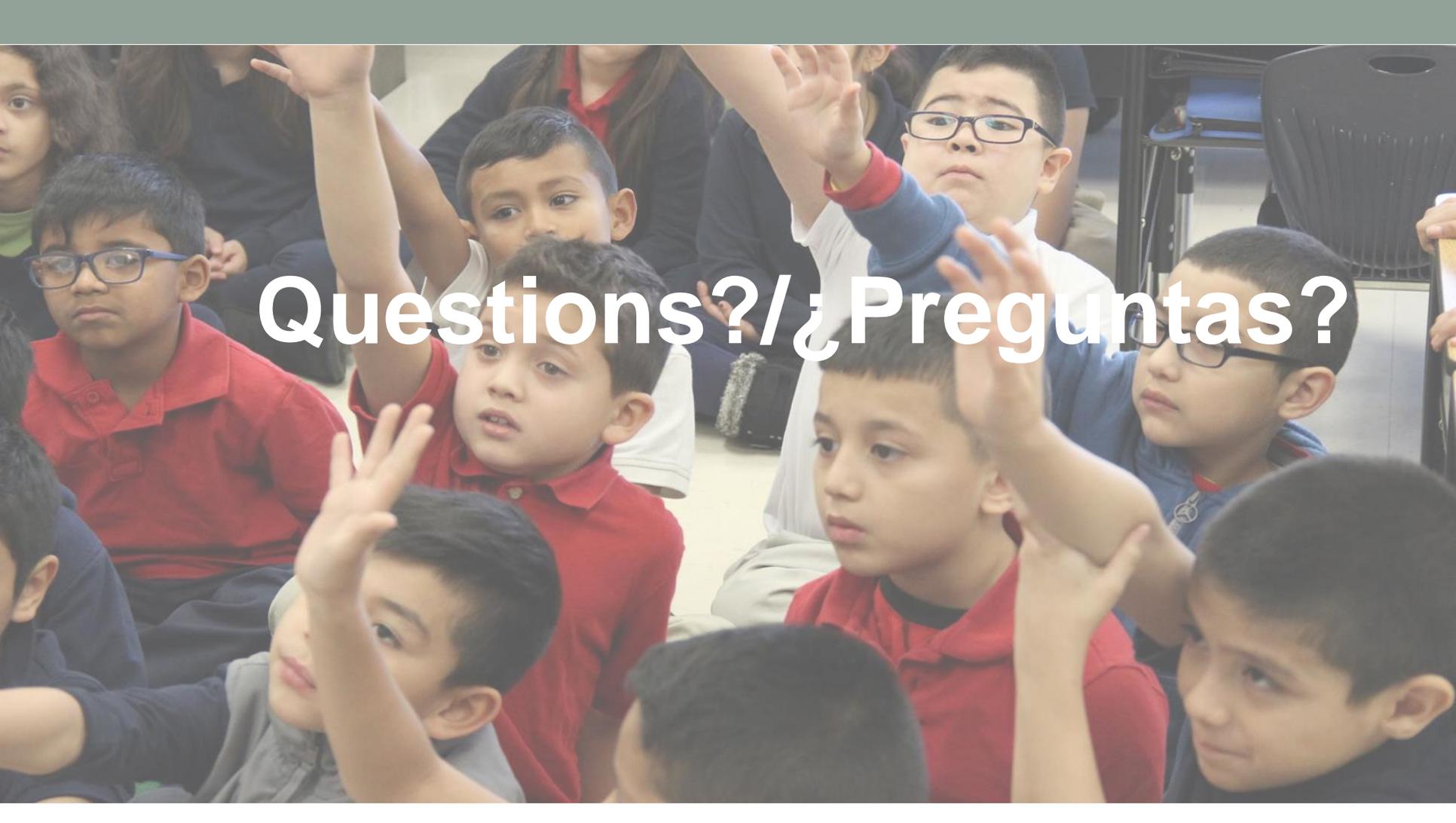
Total cost per student per year: \$35.80

Professional Development:

- ▷ Continue Professional Development for Standards-Based Learning Assessment, etc.
- ▷ Complete American Welding Society Certified Welding Educator exam

Plans for the Evaluation of Change

- ▶ Professional Development
 - June 2020 - August 2020
- ▶ Implementation of new courses
 - August 2020
- ▶ Review student data: Assessments and Certification
 - Revise Unit Templates and Assessments accordingly
 - Formal/Informal walk-through to ensure implementation with fidelity



Questions? / Preguntas?