KPBSD Middle School and High School Welding I, II, III, & IV Curriculum – 2017

Industry Standards				
ESTABLISHED GOALS/STANDARDS		Transfer Goals		
Welding I		Students will be able to independently use their learning to		
1.	Referencing SkillsUSA Welding	Welding I, II, III, & IV		
	Standards	Safely demonstrate basic welding techniques and practices for various welding		
2.	AWS 1.21	procedures.		
3.	AWS-AD 1.5.34	Be able to employ safe practices and procedures in a work environment.		
4.	AWS-AD1.6.4	Welding II, III, & IV		
5.	AWS-EX 1.1.7D	Demonstrate safe shop practices for self and others.		
6.	AWS-AD 1.8A	Identify and properly use welding tools and equipment for each welding process.		
7.	AWS-AD 1.10.1D	Demonstrate Gas Metal Arc Welding (GMAW), Shielded Metal Arc Welding (SMAW), and		
Welding II, III, & IV		other welding techniques.		
1.	AWS-EX 1.2.1	Develop Gas Tungsten Arc Welding procedures (GTAW).		
2.		Demonstrate project fabrication or repair utilizing the various welding techniques and		
3.		layout procedures.		
4.		Identify and apply special advanced welding processes (plasma cutting and pipe welding).		
5.		Explore and identify various welding careers.		
6.	AWS-AD 1.12.2J	Meaning		
ALAS Weld	KA STANDARDS ALIGNMENT:	ENDURING UNDERSTANDINGS Students will understand Welding I, II, III, & IV • Following all shop safety procedures is critical to meeting industry expectations. • Learning and abiding by proper welding procedures is critical to maintaining safety and productivity in the shop. Welding II, III, & IV • Welding machine set-up is dictated by the desired outcome/weld job.	ESSENTIAL QUESTIONS Students will keep considering Welding I, II, III, & IV What are the industry standards for shop safety? What characteristics make a weld acceptable according to industry standards?	
		Acquisition		
		Students will know	Students will be skilled at	
		Welding I, II, III, & IV	Welding I, II, III, & IV	
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	 Safe shop procedures in various welding techniques. Terminology related to basic welding equipment/tools. Welding II, III, & IV All students will have limited exposure to additional welding processes. Proper machine set up appropriate to specific processes. How to read and create welding symbols. Steps and procedures for fabricating projects. 	 Demonstrating safe shop procedures in various welding techniques. Performing welds that are compliant with AWS standards. Safely cutting and preparing metal. Welding out of position. Safely and appropriately operating power tools. Basic fabrication, layout, and construction of projects. 		
Evidence				
Evaluative Criteria	Assessment Evidence			
SkillsUSA Standards Safety Assessment	Demonstrate proficiency to progress through required check off list and safety tests. Completion of a variety of welding projects and performance tasks:			
Safety Assessment	 Welding components in flat, vertical, or over light of the light of th	erhead positions. d strike arcs by touching electrodes to metals or bolt component parts to obtain required ang equipment to fuse metal segments, using tal arc, flux-cored arc, plasma arc, and shielded assure work pieces with straight edges or ecifications. d and power tools common to the welding metal arc welding equipment. Ing parts and assemblies prior to assembly,		