Nebraska CTE

Welding 3

Apply safety principles, practices, philosophy and guidelines to the work environment. STS.HS.38.1	**a** Complete applicable safety assessment with 100% accuracy. STS.HS.38.1.A
	b Use appropriate Personal Protective Equipment (PPE) while in the lab setting. STS.HS.38.1.B
	c Use eye protection in compliance with Neb. Rev. Statute 79-715. STS.HS.38.1.C
	d Carry out the safe application of tools and machines. STS.HS.38.1.D
	e Explain the main hazards that are possible in the lab setting. STS.HS.38.1.E
	f Demonstrate proper handling and storing of materials. STS.HS.38.1.F
Identify career opportunities in the welding industry. STS.HS.38.2	**a** Describe work behaviors needed to be employable. STS.HS.38.2.A
	b Identify employment trends in the welding industry. STS.HS.38.2.B
	c Identify the responsibilities and characteristics of professionals in the welding industry. STS.HS.38.2.C
	d Identify the training, education, certification, and licensing requirements for careers in the welding industry. STS.HS.38.2.D
Demonstrate the use of welding communications. STS.HS.38.3	**a** Explain welding terminology. STS.HS.38.3.A
	b Identify a quality weld according to the American Welding Society (AWS). STS.HS.38.3.B
	c Measure metric and imperial measurements within an accuracy of a millimeter or 1/64 of an inch. STS.HS.38.3.C
	d Explain mechanical drawings according to the American National Standards Institute (ANSI). STS.HS.38.3.D
	e Explain welding symbols according to the AWS. STS.HS.38.3.E
	f Solve mathematical functions used in welding. STS.HS.38.3.F
	g Explain information from a welding procedure sheet. STS.HS.38.3.G

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Identify the materials, tools, fasteners, and equipment needed to weld. STS.HS.38.4	**a** Identify tools and their use in welding. STS.HS.38.4.A
	b Identify welding equipment and proper set up procedures according to the manufacturer's recommendations. STS.HS.38.4.B
	c Identify the material used in welding. STS.HS.38.4.C
	d Identify the filler material used in welding. STS.HS.38.4.D
	e Determine types of fasteners, adhesives, and finishes used for welding. STS.HS.38.4.E
	f Identify automated or emerging technologies in welding. STS.HS.38.4.F
Perform metal cutting operations. STS.HS.38.5	**a** Perform an abrasive cutting procedure. STS.HS.38.5.A
	b Perform a mechanical cutting procedure. STS.HS.38.5.B
	c Perform a hot (flame) source cutting operation. STS.HS.38.5.C
	d Perform an arc cutting operation. STS.HS.38.5.D
	e Perform an automated cutting operation. STS.HS.38.5.E
Join material using any methods of welding procedure in the flat, horizontal, vertical, and overhead positions. STS.HS.38.6	**a** Create a pad of surface welds with no welding defects according to the AWS. STS.HS.38.6.A
	b Create groove joints with no welding defects according to AWS standards. STS.HS.38.6.B
	c Create fillet welds with no welding defects according to AWS standards. STS.HS.38.6.C
	d Perform an AWS standard bend test. STS.HS.38.6.D
Produce a product with welding processes that are available. STS.HS.38.7	**a** Create a drawing with welding symbols according to AWS. STS.HS.38.7.A
	b Perform mathematical calculations to estimate the cost of materials for the product. STS.HS.38.7.B
	c Produce and finish the product to specifications. STS.HS.38.7.C