IDAHO
Division of Career Technical Education

2024-2025 Technical Skills Assessment
Welding

Results by Standard

Legend (%)		
0-50%	51-75%	76-100%

Assessment: Welding Number tested: 718	% Correct 21-22	% Correct 22-23	% Correct 23-24	% Correct 24-25
CONTENT STANDARD 1.0: IDENTIFY LAB ORGANIZATION AND SAFETY PROCEDURES	78.60%	80.74%	76.71%	77.74%
Performance Standard 1.1: Demonstrate general lab safety rules and procedures	78.82%	81.16%	77.54%	78.33%
1.1.1 Describe general shop safety rules and procedures (i.e., safety test)	95.10%	96.07%	93.32%	92.58%
1.1.2 Describe OSHA in workplace safety	85.10%	88.21%	82.24%	85.53%
1.1.3 Comply with the required use of safety glasses, ear protection, gloves, and shoes during lab/shop activities, i.e., personal protection equipment (PPE)	93.67%	94.87%	89.99%	90.88%
1.1.4 Operate lab equipment according to safety guidelines	67.55%	78.21%	70.29%	69.87%
1.1.5 Identify and use proper lifting procedures and proper use of support equipment (i.e., rigging, chains, straps, cables)	86.43%	90.85%	86.11%	85.85%
1.1.6 Utilize proper ventilation procedures for working within the lab/shop area	90.71%	92.14%	89.39%	90.25%
1.1.7 Identify marked safety areas	80.82%	85.30%	82.51%	83.52%
1.1.8 Identify the location and the types of fire extinguishers and other fire safety equipment; demonstrate knowledge of the procedures for using fire extinguishers and other fire safety equipment	74.08%	76.75%	72.10%	72.20%
1.1.9 Identify the location and use of eye wash stations	93.88%	91.88%	90.59%	91.95%
1.1.10 Identify the location of the posted evacuation routes	80.00%	83.25%	80.51%	83.02%
1.1.11 Identify and wear appropriate clothing for lab/shop activities	60.00%	65.47%	61.68%	58.36%
1.1.12 Secure hair and jewelry for lab/shop activities	88.16%	91.45%	88.72%	87.04%
1.1.13 Demonstrate knowledge of the safety aspects of high voltage circuits	87.45%	87.01%	84.98%	86.98%
1.1.17 Follow written instructions to complete work assignments	73.47%	77.95%	71.70%	74.34%
1.1.18 Identify requirements for Hot Work Permits	45.51%	43.42%	41.86%	44.72%
1.1.19 Identify what constitutes a confined space	60.00%	60.34%	58.01%	59.87%
Performance Standard 1.2: Identify and utilize proper tools	77.24%	79.40%	73.43%	75.85%

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1.2.1 Identify hand tools and their appropriate usage	94.49%	94.70%	92.52%	92.70%
1.2.3 Demonstrate safe handling and use of appropriate tools	60.00%	64.10%	54.34%	58.99%
Performance Standard 1.3: Identify and utilize power tools and equipment	77.55%	78.06%	71.70%	73.92%
1.3.1 Identify power tools and equipment, and their appropriate usage	93.47%	93.68%	85.45%	84.78%
1.3.2 Demonstrate safe handling and use of appropriate power tools and equipment	69.59%	70.26%	64.82%	68.49%
CONTENT STANDARD 2.0: APPLY FUNDAMENTAL PRINT READING, MEASUREMENT AND LAYOUT/FIT-UP TECHNIQUES	65.68%	70.34%	64.64%	67.25%
Performance Standard 2.1: Demonstrate print reading and sketching practices	65.41%	69.36%	63.38%	64.65%
2.1.2 Identify and explain industry standard welding symbols	60.00%	65.21%	56.74%	58.11%
2.1.7 Fabricate parts from a drawing or sketch	70.82%	73.50%	70.03%	71.19%
Performance Standard 2.3: Utilize layout principles and practices	66.22%	72.31%	67.16%	72.45%
2.3.3 Select appropriate materials to complete work assignment	64.90%	69.57%	64.75%	70.94%
2.3.5 Layout parts using measurement practices	67.55%	75.04%	69.56%	73.96%
CONTENT STANDARD 3.0: IDENTIFY PROPERTIES OF METALS	65.97%	71.50%	65.25%	63.46%
Performance Standard 3.1: Identify material properties and science	65.97%	71.50%	65.25%	63.46%
3.1.1 Identify the difference between ferrous and non-ferrous metals	65.97%	71.50%	65.25%	63.46%
CONTENT STANDARD 4.0: APPLY SHIELDED METAL ARC WELDING (SMAW) TECHNIQUE	68.98%	71.34%	66.40%	69.31%
Performance Standard 4.1: Safety procedures	59.69%	60.85%	55.34%	59.94%
4.1.1 Identify and explain different types of welding current and polarity	59.69%	60.85%	55.34%	59.94%
Performance Standard 4.2: Produce welds using SMAW on carbon steel	87.55%	92.31%	88.52%	88.05%
4.2.2 Operate SMAW equipment	87.55%	92.31%	88.52%	88.05%
CONTENT STANDARD 5.0: APPLY GAS METAL ARC WELDING (GMAW-S, GMAW) TECHN	62.41%	66.69%	62.15%	64.15%
Performance Standard 5.1: Utilize safety procedures	65.82%	72.82%	67.36%	66.92%
5.1.4 Demonstrate safe startup, shutdown, disassembly, and cylinder exchange procedures of GMAW equipment	65.82%	72.82%	67.36%	66.92%
Performance Standard 5.2: Produce welds using GMAW-S on carbon steel	61.84%	65.67%	61.28%	63.69%
5.2.1 Set up for GMAW-S operations	57.14%	66.50%	56.88%	55.85%
5.2.2 Operate GMAW-S equipment	63.81%	65.70%	63.02%	66.12%
5.2.3 Perform welds in the 1F position	62.24%	68.03%	62.08%	63.90%
5.2.4 Perform welds in the 2F position	66.53%	68.12%	62.15%	67.30%
5.2.7 Perform welds in the 1G position	63.06%	66.50%	63.42%	67.30%

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5.2.8 Perform welds in the 2G position	56.12%	60.51%	59.28%	60.88%
5.2.9 Perform welds in the 3G position	60.61%	64.62%	59.01%	58.62%
CONTENT STANDARD 6.0: APPLY FLUX CORED ARC WELDING (FCAW-G) TECHNIQUE	67.21%	69.74%	62.93%	65.45%
Performance Standard 6.2: Produce welds using FCAW-G on carbon steel	67.21%	69.74%	62.93%	65.45%
6.2.1 Set up for FCAW-G operations	75.92%	78.12%	71.96%	72.58%
6.2.2 Operate FCAW-G equipment	35.51%	38.97%	30.97%	33.33%
6.2.9 Perform welds in the 3G position	90.20%	92.14%	85.85%	90.44%
CONTENT STANDARD 7.0: APPLY GAS TUNGSTEN ARC WELDING (GTAW) TECHNIQUES	42.45%	45.64%	42.32%	35.09%
Performance Standard 7.2: Produce welds using GTAW on carbon steel	42.45%	45.64%	42.32%	35.09%
7.2.2 Operate GTAW equipment	42.45%	45.64%	42.32%	35.09%
CONTENT STANDARD 8.0: APPLY THERMAL CUTTING PROCESSES	61.26%	62.95%	58.62%	58.17%
Performance Standard 8.1: Demonstrate oxy-fuel gas cutting (OFC)	66.15%	67.98%	64.13%	63.87%
8.1.1 Perform safety inspections of OFC equipment and accessories	55.71%	57.66%	54.43%	53.75%
8.1.3 Demonstrate safe startup, shutdown, disassembly, and cylinder exchange procedu	67.48%	68.89%	65.33%	65.20%
8.1.5 Operate OFC equipment	83.78%	86.92%	79.91%	79.56%
8.1.6 Perform straight, square edge cutting operations in the flat position	58.16%	58.29%	58.08%	58.87%
Performance Standard 8.2: Demonstrate plasma arc cutting (PAC) on carbon steel and aluminum	39.29%	40.34%	33.85%	32.52%
8.2.5 Set up for PAC operations	59.39%	55.56%	46.86%	45.53%
8.2.6 Operate PAC equipment	19.18%	25.13%	20.83%	19.50%
CONTENT STANDARD 9.0: IDENTIFY WELDING CODES, INSPECTIONS, AND TESTING PRINCIPLES	60.58%	63.59%	59.97%	62.23%
Performance Standard 9.1: Identify welding codes, qualifications and certifications	60.44%	62.93%	59.61%	61.53%
9.1.3 Explain the importance of quality workmanship	72.11%	76.52%	73.43%	76.18%
9.1.5 Perform a visual inspection of fillet welds	48.78%	49.34%	45.79%	46.88%
Performance Standard 9.2: Demonstrate welding inspection and testing principles	61.43%	67.52%	62.08%	66.42%
9.2.3 Examine tack, root passes, intermediate layers, and completed welds	61.43%	67.52%	62.08%	66.42%
CONTENT STANDARD 10.0: APPLY FABRICATION FUNDAMENTALS	65.06%	70.66%	64.31%	65.70%
Performance Standard 10.1: Utilize base metal preparation fundamentals	68.34%	73.21%	66.61%	68.77%

Assessment: Welding **Number tested: 718**	**% Correct 21-22**	**% Correct 22-23**	**% Correct 23-24**	**% Correct 24-25**
10.1.1 Clean base metal for welding or cutting	62.86%	69.83%	61.42%	63.27%
10.1.2 Identify and explain joint design	86.84%	91.20%	85.98%	87.04%
10.1.3 Select the proper joint design based on a welding procedure specification (WPS) or instructors direction	29.39%	38.29%	34.58%	36.86%
10.1.4 Mechanically bevel the edge of a mild steel plate (i.e., hand beveller, grinder)	72.65%	75.10%	67.82%	70.90%
Performance Standard 10.2: Demonstrate fabrication techniques	62.87%	68.96%	62.78%	63.66%
10.2.1 Demonstrate proper setup of fabrication area, equipment, and materials	76.53%	81.25%	75.08%	75.39%
10.2.2 Construct projects in the proper sequence	70.88%	76.01%	69.78%	68.76%
10.2.3 Properly layout projects from welding prints	55.51%	61.20%	56.52%	59.96%
10.2.4 Check work for accuracy	48.57%	57.38%	49.76%	50.52%