LLED 360 Unit Plan for Welding

Name: Marshall Hacker

Subject / Grade: Machining and Welding 12

Class composition:

2 learning disabled students in the classroom who are unable to read/write they have a teacher's assistant with them. 1 ELL student who is proficient at English and requires no teacher aid.

Introduction:

The goal for the unit is to expose the children to the basics of Welding. The skills and processes required to produce a good weld. Students will be able to weld and recognize the flaw in their welds and know how and where to correct them.

Summative assessment (optional):

Assessment will be done via 1 written test regarding safety, theory, and technique tip/tricks. In addition, they will be evaluated via a Welded Log Project and graded based on quality of their welds.

Lesson Topic	Subject Big Ideas	Curricular Competencies / Content	Literacy Objectives	Lesson Summary
Welder Safety	Products can be designed for life cycle. Tools and technologies can be adapted for specific purposes.	Identification and selection of metal suitable for machining or welding processes. Procedures for inspection of quality. Welding and machining in industry. DEFINING/IDEATING/APPLIED SKILLS	Picture diagrams will be given to ELL and learning disabled. These students will work in groups with other classmates. Students will have access to TA.	Safe operation of the welder. Proper way to set up and use machine. Introduction to preparing the metal.
Using a Grinder	Personal design interests require the evaluation and refinement of skills. Tools and technologies can be adapted for specific purposes.	Forms of welding. Engineered drawings and blueprints. DEFINING/IDEATING/APPLIED SKILLS	These students will work in groups with other classmates. Students will have access to TA.	Safe operation of the grinder. Proper way to set up and use machine. Introduction to preparing the metal. Work on log.
Arc Welding	Personal design interests require the evaluation and refinement of skills.	Forms of welding DEFINING/IDEATING/APPLIED SKILLS	Picture diagrams will be given to ELL and learning disabled. These students will work in groups with other classmates. Students will have access to TA.	Safe operation of the welder. Proper way to set up and use machine. Work on log.
TIG Welding	Personal design interests require the evaluation and refinement of skills.	Forms of welding DEFINING/IDEATING/APPLIED SKILLS	Picture diagrams will be given to ELL and learning disabled. These students will work in groups with other classmates. Students will have access to TA	Safe operation of the welder. Proper way to set up and use machine. Focus on Prep and Differences. Work on log

Resources (optional): n/a

MIG Welding	Personal design interests require the evaluation and refinement of skills.	Forms of welding DEFINING/IDEATING/APPLIED	Picture diagrams will be given to ELL and learning disabled. These students will work in groups with	Safe operation of the welder. Proper way to set up and use machine.
		SKILLS	other classmates. Students will have access to TA.	Work on log.
	Products can be designed for life cycle.	Identification and selection of metal	Picture diagrams will be given to ELL and learning	Test students.
Test of theoretical	Personal design interests require the	suitable for machining or welding	disabled. Students will have access to TA.	Work on log.
Knowledge and Skills	evaluation and refinement of skills.	processes. Procedures for inspection of		
		quality. Welding and machining in		
		industry		
		DEFINING/IDEATING/APPLIED		
		SKILLS		
	Products can be designed for life cycle.	Forms of welding	Picture diagrams will be given to ELL and learning	Work on log.
Work on Log and Welding	Tools and technologies can be adapted	DEFINING/IDEATING/APPLIED	disabled. These students will work in groups with	
Skills	for specific purposes.	SKILLS	other classmates. Students will have access to TA.	
	Personal design interests require the	Forms of welding. Procedures for	Picture diagrams will be given to ELL and learning	Work on log.
Welded Log Submission	evaluation and refinement of skills.	inspection of quality. engineered	disabled. These students will work in groups with	
		drawings and blueprints. connection	other classmates. Students will have access to TA.	
		between welding and machining in the		
		creation of a project.		
		DEFINING/IDEATING/APPLIED		
		SKILLS		

Reflection:

This unit plan helps to me to see and lay out timelines for projects efficiently. This also allows me to prepare for future classes and modify where necessary. This unit plan could help substitute teachers find where they are and help them teach the class if I, as a teacher, was away. After creating this unit plan I can see the importance of planning and preparation. These are great skills and I am grateful to have learned them. I am excited to use this unit plan in the class room to see how it works. This unit plan is a great refresher for old students as well as a great introduction unit for new students into the program. It ties all types of welding in because they all share similar techniques. This can allow for students to complete a large portion of the curriculum competencies/content using 1 test and 1 project so students can move on and inquire into project of their own.