Name _____ Troop _____ Council _____

Welding Merit Badge Homework Sheet

Req. 1. Do the following:
(a) Explain to your counselor the hazards you are most likely to encounter while welding, and what you should do to anticipate, help prevent, mitigate, or lessen these hazards
(b) Show that you know first aid for, and the prevention of, injuries or illnesses that could occur while welding, including electrical shock, eye injuries, burns, fume inhalation, dizziness, skin irritation, and exposure to hazardous chemicals, including filler metals and welding gases. (Discuses this with an adult leader)

(a)_____
_____
_____
_____
b) Adult Leader Signature _____

Req. 2. Do the following:

(a) With your counselor, discuss general safety precautions and safety data sheets (SDS) related to welding. Explain the importance of the SDS.

(b) Describe the appropriate safety gear and clothing that must be worn when welding. Then, present yourself properly dressed for welding—in protective equipment, clothing, and footwear

(c) Explain and demonstrate the proper care and storage of welding equipment, tools, and protective clothing and footwear.

(a)_____
_____
_____
(b)_____
_____
_____
(c)_____
_____
_____

Req. 3. Explain the terms welding, electrode, slag, and oxidation. Describe the welding process, how heat is generated, what kind of filler metal is added (if any), and what protects the molten metal from the atmosphere.

Explain Each Term

Welding_____
Electrode_____
Slag_____
Oxidaton_____

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Welding Merit Badge Homework Sheet

Req. 3. (Cont)

Describe each process

The welding process

_____

_____

How is heat generated

_____

_____

What kind of filler metal is added (if any)

_____

_____

What protects the molten metal from the atmosphere

_____

_____

Req. 4. Name the different mechanical and thermal cutting methods. Choose one method and describe how to use the process. Discuss one advantage and one limitation of this process.

_____

_____

_____

_____

_____

Req. 5. Do the following:

(a) Select two welding processes, and make a list of the different components of the equipment required for each process. Discuss one advantage and one limitation for each process.

(b) Choose one welding process. Set up the process you have chosen, including gas regulators, work clamps, cables, filler materials, and equipment settings. Have your counselor inspect and approve the area for the welding process you have chosen.

(a)_____

_____

_____

(b)_____

_____

_____

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Welding Merit Badge Homework Sheet