

Elizabethtown Area School District  
Scope & Sequence - Quick Reference



**Department:** Agriculture Education

**Course:** Agriculture Mechanics I

**Grade Level(s):** 9-12th Grade

<i>Unit Title</i>	<i>General Topic(s)</i>	<i>Pacing</i>
1. Arc Welding (SMAW - Shielded Metal Arc Welding)	<ul style="list-style-type: none"><li>● History of welding<ul style="list-style-type: none"><li>○ Types of welding</li></ul></li><li>● Welding Safety</li><li>● Weld process<ul style="list-style-type: none"><li>○ Welder set-up</li><li>○ CLAMS</li></ul></li><li>● Types of weld joints</li><li>● Electrode Selection</li><li>● Electricity Review<ul style="list-style-type: none"><li>○ AC/DC</li></ul></li><li>● Hands-on welding<ul style="list-style-type: none"><li>○ Arc Strike</li><li>○ Bead</li><li>○ Butt</li><li>○ Lap</li><li>○ T-joint</li><li>○ Final Weld Project</li></ul></li></ul>	10 weeks

<p>2. Small Gasoline Engine Operation</p>	<ul style="list-style-type: none"> <li>● History of Small Engines</li> <li>● Small Engine Safety</li> <li>● Engine operation</li> <li>● 4 stroke vs 2 stroke</li> <li>● Small Engine Parts and function</li> <li>● Small Engine Tools and use</li> <li>● Engine disassembly</li> <li>● Using Measuring Tools</li> <li>● Repair Parts/Parts Manual</li> <li>● Engine reassembly</li> <li>● Troubleshooting</li> <li>● Preventative Maintenance</li> </ul>	<p>5 weeks</p>
<p>3. Oxy-Acetylene Brazing and Cutting</p>	<ul style="list-style-type: none"> <li>● Gas welding safety</li> <li>● Parts of the oxy-rig</li> <li>● Oxy rig operation and set-up</li> <li>● Brazing vs Welding</li> <li>● Torch Cutting</li> <li>● Hands-on Torch Work <ul style="list-style-type: none"> <li>○ Brazing cowboy/turtle</li> <li>○ Cutting block</li> </ul> </li> </ul>	<p>3 weeks</p>