

*Education and Workforce Development Cabinet*

**CURRICULUM MAP**

<b>School:</b>	<b>Franklin Simpson CTE</b>	<b>Program:</b>	<b>Welding</b>
<b>Teacher:</b>	<b>Jeremy Loveall</b>	<b>School Year:</b>	<b>2011-2012</b>
<b>KCTCS Course Number:</b>	<b>WLD 120 and 121</b>	<b>KY Tech Course Name</b>	<b>Shielded Metal Arc Welding and Fillet Lab</b>
<b>Length of Course:</b>	<b>2 Trimesters 120 Days</b>	<b>Length of Period</b>	<b>60 Minutes</b>
<b>High School Credit(s)</b>	<b>1</b>		

DATE TAUGHT Time Wks/Month	Unit Topics	Content Tasks (#'s and E, I, C), Activities, Assessment	Essential Questions	Core Content Skill Standards
Unit 1 Days 1,2,3,4,5	Lab Equipment and Safety	<p><b>TASKS</b></p> <p>1.WLD 120 TASK 1-Practice welding safety procedures</p> <p>2.WLD 121 TASK 1-Practice welding procedures safely</p> <p><b>ACTIVITIES</b></p> <p>1.Students will go through class orientation</p> <p>2.Course syllabus, class and lab rules read and signed by students and parents</p> <p>3.Show power point on lab safety and lecture</p> <p>4.Show video on lab safety and lecture</p> <p>5.Show video on fire safety and lecture</p> <p>6.Show video on personal protective equipment and lecture</p> <p>7.Show video on equipment safety and lecture</p> <p><b>ASSESSMENT</b></p> <p>1.Written test on lab and equipment safety</p> <p>2.Written test on fire safety</p> <p>3.Written test on personal protective equipment</p>	<ol style="list-style-type: none"> <li>Who is the person most responsible for your safety?</li> <li>What is the proper PPE for welding?</li> <li>Why is it important to have procedures in place for emergency situations?</li> </ol>	<p><b>Skill Standards:</b></p> <p><b>AD002</b> Demonstrate ability to learn new process steps</p> <p><b>OD008</b> Identify the safety and proper use of the tools of the trade</p> <p><b>EA009</b> Comply with safety guidelines</p> <p><b>Core Content:</b></p> <p><b>RST-2</b> Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.</p> <p><b>RST-4.</b> Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to <i>grades 11–12 texts</i></p>

DATE TAUGHT Time Wks/Month	Unit Topics	Content Tasks (#'s and E, I, C), Activities, Assessment	Essential Questions	Core Content Skill Standards
				<b>RST-7.</b> Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.
Unit 2 Days 6,7,8,9,10	SMAW Equipment set up and Electrode Identification	<p><b>TASKS</b></p> <p><b>WLD 120 TASK 2-</b> Identify, select, and store SMAW electrodes</p> <p><b>WLD 121 TASK 2-</b> Identify, select, and store SMAW electrodes</p> <p><b>WLD 120 TASK 6-</b> Use shop equipment and tools appropriately.</p> <p><b>WLD 121 TASK 6-</b> Use shop equipment and tools appropriately.</p> <p><b>ACTIVITIES</b></p> <ol style="list-style-type: none"> <li>1. Show power point on SMAW equipment set up and use and lecture</li> <li>2. Show video from Lincoln Electric on SMAW equipment and use</li> <li>3. Show power point on SMAW electrode identification</li> <li>4. Discuss proper selection of electrodes for a particular application.</li> <li>5. Show videos from Lincoln Electric and Welding Tips and Tricks . com of actual SMAW welding</li> </ol>	<p>What is the proper way to set up an SMAW machine for use?</p> <p>What are the advantages and disadvantages of the SMAW process?</p> <p>What do the letters and numbers on a welding electrode mean?</p> <p>How do I strike an arc and weld properly?</p>	<p><b>Skill Standards:</b></p> <p><b>EA-002</b> Demonstrate a willingness to learn</p> <p><b>OD-008</b> Identify the safety and proper use of the tools of the trade</p> <p><b>AD-002</b> Demonstrate ability to learn new process steps</p> <p><b>Core Content:</b></p> <p><b>RST-2</b></p> <p><b>RST-4.</b></p> <p><b>RST-7.</b></p>

DATE TAUGHT Time Wks/Month	Unit Topics	Content Tasks (#'s and E, I, C), Activities, Assessment	Essential Questions	Core Content Skill Standards
		<p><b>ASSESSMENT</b></p> <ol style="list-style-type: none"> <li>1. Written test given on SMAW equipment and set up</li> <li>2. Written test given on SMAW electrode identification</li> </ol>		
Unit 3 Day 11	SMAW Welding in Flat Position	<p><b>TASKS</b></p> <p><b>WLD 120 and 121 TASK 3-</b> Apply principles of SMAW process to cut and weld metals.</p> <p><b>WLD 120 and 121 TASK 4-</b> Apply knowledge of the effects of variables on the SMAW process to weld plate and pipe.</p> <p><b>WLD 120 and 121 TASK 5-</b> Apply knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel.</p> <p><b>WLD 120 and 121 TASK 6-</b> Use shop equipment and tools appropriately.</p> <p><b>ACTIVITIES</b></p> <p>Students will start and restart an arc and run a bead using a 1/8"E6011 electrode</p> <p><b>ASSESSMENT</b></p> <p>Instructor will give a grade for weld</p>	<p>What amperage and polarity is required to make this weld?</p> <p>What is the proper weld speed, electrode angle, and manipulation of electrode to make this weld?</p> <p>How can I make my welds better?</p>	<p><b>Skill Standards:</b></p> <p><b>AD-002</b> Demonstrate ability to learn new process steps</p> <p>AD-003 Implement new process steps given oral instructions</p> <p>OB-002 Demonstrate knowledge of safety practices that relate to the construction industry</p> <p><b>Core Content:</b></p> <p><b>RST-2</b> RST-4 RST-7 GC-1 Prove that all circles are similar.</p> <p>G-GMD-3 Use volume formulas for cylinders, pyramids, cones, and spheres to solve problems.</p>

DATE TAUGHT Time Wks/Month	Unit Topics	Content Tasks (#'s and E, I, C), Activities, Assessment	Essential Questions	Core Content Skill Standards
Unit 3 Day 12,13,14,15	SMAW Welding in Flat Position	<p><b>TASKS</b>  <b>WLD 120 and 121 TASK 3-</b> Apply principles of SMAW process to cut and weld metals  <b>WLD 120 and 121 TASK 4-</b> Apply the knowledge of the effects of variables on the SMAW process to weld plate and pipe  <b>WLD 120 and 121 TASK 5-</b> Apply the knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel  <b>WLD 120 and 121 TASK 6-</b> Use shop equipment and tools</p> <p><b>ACTIVITIES</b>  Students will stack straight stringer beads using a 1/8" E6011 and a 1/8" E7018 electrode</p> <p><b>ASSESSMENT</b>  Instructor will give a grade for weld</p>	<p>What amperage and polarity is required to make this weld?  What is the proper weld speed, electrode angle, and manipulation of electrode to make this weld?  How can I make my welds better?</p>	<p><b>Skill Standards:</b>  <b>AD-002</b>  Demonstrate ability to learn new process steps  AD-003  Implement new process steps given oral instructions  OB-002  Demonstrate knowledge of safety practices that relate to the construction industry  <b>Core Content:</b>  <b>RST-2</b>  RST-4  RST-7  GC-1  G-GMD-3</p>

DATE TAUGHT Time Wks/Month	Unit Topics	Content Tasks (#'s and E, I, C), Activities, Assessment	Essential Questions	Core Content Skill Standards
Unit 3 Day 16,17,18,19,20	SMAW Welding in Flat Position	<p><b>TASKS</b>  <b>WLD 120 and 121 TASK 3-</b> Apply principles of SMAW process to cut and weld metals  <b>WLD 120 and 121 TASK 4-</b> Apply the knowledge of the effects of variables on the SMAW process to weld plate and pipe  <b>WLD 120 and 121 TASK 5-</b> Apply the knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel  <b>WLD 120 and 121 TASK 6-</b> Use shop equipment and tools</p> <p><b>ACTIVITIES</b>  Students will weld a multi pass T joint on 1/4" steel plate in the flat position using a 1/8" E6011 electrode</p> <p><b>ASSESSMENT</b>  Instructor will give a grade for weld</p>	<p>What amperage and polarity is required to make this weld?  What is the proper weld speed, electrode angle, and manipulation of electrode to make this weld?  How can I make my welds better?</p>	<p><b>Skill Standards:</b>  <b>AD-002</b>  Demonstrate ability to learn new process steps  AD-003  Implement new process steps given oral instructions  OB-002  Demonstrate knowledge of safety practices that relate to the construction industry  <b>Core Content:</b>  <b>RST-2</b>  RST-4  RST-7  GC-1  G-GMD-3</p>
Unit 3 Day 21,22	SMAW Welding in Flat Position	<p><b>TASKS</b>  <b>WLD 120 and 121 TASK 3-</b> Apply principles of SMAW process to cut and weld metals  <b>WLD 120 and 121 TASK 4-</b> Apply the knowledge of the effects of variables on the SMAW process to weld plate and pipe  <b>WLD 120 and 121 TASK 5-</b> Apply the knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel  <b>WLD 120 and 121 TASK 6-</b> Use shop equipment and tools</p>	<p>What amperage and polarity is required to make this weld?  What is the proper weld speed, electrode angle, and manipulation of electrode to make this weld?  How can I make my welds better?</p>	<p><b>Skill Standards:</b>  <b>AD-002</b>  Demonstrate ability to learn new process steps  AD-003  Implement new process steps given oral instructions  OB-002  Demonstrate knowledge</p>

DATE TAUGHT Time Wks/Month	Unit Topics	Content Tasks (#'s and E, I, C), Activities, Assessment	Essential Questions	Core Content Skill Standards
		<p><b>ACTIVITIES</b> Students will weld a multi pass T joint on ¼” steel plate in the flat position using a 1/8” E6011 electrode</p> <p><b>ASSESSMENT</b> Instructor will give a grade for weld</p>		<p>of safety practices that relate to the construction industry</p> <p><b>Core Content:</b> RST-2 RST-4 RST-7 GC-1 G-GMD-3</p>
Unit 3 Day 22,23,24,25	SMAW Welding in Flat Position	<p><b>TASKS</b> WLD 120 and 121 TASK 3- Apply principles of SMAW process to cut and weld metals WLD 120 and 121 TASK 4- Apply the knowledge of the effects of variables on the SMAW process to weld plate and pipe WLD 120 and 121 TASK 5- Apply the knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel WLD 120 and 121 TASK 6- Use shop equipment and tools</p> <p><b>ACTIVITIES</b> Students will weld a multi pass T joint on ¼” steel plate in the flat position using a 1/8” E7018 electrode</p> <p><b>ASSESSMENT</b> Instructor will give a grade for weld</p>	<p>What amperage and polarity is required to make this weld? What is the proper weld speed, electrode angle, and manipulation of electrode to make this weld? How can I make my welds better?</p>	<p><b>Skill Standards:</b> AD-002 Demonstrate ability to learn new process steps AD-003 Implement new process steps given oral instructions OB-002 Demonstrate knowledge of safety practices that relate to the construction industry</p> <p><b>Core Content:</b> RST-2 RST-4 RST-7 GC-1 G-GMD-3</p>

DATE TAUGHT Time Wks/Month	Unit Topics	Content Tasks (#'s and E, I, C), Activities, Assessment	Essential Questions	Core Content Skill Standards

Time Wks/Month	Dates Taught	Unit Topics	Content Tasks (#'s and E, I, C), Activities, Assessment	Essential Questions	Core Content Skill Standards
Unit 3 Day 26,27,28,29,30		SMAW Welding in Flat Position	<p><b>TASKS</b></p> <p><b>WLD 120 and 121 TASK 3-</b> Apply principles of SMAW process to cut and weld metals</p> <p><b>WLD 120 and 121 TASK 4-</b> Apply the knowledge of the effects of variables on the SMAW process to weld plate and pipe</p> <p><b>WLD 120 and 121 TASK 5-</b> Apply the knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel</p> <p><b>WLD 120 and 121 TASK 6-</b> Use shop equipment and tools</p> <p><b>ACTIVITIES</b></p> <p>Students will weld a multi pass lap joint on 1/2" steel plate in the flat position using a 1/8" E6011 electrode</p> <p><b>ASSESSMENT</b></p> <p>Instructor will give a grade for weld</p>	<p>What amperage and polarity is required to make this weld?</p> <p>What is the proper weld speed, electrode angle, and manipulation of electrode to make this weld?</p> <p>How can I make my welds better?</p>	<p><b>Skill Standards:</b></p> <p><b>AD-002</b></p> <p>Demonstrate ability to learn new process steps</p> <p>AD-003</p> <p>Implement new process steps given oral instructions</p> <p>OB-002</p> <p>Demonstrate knowledge of safety practices that relate to the construction industry</p> <p><b>Core Content:</b></p> <p><b>RST-2</b></p> <p>RST-4</p> <p>RST-7</p> <p>GC-1</p> <p>G-GMD-3</p>

Time Wks/Month	Dates Taught	Unit Topics	Content Tasks (#'s and E, I, C), Activities, Assessment	Essential Questions	Core Content Skill Standards
Unit 3 Day 31,32,33,34,35		SMAW Welding in Flat Position	<p><b>TASKS</b>  <b>WLD 120 and 121 TASK 3-</b> Apply principles of SMAW process to cut and weld metals  <b>WLD 120 and 121 TASK 4-</b> Apply the knowledge of the effects of variables on the SMAW process to weld plate and pipe  <b>WLD 120 and 121 TASK 5-</b> Apply the knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel  <b>WLD 120 and 121 TASK 6-</b> Use shop equipment and tools</p> <p><b>ACTIVITIES</b>  Students will weld a multi pass lap joint on 1/2" steel plate in the flat position using a 1/8" E7018 electrode</p> <p><b>ASSESSMENT</b>  Instructor will give a grade for weld</p>	<p>What amperage and polarity is required to make this weld?  What is the proper weld speed, electrode angle, and manipulation of electrode to make this weld?  How can I make my welds better?</p>	<p><b>Skill Standards:</b>  <b>AD-002</b>  Demonstrate ability to learn new process steps  <b>AD-003</b>  Implement new process steps given oral instructions  <b>OB-002</b>  Demonstrate knowledge of safety practices that relate to the construction industry  <b>Core Content:</b>  <b>RST-2</b>  RST-4  RST-7  GC-1  G-GMD-3</p>
Unit 3 Day 36,37,38,39,40		SMAW Welding in Flat Position	<p><b>TASKS</b>  <b>WLD 120 and 121 TASK 3-</b> Apply principles of SMAW process to cut and weld metals  <b>WLD 120 and 121 TASK 4-</b> Apply the knowledge of the effects of variables on the SMAW process to weld plate and pipe  <b>WLD 120 and 121 TASK 5-</b> Apply the knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel  <b>WLD 120 and 121 TASK 6-</b> Use shop equipment and tools</p>	<p>What amperage and polarity is required to make this weld?  What is the proper weld speed, electrode angle, and manipulation of electrode to make this weld?  How can I make my welds better?</p>	<p><b>Skill Standards:</b>  <b>AD-002</b>  Demonstrate ability to learn new process steps  <b>AD-003</b>  Implement new process steps given oral instructions  <b>OB-002</b>  Demonstrate knowledge of safety practices that relate to the construction</p>

Time Wks/Month	Dates Taught	Unit Topics	Content Tasks (#'s and E, I, C), Activities, Assessment	Essential Questions	Core Content Skill Standards
			<p><b>ACTIVITIES</b> Students will weld a multi pass corner joint on 1/2" steel plate in the flat position using a 1/8" E6011 electrode</p> <p><b>ASSESSMENT</b> Instructor will give a grade for weld</p>		<p>industry <b>Core Content:</b> <b>RST-2</b> RST-4 RST-7 GC-1 G-GMD-3</p>
<p>Unit 3 Day 41,42,43,44,45</p>		<p>SMAW Welding in Flat Position</p>	<p><b>TASKS</b> <b>WLD 120 and 121 TASK 3-</b> Apply principles of SMAW process to cut and weld metals <b>WLD 120 and 121 TASK 4-</b> Apply the knowledge of the effects of variables on the SMAW process to weld plate and pipe <b>WLD 120 and 121 TASK 5-</b> Apply the knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel <b>WLD 120 and 121 TASK 6-</b> Use shop equipment and tools</p> <p><b>ACTIVITIES</b> Students will weld a multi pass corner joint on 1/2" steel plate in the flat position using a 1/8" E7018 electrode</p> <p><b>ASSESSMENT</b> Instructor will give a grade for weld</p>	<p>What amperage and polarity is required to make this weld? What is the proper weld speed, electrode angle, and manipulation of electrode to make this weld? How can I make my welds better?</p>	<p><b>Skill Standards:</b> <b>AD-002</b> Demonstrate ability to learn new process steps AD-003 Implement new process steps given oral instructions OB-002 Demonstrate knowledge of safety practices that relate to the construction industry <b>Core Content:</b> <b>RST-2</b> RST-4 RST-7 GC-1 G-GMD-3</p>

Time Wks/Month	Dates Taught	Unit Topics	Content Tasks (#'s and E, I, C), Activities, Assessment	Essential Questions	Core Content Skill Standards
Unit 3 Day 46,47,48,49,50		SMAW Welding in vertical Position	<p><b>TASKS</b>  <b>WLD 120 and 121 TASK 3-</b> Apply principles of SMAW process to cut and weld metals  <b>WLD 120 and 121 TASK 4-</b> Apply the knowledge of the effects of variables on the SMAW process to weld plate and pipe  <b>WLD 120 and 121 TASK 5-</b> Apply the knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel  <b>WLD 120 and 121 TASK 6-</b> Use shop equipment and tools</p> <p><b>ACTIVITIES</b>  Students will weld a multi pass T joint on 1/4" steel plate in the vertical up position using a 1/8" E6011 electrode</p> <p><b>ASSESSMENT</b>  Instructor will give a grade for weld</p>	<p>What amperage and polarity is required to make this weld?  What is the proper weld speed, electrode angle, and manipulation of electrode to make this weld?  How can I make my welds better?</p>	<p><b>Skill Standards:</b>  <b>AD-002</b>  Demonstrate ability to learn new process steps  <b>AD-003</b>  Implement new process steps given oral instructions  <b>OB-002</b>  Demonstrate knowledge of safety practices that relate to the construction industry  <b>Core Content:</b>  <b>RST-2</b>  RST-4  RST-7  GC-1  G-GMD-3</p>
Unit 3 Day 51,52,53,54,55		SMAW Welding in vertical Position	<p><b>TASKS</b>  <b>WLD 120 and 121 TASK 3-</b> Apply principles of SMAW process to cut and weld metals  <b>WLD 120 and 121 TASK 4-</b> Apply the knowledge of the effects of variables on the SMAW process to weld plate and pipe  <b>WLD 120 and 121 TASK 5-</b> Apply the knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel  <b>WLD 120 and 121 TASK 6-</b> Use shop equipment and tools</p> <p><b>ACTIVITIES</b></p>	<p>What amperage and polarity is required to make this weld?  What is the proper weld speed, electrode angle, and manipulation of electrode to make this weld?  How can I make my welds better?</p>	<p><b>Skill Standards:</b>  <b>AD-002</b>  Demonstrate ability to learn new process steps  <b>AD-003</b>  Implement new process steps given oral instructions  <b>OB-002</b>  Demonstrate knowledge of safety practices that relate to the construction</p>

Time Wks/Month	Dates Taught	Unit Topics	Content Tasks (#'s and E, I, C), Activities, Assessment	Essential Questions	Core Content Skill Standards
			<p>Students will weld a multi pass T joint on 1/4" steel plate in the vertical up position using a 3/32" E7018 electrode</p> <p><b>ASSESSMENT</b> Instructor will give a grade for weld</p>		<p>industry <b>Core Content:</b> <b>RST-2</b> RST-4 RST-7 GC-1 G-GMD-3</p>
<p>Unit 3 Day 56,57,58,59,60</p>		<p>SMAW Welding in vertical Position</p>	<p><b>TASKS</b> <b>WLD 120 and 121 TASK 3-</b> Apply principles of SMAW process to cut and weld metals <b>WLD 120 and 121 TASK 4-</b> Apply the knowledge of the effects of variables on the SMAW process to weld plate and pipe <b>WLD 120 and 121 TASK 5-</b> Apply the knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel <b>WLD 120 and 121 TASK 6-</b> Use shop equipment and tools</p> <p><b>ACTIVITIES</b> Students will weld a multi pass T joint on 1/4" steel plate in the vertical up position using a 1/8" E7018 electrode</p> <p><b>ASSESSMENT</b> Instructor will give a grade for weld</p>	<p>What amperage and polarity is required to make this weld? What is the proper weld speed, electrode angle, and manipulation of electrode to make this weld? How can I make my welds better?</p>	<p><b>Skill Standards:</b> <b>AD-002</b> Demonstrate ability to learn new process steps AD-003 Implement new process steps given oral instructions OB-002 Demonstrate knowledge of safety practices that relate to the construction industry <b>Core Content:</b> <b>RST-2</b> RST-4 RST-7 GC-1 G-GMD-3</p>

Time Wks/Month	Dates Taught	Unit Topics	Content Tasks (#'s and E, I, C), Activities, Assessment	Essential Questions	Core Content Skill Standards
Unit 3 Day 61,62,63,64,65		SMAW Welding in vertical Position	<p><b>TASKS</b>  <b>WLD 120 and 121 TASK 3-</b> Apply principles of SMAW process to cut and weld metals  <b>WLD 120 and 121 TASK 4-</b> Apply the knowledge of the effects of variables on the SMAW process to weld plate and pipe  <b>WLD 120 and 121 TASK 5-</b> Apply the knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel  <b>WLD 120 and 121 TASK 6-</b> Use shop equipment and tools</p> <p><b>ACTIVITIES</b>  Students will weld a multi pass lap joint on 1/2" steel plate in the vertical up position using a 1/8" E6011 electrode</p> <p><b>ASSESSMENT</b>  Instructor will give a grade for weld</p>	<p>What amperage and polarity is required to make this weld?  What is the proper weld speed, electrode angle, and manipulation of electrode to make this weld?  How can I make my welds better?</p>	<p><b>Skill Standards:</b>  <b>AD-002</b>  Demonstrate ability to learn new process steps  AD-003  Implement new process steps given oral instructions  OB-002  Demonstrate knowledge of safety practices that relate to the construction industry  <b>Core Content:</b>  <b>RST-2</b>  RST-4  RST-7  GC-1  G-GMD-3</p>
Unit 3 Day 66,67,68,69,70		SMAW Welding in vertical Position	<p><b>TASKS</b>  <b>WLD 120 and 121 TASK 3-</b> Apply principles of SMAW process to cut and weld metals  <b>WLD 120 and 121 TASK 4-</b> Apply the knowledge of the effects of variables on the SMAW process to weld plate and pipe  <b>WLD 120 and 121 TASK 5-</b> Apply the knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel  <b>WLD 120 and 121 TASK 6-</b> Use shop equipment and tools</p>	<p>What amperage and polarity is required to make this weld?  What is the proper weld speed, electrode angle, and manipulation of electrode to make this weld?  How can I make my welds better?</p>	<p><b>Skill Standards:</b>  <b>AD-002</b>  Demonstrate ability to learn new process steps  AD-003  Implement new process steps given oral instructions  OB-002  Demonstrate knowledge of safety practices that</p>

Time Wks/Month	Dates Taught	Unit Topics	Content Tasks (#'s and E, I, C), Activities, Assessment	Essential Questions	Core Content Skill Standards
			<p><b>ACTIVITIES</b> Students will weld a multi pass lap joint on 1/2" steel plate in the vertical up position using a 1/8" E7018 electrode</p> <p><b>ASSESSMENT</b> Instructor will give a grade for weld</p>		<p>relate to the construction industry <b>Core Content:</b> <b>RST-2</b> RST-4 RST-7 GC-1 G-GMD-3</p>
Unit 3 Day 71,73,73,74,75		SMAW Welding in vertical Position	<p><b>TASKS</b> <b>WLD 120 and 121 TASK 3-</b> Apply principles of SMAW process to cut and weld metals <b>WLD 120 and 121 TASK 4-</b> Apply the knowledge of the effects of variables on the SMAW process to weld plate and pipe <b>WLD 120 and 121 TASK 5-</b> Apply the knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel <b>WLD 120 and 121 TASK 6-</b> Use shop equipment and tools</p> <p><b>ACTIVITIES</b> Students will weld a multi pass corner joint on 1/2" steel plate in the vertical up position using a 1/8" E6011 electrode</p> <p><b>ASSESSMENT</b> Instructor will give a grade for weld</p>	<p>What amperage and polarity is required to make this weld? What is the proper weld speed, electrode angle, and manipulation of electrode to make this weld? How can I make my welds better?</p>	<p><b>Skill Standards:</b> <b>AD-002</b> Demonstrate ability to learn new process steps <b>AD-003</b> Implement new process steps given oral instructions <b>OB-002</b> Demonstrate knowledge of safety practices that relate to the construction industry <b>Core Content:</b> <b>RST-2</b> RST-4 RST-7 GC-1 G-GMD-3</p>

Time Wks/Month	Dates Taught	Unit Topics	Content Tasks (#'s and E, I, C), Activities, Assessment	Essential Questions	Core Content Skill Standards
Unit 3 Day 76,77,78,79,80		SMAW Welding in vertical Position	<p><b>TASKS</b>  <b>WLD 120 and 121 TASK 3-</b> Apply principles of SMAW process to cut and weld metals  <b>WLD 120 and 121 TASK 4-</b> Apply the knowledge of the effects of variables on the SMAW process to weld plate and pipe  <b>WLD 120 and 121 TASK 5-</b> Apply the knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel  <b>WLD 120 and 121 TASK 6-</b> Use shop equipment and tools</p> <p><b>ACTIVITIES</b>  Students will weld a multi pass corner joint on 1/2" steel plate in the vertical up position using a 3/32" E7018 electrode</p> <p><b>ASSESSMENT</b>  Instructor will give a grade for weld</p>	<p>What amperage and polarity is required to make this weld?  What is the proper weld speed, electrode angle, and manipulation of electrode to make this weld?  How can I make my welds better?</p>	<p><b>Skill Standards:</b>  <b>AD-002</b>  Demonstrate ability to learn new process steps  <b>AD-003</b>  Implement new process steps given oral instructions  <b>OB-002</b>  Demonstrate knowledge of safety practices that relate to the construction industry  <b>Core Content:</b>  <b>RST-2</b>  RST-4  RST-7  GC-1  G-GMD-3</p>
Unit 4 Day 81,82,83,84,85		SMAW Welding in overhead Position	<p><b>TASKS</b>  <b>WLD 120 and 121 TASK 3-</b> Apply principles of SMAW process to cut and weld metals  <b>WLD 120 and 121 TASK 4-</b> Apply the knowledge of the effects of variables on the SMAW process to weld plate and pipe  <b>WLD 120 and 121 TASK 5-</b> Apply the knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel  <b>WLD 120 and 121 TASK 6-</b> Use shop equipment and tools</p>	<p>What amperage and polarity is required to make this weld?  What is the proper weld speed, electrode angle, and manipulation of electrode to make this weld?  How can I make my welds better?</p>	<p><b>Skill Standards:</b>  <b>AD-002</b>  Demonstrate ability to learn new process steps  <b>AD-003</b>  Implement new process steps given oral instructions  <b>OB-002</b>  Demonstrate knowledge of safety practices that relate to the construction</p>

Time Wks/Month	Dates Taught	Unit Topics	Content Tasks (#'s and E, I, C), Activities, Assessment	Essential Questions	Core Content Skill Standards
			<p><b>ACTIVITIES</b> Students will weld a multi pass T joint on 1/4" steel plate in the overhead position using a 1/8" E6011 electrode</p> <p><b>ASSESSMENT</b> Instructor will give a grade for weld</p>		<p>industry <b>Core Content:</b> <b>RST-2</b> RST-4 RST-7 GC-1 G-GMD-3</p>
<p>Unit 4 Day 86,87,88,89,90</p>		<p>SMAW Welding in overhead Position</p>	<p><b>TASKS</b> <b>WLD 120 and 121 TASK 3-</b> Apply principles of SMAW process to cut and weld metals <b>WLD 120 and 121 TASK 4-</b> Apply the knowledge of the effects of variables on the SMAW process to weld plate and pipe <b>WLD 120 and 121 TASK 5-</b> Apply the knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel <b>WLD 120 and 121 TASK 6-</b> Use shop equipment and tools</p> <p><b>ACTIVITIES</b> Students will weld a multi pass T joint on 1/4" steel plate in the overhead position using a 1/8" E7018 electrode</p> <p><b>ASSESSMENT</b> Instructor will give a grade for weld</p>	<p>What amperage and polarity is required to make this weld? What is the proper weld speed, electrode angle, and manipulation of electrode to make this weld? How can I make my welds better?</p>	<p><b>Skill Standards:</b> <b>AD-002</b> Demonstrate ability to learn new process steps <b>AD-003</b> Implement new process steps given oral instructions <b>OB-002</b> Demonstrate knowledge of safety practices that relate to the construction industry <b>Core Content:</b> <b>RST-2</b> RST-4 RST-7 GC-1 G-GMD-3</p>

Time Wks/Month	Dates Taught	Unit Topics	Content Tasks (#'s and E, I, C), Activities, Assessment	Essential Questions	Core Content Skill Standards
Unit 4 Day 91,92,93,94,95		SMAW Welding in overhead Position	<p><b>TASKS</b></p> <p>WLD 120 and 121 TASK 3- Apply principles of SMAW process to cut and weld metals</p> <p>WLD 120 and 121 TASK 4- Apply the knowledge of the effects of variables on the SMAW process to weld plate and pipe</p> <p>WLD 120 and 121 TASK 5- Apply the knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel</p> <p>WLD 120 and 121 TASK 6- Use shop equipment and tools</p> <p><b>ACTIVITIES</b></p> <p>Students will weld a multi pass lap joint on 1/2" steel plate in the overhead position using a 1/8" E6011 electrode</p> <p><b>ASSESSMENT</b></p> <p>Instructor will give a grade for weld</p>	<p>What amperage and polarity is required to make this weld?</p> <p>What is the proper weld speed, electrode angle, and manipulation of electrode to make this weld?</p> <p>How can I make my welds better?</p>	<p><b>Skill Standards:</b></p> <p><b>AD-002</b> Demonstrate ability to learn new process steps</p> <p>AD-003 Implement new process steps given oral instructions</p> <p>OB-002 Demonstrate knowledge of safety practices that relate to the construction industry</p> <p><b>Core Content:</b></p> <p><b>RST-2</b> RST-4 RST-7 GC-1 G-GMD-3</p>

Time Wks/Month	Dates Taught	Unit Topics	Content Tasks (#'s and E, I, C), Activities, Assessment	Essential Questions	Core Content Skill Standards
Unit 4 Day 96,97,98,99,100		SMAW Welding in overhead Position	<p><b>TASKS</b></p> <p>WLD 120 and 121 TASK 3- Apply principles of SMAW process to cut and weld metals</p> <p>WLD 120 and 121 TASK 4- Apply the knowledge of the effects of variables on the SMAW process to weld plate and pipe</p>	<p>What amperage and polarity is required to make this weld?</p> <p>What is the proper weld speed, electrode angle, and manipulation of</p>	<p><b>Skill Standards:</b></p> <p><b>AD-002</b> Demonstrate ability to learn new process steps</p> <p>AD-003 Implement new process</p>

Time Wks/Month	Dates Taught	Unit Topics	Content Tasks (#'s and E, I, C), Activities, Assessment	Essential Questions	Core Content Skill Standards
			<p><b>WLD 120 and 121 TASK 5-</b> Apply the knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel</p> <p><b>WLD 120 and 121 TASK 6-</b> Use shop equipment and tools</p> <p><b>ACTIVITIES</b> Students will weld a multi pass lap joint on 1/2" steel plate in the overhead position using a 1/8" E7018 electrode</p> <p><b>ASSESSMENT</b> Instructor will give a grade for weld</p>	<p>electrode to make this weld? How can I make my welds better?</p>	<p>steps given oral instructions OB-002 Demonstrate knowledge of safety practices that relate to the construction industry <b>Core Content:</b> <b>RST-2</b> RST-4 RST-7 GC-1 G-GMD-3</p>
<p>Unit 4 Day 101,102,103,104,105</p>		<p>SMAW Welding in overhead Position</p>	<p><b>TASKS</b> <b>WLD 120 and 121 TASK 3-</b> Apply principles of SMAW process to cut and weld metals <b>WLD 120 and 121 TASK 4-</b> Apply the knowledge of the effects of variables on the SMAW process to weld plate and pipe <b>WLD 120 and 121 TASK 5-</b> Apply the knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel <b>WLD 120 and 121 TASK 6-</b> Use shop equipment and tools</p> <p><b>ACTIVITIES</b> Students will weld a multi pass corner joint on 1/2" steel plate in the overhead position using a 1/8" E6011 root pass and a 1/8" E7018 electrode fill and cover passes</p>	<p>What amperage and polarity is required to make this weld? What is the proper weld speed, electrode angle, and manipulation of electrode to make this weld? How can I make my welds better?</p>	<p><b>Skill Standards:</b> <b>AD-002</b> Demonstrate ability to learn new process steps AD-003 Implement new process steps given oral instructions OB-002 Demonstrate knowledge of safety practices that relate to the construction industry <b>Core Content:</b> <b>RST-2</b></p>

Time Wks/Month	Dates Taught	Unit Topics	Content Tasks (#'s and E, I, C), Activities, Assessment	Essential Questions	Core Content Skill Standards
			<p><b>ASSESSMENT</b> Instructor will give a grade for weld</p>		<p>RST-4 RST-7 GC-1 G-GMD-3</p>
<p>Unit 4 Day 106,107,108,109,110</p>		<p>SMAW Welding in overhead Position</p>	<p><b>TASKS</b>  <b>WLD 120 and 121 TASK 3-</b> Apply principles of SMAW process to cut and weld metals  <b>WLD 120 and 121 TASK 4-</b> Apply the knowledge of the effects of variables on the SMAW process to weld plate and pipe  <b>WLD 120 and 121 TASK 5-</b> Apply the knowledge of basic metallurgy to control chemical, physical, and mechanical properties of carbon steel  <b>WLD 120 and 121 TASK 6-</b> Use shop equipment and tools</p> <p><b>ACTIVITIES</b></p> <ol style="list-style-type: none"> <li>1. Students will be given 3 extra days to finish all the welds required for class.</li> <li>2. Last 2 days of class will be spent cleaning shop for next semester.</li> </ol> <p><b>ASSESSMENT</b> Instructor will give a grade for weld</p>	<p>What amperage and polarity is required to make this weld?  What is the proper weld speed, electrode angle, and manipulation of electrode to make this weld?  How can I make my welds better?</p>	<p><b>Skill Standards:</b>  <b>AD-002</b>  Demonstrate ability to learn new process steps  <b>AD-003</b>  Implement new process steps given oral instructions  <b>OB-002</b>  Demonstrate knowledge of safety practices that relate to the construction industry  <b>Core Content:</b>  <b>RST-2</b>  RST-4  RST-7  GC-1  G-GMD-3</p>

<b>Time Wks/Month</b>	<b>Dates Taught</b>	<b>Unit Topics</b>	<b>Content Tasks (#'s and E, I, C), Activities, Assessment</b>	<b>Essential Questions</b>	<b>Core Content Skill Standards</b>
			TASKS  ACTIVITIES  ASSESSMENT		
			TASKS  ACTIVITIES  ASSESSMENT		