
























<b>W1</b>	<b>Learning Area</b>	TLE – Computer System Servicing	<b>Grade Level</b>	9
	<b>Quarter</b>	Third	<b>Date</b>	

<b>I. LESSON TITLE</b>	Using Hand Tools
<b>II. MOST ESSENTIAL LEARNING COMPETENCIES (MELCs)</b>	Plan and prepare for tasks to be undertaken <b>TLE_IACSS9-12UHT-IIIa-17</b>
<b>III. CONTENT/CORE CONTENT</b>	<p>1.1 Identify and select appropriate hand tools according to the task requirements.</p> <p>References:            TLE 9 Learner's Material in Computer Hardware Servicing            First Edition, 2013 Page 61-63.            IT Essentials: Computer Lab Procedures and Tool Use            Link: <a href="https://www.ciscopress.com/articles/article.asp?p=2086239&amp;seqNum=7#:~:text=Skilled%20use%20of%20tools%20and,for%20different%20types%20of%20jobs.">https://www.ciscopress.com/articles/article.asp?p=2086239&amp;seqNum=7#:~:text=Skilled%20use%20of%20tools%20and,for%20different%20types%20of%20jobs.</a>            Youtube: Hand Tools &amp; Equipment in Computer Hardware Servicing            Link: <a href="https://www.youtube.com/watch?v=WE2XdvaBb5k">https://www.youtube.com/watch?v=WE2XdvaBb5k</a></p>

<b>IV. LEARNING PHASES</b>	<b>Suggested Timeframe</b>	<b>Learning Activities</b>																					
<b>A. Introduction</b> <b>Panimula</b>	1 hour	<p>In this lesson, you will learn the importance of following the proper use of different hand tools used in repairing computers.</p> <p><b>A.</b> Look at the picture below.</p>  <p>Photo from: <a href="https://www.needitpix.com/photo/download/93475/computer-problem-computer-problem-crash-hang-frustration-desperation-bug-broken">https://www.needitpix.com/photo/download/93475/computer-problem-computer-problem-crash-hang-frustration-desperation-bug-broken</a></p> <p>In a sheet of paper, answer the following questions briefly and concisely.</p> <ol style="list-style-type: none"> <li>What do you see?</li> <li>Which tool should be used in fixing a computer?</li> <li>Have you tried fixing a computer?</li> </ol> <p><b>B.</b> Gather all the tools that are present in your home. Write the name of the tools below and describe it and tell its function in your home.</p> <table border="1"> <thead> <tr> <th>Tool/s</th><th>Description</th><th>Function</th></tr> </thead> <tbody> <tr> <td>Screwdriver</td><td>It has a cross-shaped tip with a rubber handle</td><td>It is used to twist a screw</td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Tool/s	Description	Function	Screwdriver	It has a cross-shaped tip with a rubber handle	It is used to twist a screw															
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Screwdriver	It has a cross-shaped tip with a rubber handle	It is used to twist a screw																					
<b>B. Development</b> <b>Pagpapaunlad</b>	1 hour	<p>A tool is a handheld device that aids in accomplishing a task. Tools range from a traditional metal cutting part of a machine to an element of a computer program that activates and controls a particular function.</p> <p>Watch this video in youtube, Grade 9 – TLE ICT CSS Tools &amp; Equipment in Computer Hardware Servicing through this link:  <a href="https://www.youtube.com/watch?v=nOYFhJeS9JE&amp;t=603s&amp;fbclid=IwAR2Tt7ok-rbmotqYl8-DDoniiKLRNsuHtnoOBWADVw6_WBizBPTglqfnmik">https://www.youtube.com/watch?v=nOYFhJeS9JE&amp;t=603s&amp;fbclid=IwAR2Tt7ok-rbmotqYl8-DDoniiKLRNsuHtnoOBWADVw6_WBizBPTglqfnmik</a></p>																					

		<p>Match the tool on the left to its correct description on the right. Write your answer on a separate sheet.</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <ol style="list-style-type: none"> <li>1. </li> <li>2. </li> <li>3. </li> <li>4. </li> <li>5. </li> </ol> </div> <div style="width: 50%;"> <ol style="list-style-type: none"> <li>a. a key piece of safety gear that helps to prevent the buildup of static electricity</li> <li>b. it is useful for reaching into small areas where cables or other materials have become unreachable with fingers</li> <li>c. it is used for cutting wires, screws and nails</li> <li>d. a small tool used for picking up objects too small to be easily handled with the human fingers</li> <li>e. an electronic measuring instrument that combines several measurement functions in one unit</li> </ol> </div> </div>
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<b>C. Engagement</b> <b>Pakikipagpalihan</b>	1 hour	<p>Computer repair requires some task-specific tools. Make sure that you are familiar with the correct use of each tool and that the correct tool is used for the task. Skilled use of tools and software makes the job less difficult and ensures that tasks are performed properly and safely.</p> <p><b>A.</b> Below are some computer problems that you may encounter in school or at home. Write the best tool/s to use for troubleshooting of each computer hardware.</p> <table><tr><th>Computer Problem</th><th>Tools to be used</th></tr><tr><td> Photo from: <a href="https://www.pcmag.com/how-to/how-to-fix-a-noisy-computer-fan">https://www.pcmag.com/how-to/how-to-fix-a-noisy-computer-fan</a> 1. The battery of this laptop needs to be replaced. The battery is built in.</td><td></td></tr><tr><td> Photo from: <a href="http://www.notebookreview.com/notebookreview/lenovo-thinkpad-t460s-review/">http://www.notebookreview.com/notebookreview/lenovo-thinkpad-t460s-review/</a> 2. The fan of this system unit is noisy.</td><td></td></tr><tr><td> Photo from: <a href="https://helpdeskgeek.com/how-to/cd-dvd-drive-wont-open-eject/">https://helpdeskgeek.com/how-to/cd-dvd-drive-wont-open-eject/</a> 3. DVD/CD drive will not eject or open.</td><td></td></tr><tr><td> Photo from: <a href="https://www.technibble.com/computer-killers-pet-hair-dust-and-cigarette-smoke/">https://www.technibble.com/computer-killers-pet-hair-dust-and-cigarette-smoke/</a> 4. You have a dirty CPU.</td><td></td></tr><tr><td> Photo from: <a href="https://www.tonerbooks.com/r_video.htm">https://www.tonerbooks.com/r_video.htm</a> 5. You must check your video card because the graphics of your PC is poor.</td><td></td></tr></table>	Computer Problem	Tools to be used	 Photo from: <a href="https://www.pcmag.com/how-to/how-to-fix-a-noisy-computer-fan">https://www.pcmag.com/how-to/how-to-fix-a-noisy-computer-fan</a> 1. The battery of this laptop needs to be replaced. The battery is built in.		 Photo from: <a href="http://www.notebookreview.com/notebookreview/lenovo-thinkpad-t460s-review/">http://www.notebookreview.com/notebookreview/lenovo-thinkpad-t460s-review/</a> 2. The fan of this system unit is noisy.		 Photo from: <a href="https://helpdeskgeek.com/how-to/cd-dvd-drive-wont-open-eject/">https://helpdeskgeek.com/how-to/cd-dvd-drive-wont-open-eject/</a> 3. DVD/CD drive will not eject or open.		 Photo from: <a href="https://www.technibble.com/computer-killers-pet-hair-dust-and-cigarette-smoke/">https://www.technibble.com/computer-killers-pet-hair-dust-and-cigarette-smoke/</a> 4. You have a dirty CPU.		 Photo from: <a href="https://www.tonerbooks.com/r_video.htm">https://www.tonerbooks.com/r_video.htm</a> 5. You must check your video card because the graphics of your PC is poor.	
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		<p><b>B. Demonstrate the proper use of at least 10 computer tools. Video yourself while doing this activity. You can be creative on your video; you may insert sound and effects as well as texts to emphasize the important details on the topic.</b></p> <p>➤ Upload your video in your class facebook page or directly send a message to your teacher.</p> <p>➤ The video must be at least 5 minutes.</p> <p>➤ Refer to the rubrics below.</p> <table><tr><th></th><th>Advanced (10)</th><th>Proficient (7)</th><th>Developing (5)</th></tr><tr><td>Content Quality</td><td>All the tools were demonstrated precisely. The video is very engaging and reflective.</td><td>Most of the tools were demonstrated correctly. The video is engaging and reflective.</td><td>Some of the tools were demonstrated correctly. The video is quite engaging</td></tr><tr><td>Speech &amp; Grammar</td><td>Video has originality and flair, emphasizing important points; contains no errors in grammar.</td><td>Speech is fluent. Video may contain one or two errors in grammar; errors do not impede viewer's understanding.</td><td>Video may contain several errors in grammar; errors may impede viewer's understanding. Speech lacks fluency.</td></tr><tr><td>Video Quality</td><td>Video is well lit and frames the subject appropriately. Editing enhances cohesiveness of video.</td><td>Video is well lit and frames the subject within the frame without excessive movement.</td><td>Video is fairly well lit within minimal movement. Subject is usually within the frame.</td></tr><tr><td>Sound Quality</td><td>Sound is clear and volume is appropriate.</td><td>Vlog is understandable and volume is appropriate.</td><td>Vlog is somewhat difficult to hear or is occasionally too loud.</td></tr><tr><td>Timeliness</td><td>The video submitted before the deadline.</td><td>The video submitted on time.</td><td>The video submitted after the deadline.</td></tr></table>		Advanced (10)	Proficient (7)	Developing (5)	Content Quality	All the tools were demonstrated precisely. The video is very engaging and reflective.	Most of the tools were demonstrated correctly. The video is engaging and reflective.	Some of the tools were demonstrated correctly. The video is quite engaging	Speech & Grammar	Video has originality and flair, emphasizing important points; contains no errors in grammar.	Speech is fluent. Video may contain one or two errors in grammar; errors do not impede viewer's understanding.	Video may contain several errors in grammar; errors may impede viewer's understanding. Speech lacks fluency.	Video Quality	Video is well lit and frames the subject appropriately. Editing enhances cohesiveness of video.	Video is well lit and frames the subject within the frame without excessive movement.	Video is fairly well lit within minimal movement. Subject is usually within the frame.	Sound Quality	Sound is clear and volume is appropriate.	Vlog is understandable and volume is appropriate.	Vlog is somewhat difficult to hear or is occasionally too loud.	Timeliness	The video submitted before the deadline.	The video submitted on time.	The video submitted after the deadline.
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<p><b>D. Assimilation</b> <b>Paglalapad</b></p>	1 hour	<p>For every job there is the right tool. Make sure that you are familiar with the correct use of each tool and that the correct tool is used for the current task. Skilled use of tools and software makes the job less difficult and ensures that tasks are performed properly and safely.</p> <p>It is also important that we know the classification of each tool. Classification helps bring together similar devices and concepts, even when different terms have been used to describe them.</p> <p><b>A. Classify each tool according to their use.</b></p> <p><b>Tools:</b></p> <table><tr><td>Cable Ties</td><td>Compressed Air</td><td>Anti-static Mat</td><td>Flashlight</td></tr><tr><td>Flat head Screwdriver</td><td>Wire Cutter</td><td></td><td></td></tr><tr><td>Needle Nose Plier</td><td>Lint-free Cloth</td><td>Multimeter</td><td></td></tr><tr><td>Anti-static Wrist Strap</td><td></td><td></td><td></td></tr></table> <table><tr><th>ELECTO-STATIC DISCHARGE TOOL</th><th>HAND TOOLS</th><th>CLEANING TOOLS</th><th>DIAGNOSTIC TOOLS</th></tr><tr><td></td><td></td><td></td><td></td></tr></table> <p>If you are tasked to assemble a computer system, which group of tools are you going to use?</p> <p><b>B. Answer the following questions in a sheet of paper.</b></p> <p>1. Why do we need to make plans before actions?</p> <p>2. Why do we need to use the appropriate tools?</p> <p>3. What is the importance of maintaining hardware tools?</p>	Cable Ties	Compressed Air	Anti-static Mat	Flashlight	Flat head Screwdriver	Wire Cutter			Needle Nose Plier	Lint-free Cloth	Multimeter		Anti-static Wrist Strap				ELECTO-STATIC DISCHARGE TOOL	HAND TOOLS	CLEANING TOOLS	DIAGNOSTIC TOOLS				
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<p><b>V. ASSESSMENT</b> (Learning Activity Sheets for Enrichment, Remediation or Assessment to be given on Weeks 3 and 6)</p>	1 hour	<p><b>Direction.</b> Select the letter of the correct answer. Write your answers on a separate sheet of paper.</p> <p><b>1.</b> Which tool is used for hardware to stand on to prevent static electricity from building up?</p> <p><b>a.</b> Anti-static mat   <b>b.</b> Hex driver   <b>c.</b> Philips head screwdriver   <b>d.</b> Wire cutter</p> <p><b>2.</b> Which tool is used to loosen or tighten crosshead screws?</p> <p><b>a.</b> Anti-static mat   <b>b.</b> Hex driver   <b>c.</b> Philips head screwdriver   <b>d.</b> Wire cutter</p> <p><b>3.</b> Which tool is sometimes called a nut driver? It is used to tighten nuts in the same way that a screwdriver tightens screws?</p> <p><b>a.</b> Anti-static mat   <b>b.</b> Hex driver   <b>c.</b> Philips head screwdriver   <b>d.</b> Wire cutter</p> <p><b>4.</b> Which tool is used to strip and cut wires?</p> <p><b>a.</b> Anti-static mat   <b>b.</b> Hex driver   <b>c.</b> Philips head screwdriver   <b>d.</b> Wire cutter</p>																								








		<p>5. Which tool is used to retrieve parts from locations that are too small for your hand to fit?  <b>a.</b> Part Retriever <b>b.</b> Lint-free Cloth <b>c.</b> Cable ties <b>d.</b> Flathead screwdriver</p> <p>6. Which tool is used to clean different computer components without scratching or leaving debris?  <b>a.</b> Part Retriever <b>b.</b> Lint-free Cloth <b>c.</b> Cable ties <b>d.</b> Flat head screwdriver</p> <p>7. Which tool is used to bundle cables neatly inside and outside of a computer?  <b>a.</b> Part Retriever <b>b.</b> Lint-free Cloth <b>c.</b> Cable ties <b>d.</b> Flat head screwdriver</p> <p>8. Which tool is used to loosen or tighten slotted screws?  <b>a.</b> Part Retriever <b>b.</b> Lint-free Cloth <b>c.</b> Cable ties <b>d.</b> Flat head screwdriver</p> <p>9. Which tool is used to loosen or tighten screws that have a star-like depression on the top, a feature that is mainly found on laptops?  <b>a.</b> Anti-static mat <b>b.</b> Torx screwdriver <b>c.</b> Philips head screwdriver <b>d.</b> Wire cutter</p> <p>10. Which tool is used to blow away dust and debris from different computer parts without touching the components?  <b>a.</b> Anti-static mat <b>b.</b> Hex driver <b>c.</b> Compressed air <b>d.</b> Wire cutter</p>
VI. REFLECTION		<ul style="list-style-type: none"> <li>The learner communicates the explanation of their personal assessment as indicated in the <b>Learner's Assessment Card</b>.</li> <li>The learner, in their notebook, will write their personal insights about the lesson using the prompts below.  I understand that _____.  I realize that _____.  I need to learn more about _____.</li> </ul>
Prepared by:	Ana Jane S. Faylon/Loida S. Narvaez TLE-ICT-CY9-w1	Checked by: Florinda C. Gagasa




<b>W2</b>	<b>Learning Area</b>	TLE - Computer System Servicing	<b>Grade Level</b>	9
	<b>Quarter</b>	3	<b>Date</b>	

<b>I. LESSON TITLE</b>	Using Hand Tools
<b>II. MOST ESSENTIAL LEARNING COMPETENCIES (MELCs)</b>	Prepare hand tools – <b>TLE_IACSS9-12UHT-IIIb-18</b>
<b>III. CONTENT/CORE CONTENT</b>	<p>2.1 Check appropriate hand tools for proper operation and safety.</p> <p>2.2 Identify and mark unsafe or faulty tools for repair according to standard company procedure.</p> <p>References:</p> <p>"CHS Module 2 &amp; 3 - Using Hand Tools." Accessed August 19, 2020. <a href="https://www.scribd.com/doc/219418979/CHS-Module-2-Using-Hand-Tools">https://www.scribd.com/doc/219418979/CHS-Module-2-Using-Hand-Tools</a>.</p> <p>"Cisco Press," March 12, 2012. <a href="https://www.ciscopress.com/articles/article.asp?p=2086239">https://www.ciscopress.com/articles/article.asp?p=2086239</a>.</p> <p>Guy, Repair. "For An Effective Flat Head Screwdriver Use, Follow 3 Tips," July 27, 2020. <a href="https://repairinggear.com/3-tips-to-use-the-flat-head-screwdriver/">https://repairinggear.com/3-tips-to-use-the-flat-head-screwdriver/</a>. Accessed October 24, 2020. <a href="https://www.wisegeek.com/what-is-a-hex-screwdriver.htm">https://www.wisegeek.com/what-is-a-hex-screwdriver.htm</a>.</p>

<b>IV. LEARNING PHASES</b>	<b>Suggested Timeframe</b>	<b>Learning Activities</b>
<b>A. Introduction</b> <b>Panimula</b>	1 hour	<p>In many types of work, hand tools are used everyday. They make work easier and allow people to be more efficient. However, many students often fail to see the hazards these tools can present. In this lesson you will learn how accidents can be significantly reduced and review the various hazards that are associated with specific types of tools.</p> <p><b>A.</b> Below are the pictures of hand tools. Tell whether the tool is <b>SAFE</b> or <b>UNSAFE</b>. Write your answer on a separate sheet.</p> <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <p>_____ 1.  <small>www.thingiverse.com/thing:340552</small></p> <p>_____ 2.  <small>Photo from: <a href="https://www.homedepot.ca/product/1dx-6-inch-long-nose-pliers/100076741">https://www.homedepot.ca/product/1dx-6-inch-long-nose-pliers/100076741</a></small></p> <p>_____ 3.  <small>Photo from: <a href="https://www.autoguide.com/best-wire-cutters">https://www.autoguide.com/best-wire-cutters</a></small></p> </div> <div style="width: 50%;"> <p>_____ 4.  <small>Photo from: <a href="https://www.sicproducts.com/ceramic-vs-stainless-steel-knives">https://www.sicproducts.com/ceramic-vs-stainless-steel-knives</a></small></p> <p>_____ 5.  <small>Photo from: <a href="https://capitoltools.com/shop/reversible-ratcheting-wrenches-sae/">https://capitoltools.com/shop/reversible-ratcheting-wrenches-sae/</a></small></p> </div> </div> <p><b>B.</b> Have you ever tried using the tools on activity A? What are the safety precautions you must consider while using it? Write your answer on a separate sheet.</p> <p>1. Screwdriver – _____</p> <p>2. Long Nose Pliers – _____</p> <p>3. Wire Cutter – _____</p> <p>4. Knife – _____</p> <p>5. Wrench – _____</p>



		<p>C. Read and process the meaning of quotation. Write down your insights on a sheet of paper.</p> <div><div></div><div><hr/><hr/><hr/><hr/><hr/><hr/><hr/></div></div> <p>Photo from: <a href="https://www.pinterest.ph/pin/563442603365573507/">https://www.pinterest.ph/pin/563442603365573507/</a></p>										
<p>B. Development Pagpapaunlad</p>	<p>1 hour</p>	<p>Hand tools include a wide variety of non-powered devices, such as wrenches, pliers, hammers and screwdrivers. Such devices may seem harmless, but they cause a lot of injuries. The two most common hazards associated with the use of hand tools include misuse and improper maintenance. Read and understand the information in the following link: Information Sheet 2.2 Unsafe or Faulty Tools Lo2. Prepare Hand Tools Page #8 and #9 <a href="https://www.scribd.com/doc/219418979/CHS-Module-2-Using-Hand-Tools">https://www.scribd.com/doc/219418979/CHS-Module-2-Using-Hand-Tools</a> For An Effective Flat Head Screwdriver Use <a href="https://repairinggear.com/3-tips-to-use-the-flat-head-screwdriver/">https://repairinggear.com/3-tips-to-use-the-flat-head-screwdriver/</a> Hex Screwdriver <a href="https://www.wisegeek.com/what-is-a-hex-screwdriver.htm">https://www.wisegeek.com/what-is-a-hex-screwdriver.htm</a></p> <p>A. Directions. Enumerate what is being asked. Write your answer on a separate sheet.</p> <p>I. Do's and Don'ts in using hand tools.</p> <div><div>1.</div><div><hr/></div></div> <div><div>2.</div><div><hr/></div></div> <div><div>3.</div><div><hr/></div></div> <div><div>4.</div><div><hr/></div></div> <div><div>5.</div><div><hr/></div></div> <p>II. General Hazards</p> <div><div>1.</div><div><hr/></div></div> <div><div>2.</div><div><hr/></div></div> <div><div>3.</div><div><hr/></div></div> <p>III. Why is it important to use safe tools?</p> <div><hr/></div> <div><hr/></div> <p>B. Directions. Enumerate what is being asked. What are the cautions that we should bear in mind in using the following hand tools?</p> <table><tr><th>HAND TOOLS</th><th>CAUTION</th></tr><tr><td>1. Flat-Head Screwdriver</td><td></td></tr><tr><td>2. Hex Driver</td><td></td></tr><tr><td>3. Phillips-Head Screwdriver</td><td></td></tr><tr><td>4. Component Retrieving Tools</td><td></td></tr></table>	HAND TOOLS	CAUTION	1. Flat-Head Screwdriver		2. Hex Driver		3. Phillips-Head Screwdriver		4. Component Retrieving Tools	
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<div>C. Engagement Pakikipagpalihan</div>	<div>1 hour</div>	<div>A. Make a poster about the positive effects of the proper use of hand tools. Do your activity in an OSLO paper. Refer to the rubrics below.</div> <table><thead><tr><th>Category</th><th>10</th><th>7</th><th>5</th><th>3</th></tr></thead><tbody><tr><td>Graphics Relevance</td><td>All graphics are related to the topic and make it easier to understand.</td><td>All graphics are related to the topic and most make it easier to understand.</td><td>Some graphics relate to the topic.</td><td>Graphics do not relate to the topic</td></tr><tr><td>Graphics Clarity</td><td>Graphics are all in focus and the content easily viewed</td><td>Most graphics are in focus and the content easily viewed</td><td>Most graphics are in focus and the content easily viewed</td><td>Many graphics are not clear or are too small.</td></tr><tr><td>Attractiveness</td><td>The poster is exceptionally attractive in terms of design, layout, and neatness.</td><td>The poster is attractive in terms of design, layout, and neatness.</td><td>The poster is acceptably attractive though it may be a bit messy.</td><td>The poster is distractingly messy or very poorly designed. It is not attractive.</td></tr><tr><td>Timeliness</td><td>The poster submitted before the deadline</td><td>The poster submitted on time</td><td>The poster submitted 1 week after deadline</td><td>The poster submitted 2 weeks after deadline</td></tr></tbody></table> <div>Rubric from: <a href="http://eworkshop.on.ca/edu/pdf/Mod32_Poster_Rubric.pdf">http://eworkshop.on.ca/edu/pdf/Mod32_Poster_Rubric.pdf</a></div> <div>B. Gather all the unsafe hand tools that are present in your home. Put those tools in a safe container and label it FAULTY HAND TOOLS. Write below information on a separate sheet.</div> <table><thead><tr><th>Name of Tool</th><th>Reason why it's unsafe to use</th><th>Repairable</th><th>Unrepairable</th></tr></thead><tbody><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></tbody></table>	Category	10	7	5	3	Graphics Relevance	All graphics are related to the topic and make it easier to understand.	All graphics are related to the topic and most make it easier to understand.	Some graphics relate to the topic.	Graphics do not relate to the topic	Graphics Clarity	Graphics are all in focus and the content easily viewed	Most graphics are in focus and the content easily viewed	Most graphics are in focus and the content easily viewed	Many graphics are not clear or are too small.	Attractiveness	The poster is exceptionally attractive in terms of design, layout, and neatness.	The poster is attractive in terms of design, layout, and neatness.	The poster is acceptably attractive though it may be a bit messy.	The poster is distractingly messy or very poorly designed. It is not attractive.	Timeliness	The poster submitted before the deadline	The poster submitted on time	The poster submitted 1 week after deadline	The poster submitted 2 weeks after deadline	Name of Tool	Reason why it's unsafe to use	Repairable	Unrepairable																				
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<div>D. Assimilation Paglalapat</div>	<div>1 hour</div>	<div>Directions. In the graphic organizer below, write down your learnings in our lesson.</div> <div><div>Faulty or unsafe hand tools.</div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div>Proper Use of Hand Tools</div><div></div></div><div><div></div><div></div><div></div></div></div>																																																	
<div>V. ASSESSMENT (Learning Activity Sheets for Enrichment, Remediation or Assessment to be given on Weeks 3 and 6)</div>	<div>1 hour</div>	<div>A. Directions. Write <b>True</b> if the underlined word is correct, if it is <b>False</b> change the underlined word to make the statement correct.</div> <div><div>_____ 1. <u>Pencils</u> cannot be used inside the computer to adjust the settings of the switches or to delete the jumpers.</div><div>_____ 2. Needle-nose pliers and <u>hex drivers</u> may be used to position and retrieve pieces that may be difficult to reach with your fingertips.</div><div>_____ 3. Hex driver is used to loosen and tighten the <u>bolts</u> with a hexagonal (six-sided) head.</div><div>_____ 4. Flat-head screwdriver are used to remove a <u>crosshead screw</u></div><div>_____ 5. Never use a <u>screwdriver</u> as a pry bar.</div></div>																																																	



		<p><b>B. Directions.</b> Read the questions carefully and choose the letter of the best answer.</p> <p>1. Which tool is used to retrieve parts from location that are too small for your hand to fit?</p> <p>a. Flashlight b. Part Retriever c. Punch down d. Wire cutter</p> <p>2. Which tool is used to manipulate small parts?</p> <p>a. Hex Driver b. Needle-nose plier c. Tweezers d. Wire cutter</p> <p>3. Which tool is used to loosen or tighten crosshead screws?</p> <p>a. Flat head screwdriver b. Hex driver c. Needle-nose plier d. Philips head screwdriver</p> <p>4. What is a device for performing work on a material or a physical system using only hands?</p> <p>a. Cleaning tool b. Diagnostic tool c. ESD tool d. Hand tool</p> <p>5. Which tool is used to tighten nuts in the same way that a screwdriver tightens screws?</p> <p>a. Hex driver b. Part Retriever c. Torx screwdriver d. Wire cutter</p>
<b>VI. REFLECTION</b>		<ul style="list-style-type: none"> <li>The learner communicates the explanation of their personal assessment as indicated in the <b>Learner's Assessment Card</b>.</li> <li>The learner, in their notebook, will write their personal insights about the lesson using the prompts below. I understand that _____. I realize that _____. I need to learn more about _____.</li> </ul>
<b>Prepared by:</b>	Ana Jane S. Faylon/Loida S. Narvaez TLE-ICT-CY9-w2	<b>Checked by:</b> Florinda C. Gagasa






<b>W3</b>	<b>Learning Area</b>	TLE – Computer Hardware Servicing	<b>Grade Level</b>	9
	<b>Quarter</b>	3	<b>Date</b>	


<b>I. LESSON TITLE</b>	Using Hand Tools
<b>II. MOST ESSENTIAL LEARNING COMPETENCIES (MELCs)</b>	Use appropriate hand tools and test equipment <b>TLE_IACSS9-12UHT-IIIc-19</b>
<b>III. CONTENT/CORE CONTENT</b>	<p>3.1 Use tools according to tasks undertaken.</p> <p>3.2 Observe all safety procedures in using tools at all times and use appropriate PPE</p> <p>References:</p> <p>TLE 9 Learner's Material in Computer Hardware Servicing First Edition, 2013 Pages 33 – 36 &amp; 65-67 "CHS Module 2 - Using Hand Tools." Accessed August 19, 2020. Learning Outcome 3 - Pages #12 - #16 <a href="https://www.scribd.com/doc/219418979/CHS-Module-2-Using-Hand-Tools">https://www.scribd.com/doc/219418979/CHS-Module-2-Using-Hand-Tools</a>.</p>

IV. LEARNING PHASES	Suggested Timeframe	Learning Activities																								
A. Introduction Panimula	30 minutes	<p><b>Presentation</b></p> <p>Safety is always the priority in the workplace. In this lesson, you will learn the safety procedures in using hand tools while working with your personal computers. There are also different personal protective equipment that we must use while doing activities such as checking the computer hardware and troubleshooting to ensure safety.</p> <p><b>A.</b> Directions: Below are list of tools we use when working with personal computers. Write at least one (1) safety precaution you already know for each tool below.</p> <table><tr><th>Name of Tool</th><th>Safety Precaution</th></tr><tr><td>1. Screwdriver</td><td></td></tr><tr><td>2. Multimeter</td><td></td></tr><tr><td>3. Wire Cutter</td><td></td></tr><tr><td>4. Long Nose Pliers</td><td></td></tr><tr><td>5. Utility Knives/Blade</td><td></td></tr></table> <p><b>B.</b> Directions: List down at least five (5) personal protective equipment you know and write its function.</p> <table><tr><th>Personal Protective Equipment (PPE)</th><th>Function</th></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table>	Name of Tool	Safety Precaution	1. Screwdriver		2. Multimeter		3. Wire Cutter		4. Long Nose Pliers		5. Utility Knives/Blade		Personal Protective Equipment (PPE)	Function										
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B. Development Pagpapaunlad	1 hour & 30 minutes	<p>Read and understand the lessons on CHS Module for Grade 9 – 2013 Edition Pages 33 – 36 &amp; 65-67 and CHS Module 2 - Using Hand Tools LO3 Pages #12 - #16 through this link: <a href="https://www.scribd.com/doc/219418979/CHS-Module-2-Using-Hand-Tools">https://www.scribd.com/doc/219418979/CHS-Module-2-Using-Hand-Tools</a>.</p> <p>Computer equipment can be dangerous, and you or others can be injured or even killed if you don't follow proper safety guidelines when working along with PC's.</p> <p><b>A.</b> Directions: Below are some hazardous situations present while working with computers. Write the precautionary measure you must do to avoid accidents.</p>																								



		<table><tr><th>Hazardous Situation</th><th>Precautionary Measure</th></tr><tr><td>1. You are going to clean your dirty computer. The unit is still plugged in to the power source.</td><td></td></tr><tr><td>2. You will tighten the screws in the computer's fan. You are wearing jewelry.</td><td></td></tr><tr><td>3. While troubleshooting the PC, your mom served your lunch on the same table where you are working.</td><td></td></tr><tr><td>4. There was a typhoon, and your PC is beside your open window. The computer is still plugged in to the extension on the wet floor.</td><td></td></tr><tr><td>5. The utility knife that you will use to cut the wires is rusty and dull.</td><td></td></tr></table> <p><b>B.</b> Directions: Below are some accidents while working with computers. Write the possible cause of the accident on the 2<sup>nd</sup> column and the ways to avoid it on the 3<sup>rd</sup> column.</p> <table><tr><th>Accident</th><th>Possible Cause</th><th>How to Avoid It</th></tr><tr><td>1. burned computer</td><td></td><td></td></tr><tr><td>2. foot injury</td><td></td><td></td></tr><tr><td>3. electric shock</td><td></td><td></td></tr><tr><td>4. hand cuts</td><td></td><td></td></tr><tr><td>5. eye injury</td><td></td><td></td></tr></table>	Hazardous Situation	Precautionary Measure	1. You are going to clean your dirty computer. The unit is still plugged in to the power source.		2. You will tighten the screws in the computer's fan. You are wearing jewelry.		3. While troubleshooting the PC, your mom served your lunch on the same table where you are working.		4. There was a typhoon, and your PC is beside your open window. The computer is still plugged in to the extension on the wet floor.		5. The utility knife that you will use to cut the wires is rusty and dull.		Accident	Possible Cause	How to Avoid It	1. burned computer			2. foot injury			3. electric shock			4. hand cuts			5. eye injury		
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<b>C. Engagement</b> <b>Pakikipagpalihan</b>	1 hour	<p>Safety is a state in which hazards and conditions leading to physical, psychological, or material harm are controlled in order to preserve the health and well-being of individuals and the community. It is an essential resource for everyday life, needed by individuals and communities to realize their aspirations.</p> <div></div> <p>Photo from: <a href="https://www.pinterest.ph/camposlyd/safety-quotes/">https://www.pinterest.ph/camposlyd/safety-quotes/</a></p> <p>On the next activity, you will create your own quotation of safety precautions related to the proper ways of using tools to avoid accidents and injuries.</p> <p><b>B.</b> Directions: On the 1<sup>st</sup> column draw at least five (5) personal protective equipment we use when working with computers and write the importance of using or wearing it on the 2<sup>nd</sup> column.</p>																														







		Personal Protective Equipment (PPE) Illustration	Importance
<b>D. Assimilation</b> <b>Paglalapad</b>	1 hour	<p><b>A. Directions:</b> Read and answer the following questions. Write your answer on a separate sheet.</p> <p>1. What is Occupational Health and Safety Standards?</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>2. Why do we need to observe safety precautions in using tools?</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>3. What are the Common Occupational Health and Safety Standards? Give at least (5) five.</p> <p>_____</p> <p>_____</p> <p>_____</p> <p><b>B. Directions:</b> Write safety precautions for your protection especially that our country is in the midst of a COVID – 19 pandemic. Write it inside a big heart below. Do this activity on a separate sheet.</p> <div style="text-align: center;">  </div>	
<b>V. ASSESSMENT</b> (Learning Activity Sheets for Enrichment, Remediation or Assessment to be given on Weeks 3 and 6)	1 hour	<p>Directions: Write <b>True</b> if the underlined word is correct if it is <b>False</b> change the underlined word to make the statement correct.</p> <p>_____ 1. Always wear <u>personal protective equipment</u> (PPE) in accordance with the organization's OHS procedures and practices.</p> <p>_____ 2. Make sure that the pins are <u>re-aligned</u> when connecting a cable connector.</p> <p>_____ 3. Clean the area before and after use to ensure <u>sanitation</u> and avoid accidents.</p> <p>_____ 4. Use <u>flammable cleaners</u> or water in electrical equipment.</p>	



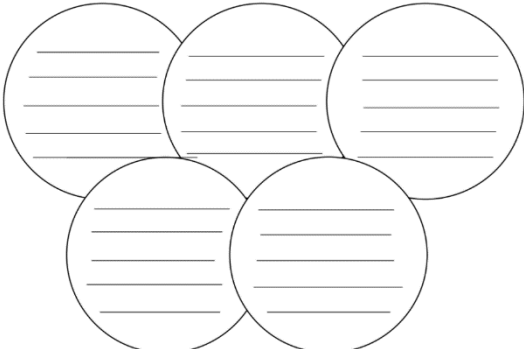
		<p>_____ 5. Make sure you understand and <u>dis-obey</u> both legislative and personal safety protocols while conducting the following activities.</p> <p>_____ 6. Always <u>disconnect</u> a computer from the AC power and from any powered peripherals while you are working on it.</p> <p>_____ 7. Always handle electronic components by a <u>non-conducting</u> (non-metallic) edge. Don't touch the pins or other connectors.</p> <p>_____ 8. <u>Never</u> use an anti-static wrist strap when working on a computer (except when working on monitors)</p> <p>_____ 9. Apron is a garment worn over the front of the body as a <u>protection</u> for one's cloth.</p> <p>_____ 10. PPE can also be used <u>to protect</u> the working environment from pesticide application, pollution, or infection from the worker.</p>
<b>VI. REFLECTION</b>		<ul style="list-style-type: none"> <li>• The learner communicates the explanation of their personal assessment as indicated in the <b>Learner's Assessment Card</b>.</li> <li>• The learner, in their notebook, will write their personal insights about the lesson using the prompts below.  I understand that _____.  I realize that _____.  I need to learn more about _____.</li> </ul>
<b>Prepared by:</b>	Ana Jane S. Faylon/Loida S. Narvaez TLE-ICT-CY9-w3	<b>Checked by:</b> Florinda C. Gagasa

<b>W4</b>	<b>Learning Area</b>	TLE – Computer System Servicing	<b>Grade Level</b>	9
	<b>Quarter</b>	3	<b>Date</b>	

<b>I. LESSON TITLE</b>	Using Hand Tools
<b>II. MOST ESSENTIAL LEARNING COMPETENCIES (MELCs)</b>	Maintain hand tools <b>TLE_IACSS9-12UHT-IIIId-20</b>
<b>III. CONTENT/CORE CONTENT</b>	<p>4.1 Do not drop tools to avoid damage; carry out routine maintenance of tools according to standard operational procedures, principles, and techniques.</p> <p>References: Read and understand these lessons: CHS Module 2 - Using Hand Tools LO4 Pages #18 - #20 Link: <a href="https://www.scribd.com/doc/219418979/CHS-Module-2-Using-Hand-Tools">https://www.scribd.com/doc/219418979/CHS-Module-2-Using-Hand-Tools</a> Pam Jack, By and Pam Jack. "How To Care for Hand Tools," October 26, 2020. Link: <a href="https://www.charlottestories.com/how-to-care-for-hand-tools/">https://www.charlottestories.com/how-to-care-for-hand-tools/</a> 5S Link: <a href="https://www.isixsigma.com/tools-templates/5s/practical-approach-successful-practice-5s/">https://www.isixsigma.com/tools-templates/5s/practical-approach-successful-practice-5s/</a></p>

IV. LEARNING PHASES	Suggested Timeframe	Learning Activities												
<b>A. Introduction</b> <b>Panimula</b>	1 hour	<p><b>Presentation</b></p> <p>Hand tools such as screwdrivers, wrenches, hammers, pliers, levels, and wire cutters are examples of common household tools that are often left out in places such as basements, garages, and tool sheds. Tools are tough, but they are not indestructible and exposure to the elements can take its toll.</p> <p>In this lesson you will learn how to maintain the hand tools so that you get optimum use out of them. You will also learn the correct procedures of</p> <p><b>A.</b> Write down at least five (5) hand tools that are present in your home and how you take care of it. Do this activity on a separate sheet of paper.</p> <table><tr><th>Hand Tool</th><th>How we maintain it at home</th></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table> <p><b>B.</b> Identify which tool maintenance is observed in each picture. You will be guided based on the first letter and number of blanks below the pictures. Write your answer on a separate sheet of paper.</p> <div><div><p>1.</p><p>Photo from: <a href="https://www.5newoodworking.com/2005/09/13/all-about-tool-storage">https://www.5newoodworking.com/2005/09/13/all-about-tool-storage</a></p><p>S _ _ _ _ _</p></div><div><p>3.</p><p>Photo from: <a href="https://www.fts.org.uk/advise/profile?pid=1036">https://www.fts.org.uk/advise/profile?pid=1036</a></p><p>S _ _ _ _ _</p></div></div> <div><div><p>2.</p><p>Photo from: <a href="https://www.youtube.com/watch?v=CHTtH5naw">https://www.youtube.com/watch?v=CHTtH5naw</a></p><p>C _ _ _ _ _</p></div><div><p>4.</p><p>Photo from: <a href="https://happes.com.my/SHEDWIX-5-Mini-Flat-Nose-Pliers">https://happes.com.my/SHEDWIX-5-Mini-Flat-Nose-Pliers</a></p><p>L _ _ _ _ _</p></div></div>	Hand Tool	How we maintain it at home										
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C. Engagement Pakikipagpalihan	1 hour & 30 minutes	<p>A. Demonstrate how to properly clean, sharpen, lubricate, and store the hand tools for at least five (5) minutes. Practice safety and use personal protective equipment. Video yourself and send your output through google drive. Note: Ask for your parents/guardians' assistance while doing the activity.</p> <p>Rubrics:</p> <table><tr><th></th><th>10</th><th>7</th><th>5</th></tr><tr><td>Content</td><td>Demonstration accurately shows how to complete a task- all steps are shown and described in detail so that task could be replicated.</td><td>Demonstration gives overview of how to complete a task but does not give details. Task could be replicated, but with difficulty.</td><td>Task demonstration and description are lacking key components. Task could not be replicated with directions given.</td></tr><tr><td>Presentation</td><td>Student uses time wisely- is well prepared and well-rehearsed. Student does not use flash cards and needs minimal prompting/scaffolding.</td><td>Student is prepared, but not well rehearsed. Students may not use full amount of time. Students needs prompting and flashcards to complete presentation.</td><td>Student is not prepared or rehearsed. Presentation is not professional, and student needs ample prompting to complete task. Relies heavily on flashcards</td></tr><tr><td>Total:</td><td></td><td></td><td></td></tr></table> <p><a href="https://www.rcampus.com/rubricshowc.cfm?code=H9B659&amp;sp=yes&amp;">https://www.rcampus.com/rubricshowc.cfm?code=H9B659&amp;sp=yes&amp;</a></p>		10	7	5	Content	Demonstration accurately shows how to complete a task- all steps are shown and described in detail so that task could be replicated.	Demonstration gives overview of how to complete a task but does not give details. Task could be replicated, but with difficulty.	Task demonstration and description are lacking key components. Task could not be replicated with directions given.	Presentation	Student uses time wisely- is well prepared and well-rehearsed. Student does not use flash cards and needs minimal prompting/scaffolding.	Student is prepared, but not well rehearsed. Students may not use full amount of time. Students needs prompting and flashcards to complete presentation.	Student is not prepared or rehearsed. Presentation is not professional, and student needs ample prompting to complete task. Relies heavily on flashcards	Total:			
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		<p><b>B.</b> Practice the 5S in your home particularly in your hand tools storage. Take a photo of your work. Below is the checklist that you must accomplish.</p> <table border="1"> <thead> <tr> <th colspan="3">5S CHECKLIST</th> </tr> <tr> <th>Area:</th><th colspan="2">Date:</th> </tr> </thead> <tbody> <tr> <td><b>S1 - Sort - SEIRI:</b></td><td>√</td><td>X</td> </tr> <tr> <td>No unnecessary items are left or stored in the workplace.</td><td></td><td></td> </tr> <tr> <td>All tools are in regular use</td><td></td><td></td> </tr> <tr> <td>Storage area is defined to store broken, unusable or occasionally used items.</td><td></td><td></td> </tr> <tr> <td>Standards for eliminating unnecessary items exist and are being followed.</td><td></td><td></td> </tr> <tr> <td><b>S2 - Set in order - SEITON:</b></td><td></td><td></td> </tr> <tr> <td>Locations of tools and equipment are clear and well organized.</td><td></td><td></td> </tr> <tr> <td>Labels exist to indicate locations, containers, boxes, shelves and stored items.</td><td></td><td></td> </tr> <tr> <td>Evidence of inventory control exists (i.e. Kanban cards, FIFO, minimum/maximum, etc.)</td><td></td><td></td> </tr> <tr> <td>Dividing lines are clearly identified and clean as per standard.</td><td></td><td></td> </tr> <tr> <td>Safety equipment and supplies are clear and in good condition.</td><td></td><td></td> </tr> <tr> <td><b>S3 - Shining - SEISO:</b></td><td></td><td></td> </tr> <tr> <td>Cabinets and shelves are kept clean.</td><td></td><td></td> </tr> <tr> <td>Tools are kept clean.</td><td></td><td></td> </tr> <tr> <td>Lighting is enough and all lighting is free from dust.</td><td></td><td></td> </tr> <tr> <td>Cleaning tools and materials are easily accessible.</td><td></td><td></td> </tr> <tr> <td><b>S4 - Standardize - SEIKETSU:</b></td><td></td><td></td> </tr> <tr> <td>Information displays, signs, color coding and other markings are established.</td><td></td><td></td> </tr> <tr> <td>Procedures for maintaining the first three S's are being displayed.</td><td></td><td></td> </tr> <tr> <td><b>S5 - Sustain - SHITSUKE:</b></td><td></td><td></td> </tr> <tr> <td>5S seems to be the way of life rather than just a routine.</td><td></td><td></td> </tr> </tbody> </table>	5S CHECKLIST			Area:	Date:		<b>S1 - Sort - SEIRI:</b>	√	X	No unnecessary items are left or stored in the workplace.			All tools are in regular use			Storage area is defined to store broken, unusable or occasionally used items.			Standards for eliminating unnecessary items exist and are being followed.			<b>S2 - Set in order - SEITON:</b>			Locations of tools and equipment are clear and well organized.			Labels exist to indicate locations, containers, boxes, shelves and stored items.			Evidence of inventory control exists (i.e. Kanban cards, FIFO, minimum/maximum, etc.)			Dividing lines are clearly identified and clean as per standard.			Safety equipment and supplies are clear and in good condition.			<b>S3 - Shining - SEISO:</b>			Cabinets and shelves are kept clean.			Tools are kept clean.			Lighting is enough and all lighting is free from dust.			Cleaning tools and materials are easily accessible.			<b>S4 - Standardize - SEIKETSU:</b>			Information displays, signs, color coding and other markings are established.			Procedures for maintaining the first three S's are being displayed.			<b>S5 - Sustain - SHITSUKE:</b>			5S seems to be the way of life rather than just a routine.		
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<b>D. Assimilation</b> <b>Paglalapad</b>	1 hour	<p><b>A.</b> Directions. Read and answer the following questions. Write your answer on a separate sheet.</p> <ol style="list-style-type: none"> <li>1. What are the ways on how to maintain you hand tools properly?</li> <li>2. Why is it important to have proper maintenance of hand tools?</li> <li>3. Why do you think 5s is important in the workplace?</li> </ol> <p><b>B.</b> Directions. In the graphic organizer below, write down your learnings in Proper Maintenance of Hand Tools and The 5s. Write your answer on a separate sheet.</p> 																																																																					




IV. LEARNING PHASES	Suggested Timeframe	Learning Activities
V. ASSESSMENT (Learning Activity Sheets for Enrichment, Remediation or Assessment to be given on Weeks 3 and 6)	30 minutes	<p><b>A. Directions:</b> Read the questions carefully and choose the letter of the best answer. Write your answer on a separate sheet.</p> <p>_____ 1. It is a process that removes unwanted substances, such as dirt, infectious agents and other impurities, from the object or the environment. a. Cleaning      b. Lubrication      c. Sharpening      d. Storing</p> <p>_____ 2. This type of lubrication can be divided into two forms either hydrodynamic or elastohydrodynamic. a. Boundary      b. Elastohydrodynamic      c. Full-film      d. Mixed</p> <p>_____ 3. A method of organization of the workplace which uses a list of five Japanese words. a. Cleaning      b. Lubrication      c. 3S      d. 5S</p> <p>_____ 4. It is a cross-section between boundary and hydrodynamic lubrication. a. Boundary      b. Elastohydrodynamic      c. Full-film      d. Mixed</p> <p>_____ 5. It places all the requisite things in the best position to perform their duties at the workplace. a. Sort (Seiri)      b. Set In Order (Seiton)      c. Shine (Seiso)      d. Standardize (Seiketsu)</p> <p><b>B. Directions:</b> Fill in the missing letters to complete the words. Use the definition provided as your reference.</p> <div><div></div><div>O</div><div></div><div>T</div></div> <p>1. It is sorting through all items in a location and removing all unnecessary items from the location.</p> <div><div></div><div>L</div><div></div><div>A</div><div></div><div>I</div><div></div><div>G</div></div> <p>2. A process that removes unwanted substances, such as dirt, infectious agents and other impurities, from the object or the environment.</p> <div><div>L</div><div></div><div>B</div><div></div><div>I</div><div></div><div>A</div><div></div><div></div><div></div></div> <p>3. It is the regulation of friction and wear by applying a friction-reducing film between moving surfaces in contact.</p> <div><div></div><div>E</div><div></div><div>I</div><div></div><div>N</div><div></div><div>O</div><div></div><div></div><div></div></div> <p>4. It places all the requisite things in the best position to perform their duties at the workplace.</p> <div><div></div><div>I</div><div></div><div>E</div><div></div></div> <p>5. It is a cross-section between boundary and hydrodynamic lubrication.</p>
VI. REFLECTION		<ul style="list-style-type: none"><li>The learner communicates the explanation of their personal assessment as indicated in the <b>Learner's Assessment Card</b>.</li><li>The learner, in their notebook, will write their personal insights about the lesson using the prompts below. I understand that _____. I realize that _____. I need to learn more about _____.</li></ul>
Prepared by:	Ana Jane S. Faylon TLE-ICT-CY9-w4	Checked by: Roger C. Maldia Mary Ann Q. Clanor






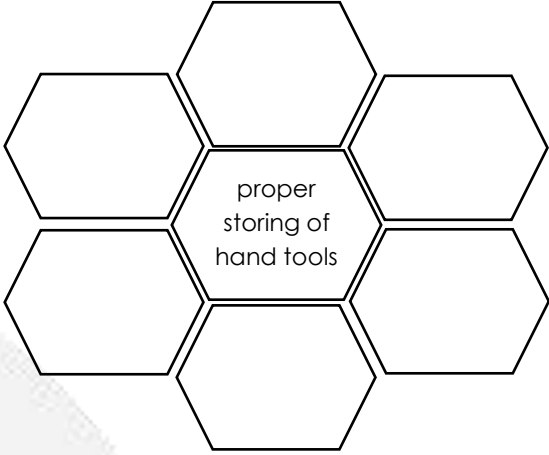
<b>W5</b>	<b>Learning Area</b>	TLE – Computer Systems Servicing	<b>Grade Level</b>	9
	<b>Quarter</b>	Three	<b>Date</b>	

<b>I. LESSON TITLE</b>	Using Hand Tools
<b>II. MOST ESSENTIAL LEARNING COMPETENCIES (MELCs)</b>	Maintain hand tools <b>TLE_IACSS9-12UHT-IIIId-20</b>
<b>III. CONTENT/CORE CONTENT</b>	<p>4.2 Store tools safely in appropriate locations in accordance with manufacturer's specifications or standard operating procedures</p> <p>References: TLE – Computer System Servicing 9 Module from Division of Pasig City Quarter 3 – Module 7: Proper Storing of hand tools/instruments, First Edition, 2020</p> <p>Common Types of Toolboxes <a href="https://www.homestratosphere.com/types-of-tool-boxes/">https://www.homestratosphere.com/types-of-tool-boxes/</a></p>

<b>IV. LEARNING PHASES</b>	<b>Suggested Timeframe</b>	<b>Learning Activities</b>
<b>A. Introduction</b> <b>Panimula</b>	30 minutes	<p><b>Presentation</b></p> <p>To sustain your hand tools and keep them in good condition for years to come, you should take the proper steps to make sure the metal tools maintain their durability and do not accumulate rust. Where and how you store your tools can make all the difference.</p> <p>In this lesson, you will learn the proper ways to store your hand tools to ensure the safety and maintain its good condition.</p> <p><b>A.</b> Can you spot the five (5) differences between the two images? The full-sized Spot the Difference images may be viewed by clicking on the web link: <a href="https://www.pinterest.ph/pin/608548968382878346/">https://www.pinterest.ph/pin/608548968382878346/</a>. Write your answer on a separate sheet.</p>  <p>Five (5) differences:</p> <ol style="list-style-type: none"> <li>_____</li> <li>_____</li> <li>_____</li> <li>_____</li> <li>_____</li> </ol> <p>Do you think these tools were properly stored? Why?</p> <p>_____</p> <p>_____</p>
<b>B. Development</b> <b>Pagpapaunlad</b>	1 hour & 30 minutes	<p>Read and understand the <b>CSS 9 - Module 7 Proper Storing of Hand Tools and Common Types of Toolboxes</b> through these links: <a href="http://bit.ly/3kVpuxN">http://bit.ly/3kVpuxN</a> &amp; <a href="https://www.homestratosphere.com/types-of-tool-boxes/">https://www.homestratosphere.com/types-of-tool-boxes/</a> and do the activities below in a separate sheet.</p>

IV. LEARNING PHASES	Suggested Timeframe	Learning Activities																																								
		<p><b>A.</b> Below are the different hand tool storages, describe it and tell the best feature of each storage.</p> <table><tr><th>Storage</th><th>Description</th><th>Best Feature</th></tr><tr><td>Power Tool Storage Rack</td><td></td><td></td></tr><tr><td>Power Tool Storage Cabinet</td><td></td><td></td></tr><tr><td>Hanging Tools or Use Tool Storage Drawers</td><td></td><td></td></tr><tr><td>Portable Toolboxes</td><td></td><td></td></tr><tr><td>Stationary Toolboxes</td><td></td><td></td></tr></table> <p><b>B.</b> Here is an empty tool storage, you will list down all the hand tools that can be stored in this kind of storage. Then write where the tool should be placed.</p> <div></div> <p>Photo from: <a href="https://www.conrad.com/p/knipex-robust-45-00-21-37-le-electrical-contractors-tool-box-empty-1674876">https://www.conrad.com/p/knipex-robust-45-00-21-37-le-electrical-contractors-tool-box-empty-1674876</a></p> <table><tr><th>Hand Tools</th><th>Location</th></tr><tr><td>1.</td><td></td></tr><tr><td>2.</td><td></td></tr><tr><td>3.</td><td></td></tr><tr><td>4.</td><td></td></tr><tr><td>5.</td><td></td></tr><tr><td>6.</td><td></td></tr><tr><td>7.</td><td></td></tr><tr><td>8.</td><td></td></tr><tr><td>9.</td><td></td></tr><tr><td>10.</td><td></td></tr></table> <p><b>C.</b> How do we keep tools in good working condition during storage?</p> <div><div>1.</div><div>2.</div><div>3.</div><div>4.</div><div>5.</div><div>6.</div></div>	Storage	Description	Best Feature	Power Tool Storage Rack			Power Tool Storage Cabinet			Hanging Tools or Use Tool Storage Drawers			Portable Toolboxes			Stationary Toolboxes			Hand Tools	Location	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.	
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<b>C. Engagement</b> <i>Pakikipagpalihan</i>	1 hour	<p><b>A.</b> Do you have hand tools in your home? Locate its storage and make some observations. Use below checklist to tell if your family is practicing the proper way of storing tools. Do this activity in a separate sheet.</p> <table border="1"><thead><tr><th colspan="4">Hand Tool Storage Checklist</th></tr><tr><th></th><th>Yes</th><th>No</th><th>N/A</th></tr></thead><tbody><tr><td>The storage cabinet has a label.</td><td></td><td></td><td></td></tr><tr><td>Tools were stored near the point of use.</td><td></td><td></td><td></td></tr><tr><td>Tools were washed and dry properly before storing.</td><td></td><td></td><td></td></tr><tr><td>Knives are properly stored with sharp edge down.</td><td></td><td></td><td></td></tr><tr><td>Frequently used items are in conveniently accessible locations.</td><td></td><td></td><td></td></tr><tr><td>Storing area are clean, dry, and not overcrowded.</td><td></td><td></td><td></td></tr><tr><td>There is designated place for each kind of tools.</td><td></td><td></td><td></td></tr></tbody></table> <p><b>B.</b> Visit the nearest computer technician in your community. Make an interview and look at his/her hand tool storage. Bring the checklist from the previous activity fill it up based on the condition of the storage. Do this activity in a separate sheet.</p> <p>Guide Questions for the Interview.</p> <p>1. What are the common tools that you use as a computer technician?</p> <p>_____</p> <p>_____</p> <p>2. What kind of hand tool storage do you have? Why did you choose it as your storage?</p> <p>_____</p> <p>_____</p> <p>3. What are the best practices you do to keep your tools in a good condition?</p> <p>_____</p> <p>_____</p> <p>4. How do you maintain your tool storage area?</p> <p>_____</p> <p>_____</p> <p>5. How proper storage of hand tools help you save time, money, and effort in doing your work?</p> <p>_____</p> <p>_____</p>	Hand Tool Storage Checklist					Yes	No	N/A	The storage cabinet has a label.				Tools were stored near the point of use.				Tools were washed and dry properly before storing.				Knives are properly stored with sharp edge down.				Frequently used items are in conveniently accessible locations.				Storing area are clean, dry, and not overcrowded.				There is designated place for each kind of tools.			
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<b>D. Assimilation</b> <i>Paglalapat</i>	1 hour	<p><b>A.</b> Directions. Read and answer the following questions on a separate sheet.</p> <p>1. What are ways on how to store your hand and power tools?</p> <p>_____</p> <p>_____</p> <p>2. Why it is important to keep your tools in good working condition during storage?</p> <p>_____</p> <p>_____</p>																																				

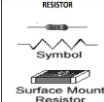


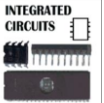

IV. LEARNING PHASES	Suggested Timeframe	Learning Activities
		<p><b>B.</b> Direction. In the graphic organizer below, write down your learnings in proper storing of hand tools.</p> 
<p><b>V. ASSESSMENT</b> (Learning Activity Sheets for Enrichment, Remediation or Assessment to be given on Weeks 3 and 6)</p>	<p>1 hour</p>	<p><b>A.</b> Directions: Read the statements carefully and identify what is being described. Write your answer on a separate sheet.</p> <p>_____ 1. It is the best solution for storing power tools and other hand tools keeping it safe, clean and organized.</p> <p>_____ 2. This storage will keep instruments off the floor and organized.</p> <p>_____ 3. It is usually sold in an upright design and consist of pull-out drawers.</p> <p>_____ 4. The most common type of toolbox</p> <p>_____ 5. It is accompanied by a power tool storage rack for protection.</p> <p><b>B.</b> Directions. Write True if the underlined word is correct, if it is False change the underlined word to make the statement correct. Write your answer on a separate sheet.</p> <p>_____ 6. Put the tools on the ground directly for storage.</p> <p>_____ 7. Check for damage or flaws as you do your cleaning.</p> <p>_____ 8. A power tool storage rack is a smart solution for keeping your power tools organized if you are in a crunch for space.</p> <p>_____ 9. Make sure the location is unprotected from disruptive factors if you put an instrument in its storage location.</p> <p>_____ 10. Keep measuring instruments stored in a place as far away as possible from vibration and movement if your work is in a setting where vibration is an issue.</p>
<p><b>VI. REFLECTION</b></p>		<ul style="list-style-type: none"> <li>The learner communicates the explanation of their personal assessment as indicated in the <b>Learner's Assessment Card</b>.</li> <li>The learner, in their notebook, will write their personal insights about the lesson using the prompts below. I understand that _____. I realize that _____. I need to learn more about _____.</li> </ul>
<p><b>Prepared by:</b></p>	<p>Ana Jane S. Faylon TLE-ICT-CY9-w5</p>	<p><b>Checked by:</b> Roger C. Maldia Mary Ann Q. Clanor</p>







W6	Learning Area	TLE – ICT	Grade Level	9
	Quarter	Third	Date	

I. LESSON TITLE	Terminating and connecting electrical wiring and electronics circuit (tcew)
II. MOST ESSENTIAL LEARNING COMPETENCIES (MELCs)	Plan and prepare for termination/ connection of electrical wiring/ electronics circuits-TLE_IACSS9-12TCEW-IIIe-F-21
III. CONTENT/CORE CONTENT	<p>1.1 Check materials according to specifications and tasks.</p> <p>References:                      "CHS Module 8" TERMINATING AND CONNECTING ELECTRICAL WIRING AND ELECTRONICS CIRCUIT (TCEW) Accessed August 19, 2020.                      Learning Outcome 3 - Pages #8 - #13. First edition, 2020.  <a href="https://www.youtube.com/watch?v=LG9sMS7M4TY">https://www.youtube.com/watch?v=LG9sMS7M4TY</a>  <a href="https://kapitolyohs.files.wordpress.com/2011/06/terminating-and-connecting-of-electrical-wirings-and-electronics-circuits-2nd.pdf">https://kapitolyohs.files.wordpress.com/2011/06/terminating-and-connecting-of-electrical-wirings-and-electronics-circuits-2nd.pdf</a> </p>

IV. LEARNING PHASES	Suggested Timeframe	Learning Activities														
A. Introduction Panimula	30 minutes	<p><b>Presentation</b></p> <p>Electricity is the flow of electrical power or charge. There are two types of current, direct current (DC) and alternating current (AC). DC is current that flows in one direction with a constant voltage polarity, while AC is current that changes direction periodically along with its voltage polarity.</p> <p>Electric circuit theory is one of the most vital aspects of electrical engineering. Understanding how components work individually and collectively is the basis for designing, manufacturing, and troubleshooting all kinds of electronic devices and systems.</p> <p><b>A. Directions:</b> Name Electrical Symbols. Write your answer inside the box.</p> <table><tr><th>Symbol</th><th>Component</th></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></table> <p>Retrieved from:<a href="https://www.pinterest.ph/christinew2056/">https://www.pinterest.ph/christinew2056/</a> saved/</p> <p><b>B. Directions:</b> Read the questions carefully and choose the letter of the best answer. Write your answer on the space provided before each number.</p> <p>_____ 1. A single slender rod or filament of drawn metal. A. cable                      B. current                      C. wire                      D. voltage</p> <p>_____ 2. A wire that is sufficient for holding an electrical current. A. cable                      B. conductor                      C. wire                      D. voltage</p> <p>_____ 3. It is one that does not add any power gain (amplification) to a circuit or system. A. active Device                      B. fuse                      C. passive device                      D. switch</p>	Symbol	Component												
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IV. LEARNING PHASES	Suggested Timeframe	Learning Activities
		<p>_____ 4. These are components capable of regulating voltages or currents that can produce a circuit switching operation. A. active devices B. fuse C. passive devices. D. switch</p> <p>_____ 5. These are used in Alternating Current circuits to oppose changes in the existing current. A. capacitors B. diodes C. inductors D. resistor</p>
<b>C. Development</b> <b>Pagpapaunlad</b>	1 hour & 30 minutes	<p>Read and understand Information Sheet TERMINATING AND CONNECTING ELECTRICAL WIRING AND ELECTRONICS CIRCUIT (TCEW). <b>For Additional info</b>, you can watch Types of wires and cable by clicking this link, <a href="https://www.youtube.com/watch?v=LG9sMS7M4TY">https://www.youtube.com/watch?v=LG9sMS7M4TY</a></p> <p><b>Learning Activity 1. Identify Me!</b> <b>Directions:</b> Identify the word/words being describe by the statement.</p> <ol style="list-style-type: none"> <li>It is a single slender rod or filament of drawn metal.  <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px 0;"></div> </li> <li>A wire that is sufficient for holding an electrical current.  <div style="border: 1px solid black; width: 200px; height: 20px; margin: 5px 0;"></div> </li> <li>It is a single conductor that is either bare or insulated.  <div style="display: flex; justify-content: space-around; margin: 5px 0;"> <div style="border: 1px solid black; width: 100px; height: 20px;"></div> <div style="border: 1px solid black; width: 100px; height: 20px;"></div> </div> </li> <li>It has two or more conductors that are insulated from each other.  <div style="display: flex; justify-content: space-around; margin: 5px 0;"> <div style="border: 1px solid black; width: 100px; height: 20px;"></div> <div style="border: 1px solid black; width: 150px; height: 20px;"></div> </div> </li> <li>A wire composed of many thin strands of wires twisted together.  <div style="border: 1px solid black; width: 150px; height: 20px; margin: 5px 0;"></div> </li> </ol> <p><b>Learning Activity 2. "Let Me guess"</b> <b>Directions:</b> Classify the following electronic components whether it is <b>Passive Device</b> or <b>Active Device</b>. Write your answer on the space provided.</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 60%;"> <p>_____ 1.</p> <p>_____ 2.</p> <p>_____ 3.</p> <p>_____ 4.</p> <p>_____ 5.</p> </div> <div style="width: 35%;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center; font-weight: bold; font-size: small;">RESISTOR</p>  <p style="text-align: center; font-size: x-small;">Symbol Surface Mount Resistor</p> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center; font-weight: bold; font-size: small;">DIODES</p>  </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center; font-weight: bold; font-size: small;">TRANSISTORS</p>  </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center; font-weight: bold; font-size: small;">INTEGRATED CIRCUITS</p>  </div> <div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center; font-weight: bold; font-size: small;">INDUCTORS</p>  </div> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px; font-size: x-small;"> <p>Images retrieved from:  <a href="https://kapitolyohs.files.wordpress.com/2011/06/terminating-and-connecting-of-electrical-wirings-and-electronics-circuits-2nd.pdf">https://kapitolyohs.files.wordpress.com/2011/06/terminating-and-connecting-of-electrical-wirings-and-electronics-circuits-2nd.pdf</a> </p> </div> </div>

IV. LEARNING PHASES	Suggested Timeframe	Learning Activities												
D. Engagement Pakikipagpalihan	1 hour	<b>Learning Activity 3. Name It. Use It!</b> <b>Directions:</b> Identify the materials in each box by arranging the scrambled letters. Describe how the materials is being used. (5PTS. EACH)												
		<div><p>L I D O S   R E I W</p></div>	Material: Uses:											
		<div><p>S T E D W I T   I R A P   B L E A C</p></div>	Material: Uses:											
		<div><p>M L T I U   C N O C U D R O T   C A L E B</p></div>	Material: Uses:											
		<div><p>T R A N D E D S   W R E I</p></div>	Material: Uses:											
Images retrieved from: <a href="https://kapitolyohs.files.wordpress.com/2011/06/terminating-and-connecting-of-electrical-wirings-and-electronics-circuits-2nd.pdf">https://kapitolyohs.files.wordpress.com/2011/06/terminating-and-connecting-of-electrical-wirings-and-electronics-circuits-2nd.pdf</a>														
		<b>LEARNING ACTIVITY 4. Draw and Tell Me!</b> <b>DIRECTIONS:</b> Draw the circuit symbol and write the function of each component.												
		<table><tr><th>Component</th><th>Circuit Symbol</th><th>Function of Component</th></tr><tr><td>Wires joined</td><td></td><td></td></tr><tr><td>Wire</td><td></td><td></td></tr><tr><td>Wires not joined</td><td></td><td></td></tr></table>	Component	Circuit Symbol	Function of Component	Wires joined			Wire			Wires not joined		
		Component	Circuit Symbol	Function of Component										
		Wires joined												
		Wire												
Wires not joined														
E. Assimilation Paglalapat	1 hour	<b>LEARNING ACTIVITY 5. “Think About It.”</b> <b>DIRECTIONS:</b> Read and answer the given questions: ⚡ What are the different types of electrical wires? Give some examples and explains it briefly.  a. _____ b. _____ c. _____ d. _____												



IV. LEARNING PHASES	Suggested Timeframe	Learning Activities
<b>V. ASSESSMENT</b> (Learning Activity Sheets for Enrichment, Remediation or Assessment to be given on Weeks 3 and 6)	1 hour	Let us see how much you have learned. <b>Directions:</b> Match column A with that of column B. Write only the letter of the correct answer on the line provided before each number.  _____ 1. It two or more conductors that each other.                      a. Switch are insulated from  _____ 2. These are components capable regulating voltages or currents that can produce a circuit switching operation.                      b. Multi-conductor cable of  _____ 3. It is a mechanism used to break electrical current to another conductor.                      c. Active Devices or pass an  _____ 4. It is a single conductor that is either insulated.                      d. Stranded Wire bare or  _____ 5. It is composed of many thin strands of together and used where flexibility is important because the wire can be used for a longer period.                      e. Solid Wire wires twisted
<b>VI. REFLECTION</b>		<ul style="list-style-type: none"> <li>The learner communicates the explanation of their personal assessment as indicated in the <b>Learner's Assessment Card</b>.</li> <li>The learner, in their notebook, will write their personal insights about the lesson using the prompts below.                      I understand that _____.                      I realize that _____.                      I need to learn more about _____.                 </li> </ul>

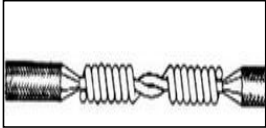
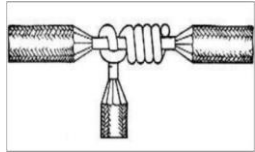
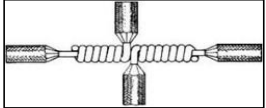
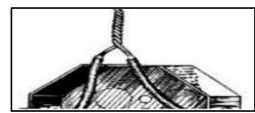
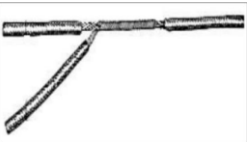
**Prepared by:** Jelly Ann O. Redondo

**Checked by:** Roger C. Maldia  
Mary Ann Q. Clanor

W7	Learning Area	TLE – ICT	Grade Level	9
	Quarter	3	Date	

I. LESSON TITLE	Terminating and connecting electrical wiring and electronics circuit (tcew)
II. MOST ESSENTIAL LEARNING COMPETENCIES (MELCs)	Plan and prepare for termination/ connection of electrical wiring/ electronics circuits-TLE_IACSS9-12TCEW-IIIe-F-21
III. CONTENT/CORE CONTENT	<p>1.2 Select appropriate tools and equipment according to task requirements.</p> <ul style="list-style-type: none"> <li>• Task requirements                     <ul style="list-style-type: none"> <li>- Splicing</li> <li>- Jointing</li> <li>- Soldering</li> </ul> </li> <li>• Tools and equipment                     <ul style="list-style-type: none"> <li>- Pliers</li> <li>- Cutters</li> <li>- Screw driver</li> <li>- Soldering gun</li> <li>- Multitester</li> </ul> </li> </ul> <p>References:                      "SLM CHS 9 "Common Wire Splices and Joints" p. 7-12 &amp; 10 "Tools and Equipment" p. 7-10. Accessed August 19, 2020.</p>

IV. LEARNING PHASES	Suggested Timeframe	Learning Activities
<b>A. Introduction</b> <b>Panimula</b>	30 minutes	<p><b>Presentation</b></p> <p>As a student you should acquire the important knowledge and skills in wire splices and joints and should be familiar with the actual application of every splice and joint. This will serve as your tool in performing actual wiring installation.</p> <p><b>A. Directions:</b> Guess the missing letter to form a word/s. Write your answer on a space provided.</p> <p>_____ 1. _ P _ _ C _ N G</p> <p>_____ 2. S _ L D _ R _ _ G</p> <p>_____ 3. _ O _ N T _ N G</p> <p>_____ 4. R A _ _ T _ _ L</p> <p>_____ 5. P _ I E _ _</p> <p><b>B. Directions:</b> Read the questions carefully and choose the letter of the best answer. Write your answer on the space provided.</p> <p>_____ 1. It is a pencil-shaped tool which uses a heating element to bring the tip to between 500 and 650 F, hot enough to melt electrical solder.</p> <p>A. cutters      B. pliers      C. screwdriver      D. soldering iron</p> <p>_____ 2. An electronic tester which measures voltage, current, resistance and other aspects of electricity and circuits.</p> <p>A. cutters      B. pliers      C. multi-tester      D. screwdriver</p> <p>_____ 3. It is the process of joining two or more electronic parts together by melting solder around the connection.</p> <p>A. joining      B. splicing      C. soldering      D. welding</p> <p>_____ 4. This is used extensively for outside wiring to extend the length of wire from one end to another.</p>

IV. LEARNING PHASES	Suggested Timeframe	Learning Activities
		<p>A. knotted tap                      C. western union short-tie plice  B. plain tap joint                  D. western Union Long-tie Splice  _____ 5. This is a two-tap wire turned simultaneously and is used where the two-tap wire is under heavy tensile stress.  A. cross joint                      C. knotted tap  B. duplex cross joint            D. plain tap joint</p> <p><b>Directions:</b> Read each statement carefully. Write <b>T</b> if the statement is true and <b>F</b> if the statement is false.  ____ 1. This is use for holding, gripping, cutting, bending, and splicing wires, cables and even small nails it is known as the linesman pliers.  ____ 2. Cutting, gripping and holding wires are the main functions of cutters.  ____ 3. Screw drivers is used for tighten and loosen the screws.  ____ 4. Desoldering tool functions is to join the two metals together by melting it.  ____ 5. Multitester this is use to check the integrity of the circuits and the quality of electricity in other components of computer.</p>
<b>C. Development Pagpapaunlad</b>	1 hour & 30 minutes	<p>Read and understand Information Sheet "Common Wire Splices and Joints" &amp; Tools and Equipment"</p> <p><b>Learning Activity 1. Catch Me, Who Am I?</b>  <b>Directions:</b> Identify the following common splices and joints whether it is <b>Splice</b> or <b>Joint</b>. Write your answer on the space provided.</p> <p>_____ 1. </p> <p>_____ 2. </p> <p>_____ 3. </p> <p>_____ 4. </p> <p>_____ 5. </p> <p><b>Learning Activity 2. Where Do I Belong?</b>  <b>Directions:</b> Complete the table by classifying the following task requirement. Choose your answer from the box below.</p>

IV. LEARNING PHASES	Suggested Timeframe	Learning Activities
		<div><div>Britannia      knotted tap      Duplex cross      Straight Y-splice      Aerial      Rat Tail      Plain tap Wester Union Short-tie      Western Union Long-tie   </div></div>

IV. LEARNING PHASES	Suggested Timeframe	Learning Activities
		<p>_____ 1. Place the two ends of bare wire in crossed position.</p> <p>_____ 2. Then, twist the bare conductors about five to seven times.</p> <p>_____ 3. Strip the wire insulator at the ends of the conductor to be joined at about 50 mm. Clean both wires to be joined.</p>
<b>V. ASSESSMENT</b> (Learning Activity Sheets for Enrichment, Remediation or Assessment to be given on Weeks 3 and 6)	1 hour	<p><b>Directions:</b> Fill in the missing letters to complete the words. Use the definition provided as your reference.</p> <p>_____ O _____ D _____</p> <p>1. A metal alloy material that is melted to create a permanent bond between electrical parts.</p> <p>_____ E R _____ L A _____</p> <p>2. This is used as a temporary tap usually done in constructions sites. The easy twist will facilitate tap wire movement.</p> <p>_____ S _____ CE _____</p> <p>3. This method of wrapping is generally used on small cables because the strands are flexible, and all can be wrapped in one operation.</p> <p>_____ N T E _____ P _____</p> <p>4. Joint all the splices discussed up to this point are known as butted splices.</p> <p>_____ P I I G _____</p> <p>5. It is an electrical connection or joining of two or more wires that conduct electricity in a building.</p> <p><b>Directions:</b> State whether the following is a tool or equipment. Write your answer on the blank before each number.</p> <p>_____ 1. Phillips screwdriver</p> <p>_____ 2. Wire rope cutters</p> <p>_____ 3. Long nose pliers</p> <p>_____ 4. Soldering tool</p> <p>_____ 5. Multi-tester</p>
<b>VI. REFLECTION</b>		<ul style="list-style-type: none"> <li>The learner communicates the explanation of their personal assessment as indicated in the <b>Learner's Assessment Card</b>.</li> <li>The learner, in their notebook, will write their personal insights about the lesson using the prompts below.</li> </ul> <p>I understand that _____.</p> <p>I realize that _____.</p> <p>I need to learn more about _____.</p>

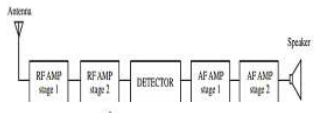
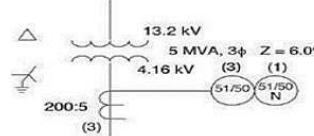
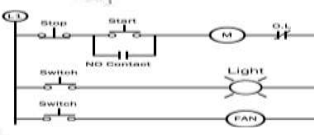
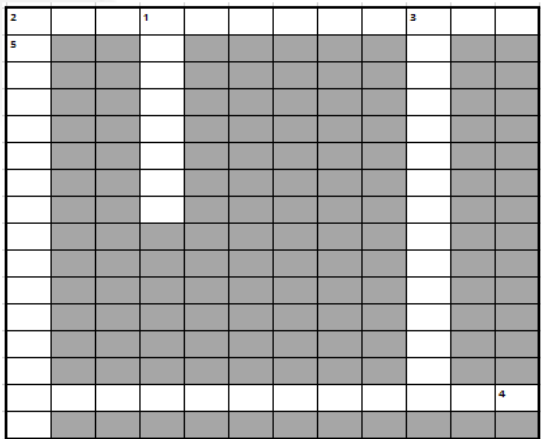
<b>Prepared by:</b> Jelly Ann O. Redondo	<b>Checked by:</b> Roger C. Maldia Mary Ann Q. Clanor
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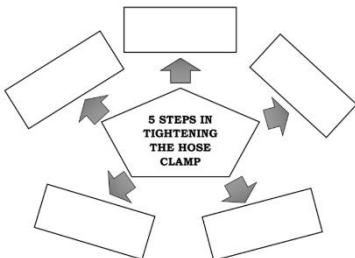


<b>W8</b>	<b>Learning Area</b>	TLE – ICT	<b>Grade Level</b>	9
	<b>Quarter</b>	Third	<b>Date</b>	

<b>I. LESSON TITLE</b>	Lesson 6: Terminating and connecting electrical wiring and electronics circuit (tcew)
<b>II. MOST ESSENTIAL LEARNING COMPETENCIES (MELCs)</b>	LO 2: Terminate/connect electrical wiring/ electronic circuits. <b>TLE_IACSS9-12TCEW-IIIg-i-22</b>
<b>III. CONTENT/CORE CONTENT</b>	<ul style="list-style-type: none"> <li>Prepare electrical wiring/electronics circuits correctly for connecting/terminating in accordance with instruction and work site procedures.                     <ul style="list-style-type: none"> <li>➤ Electrical wiring diagram</li> <li>➤ Electronics kit</li> </ul> </li> </ul> <p>2.3 Use appropriate range of methods in termination/connection in accordance to specifications, manufacturer's requirements, and safety</p> <p>2.5 Adjust used accessories</p> <p>2.6 Confirm termination/connection in accordance with job specification</p> <p>References: "SLM CSS 9-M14,M15" Accessed August 19, 2020.</p>

IV. LEARNING PHASES	Suggested Timeframe	Learning Activities
<b>A. Introduction</b> <i>Panimula</i>	30 minutes	<p><b>Presentation</b></p> <p>A <b>wiring diagram</b> is a simplified conventional pictorial representation of an electrical circuit. It shows the components of the circuit as simplified shapes, and the power and signal connections between the devices.</p> <p><b>A.</b> Directions: Observe the picture below. Answer the guide questions.</p> <div data-bbox="604 1126 1007 1355"> </div> <p>Image retrieved from: <a href="https://www.storyboardthat.com/lesson-plans/electrical-circuits">https://www.storyboardthat.com/lesson-plans/electrical-circuits</a></p> <p>Guide Questions:</p> <ol style="list-style-type: none"> <li>What can you say about the picture being shown?</li> <li>What are the different electrical symbols are familiar to you?</li> <li>Why do you think that these symbols are important in wiring diagram?</li> </ol>
<b>B. Development</b> <i>Pagpapaunlad</i>	1 hour & 30 minutes	<p>Read and understand Information Sheet about Terminate/connect electrical wiring/ electronic circuits.</p> <p><b>Learning Activity 1. Matchy matchy!</b></p> <p><b>Directions:</b> Match the picture in column A with the description in column B. Write your answer on a space provided.</p> <p>Column A</p> <div data-bbox="614 1736 957 1825"> <p>___ 1. </p> </div> <div data-bbox="614 1859 981 1915"> <p>___ 2. </p> </div> <p>Column B</p> <p>A. Pictorial diagram</p> <p>B. Single Line diagram</p>

IV. LEARNING PHASES	Suggested Timeframe	Learning Activities
		<p>3. </p> <p>4. </p> <p>5. </p> <p>C. Block diagram</p> <p>D. Schematic diagram</p> <p>E. Ladder diagram</p> <p>Image retrieved from: <a href="https://automationforum.co/what-is-an-electrical-diagram-and-what-are-the-different-types-of-electrical-diagrams%E2%82%AC%80%A2%E2%82%AC">https://automationforum.co/what-is-an-electrical-diagram-and-what-are-the-different-types-of-electrical-diagrams%E2%82%AC%80%A2%E2%82%AC</a></p> <p><b>Learning Activity 2. Up, Side, Down</b>  <b>Directions:</b> Find the word needed in the puzzle based on its uses.</p> <div data-bbox="762 817 1305 1254">  </div> <p><b>Across</b></p> <p>2. A device that joins two pieces of equipments, wires, or pipings with the use of pins.</p> <p>4. It represents a new alternative screw clamps and are useful in applications using small wire diameters and limited working space.</p> <p><b>Down</b></p> <p>1. It comes from the root word clamp which means holding something together tightly.</p> <p>3. Multiple wires are being connected individually to a single terminal point and enclosed in its housing.</p> <p>5. This joins two or more electronic parts like wires or circuit boards together by melting solder to the connection.</p>
C. Engagement Pakikipagpalihan	1 hour	<p>The wire termination is the work performed to the end of a wire that allows it to connect to a device such as connector, switch, terminals and others. Hence, electrical connection allows electricity to flow through the wire which transmit electricity. A cable with specialized ends runs between two connectors; these are the ends that interlock with the ends on a compatible cables and wires to allow transfer of power.</p> <p><b>Learning Activity 3: "C vs. PC vs. PAS</b>  <b>Directions:</b> Determine the methods of termination and connection. Write <b>C</b> if the methods are <b>clamping</b>, <b>PC</b> for <b>pin connector</b>, and <b>PAS</b> for <b>plug and socket</b>.</p> <p>1. Wire-to-wire connector</p> <p>2. Steel clamp</p>

IV. LEARNING PHASES	Suggested Timeframe	Learning Activities												
		<div>____ 3. Ring and spade</div> <div>____ 4. Spring clamp</div> <div>____ 5. Wire to board connector system</div> <div>Learning Task 4: Step? Yes!</div> <div>Directions: Give the 5 steps in tightening the hose clamp. Write the answer on each box.</div> <div></div>												
D. Assimilation Paglalapat	1 hour	<div>Learning Task 5: Fill Me In:</div> <div>Directions: Read the sentences carefully. Fill in the blanks with the correct answer to complete the statement.</div> <div>1. Clip off wire ends about _____ inch from the clamp and push ends down against the hose.</div> <div>2. Cut the wire to length 4 times around project plus _____ for tool.</div> <div>3. Then, rotate the tool _____ degrees to lock clamp when the clamp has reached its desired tension.</div> <div>4. To open the hose clamp by turning the driver _____ have a flat-head screwdriver or a hex wrench, then turn it until the clamp comes apart.</div> <div>5. To use the clamp, the exposed tabs are pressed towards each other using _____, increase the diameter of the ring, the clamp is slid onto the hose, past the portion that will go onto the barb.</div> <div>Learning Activity 6: Things to consider</div> <div>Directions: In the table below, write 5 procedures in inspecting the wires, that you and your family performed at home.</div> <div><table><tr><th colspan="2">PROCEDURES IN INSPECTING THE WIRES</th></tr><tr><td>1.</td><td></td></tr><tr><td>2.</td><td></td></tr><tr><td>3.</td><td></td></tr><tr><td>4.</td><td></td></tr><tr><td>5.</td><td></td></tr></table></div> <div>Learning Activity 7: Know me what?</div> <div>What are the benefits of knowing the inspection of electrical wires in your home? Write your answer inside the box.</div> <div><div>BENEFITS OF ELECTRICAL INSPECTION</div><div><div></div><div><div></div><div></div></div><div><div></div><div></div></div></div></div>	PROCEDURES IN INSPECTING THE WIRES		1.		2.		3.		4.		5.	
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IV. LEARNING PHASES	Suggested Timeframe	Learning Activities												
<b>V. ASSESSMENT</b> (Learning Activity Sheets for Enrichment, Remediation or Assessment to be given on Weeks 3 and 6)	1 hour	<p><b>Directions:</b> Modified True or False. Write <b>TRUE</b> if the statement is correct. If <b>FALSE</b>, change the <b><u>underlined word/s</u></b> to make the statement correct.</p> <p>_____ 1. Soldering joints uses solder a metal alloy and when it cools it creates a <b>weak</b> electrical bond between the parts.</p> <p>_____ 2. The plug and socket has a female as a socket having one or more pins into a male socket or also known as <b>plug</b>.</p> <p>_____ 3. Touch the tip of one end of the wire, be sure the soldering iron is full <b>unheated</b>, and hold on the wire for 3-4 seconds.</p> <p>_____ 4. <b>Spring clamps</b> uses a screw to tighten the wire and make an electrical connection, it can accommodate a very wide range of wire sizes and provides a reliable connection.</p> <p>_____ 5. <b>IDC</b> pushes the wire between two sharp pieces of metal, it allows connection to be made without any exposing of bare wires.</p> <p><b>Directions:</b> Match column A with column B. Write only the letter of correct answer on the blank provided before each number.</p> <table><tr><td>A</td><td>B</td></tr><tr><td>____ 1. It refers to thorough check up of the electrical connections and wiring installed.</td><td>a. Electrical wires</td></tr><tr><td>____ 2. Check all the possible norms and procedures to follow while installing different wires and cables.</td><td>b. Overheat</td></tr><tr><td>____ 3. This protects the electrical circuits that needs to check regularly.</td><td>c. Electrical inspection</td></tr><tr><td>____ 4. It is the cause of break through fire.</td><td>d. Research</td></tr><tr><td>____ 5. Needs to check in inspection every 2 to 3 years.</td><td>e. Circuit breaker</td></tr></table>	A	B	____ 1. It refers to thorough check up of the electrical connections and wiring installed.	a. Electrical wires	____ 2. Check all the possible norms and procedures to follow while installing different wires and cables.	b. Overheat	____ 3. This protects the electrical circuits that needs to check regularly.	c. Electrical inspection	____ 4. It is the cause of break through fire.	d. Research	____ 5. Needs to check in inspection every 2 to 3 years.	e. Circuit breaker
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____ 5. Needs to check in inspection every 2 to 3 years.	e. Circuit breaker													
<b>VI. REFLECTION</b>		<ul style="list-style-type: none"><li>• The learner communicates the explanation of their personal assessment as indicated in the <b>Learner's Assessment Card</b>.</li><li>• The learner, in their notebook, will write their personal insights about the lesson using the prompts below. I understand that _____. I realize that _____. I need to learn more about _____.</li></ul>												

<b>Prepared by:</b> Jelly Ann O. Redondo	<b>Checked by:</b> Roger C. Maldia Mary Ann Q. Clanor
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