


**WEEK ENDING.....30/09/2022.....**

**SUBJECT...PRE-TECHNICAL SKILLS**

**REFERENCE...SYLLABUS(CRDD,2007), PRE-TECH FOR JHS .....**

**FORM.....BASIC 8.....WEEK.....3.....**

<b><u>DAY/DURATION</u></b>	<b><u>TOPIC/SUB-TOPIC/ASPECT</u></b>	<b><u>OBJECTIVES/R.P.K</u></b>	<b><u>TEACHER-LEARNER ACTIVITIES</u></b>	<b><u>T/L MATERIALS</u></b>	<b><u>CORE POINTS</u></b>	<b><u>EVALUATION AND REMARKS</u></b>
<b>TUESDAY</b> <b>27-09-2022</b>  <b>1:20PM - 2:40PM</b> <b>80min</b>	<b>Topic;</b>  <b>Metals</b>  <b>Sub-Topic</b>  <b>Medium Carbon steel</b>	<b>Objective;</b> By the end of the lesson the Pupil will be able to; <ol style="list-style-type: none"> <li>i. Explain the meaning of a Medium Carbon Steel</li> <li>ii. Identify the physical properties of a Medium Carbon Steel.</li> </ol> <b>RPK</b> Pupils were taught lessons on Metals in basic 7.	<b>Introduction;</b> Discuss the meaning of Medium Carbon steel with the Pupils.  Show pupils pictures of a Medium Carbon steel.  <b>Activities</b> <ol style="list-style-type: none"> <li>1. Show a video play of Medium Carbon steels.</li> <li>2. Discuss the properties of medium carbon steel.</li> </ol>		 <p style="text-align: right;">Steel</p> <p>is an alloy of metals that consists primarily of iron and contains 0.2 to 2.1 percent carbon. All steel contains carbon, but the term “carbon steel” applies specifically to steel that contains carbon as the main alloying constituent. Medium carbon steel is carbon steel that contains between 0.30 and 0.60 percent carbon. It also has a manganese content between 0.6 and 1.65 percent. This type of steel provides a good balance between strength and ductility, and it is common in many types of steel parts.</p>	<b>Exercise;</b> <ol style="list-style-type: none"> <li>1. What is a Carbon steel</li> <li>2. State and explain 4 properties of a medium carbon steel.</li> </ol>

			<b>Closure;</b>		<table> <thead> <tr> <th></th> <th><b>Carbon content (wt.%)</b></th> <th><b>Properties</b></th> </tr> </thead> <tbody> <tr> <td>Medium-carbon steel</td> <td>0.25 – 0.60</td> <td>Low hardenability, medium strength, ductility and toughness</td> </tr> <tr> <td>High-carbon steel</td> <td>0.60 – 1.25</td> <td>High hardness, strength, low ductility</td> </tr> </tbody> </table>		<b>Carbon content (wt.%)</b>	<b>Properties</b>	Medium-carbon steel	0.25 – 0.60	Low hardenability, medium strength, ductility and toughness	High-carbon steel	0.60 – 1.25	High hardness, strength, low ductility		
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<p><b>THURSDAY</b></p> <p><b>29-09-2022</b></p> <p><b>8:05AM – 9:15AM</b></p> <p><b>70min</b></p>	<p><b>Topic;</b></p> <p><b>Metals</b></p> <p><b>Sub-Topic</b></p> <p><b>Carbon content of medium carbon steel.</b></p>	<p><b>Objective;</b></p> <p>By the end of the lesson the Pupil will be able to;</p> <p>state the range of carbon content of medium carbon steel.</p> <p><b>RPK</b></p> <p>Pupils have been taught about the properties of Medium carbon steel.</p>	<p><b>Introduction</b></p> <p>Review Pupils knowledge on the previous lesson.</p> <p><b>Activities</b></p> <ol style="list-style-type: none"> <li>1. Discuss the range of carbon content of medium carbon steel with the Pupils.</li> <li>2. Pupils brainstorm to tell the range of</li> </ol>		<p>The medium-carbon steels have carbon content of 0.30% to 0.60%. They may contain manganese ranging from 0.6% to 1.65%; this makes these types of steel susceptible to hardening during welding. However, they can be very successfully welded with some precautions.</p> <table border="1"> <thead> <tr> <th>Type of steel</th> <th>Carbon content (%)</th> </tr> </thead> <tbody> <tr> <td>Dead mild steel</td> <td>&lt; 0.15</td> </tr> <tr> <td>Mild steel</td> <td>0.15–0.3</td> </tr> <tr> <td>Medium carbon steel</td> <td>0.3–0.8</td> </tr> <tr> <td>High carbon steel or hard steel</td> <td>0.8–1.5</td> </tr> </tbody> </table> <p>(&gt; 1 is also called cast steel or tool steel)</p>	Type of steel	Carbon content (%)	Dead mild steel	< 0.15	Mild steel	0.15–0.3	Medium carbon steel	0.3–0.8	High carbon steel or hard steel	0.8–1.5	<p><b>Exercise;</b></p> <p>State the range of Carbon content of medium carbon steel.</p> <p><b>REMARKS</b></p>
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Manganese content in medium carbon steels.

**Closure;**  
Assist Pupils to differentiate between Carbon steel and Mild steel.

