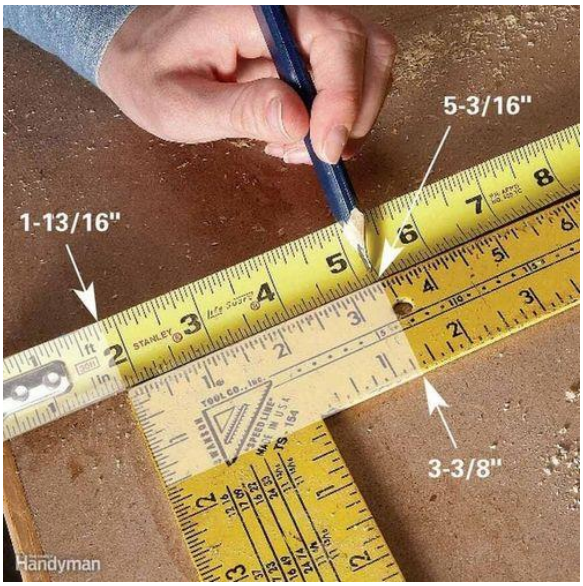
Strand:	Tools, Equipment and Processes	**Sub-Strand:**	Measuring and Marking Out

BASIC 9

WEEKLY LESSON PLAN – WEEK 13

Content Standard:	B9.3.1.1 Demonstrate understanding of measuring and marking out tools and equipment				
Indicator (s)	B9.3.1.1.3: Demonstrate how to care for and maintain measuring and marking out tools		**Performance Indicator:** Learners can properly care for and maintain measuring and marking out tools, ensuring accurate measurements and precise markings		
Week Ending	06-12-2024				
Class	B.S.9	**Class Size:**		**Duration:**	
Subject	Career Technology				
Reference	Career Technology Curriculum, Teachers Resource Pack, Learners Resource Pack, Textbook.				
Teaching / Learning Resources	Tape measure, marking chalk, Poster, Pictures, Video		**Core Competencies:**	• Critical Thinking and Problem Solving • Communication and Collaboration.	

DAY/DATE	**PHASE 1 : STARTER**	**PHASE 2: MAIN**	**PHASE 3: REFLECTION**
WEDNESDAY	Review Learners knowledge on the previous lesson.	1. Discuss with the Learners on the importance of measuring and marking tools in various industries and applications. 2. Drill Learners on the need for proper care and maintenance to ensure accuracy and longevity. 3. Demonstrate how to inspect measuring and marking tools for wear, damage, or corrosion. 4. Assist Learners to identify common issues, such as: i. Dull or worn-out edges ii. Misaligned or loose parts iii. Cracks or breaks **How to care for measuring and marking out tools** To ensure accuracy and longevity, it's essential to handle and care for measuring and marking out tools with attention to detail. Here are some guidelines: • **Cleanliness**: Regularly wipe down tools with a soft cloth and mild detergent to remove dirt, oil, and debris. Avoid using harsh chemicals or abrasive materials that can damage surfaces. • **Storage**: Store tools in a dry, cool place, away from direct sunlight and extreme temperatures. Keep them in their original cases or containers to prevent damage and scratching.	Reflect on the need for proper care and maintenance of measuring and marking out tools. **Exercise;** Explain 5 importance of measuring and marking tools.

		• **Handling**: Handle tools with care, avoiding sudden shocks, drops, or rough treatment. For precision instruments, use a gentle touch and avoid applying excessive pressure. • **Maintenance**: For instruments with moving parts, such as calipers or micrometers, apply a few drops of lubricant (e.g., silicone spray) to keep mechanisms running smoothly. Avoid over-lubricating, as this can attract dirt and dust. • **Calibration**: Regularly check and maintain the calibration of precision instruments. If possible, perform routine calibration checks according to the manufacturer's instructions. • **Protection from Vibration**: If your work environment is prone to vibration, store measuring instruments in an area with minimal vibration to prevent damage or miscalibration. • **Tool Specific Care**: For specific tools, such as marking gauges or bevel protractors, follow the manufacturer's guidelines for cleaning, lubrication, and storage.  	

THURSDAY	Play a video to sensitize the Learners on how to clean tools using a soft cloth, mild soap, and water.	1. Demonstrate on the application of lubricants (if necessary) to moving parts, such as hinges or pivot points. 2. Discuss with the Learners about the importance of storing tools in a dry, secure location, away from direct sunlight and extreme temperatures. 3. Assist Learners to practice how to organize tools in storage containers or cases, keeping similar tools together and labeling each container. 4. Discuss with the Learners on the best practices for using measuring and marking tools, including: i. Handling tools gently to avoid damage ii. Avoiding exposure to harsh chemicals or environments iii. Regularly checking tool accuracy and adjusting as needed **Storage** Storage is a critical element of measuring tool care, as these devices can spend significant amounts of time in cupboards or cabinets where they may get damaged. Be sure to follow the recommendations for how to store each tool you use. Different types of gages and tools made of different materials often have different storage requirements. Many measurement devices come in cases, and it's often a best practice to store your tools in these cases. If your tool didn't come with a case, purchase one that meets the storage requirements of your instrument. Make sure it's the right material, size and shape and that it has the right features. Often, these containers will have padding. For some types of gages, you may want to place them on a clean, dry cloth inside a case. Keeping your tools in a case helps to protect them from airborne contaminants and accidental physical damage. Another crucial measure to take to prevent physical damage is to separate your devices so that they don't bump into and damage each other. You can separate them using dividers or cases. Don't stack devices on top of each other unless they're in cases that will protect them from damaging each other. It can also be helpful to take time to organize your devices in a cart, tray, inspection station or other location. Doing so can help make it easier to follow proper storage procedures and enable you to access your tools more efficiently. You also need to ensure that you store your devices in the proper temperature and humidity and that other conditions are suitable for your tools as well. In general, you want to keep gages in a cool, dry place, but some	Encourage Learners to research and present on specific tools or techniques used in their chosen industry or profession. **Exercise;** Discuss 4 proper ways of caring for measuring and marking out tools.

		devices may also come with more specific recommendations. Be sure to keep the storage area at an appropriate temperature and keep your devices away from sources of heat, including sunlight. If your gages get exposed to sunlight or other sources that produce too much heat, they may expand as they heat up and then contract as they cool, potentially damaging them and decreasing their accuracy. You also need to take steps to keep the humidity of the storage space at a suitable level and to take care of any moisture issues that may arise. Doing so is crucial, since excessive moisture can lead to corrosion. Air conditioning or a dehumidifier can help you control humidity and reduce ambient moisture. Placing silica gel packets in the drawers where you store your tools can help take care of any other excess moisture. Over time, vibration can cause measuring tools to fall out of calibration, so store your instruments away from any equipment that may cause vibration or movement. **Cleaning** Another essential aspect of gage maintenance is keeping your instruments clean. Like with measuring tool storage, there are different cleaning recommendations for different types of gages and materials. Be sure to follow the guidelines for your specific tools to ensure you thoroughly clean them and avoid damaging them. Conscientiously cleaning your devices is crucial, as any residue that remains on your device may impact the accuracy of your measurements. The material your device is made of plays a significant role in the cleaning method you should use. If an instrument is mostly aluminum, for example, avoid using alcohol, as it can cause aluminum to deteriorate. For brass, it's best not to use anything except for a clean cloth that you've dampened with distilled water. Some general cleaning tips include: • Not leaving your instruments in contact with dirt or oil for long periods, as oils can cause corrosion • Avoiding touching gages with your bare hands, as skin oils can be damaging • Using a soft, non-abrasive cloth to clean your instruments and ensuring the cloth is clean before using it	

Name of Teacher: **School:** **District:**