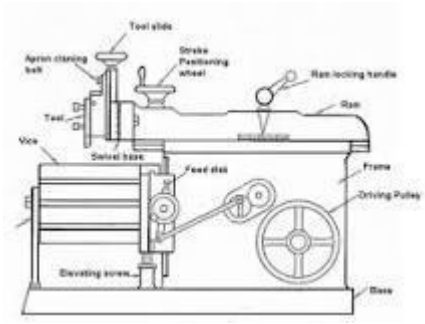
BASIC 7

WEEKLY LESSON PLAN – WEEK 6

Strand:	Tools, equipment and processes		**Sub-Strand:**	Cutting/Shaping	
Content Standard:	B7.3.2.1 Demonstrate understanding of cutting/shaping tools and equipment for production				
Indicator (s)	B7.3.2.1.1:Identify cutting and shaping tools and equipment used for production B7.3.2.1.2 : Use appropriate skills in cutting, chopping , slicing, dicing and shaping products B7.3.2.1.3: Demonstrate how to care for and maintain cutting and shaping tools used for production		**Performance Indicator:** Learners can identify examples cutting and shaping tools.		
Week Ending	12-05-2023				
Class	B.S.7	**Class Size:**		**Duration:**	
Subject	Career Technology				
Reference	Career Technology Curriculum, Teachers Resource Pack, Learners Resource Pack				
Teaching / Learning Resources	Saw, chisel, bench grinder, angle grinder		**Core Competencies:**	● Creativity and Innovation ● Manipulative skills ● Operational skills.	

DAY/DATE	**PHASE 1 : STARTER**	**PHASE 2: MAIN**	**PHASE 3: REFLECTION**
MONDAY **08-05-2023**	Discuss with the Learners the meaning of "cutting and shaping".	1. Assist Learners to identify examples of cutting and shaping tools used for production. 2. Learners in small groups are to discuss about the features of cutting and shaping tools. 3. Discuss 5 importance of using cutting and shaping tools. **Cutting and Shaping Tools;** **What is cutting tool?** Cutting tool is a wedge shaped and sharp edged device that is used to remove excess layer of material from the workpiece by shearing during machining in order to obtain desired shape, size and accuracy. It is rigidly mounted on the machine tool. A relative velocity between workpiece and cutting tool is also provided by various mechanical and other arrangements for cutting action. **Examples of cutting tools**	Reflect on the features of cutting and shaping tools. **Exercise;** 1. What are cutting tools? 2. Mention 5 examples of cutting tools

		Cutting tool is basically the cutter used in machining operation. Various machining operations utilize different cutters and thus various names are available for these cutters based on the application. A list of commonly used cutting tools is provided below. 4. **Single point turning tool**—cutter for turning operation performed in lathe 5. **Drill**—cutter for drilling operation performed on drilling machine or lathe or milling machine 6. **Milling cutter (or mill)**—cutter for milling operations performed on milling machine 7. **Fly cutter**—cutter for fly milling operation performed in milling machine 8. **Shaper**—cutter for shaping operation performed in shaping machine 9. **Planer**—cutter for planing operation performed in planing machine 10. **Boring bar**—cutter for boring operation performed in drilling or boring machine 11. **Reamer**—cutter for reaming operation performed in drilling machine 12. **Broach**—cutter for broaching operation performed in broaching machine 13. **Hob**—cutter for hobbing operation performed in hobbing machine 14. **Grinding wheel**—abrasive cutter for grinding operation performed in grinding machine. 15. **Food laboratory** - Kitchen knives, cutters: pairing, chopping, bread, biscuit cutters ,cake tins, moulds, scoops for ice cream 16. **Sewing workshop/laboratory** e.g. Scissors, pinking shears, seam ripper and French curves) 17. Woodwork - Saws, chisels, spoke shave, rasp file 18. Building - Bolster, brick hammer, mould box 19. Plastic - Coping saw, junior hacksaw, files, drills 20. Metal/plastics - Saws, files, chisels The purpose of cutting tool (also called cutter) is to compress a particular layer of work material in order to shear it off. Therefore, cutter must have wedge shape with sharp edge for smoothly and efficiently removing material requiring minimum power. At the same time cutter material should be sufficiently hard so as to withstand intense rubbing occurred during machining	

THURSDAY **11-05-2023**	Through questions and answers, review Learners knowledge on the previous lesson.	1. Assist Learners to differentiate between cutting and shaping. 2. Discuss with Learners on the functions of different kinds of shaping tools. 3. Learners in small groups to practice using cutting and shaping tools in the classroom. 4. Learners brainstorm on how to care and maintain for cutting and shaping tools.  A shaping tool is used to cut in curves, different angles, and many other shapes. A disc is responsible for the tool rotation which results in the forward and backward movement. The cutting tool is used to give the shape to the hard surface of metal or wood by removing the excess material **Shaping Tools** ● Soldering Iron. A handheld tool used to create strong electrical connections by melting soldering wire. ● Orbital Sanders. ● Belt Sander. ● Planer. ● Bench Grinder. ● Angle Grinder. ● Mini Lathe. ● CNC Router. **Caring for Cutting and shaping tools;** 1. Keep your tools in a dry place. 2. Store tools in their original cases. 3. Use rust collector or silica gel pack. 4. Clean your tools properly. 5. Inspect tools frequently for wear and damages. 6. Maintain the batteries of tools	Learners practice using shaping tools. **Exercise;** 1. What are Shaping tools? 2. State 5 examples of shaping tools.

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