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NG EOUILASYON	School:	Grade Level:	7
REALIST HEA NG PILIPINES	Teacher:	Learning Area:	TLE
4 10	Teaching Dates and Time:	Quarter:	Fourth
MATATAG  Bansang Makabata   Batang Makabansa	Time.	Week:	Week 4-Day 1

I. CONTENT, STANI	DARDS AND LEARNING COMPETENCIES	ANNOTATIONS	
A. CONTENT STANDARDS	The learners demonstrate an understanding of the uses and maintenance of hand tools, power tools, instruments, and equipment.		
B. PERFORMANCE STANDARDS	The learners perform mensuration and calculations following safety precautions.		
C. LEARNING COMPETENCIES	Learning Competency Classification of tools in industrial arts services		
D. LEARNING OBJECTIVES	Learning Objectives 1. Classify different tools in industrial services 2. Identify examples of tools for each classification 3. Sort industrial arts services tools according to their classification		
	I. CONTENT		
Classification of Tools in Industrial Arts Services			
	II. LEARNING RESOURCES		
A. REFERENCES	Basic metalwork tools and equipments. (n.d https://metalworkinginfo.blogspot.com/p/bast.html	•	

Dabu, C. (2015, September 13). Occupational health and safety procedures [Slide show]. SlideShare.

https://www.slideshare.net/cupaydabu/occupational-health-and-safety-procedures

Miguel, C. G. (2019, November 7). The complete guide of Automotive tools: With names & pictures. philkotse.com. https://philkotse.com/car-

maintenance/the-complete-guide-of-automotive-tools-with-names-pictures-57 41

Nazarov, E. (2023, October 15). A Tool Odyssey: History of Tools from Prehistory to The Present. Ronix Mag. https://ronixtools.com/en/blog/a-tool-

odyssey-history-of-tools-from-prehistory-to-the-present/

Rico, R. (n.d.). Carpentry tools. Scribd. https://www.scribd.com/document/429157675/Carpentry-Tools

Team. (n.d.). What are the masonry tools? CMP Stonemason Supplies. https://cmpstone.com.au/what-are-the-masonry-

tools/#:~:text=FAQs%20About%20Masonry%20Tools

Team, W. R. (2024, February 27). 6 Essential carpenter tools for more precise and efficient projects. Woodsmith.

https://www.woodsmith.com/review/essential-carpenter-tools/

## B. OTHER LEARNING RESOURCES

#### III. TEACHING AND LEARNING PROCEDURE

## **BEFORE/PRE-LESSON PROPER**

## ACTIVATING PRIOR KNOWLEDGE

## **Short Review:**

The teacher will show pictures of tools and let the students classify if they are analog or digital.

1.



If you have stable internet connections, you may use other activities, such as integrating Kahoot in class.

### Answer key:

- 1. Digital
- 2. Analog
- 3. Analog

2.

		4. Digital
		5. Analog
	3.	
	4.	
	5.	
	<u> </u>	
	2. Feedback (Optional)	
LESSON	1. Lesson Purpose: Pass the Alcohol,	The teacher may print or show
PURPOSE/INTENTION	not the Virus!  The teacher will play a song while the song is playing, and students will spray alcohol on their seatmates' hands. As the music stops, the last student who was sprayed will answer the question given by the teacher.  The teacher will give examples of broken objects/fixtures and let the students guess	pictures of broken objects/fixtures. They may also ask the following questions:  1. What type of tool would be used in fixing the following:  Broken doors Broken electric fan Damaged wall Clogged sink and toilet
	what tool would be used in each object/fixture.	Broken grills
	<ul> <li>Broken doors</li> <li>Broken electric fan.</li> <li>Damaged wall</li> <li>Clogged sink and toilet</li> </ul>	

	<ul> <li>Broken grills</li> <li>After the activity, the lesson objectives were introduced:</li> <li>1. Classify different tools in industrial services</li> <li>2. Identify examples of tools for each classification</li> <li>3. Sort industrial arts services tools</li> </ul>	
	according to their classification	
LESSON LANGUAGE PRACTICE	<ul> <li>Masonry- the craft of building a structure with brick, stone, or similar material, including mortar plastering, often laid in, bound, and pasted together by mortar.</li> <li>Plumbing- uses pipes, valves, fixtures, tanks, and other apparatuses to convey fluids.</li> <li>Shallow- of little depth</li> <li>Cylindrical- having straight parallel sides and a circular or oval cross-section in the shape or form of a cylinder.</li> <li>Synthetic- made by chemical synthesis, especially to imitate a natural product.</li> </ul>	2. Can you classify the tools based on their primary functions, such as carpentry, electrical, construction, painting, plumbing, etc.?
DURING/LESSON PROPER		Day 1 comprises two topics, but
READING THE KEY IDEA/STEM	Classification of Tools in Industrial Arts Services  SUB-TOPIC 1: Carpentry and Masonry Tools  1. Explicitation  Carpentry Tools- instruments and equipment specifically designed for woodworking and construction tasks, primarily related to shaping, cutting, ioining, and finishing wood materials.	Day 1 comprises two topics, but you can choose the important and common tools commonly used in carpentry and masonry, painting, and metalwork. Regarding the activities in each topic, you can modify them depending on how you will deliver the topics. This is also the same as the other topics; if you think this is too long and

joining, and finishing wood materials.

These tools are essential for carpenters and woodworkers to perform various tasks accurately and efficiently.

Name Of Tools	Images	Uses
Claw Hammer		This tool is used to break an object, drive a nail or spike into another, or mold the desired shape of the material.
Crosscut Saw	- Contract of the Contract of	They are used to cut across the grain of the wood.
Rip Saw		They are used to cut along the grain of the wood.
Circular Saw		A powered handheld tool is used to cut wood.
Hand Drills		Hand drills make holes in some wood crafts and are helpful in outdoor projects.
Chisel		A cutting tool with sharpened edges at the end of metal blades or used for cutting or

needs modification, you are free to do so.

**Day 1** - The teacher will discuss sub-topic 1, carpentry and masonry tools.

The teacher may briefly discuss the history and evolution of tools.

A Tool Odyssey: History of Tools from Prehistory to The Present. (n.d.). Ronix Blog.

https://ronixtools.com/en/blog/a-t ool-odyssey-history-of-tools-fro m-prehistory-to-the-present/

The teacher may give additional examples for each classification of tools.

(Note: Emphasize to them that some tools can also be used in other areas in the construction sector.)

You may also classify them as guiding, testing, measuring, holding, tooth-cutting, boring, and sharp-edge tools.

-	1	T	,	
			shaping wood,	
	Measurin g Tape		Measuring tape is a fundamental tool for accurately measuring various materials, primarily wood, lengths, distances, and dimensions.	
	Square	How as pare	It is a 90-degree standard right-angle tool sometimes called a try or trying square (90-degree angle), a miter square (45-degree angle), a combined try and miter square, combined square framing, or steel square.	
	Plane		A hand plane is a tool for shaping and refining wooden surfaces. It can also be operated as a powered tool.	

Wood
lathe
Machine



A wood lathe is a machine used in woodworkin g to shape wood into various cylindrical forms, such as balusters.

Masonry Tools- are instruments and equipment specifically designed for working with materials such as bricks, stones, concrete blocks, and mortar in construction and masonry projects. These tools are essential for cutting, shaping, laying, and finishing materials and maintaining and repairing masonry structures.

Name of Tools	Images	Uses
Trowel		A handheld tool with a flat, pointed blade is used for spreading and shaping mortar and scooping and applying other masonry materials.
Float		A hand tool used for smoothing and finishing freshly applied mortar or concrete
Hawk tool		A hawk is a tool

			7
		consisting of a flat, square board with a handle underneath . It holds a small quantity of mortar or plaster while working.	
Masonry Hammer		Also known as a brick hammer has a chisel-shap ed edge for splitting bricks and a flat face for striking or setting bricks and stones.	
Masonry Saw		A power tool equipped with a diamond-tip ped blade for cutting bricks, blocks, or stones.	
Masonry Drill	\$2222 \$2222	A drill bit specifically designed for drilling holes in masonry materials such as bricks, blocks, or concrete.	

Brick Jointer	A handheld tool with a pointed or rounded edge shape and smoothing mortar joints between bricks or blocks.
Cold Chisel	A sharp edge for cutting bricks and shaping stone in masonry works.

2. Worked Example

Let the students reflect on what they learned about carpentry and masonry tools. Encourage them to consider how understanding the differences between these tools can help them in future projects or careers related to construction and building trades.

## 3. Lesson Activity: Tool Sorting Challenge

Ask students to sort various tools into two categories: carpentry and masonry. Through this hands-on activity, they will identify and differentiate between tools commonly used in carpentry and masonry work.

(To apply what the students learned with the lesson, a supplemental activity is given. See worksheet #1 for the activity which students will accomplish.)

PLEMENTATION OF THE MATATAG K TO 10 CURRICULUM

Learning Area:	TLE 7	Quarter:	4
Lesson No.:	4	Date:	
Lesson Title/ Topic:	Classification of Tools in Industrial Masonry Tools	Arts Servi	es/Carpentry an
Name:		Grade & S	Section:

 To reinforce understanding of carpentry and masonry tools by classifying them into th appropriate categories.
 To encourage critical thinking and analytical skills in identifying the primary function of each tool.

II. Materials Needed: Ballpen and Paper
V. Instructions: Review the carpentry and masonry tool list below. Classify each tool into the

Teachers can print names or pictures of carpentry and masonry tools. Provide large bins or boxes labeled "Carpentry Tools" and "Masonry Tools.

The teacher will provide a worksheet for this activity.

**SUB-TOPIC 2: Construction Painting** and Metal Works Tools

## 1. Explicitation

Construction Painting Tools are essential for preparing surfaces, applying coatings, and achieving quality finishes in construction and painting projects.

Name of Tools	Images	Uses
Paint Brushes		Paintbrushe s are handheld tools with bristles used for applying paint to surfaces.
Roller Frames		Roller frames are handheld devices that hold paint roller covers and facilitate smooth and even paint application over large surfaces.
Paint Trays		Paint trays are shallow containers used for holding paint

	during roller application. They typically feature ribbed sections to distribute the paint evenly on roller covers and raised edges to prevent spills.
Paint Scrapers	Paint scrapers are handheld tools with sharp blades that remove old paint, dirt, and debris from surfaces before painting.
Roller Covers	Also known as roller sleeves, they are cylindrical sleeves made of absorbent material such as synthetic fibers or sheepskin.

Metal Works Tools- are instruments and equipment specifically designed for shaping, cutting, joining, and finishing metal materials in various manufacturing, fabrication, and repair applications. These tools are essential for machining, welding, forging, and forming metal components to precise specifications.

Name Of	Images	Uses
Tools		

Hacksaw		A handheld saw is a cutting tool with a fine-toothed blade for cutting metal rods, pipes, and sheets.	
Metal Shear		A cutting tool used for shearing or cutting sheet metal, plate, and bar stock.	
Welding Machine	8000	A power tool is used to join metal pieces together by melting and fusing them with heat.	
Grinding Wheel		Rotating abrasive wheel grids, smoothing, and finishing metal surfaces.	
Drill Press		A machine used for precision and accuracy to drill holes in metal workpieces.	
Cut-off		A cut-off tool refers to a handheld power tool or machine used to cut through materials	

	such as metal,
Chipping Hammer	A chipping hammer is a handheld tool used in welding and metalworkin g to remove slag and unwanted materials from welded joints and metal surfaces.

## 2. Worked Example

Students will be given scenarios to identify whether construction painting or metal works tools would be used in each situation.

## (See worksheet #2 for the activity which students will accomplish.)

Learning Area:	T.E. 7	Quarter:	4
Leason Ro.:	4	Leason Rish / Topic:	Classification of Tools in Industrial Arts Services/Construction Planting and Metal Works Tools
Name:	Grade & Section:	Classification of Tools in Industrial Arts Services/Construction Planting and Metal Works Tools	
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## **Lesson Activity: Paint Me a Picture**

IMPLEMENTATION OF THE MATATAG K TO 10 CURRICULUM

V. Synthesis/Extended Practice/Differentiation Below are pictures of tools. Identify and classify each as a construction painting or metal works tool.

	<ol> <li>Divide the class into the construction painting group and the metal works group.</li> <li>Assign each group a specific scenario to act out, incorporating construction painting tools or metal works tools.</li> <li>In their groups, students will brainstorm and plan their scenarios, focusing on how they will use the assigned tools in their performance.</li> <li>Encourage students to be creative and think of engaging ways to showcase the tools and their functions within the scenario context.</li> </ol>	
DEVELOPING and DEEPENING UNDERSTANDING	Group Activity: "Tool Masters Challenge"	
OF THE KEY IDEA/STEM	Objective:	
	<ul> <li>Identify and classify tools used in carpentry, masonry, construction painting, and metalworks.</li> </ul>	
	Explain the function and proper use of each tool.	
	Demonstrate teamwork and critical thinking in solving real-world construction-related problems.	
	Materials:	
	<ul> <li>Printed images or actual tools (if available)</li> </ul>	
	Manila paper or whiteboard	
	<ul><li>Markers</li></ul>	
	Strips of paper with tool names/functions	
	Instructions:	
	1. Group Formation	
	Divide the class into four groups. Assign each group a category:	

• **Group 1**: Carpentry Tools

Group 2: Masonry
 Tools

Group 3:

Construction Painting Tools

Group 4: Metal
 Works Tools

## 2. Activity 1: "Match the Tool"

- Each group receives an envelope containing images of different tools and strips of paper with tool names and descriptions.
- Their task is to correctly match the images with the correct name and function.
- Groups will present their matches and explain their choices.

## 3. Activity 2: "Tool in Action"

- Each group picks a real-life construction scenario (e.g., building a wooden frame, laying bricks, painting a wall, cutting metal).
- They must discuss and list which tools they will use for the task and explain why.
- A spokesperson from each group presents their scenario and tool choices.

# 4. Activity 3: "Who Am I?" (Bonus Game)

 One student from each group stands in front of the class with a card on their forehead (tool name).

AFTER AFTER/POST-LESS  MAKING GENERALIZATIONS AND ABSTRACTIONS	Their teammates will give clues about the tool without saying its name.  The student must guess the tool within 30 seconds.  Worksheet  Synthesis/Extended What you have learned In a one sheet of paper write something you understand about the lesson we discussed today.	
EVALUATING LEARNING	Direction: Read each question carefully and choose the best answer. Encircle the letter of your choice.  1. Which tool is used in carpentry to smooth or shape wood surfaces?  a. Chisel b. Hand saw c. Plane d. Trowel 2. Which of the following tools is commonly used in masonry for spreading and leveling mortar? a. Trowel b. Spirit level c. Crowbar d. Paintbrush 3. What tool is used to check the vertical and horizontal alignment of bricks or tiles in masonry? a. Trowel b. Spirit level c. Putty knife d. Hacksaw 4. Which tool is used in construction painting to apply paint on large surfaces? a. Paint roller b. Trowel c. Hacksaw d. Try square 5. Which tool is used to cut metal rods or sheets in metal works? a. Chisel	Answers: 1. c. Plane 2. a. Trowel 3. b. Spirit level 4. a. Paint roller 5. b. Hacksaw 6. a. Pliers 7. b. Claw hammer 8. c. Trowel 9. a. Drop cloth 10. a. Welding machine

6. No. 10. No.	c. Hacksaw c. Trowel d. Claw hammer  Which of the following is a gripping tool used in both carpentry and metal works? a. Pliers b. Putty knife c. Spirit level d. Paintbrush n carpentry, what tool is used to drive and remove nails? a. Spirit level b. Claw hammer c. Hacksaw d. Trowel  What is the primary tool used for mixing and applying cement or plaster in masonry work? a. Chisel b. Putty knife c. Trowel d. Paint roller  Which tool is used to protect surfaces from unwanted paint splashes while painting? a. Drop cloth b. Trowel c. Hacksaw d. Claw hammer  Which metalwork tool is used to oin metal pieces together by applying extreme heat? a. Welding machine b. Claw hammer c. Trowel d. Paint roller	
ADDITIONAL ACTIVITIES		
FOR APPLICATION OR		
REMEDIATION (IF		
APPLICABLE)		
REMARKS		
REFLECTION		

Prepared by:	Reviewed by:
Subject Teacher	Master Teacher/Head Teacher