

Timber Tech

Hand Tools: Bench & Shaping Planes.



Educon

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Introduction:

This activity helps students recognise, name, and understand the different **bench planes** and **shaping planes** used in carpentry and joinery. Students will match images of planes to their correct names, reinforcing visual identification and tool knowledge. The activity supports the lesson content, which explains that students should “*Identify types of Bench Planes*” and “*Identify Types of Shaping Planes*” (PPTX & PDF).

Aim:

To develop students' ability to correctly identify a range of bench and shaping planes by sight and understand their basic purpose and features.

Learning Objectives

By the end of this activity, students will be able to:

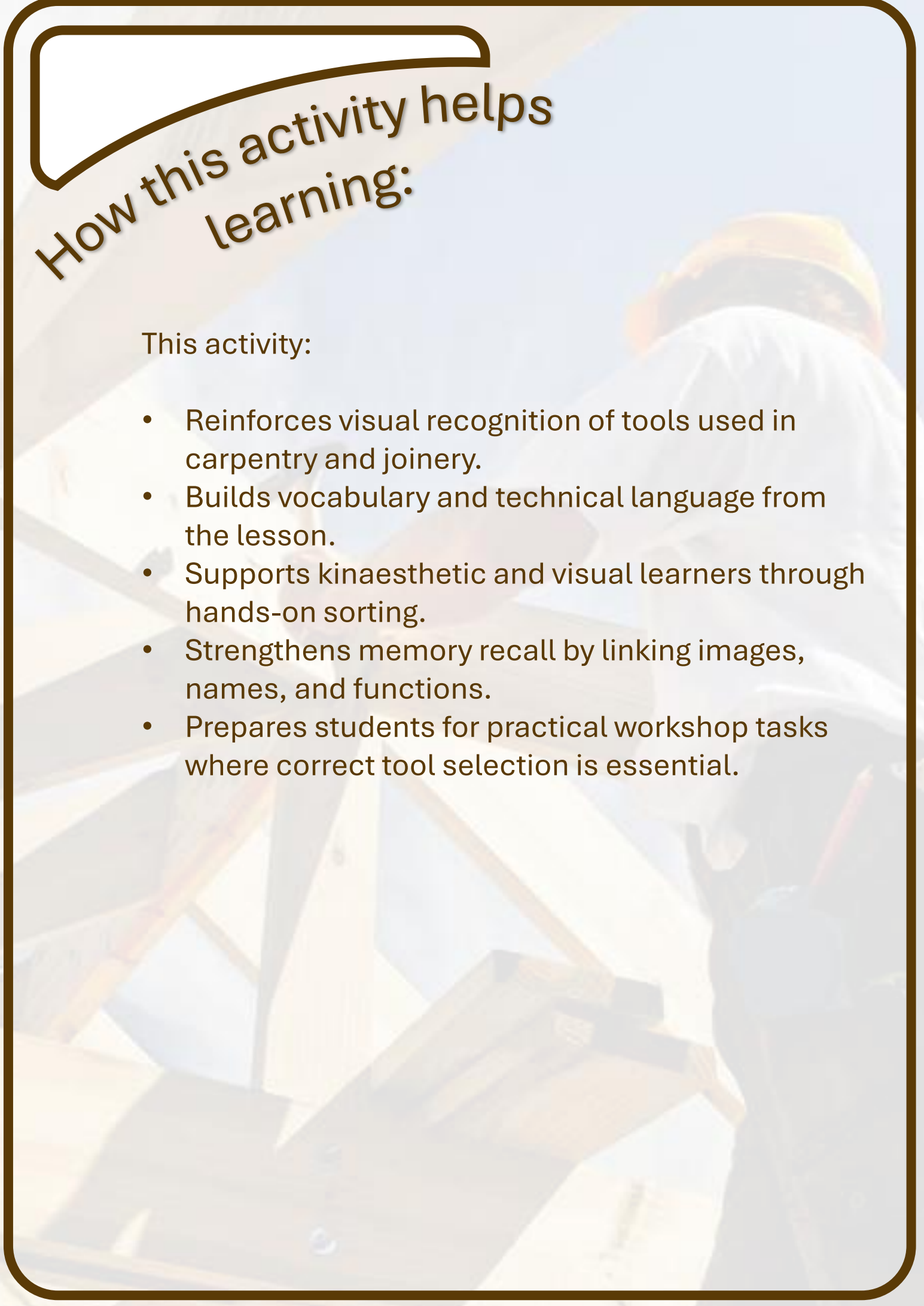
- Identify common **bench planes** (e.g., No.2, No.3, No.4, No.5, No.6, No.7, Block Plane).
- Identify common **shaping planes** (e.g., Shoulder Plane, Bullnose Plane, Router Plane, Compass Plane, Rebate Plane, Side Rebate Plane, Multi-Plane, Combination Plane, Plough Plane, Scratch Stock).
- Match each plane to its correct name and description.
- Recognise key features described in the lesson, such as “*short body and low-angle blade*” (Block Plane) or “*extended sole for flattening*” (No.7 Try Plane).

Activity Overview:

Students receive two sets of cards:

- **Image Cards** – photos/diagrams of each plane
- **Name Cards** – the correct tool names

Students must match all card together. This can be done individually, in pairs, or in small groups.



How this activity helps learning:

This activity:

- Reinforces visual recognition of tools used in carpentry and joinery.
- Builds vocabulary and technical language from the lesson.
- Supports kinaesthetic and visual learners through hands-on sorting.
- Strengthens memory recall by linking images, names, and functions.
- Prepares students for practical workshop tasks where correct tool selection is essential.

Student Instructions:

1. Spread out all the **image**, **name**, and **description** cards.
2. Read each description carefully.
3. Match each image to the correct name card.
4. Match the correct description to the image/name pair.
5. Check your answers with your partner or group.
6. Once complete, choose **three planes** and explain their purpose in your own words.

Lecturer Instructions.

- Provide each group with a full set of cards.
- Encourage students to justify their choices using features from the lesson (e.g., “*extended sole*”, “*short nose*”, “*full-width blade*”).
- Circulate and prompt with questions such as:
- “What feature tells you this is a shaping plane?”
- “Which planes are used for smoothing?”
- “Which plane has a flexible sole?”
- Review answers as a class and clarify any misconceptions.
- Use the PDF diagrams to reinforce correct identification.

Scaffolding Options:

- **Colour-coded card backs**
 - Bench planes = blue
 - Shaping planes = green
 - Descriptions = yellow
- **Partially completed sets**
 - Give students the image + name and ask them to find the description.
 - Or give the description + image and ask them to find the name.
- **Feature prompts**

Provide small hint cards such as:

 - “Long sole for flattening”
 - “Short nose for tight spaces”
 - “Blade spans full width”
 - “Used for grooves” Students match hints to the correct plane.
- **Reduced set for SEND learners** Use 6–8 planes instead of the full list.

Differentiation Strategies.

Students needing support

- Provide a **reference sheet** with all plane images and names.
- Use **larger images** and **simplified descriptions**.
- Allow matching in pairs for peer support.
- Reduce the number of cards in the first round.

Students ready for stretch and challenge

- Remove descriptions and ask them to **write their own**.
- Ask them to explain the difference between similar planes (e.g., Shoulder vs Bullnose).
- Challenge them to group planes by function (smoothing, truing, shaping, joinery).
- Ask them to identify **key components** using the diagrams in the PDF (e.g., “*Feed Adjuster*”, “*Chip Breaker*”, “*Depth Stop*”).

Assessment Opportunities

Formative

- Observe students during matching.
- Ask them to justify choices using terminology from the lesson.
- Quick verbal quiz: “Which plane is used for grooves?” → Plough Plane (PDF: *“designed specifically for cutting grooves”*).

Summative

- End-of-lesson worksheet: label parts of a plane.
- Short written task: describe the purpose of three shaping planes.
- Practical assessment: select the correct plane for a given task.

Hand Tools

Hand Tool Card



Hand Tools

Hand Tool Card



Hand Tools

Hand Tool Card



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Block Plane



Hand Tools

Hand Tool Card



**No.2
Smoothing
Plane**



Hand Tools

Hand Tool Card



**No.3
Smoothing
Plane**



Hand Tools

Hand Tool Card



**No.4
Smoothing
Plane**

Hand Tools

Hand Tool Card



**No.5 Jack
Plane**

Hand Tools

Hand Tool Card



**No.6 Fore
Plane**

Hand Tools

Hand Tool Card



No7. Try Plane

Hand Tools

Hand Tool Card



Shoulder Plane



Hand Tools

Hand Tool Card



Bullnose Plane



Hand Tools

Hand Tool Card



Router Plane



Hand Tools

Hand Tool Card



**Compass
Plane**



Hand Tools

Hand Tool Card



Rebate Plane

Hand Tools

Hand Tool Card



Multi Plane

Hand Tools

Hand Tool Card



**Combination
Plane**

Hand Tools

Hand Tool Card



Plough Plane

Hand Tools

Hand Tool Card



Moulding Plane



Hand Tools

Hand Tool Card



Scratch Stock

Thank You.

We would like to say thank you for using this learning material, we hope you found it useful.



If you have any questions regarding this or any other learning material produced by James, or have any suggestions about improvements or ideas please email James Rix at:

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