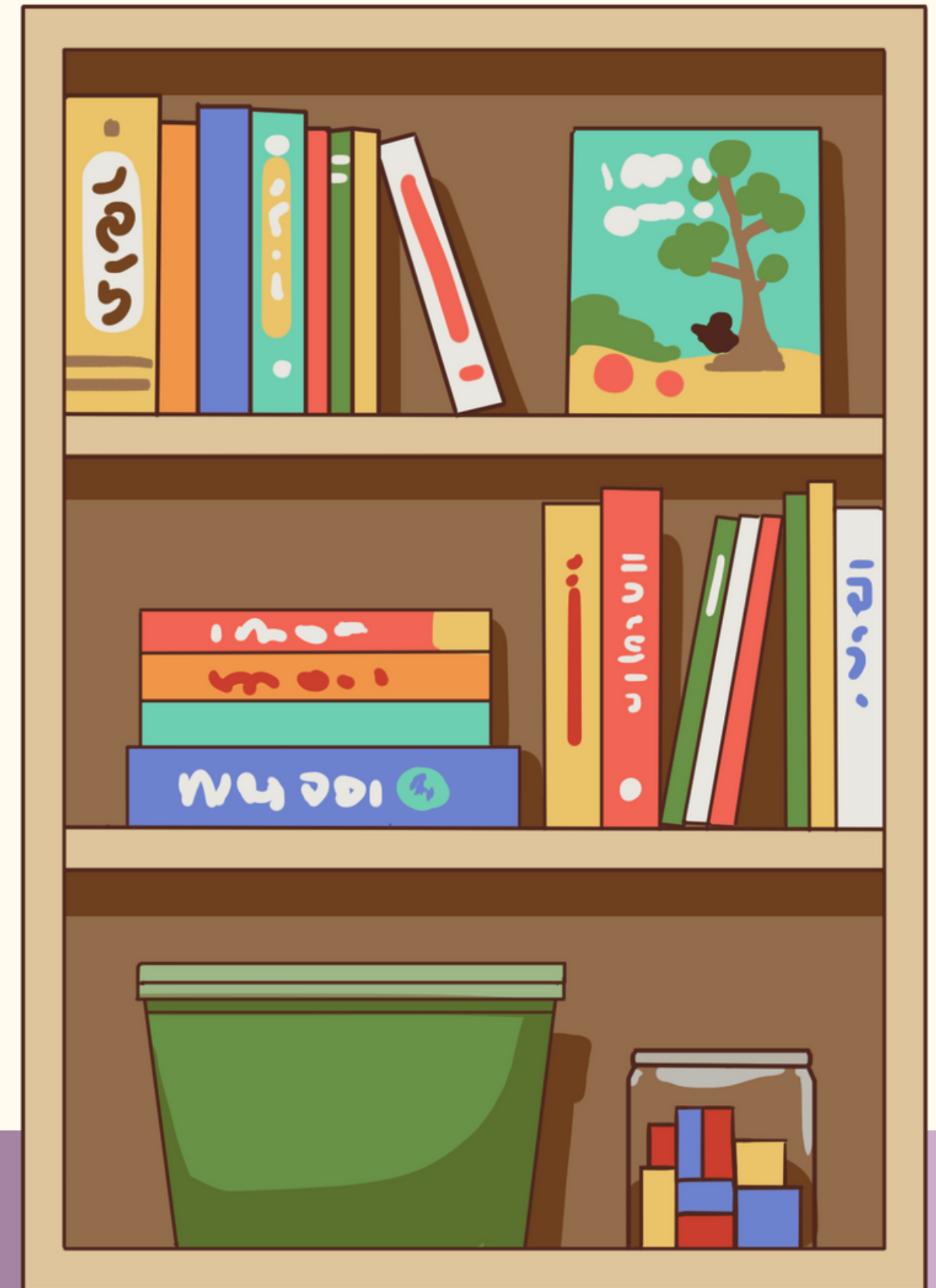




Assembling a Bookshelf

INTRODUCTION

In this practical exercise, you will learn how to assemble a bookshelf using basic carpentry techniques. This guide will provide step-by-step instructions to ensure a safe and successful project. Please follow the instructions carefully.



MATERIALS

- Two vertical wooden boards (pre-cut to 6 feet in height)
- Four horizontal wooden boards (pre-cut to 3 feet in length)
- Wood glue
- Screws (2.5 inches)
- Screwdriver or power drill
- Measuring tape



Safety Equipment :

- Safety goggles
- Protective gloves
- Closed-toe shoes
- Dust mask (if working indoors)

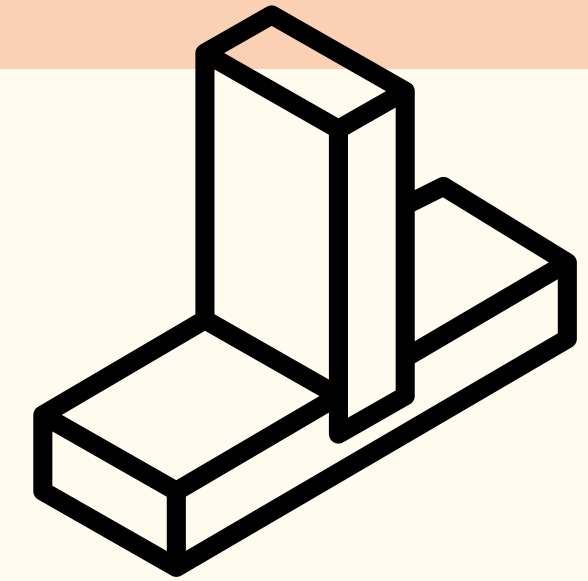


Safety Precautions:



- **Safety Gear:**
 - Prior to starting, put on safety goggles, protective gloves, and closed-toe shoes to protect against dust, splinters, and any accidental injury.
- **Work Area:**
 - Choose a well-ventilated workspace and place a dust mat or tarp to catch debris.
- **Tool Safety:**
 - Be cautious when using tools and follow the manufacturer's safety guidelines.

Wood Joints:



- For this project, we will use two types of wood joints:
- **Butt Joints:** These joints involve attaching the ends of one board directly to the surface of another. In our project, butt joints will be used for securing the horizontal shelves to the vertical supports.
- **Screwed Butt Joints:** To reinforce the butt joints, screws will be used to add stability and strength.



Steps to Assemble the Bookshelf :



STEP 1

Prepare the Vertical Supports:

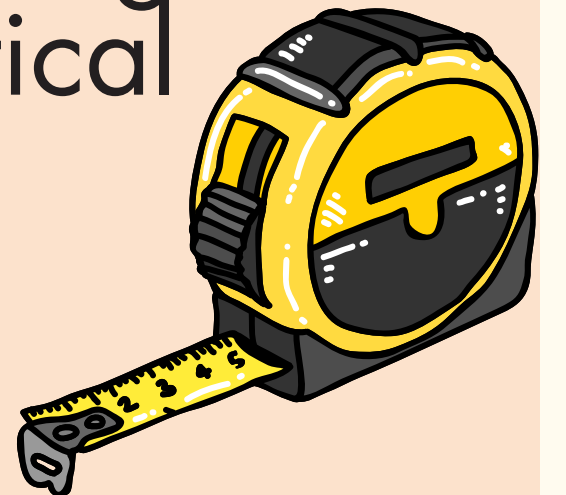
- Position the two vertical boards parallel to each other, ensuring they are spaced evenly.



STEP 2

Position the First Horizontal Board:

- Measure 30.48 cm from the bottom of the vertical boards and mark it with a pencil.
- Apply wood glue along the edge of the first horizontal board (the bottom shelf) to create a butt joint.
- Align the board with the pencil mark and attach it using screws. Make sure it's level and flush with the vertical supports.



STEP 3

Add Remaining Shelves:

- Measure and mark the positions for the remaining horizontal boards, leaving 30.48 cm gaps between them.
- Create butt joints by applying wood glue and attach the remaining shelves one by one, ensuring they are level, square, and flush with the vertical supports. Secure with screws.

STEP 4

Reinforce the Structure:

- Hammer small finishing nails through the horizontal boards into the vertical supports to provide extra stability.



STEP 5

Check Alignment and Stability:

- Use a level to ensure the bookshelf is upright and stable. Adjust the positioning if necessary.



STEP 6

Allow Glue to Dry:

- Leave the bookshelf undisturbed for at least 24 hours to allow the wood glue to fully set and the structure to stabilize.

