

# Woodworking Detective: Mastering Activity Analysis

## Materials Needed

- **Core Materials:**
  - Notebook, paper, or a printable worksheet (template provided below)
  - Pencil or pen
  - A simple, existing wooden object to examine (e.g., a picture frame, a small box, a wooden toy)
  - (Optional) Computer or tablet for researching project ideas
- **Worksheet Template (can be drawn in a notebook):**
  - **Project Name:** \_\_\_\_\_
  - **End Goal (What will it look/do like?):** \_\_\_\_\_
  - **Materials List:** \_\_\_\_\_
  - **Tools List (and Safety Gear!):** \_\_\_\_\_
  - **Step-by-Step Plan:**
    1. Step: \_\_\_\_\_ | Safety/Quality Check: \_\_\_\_\_
    2. Step: \_\_\_\_\_ | Safety/Quality Check: \_\_\_\_\_
    3. Step: \_\_\_\_\_ | Safety/Quality Check: \_\_\_\_\_
    4. (and so on...)
- **Extension Materials (Optional):**
  - A simple woodworking kit (e.g., birdhouse, small car)
  - Scrap wood
  - Basic, supervised tools: measuring tape, safety glasses, handsaw, sandpaper, wood glue

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## Learning Objectives

By the end of this lesson, you will be able to:

- Define "activity analysis" in the context of a creative project.
- Identify the necessary steps, tools, and materials for a simple woodworking project.
- Sequence the steps of a project in a logical and safe order.
- Create a complete activity analysis plan for a small woodworking project of your choice.

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## Lesson Plan

### Introduction (10 Minutes)

#### Hook: The Puzzle of the Project

Imagine you want to build an awesome custom holder for your phone or headphones. You have a cool idea, some wood, and access to some tools. You're excited, so you grab a saw and just start cutting. What do you think might happen?

*(Pause for discussion. Guide toward answers like: "The pieces might not fit," "I could cut it wrong and waste wood," "I might forget a step," or "It could be unsafe.")*

Exactly! You could end up with a pile of scrap wood and a lot of frustration. Master woodworkers and creators have a secret skill to prevent this. They don't just build things; they build *plans* first. Today, you're going to learn this skill, called **Activity Analysis**. It's like being a detective—you investigate a project and uncover all the clues needed to build it perfectly and safely.

## Stating the Objectives

Our mission today is to become "Woodworking Detectives." We'll learn how to break down any project into a simple, step-by-step recipe for success.

## Body (30-40 Minutes)

### Part 1: I Do - Deconstructing a Simple Object (10 mins)

Activity analysis is just a fancy term for creating a game plan. It involves three main questions:

1. **What do I need?** (Materials & Tools)
2. **What do I do?** (The Steps)
3. **In what order do I do it?** (The Sequence)

Let's analyze something simple, like this wooden picture frame. *(Use a real frame if possible)*. I'm going to model how to think like a woodworking detective.

- **Goal:** A simple 4x6" wooden frame that holds a picture.
- **Materials Detective:** Looking closely, I see I'll need wood, wood glue, maybe some small nails, sandpaper, and a finish like paint or oil. And something for the back and front, like cardboard and plexiglass.
- **Tools Detective:** To make this, I'd need a measuring tape, a pencil, a saw to cut the angles, safety glasses (always!), clamps to hold it while the glue dries, and a paintbrush for the finish.
- **Steps & Sequence Detective:**
  1. First, I'd have to measure and mark my four wood pieces. You always measure before you cut.
  2. Second, I would cut the pieces with 45-degree angles. Safety check: Wear glasses!
  3. Third, I would do a "dry fit" — putting the pieces together without glue to make sure they fit. This prevents mistakes.
  4. Fourth, I'd sand the cut edges lightly.
  5. Fifth, apply glue and clamp the frame together tightly.
  6. Sixth, let it dry completely. Patience is a key tool!
  7. Finally, I'd do a final sanding and apply my paint or finish.

See? We just created a complete recipe. Now, no wood will be wasted, and we know exactly what to do and when.

### Part 2: We Do - Let's Be Detectives Together (10-15 mins)

Now, let's work on one together. Let's plan out how to build a very simple wooden box—like one to hold pencils or small treasures. Let's use the worksheet format.

*(Work through the worksheet with Inspire262626, asking guiding questions).*

- **Project Name:** Simple Pencil Box
- **End Goal:** A small, open-top box with four sides and a bottom.
- **Materials List:** "What stuff would we need to build this? What about the wood? What holds it together?" (Guide to: wood, glue, sandpaper, etc.)
- **Tools List:** "What tools would help us measure? To cut? To stay safe?" (Guide to: safety glasses, ruler, saw, clamps, etc.)
- **Step-by-Step Plan:** "Okay, what is the very first thing we would do? Do we cut the bottom or the sides first? Why?"

*(Collaboratively fill out the steps, helping to sequence them logically).*

1. Measure and cut the bottom piece.
2. Measure and cut the four side pieces. (Pro tip: Two will be shorter if they fit inside the other two!)
3. Sand all the cut edges.
4. Dry fit the sides around the bottom to check for gaps.
5. Apply glue and assemble the box, clamping it securely.
6. Check if it's square (using a square tool or the corner of a book).
7. Let dry.
8. Final sanding and finishing.

Great job! We've just created a foolproof plan together.

### **Part 3: You Do - Your Creative Project Plan (10-15 mins)**

Now it's your turn to be the lead detective! Your mission is to choose a simple project you'd be excited to build and create a complete Activity Analysis plan for it.

**Project Ideas:** A phone stand, a bookend, a small shelf, a custom coaster, or an idea of your own (let's make sure it's simple to start with).

**Your Task:** Using a blank worksheet (or your notebook), fill out every section for your chosen project. Think carefully about the materials, tools, and especially the order of the steps.

**Success Criteria:** A great plan will have...

- A clear goal.
- A thorough list of materials and tools (including safety gear!).
- At least 5-8 clear, logical steps in the correct order.
- A safety or quality check note for at least two of the steps.

Take your time, and I'm here if you need to consult with another detective!

### **Conclusion (5-10 Minutes)**

#### **Share and Recap**

Let's see the plan you created! Can you walk me through your project idea and the steps you came up with?

*(Student presents their plan. Provide positive feedback and ask questions like, "What part of the plan do you think is most important for success?" or "Why did you put that step before the other one?")*

## Reinforce Takeaways

Awesome work today! Let's quickly recap what we learned.

- We learned that **Activity Analysis** is like creating a recipe for a project to ensure it's successful and safe.
- We practiced breaking down a project into its three key parts: **materials/tools, steps, and sequence**.
- You successfully created your very own project plan from scratch.

This skill is a creative superpower. You can use it for anything—planning a drawing, writing a story, tackling a big school assignment, or, of course, building amazing things out of wood. Your plan is the first and most important step in your creative journey!

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## Assessment

- **Formative:** Your verbal answers and reasoning during our "We Do" practice of planning the pencil box.
- **Summative:** The completed "Activity Analysis Worksheet" for your chosen project. It will be evaluated based on the success criteria: completeness of lists, logical sequencing, and inclusion of safety/quality notes.

## Differentiation and Extension

- **For a Simpler Start:** If creating steps from scratch is tough, I can provide a list of jumbled steps for a project, and your task is to put them in the correct order.
- **For an Advanced Challenge:**
  - Add a "Time Estimate" column to your plan for each step.
  - Research and add a small sketch or diagram for a tricky step (like how the pieces join).
  - The ultimate extension: In our next session, we can try to build your project using your plan as our guide!