

**Creating Perry the Platypus from MDF Wood**



# Learning objectives

Students will learn how to create a Perry the Platypus model from MDF wood by following a drawing plan, cutting the wood, assembling the pieces, and painting the final model in their favorite colors. This exercise is a hands-on activity that gives students a chance to work with wood and tools to finalize a project. Gaining knowledge on how to use tools with guidance and following a step-by-step guide.

B&T dimensions and types covered

**Dimension:**

* **7. Practical Orientation.** This activity focuses on hands-on learning by working with wood. Students physically build Perry the Platypus.
* **1. Self-Confidence in Science and Technology.** Students build their confidence as they successfully create Perry the Platypus. Giving them confidence in their hand crafting skills and knowledge on how to work the tools. For extra technological knowledge the exercise can be done in a laser cutter.

**Type:**

* **Explorer**: Through the exercise the student get to manually work with tools that they are perhaps not use to and explore how to put together an item.
* **Does**: The lesson entails that the students have a hands on activity. Hand-on activity that combines following instructions and making the item.

# Teacher Prerequisite Knowledge

The teacher(s) for this lesson need the ability to teach woodworking. It is also important that they teach shop safety.



Grade Level

Middle school / junior high school (grades 5/6/7–8/9) from 11 to 15 years old.

High School / College Level / Girls, Women 16 -30 Art, Design, Human tech.

Subjects

**Natural Sciences:** material properties.

**Technology:** Knowledge of tools used

**Art:** Personal expression of final product, painting and final look.

**Mathematics:** Measuring and classifying materials based on conductivity.

Materials

* MDF wood sheets (Medium Density Fiberboard)
* Drawing plan of Perry the Platypus
* Pencils and rulers
* Jigsaw or scroll saw ( Laser cutter if applicable)
* Sandpaper
* Wood glue
* Clamps
* Paints (acrylic or other suitable for wood)
* Paintbrushes
* Safety goggles
* Protective gloves
* Drop cloth or newspaper (to protect surfaces)
* Aprons (optional)
* Small containers for paint mixing
* Water cups and paper towels for cleaning brushes

**Safety Precautions:**

* Always wear safety goggles and protective gloves when cutting and sanding wood.
* Supervise the use of always cutting tools.
* Ensure proper ventilation when painting.
* Handle wood glue carefully to avoid contact with skin.

Duration

3 hours

Lesson Plan

Introduction

**1. Introduction (15 minutes)**

* Welcome students and introduce the project: creating a Perry the Platypus model.
* Show an example of the finished model.
* Explain the steps involved in the project

**2. Reviewing the Drawing Plan (20 minutes)**

* Distribute copies of the drawing plan to each student.
* Go through the plan step-by-step, ensuring everyone understands the shapes and pieces that need to be cut.
* Demonstrate how to transfer the drawing plan onto the MDF wood using pencils and rulers.

step-by-step development

**3. Cutting the MDF Wood (40 minutes)**

* Instruct students on the safe use of jigsaws or scroll saws.
* Have students cut out the shapes from the MDF wood sheets following the drawing plan.
* Assist students with cutting if necessary, ensuring safety protocols are followed.
* Once all pieces are cut, have students sand the edges to smooth any rough areas.

**4. Assembling the Model (30 minutes)**

* Demonstrate how to assemble the cut pieces using wood glue.
* Provide clamps to hold pieces together while the glue dries.
* Assist students with the assembly process, ensuring pieces are aligned correctly.
* Allow time for the glue to set and dry.

**5. Painting the Model (45 minutes)**

* Once the glue is dry, cover the work area with drop cloths or newspaper.
* Provide aprons for students to protect their clothing.
* Have students paint their Perry the Platypus models using their favorite colors.
* Encourage creativity and personalization in the painting process.
* Allow the paint to dry between coats if necessary.

**6. Finishing Touches (20 minutes)**

* Once the paint is dry, check for any areas that may need touch-ups.
* Have students clean their brushes and work area.
* Review the completed models and offer praise for creativity and effort.

wrap- up & reflection

**7. Review and Showcase (20 minutes)**

* Have students present their finished Perry the Platypus models to the group.
* Discuss the process and any challenges faced during the project.
* Encourage students to share what they enjoyed most about the activity.

**8. Cleanup (10 minutes)**

* Ensure all materials and tools are properly cleaned and stored.
* Make sure the workspace is tidy.

**9. Conclusion (10 minutes)**

* Recap the lesson and highlight the skills learned, such as following a plan, cutting, assembling, and painting.
* Encourage students to think of other woodworking projects they might enjoy.

#### Additional Notes:

* Adjust the duration of each segment based on the class’s pace and engagement.
* Consider having additional helpers or instructors to assist with the use of cutting tools and painting.

Extension activities

A way to extend this project is to increase the level of complexity by including or changing tasks. An additional task could be to make the students model Perry in a 3D drawing program like Fusion 360. An alternative task could be to have them use their model to cut perry on a CNC or laser cutter.

Additional Resources

See website.