

Unit: Book 1 Projects

Title: Bird House

Skill(s) and Knowledge: Students will be able to: identify the tools and materials and processes needed to complete the bird house project, while maintaining a safe working environment.

Tasks: Fabricate the parts and assemble a Bird House according to the working drawings and instructions.

Performance objective: Create a cut list, identify materials and fasteners, follow directions, read working drawings, use and maintain hand and power tools.

Tools, supplies and reference materials:

Pine or Cedar- 1 x 6 x 5', 6d galvanized finish nails, (3) 1 ¼" coated screws, tape measure, pencil, combination square, circular saw, rasp, ⅛" twist drill bit, ⅜" drill, 1 ½" spade bit, nail set, claw hammer, screw gun (or screw driver), sandpaper, clamps. Career Connections Book 1 Chapter 8 pages: 195-203.

Methods of instruction: Provide each student with the materials to and tools to complete the project and allow students to work at their own pace referencing the Career Connections Book 1 Chapter 8 and following the instructions.

Estimated time: 8-10hrs. **Number of students:** 10-15

Task analysis or activities: Students will work in small groups at shop tables, with all the previously mentioned power tools, working together to complete all activities and helping each other as they progress at their own pace.

Evaluation: Students will be graded on their use of time, safety methods, quality of work, cleaning and organization of their work area, interaction with other students, and vocational employability skills grading rubric. Saw key holder project evaluation on page 214.

Performance Notes:

Vocational Frameworks References

- 2.E.01.01 Demonstrate use and maintenance of layout, marking and measuring tools.
- 2.E.01.02 Demonstrate use and maintenance of fastening and clamping tools.
- 2.F.01.01 Demonstrate use and maintenance of portable circular saw.
- 2.F.02.01 Demonstrate use and maintenance of portable drills.

English/Strand 3 Frameworks References:

RST Grades 9-10 #4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases in a technical context.

Frameworks References: Math

N-Q3 Identify significant figures in recorded measures and computed values based on the context given and the precision of the tools used.

Common Core References:

- Read and listen critically for information understanding and enjoyment
- Set goals and achieve them by organizing time, workspace, and resources effectively
- Work both independently and in groups

SCANS references:**Foundation Skills:**

1. Basic skills— reading, writing, mathematics, speaking, and listening.
2. Thinking Skills-- thinking creatively, making decisions, solving problems, visualizing, knowing how to learn, and reasoning
3. Personal qualities--individual responsibility, self-esteem, sociability, self management, and integrity

Work Place Competencies

1. Resources--allocating time, money, material, space, and staff.
2. Interpersonal skills--working in teams, teaching others, serving customers, leading negotiating, and working well with culturally diverse populations.
3. Information--acquiring and evaluating data, organizing and maintaining files, interpreting & communicating, and using computer to process information
4. Systems--understanding social, organizational, and technological systems, monitoring and correcting performance, and designing or improving systems.
5. Technology--selecting equipment and tools, applying technology to specific tasks, and maintaining and troubleshooting technologies

CAREER CONNECTIONS: PROJECT BOOK 1

Lesson Plan: Chapter 8, Bird House

Time Required: Eight 50-minute class periods (to construct the bird house; instructions to construct a saw key holder and coat rack are provided as alternative or additional projects, as needed)

- Allow time to check out students on safety and operation of tools to be used in the project if they have not already demonstrated safety and operation competency.
- Allow time, depending on the complexity of the project, for students to make up the cut list (1-2 hours).
- Allow time before the shop period ends for cleaning up the shop.

Goal:

Adapt previously learned techniques and work with new materials to construct a bird house.

Objectives:

At the end of this chapter, students should be able to:

- Manage working with many components versus only a few
- Interpret drawings to determine how a multi-component project fits together
- Calculate measurements, including angles
- Employ new skills with tools used in previous projects
- Describe the differences in working with cedar
- Fit-test components
- Consider the intended use of objects built

Cooperative Learning:

For more complex projects, students can work in pairs or in teams. In this case, both students in the pair or all members of the team will receive the same grade in evaluations. Working in pairs or in teams will shorten the time required to complete the projects if time in the shop is an issue. This method of building projects will also cut down on the amount of material used.

Procedures:

The following provides a summary of instructional and assessment procedures.

Teach

Minutes	Activity
Class Period 1	
10	<i>Chapter 8 Introduction</i> Review the lesson goal and objectives with students. Discuss expectations and how the project will be evaluated.
40	<i>Section 1</i> Review with students the illustrations shown of the bird house. Direct students in the development of a cut list for this project.
Class Period 2	

10	Review project illustrations with students. Allow time for students to finalize the cut list.
40	Have students begin construction of the bird house by laying out and cutting the pieces. Point out the differences in working with cedar.
Class Period 3	
50	Direct students as they continue cutting the pieces.
Class Period 4	
50	Guide students through completion of cutting the pieces.
Class Period 5	
50	Lead students through the steps for shaping the floor and cutting the entrance opening.
Class Period 6	
50	Have students begin fastening the front to the sides.
Class Period 7	
50	Direct students as they continue work on fastening the front to the sides.
Class Period 8	
40	Lead students through complete assembly of the bird house.
10	<i>Project Review</i> Review completed results. Assign alternative projects as needed. Ask students to review Chapter 9 for the next class.

Assess

Assessment Activity	Assessment Method and Criteria
Bird House, Saw Key Holder, Coat Rack	See rubrics and evaluation sheets. Additionally, a skills matrix will be provided.