

Rabbit Kindle Box

Name: _____

Date: _____

Description:

The project is a rabbit kindle box for birthing mothers. It is designed to keep the baby bunnies in and allow the mother to move into and out of freely. The project will focus on measuring, cutting, squaring, fastening, and gluing. We will be using hand and power tools. We will be reviewing safety and focusing on working efficiently.

Materials:

1x8 pine
1x6 pine
4d box nails
3d box nails
1/4" welded wire mesh (hardware cloth)
wood glue

Tools:

compound miter saw
cross cut saw
tape measure
speed square or combination square
claw hammer
bar or wood clamps
Band saw
staple gun

Directions:

Before you Start! Put on your safety glasses. Read all directions and study the plans

Gather it

1. Gather the necessary material. Each student will need a piece of 1x8 #2 pine that is cut to 42" and a piece of 1x6 #2 pine cut to 8 3/4".

MEASURE IT

2. Cut your board to the proper dimensions. Mark your board using a tape measure and speed square. Be sure to cut to the outside of your line!
3. The 1x8 pine needs to be cut down to the following dimensions:
 - a. two boards cut to 14 1/2", one at 6 3/4", and one at 4"
 - b. the 1x6 needs to be 8 3/4"
4. Adjust the miter saw to the proper angle (zero degrees). Place pine board on mitre saw table making sure the wood is pushed up against the fence. Always cut to the outside of your line so that the kerf will not cut into the part of the workpiece you are keeping.

Cut Angles

5. You need to cut angles off of the 14 1/2" boards. On the short side of the board mark 4" up from the bottom. On the long side of the board mark 5 1/2" from the end; connect your marks with a straight line. See diagram.

- 6. -Clamp the board to the corner of a table using bar clamps.
- 7. -Cut the board using a crosscut saw. (Be sure to cut outside the line, you can always sand down the board later.)

Assemble the Box

- 8. Now that all pieces are cut assemble the box. You will need a hammer, fourteen 4d x 1 1/2" finishing nails, and wood glue.
- 9. Assemble the box as shown in the diagram.
- 10. Be sure to only use a very thin line of glue per joint.
- 11. Keep nails in line and equal distance in from edges.

Attach Bottom Screen

- 12. Gather a staple gun, tin snips, welded wire mesh and ten 3d x 1 1/4" nails. Using tin snips you will need to cut a piece of the welded wire mesh in a rectangle that measures 8 3/4" x 14 1/2". This will be the bottom of the box.
- 13. Now go to the bands saw and rip two pieces of pine 1/4" wide from the board that is precut to 12 7/8" long and two more from the board that is 8 3/4" long.
- 14. Attach the wire to the bottom of the box with the staple gun.
- 15. Hammer staples in flat.
- 16. Attach the 1/4" pieces of pine over the wire by nailing them in. Four nails on the long sides, three on the short.

Sanding and Finishing

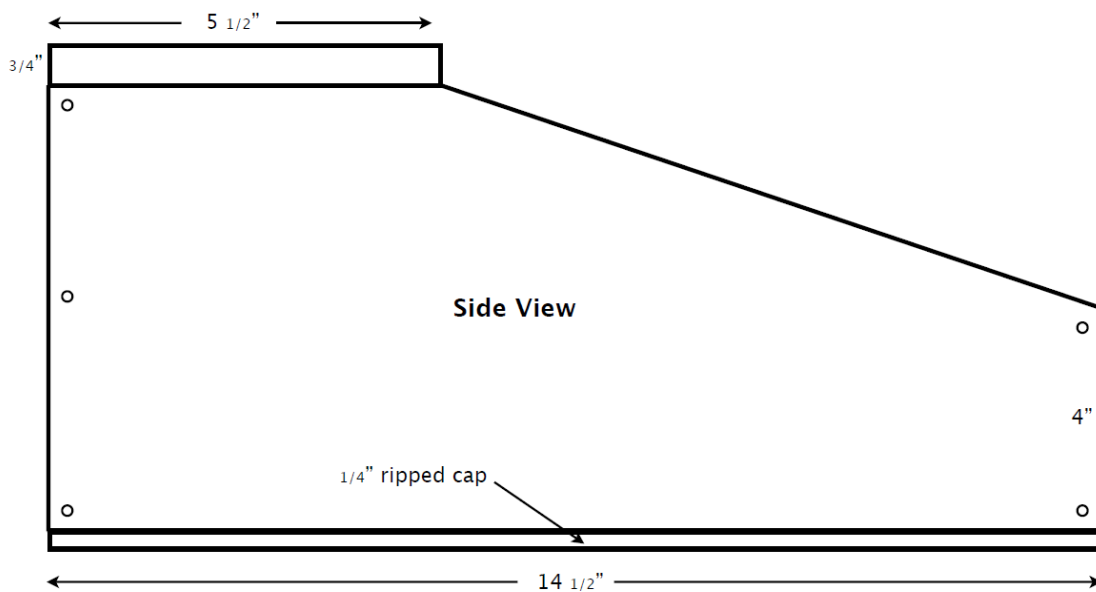
- 17. Hammer all nails in flush with wood and then sand down all edges so there are no sharp lines or points.

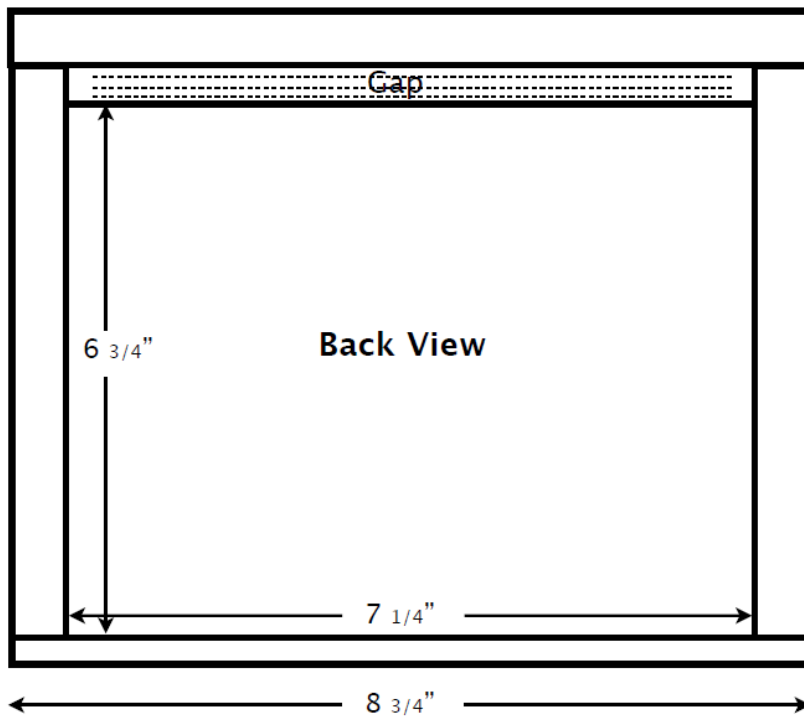
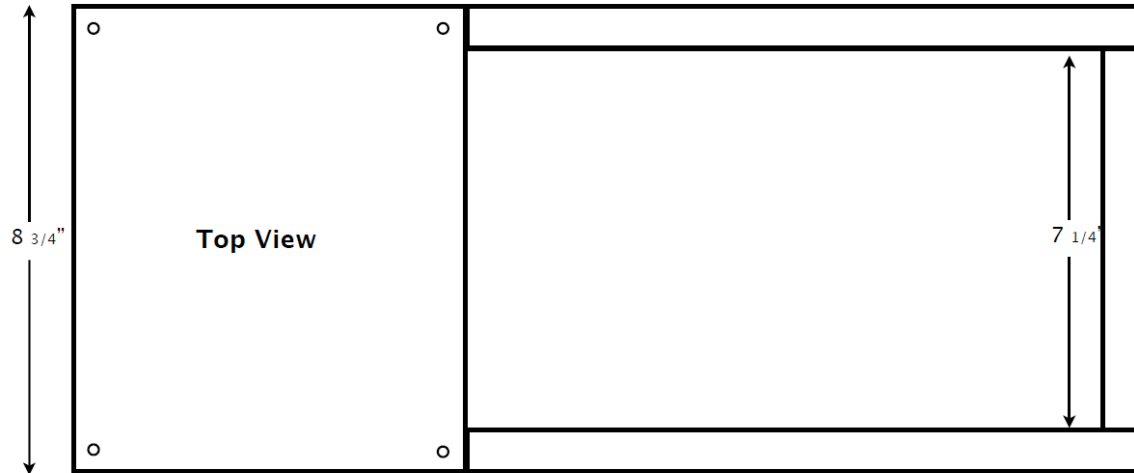
Notes:

Drawing/Photo:



Note: This is a similar design made from plywood.





Rabbit Kindle Box Student Worksheet:

Name: _____

Date: _____

Complete this worksheet prior to starting the project.

1. What size and type of wood is used for this project?

2. The wood purchased for the project was 1 x 8. What were the true measured dimensions of the board?

3. Why do we use glue at all connections made with nails?

4. What tools are required to complete this project?

5. DEFINE THE FOLLOWING:

a. Kerf-- _____

b. Crosscut: _____

c. Rip: _____ --

Grading Rubric:

| Criteria (+/- 1/8") | Possible | Score |
|--|----------|-------|
| Length | 10 | |
| Width | 10 | |
| Hole location | 10 | |
| Squareness | 10 | |
| General Workmanship (Clean edges, sanded smooth, clean use of paint or stain) | 10 | |
| TOTAL | 50 | |

Teachers Notes:

- May want to pre-rip strips for the screen attachment. Students can cut to length.

Agricultural Standards Met:

6.0 Health and Safety. Students understand health and safety policies, procedures, regulations, and practices, including the use of equipment and handling of hazardous materials:

- 6.1 Know policies, procedures, and regulations regarding health and safety in the workplace, including employers' and employees' responsibilities.
- 6.2 Understand critical elements of health and safety practices related to storing, cleaning, and maintaining tools, equipment, and supplies.
- 6.4 Maintain safe and healthful working conditions.
- 6.5 Use tools and machines safely and appropriately.
- 6.6 Know how to both prevent and respond to accidents in the agricultural industry.

B1.0 Students understand personal and group safety:

- B1.1 Practice the rules for personal and group safety while working in an agricultural mechanics environment.
- B1.2 Know the relationship between accepted shop management procedures and a safe working environment.

B2.0 Students understand the principles of basic woodworking:

B2.1 Know how to identify common wood products, lumber types, and sizes.

B2.2 Know how to calculate board feet, lumber volume, and square feet.

B2.3 Know how to identify, select, and implement basic fastening systems.

B2.4 Complete a woodworking project, including interpreting a plan, developing a bill of materials and cutting list, selecting materials, shaping, joining, and finishing.

Objectives:

By properly completing this project, students will be able to:

- Read the plan and layout the project.
- Construct a wood project with common tools.
- Install nails and finish the project properly.

Alternative Tools/Methods/Materials:

- Angles can be cut on the band saw.
- Entire project could be built with hand tools.

Safety Review:

- Power Miter Saw

Project Time:

| | |
|----------------|------------|
| Demonstration: | 30 minutes |
| Build: | 1.5 hours |

Demonstration Notes

1. Review the plan and have students make notes and complete the worksheet.
2. Make the square cuts.
3. Make the angle cuts.
4. Demonstrate the assembly of the box including the gap in the back.
5. Demonstrate how to cut the strips (from scrap wood).
6. Demonstrate how the hardware cloth is attached (staples then strips).
7. Explain the importance of NOT sanding the box nails....

Bill of Materials:

| Projects: | | 24 | | | | |
|---------------|----------------|----------|-------------|-----------|-------|----------|
| Size | Description | Units | Qty/Project | Cost/Unit | Order | Amount |
| 1"x8"x8' | #2 Pine | each | 0.5 | \$5.50 | 12 | \$ 66.00 |
| 1"x6"x8' | #2 Pine | each | 0.1 | \$8.00 | 3 | \$ 24.00 |
| 4d | Box Nails | 1 lb box | 0.01 | \$3.47 | 1 | \$ 3.47 |
| 3d | Box Nails | 1 lb box | 0.01 | \$3.47 | 1 | \$ 3.47 |
| | Wood Glue | 16 oz. | 0.0025 | \$4.99 | 1 | \$ 4.99 |
| | | | | | 0 | \$ - |
| | | | | | 0 | \$ - |
| 1/4" x2' x 5' | Hardware Cloth | Roll | 0.1 | \$ 13.00 | 3 | \$ 39.00 |

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