

Instructional Scenario

Safe Table Saw Operation



Course/Duty Area: Agricultural Production Technology/Applying Safety Practices for Carpentry and Metalworking in Agriculture

Scenario:

Jane is working on the construction of a bird house as her project for the class. To date she has selected, planed, jointed, and cut her lumber to rough length. Today she needs to rip her lumber to the correct widths for the various parts. After putting on the required PPE for the table saw, she makes a safety check of the saw to ensure that it is safe to use. She removes the miter gauge and installs the fence on the saw. She then sets the fence to the desired width. Once the width is set, she checks to make sure that the blade is set correctly, and the guard is in place. Upon securing a helper to catch the lumber and ensuring the table surface is clear, she uses a push stick and rips all her lumber to the desired width, making sure that the machine is turned off and the blade has stopped rotating when adjusting between cuts. Once she completes cutting all her boards, she turns the saw off, lowers the blade below the surface of the table and cleans all waste material and sawdust from the saw.

Big Question:

What can happen if you do not follow all required safety rules and guidelines when using a large power tool like the table saw?

Focused Questions:

- What is the proper PPE when using the table saw?
- What should you check for when performing a safety check of the table saw before using it?
- What is the purpose of the fence on the table saw, and when should you use it?
- What is the purpose of the miter gauge on the table saw, and when should you use it?
- What does it mean to *rip* lumber?
- Why should you lower the blade below the surface of the table when leaving the table saw?

Correlations to Virginia Standards of Learning (SOL):

English: 10.5, 10.6, 10.7, 11.5, 11.6, 11.7

Project-Based Assessment:

Construct a woodworking project using the table saw. Examples may include a birdhouse, a cutting board, a nail box, or a stepping stool.

Teacher Resources:

- Agricultural Mechanics Fundamentals and Applications 6th edition, Ray V. Herren ISBN-13: 978-1-4354-0097-9
- Laboratory Safety Resources, Department of Agricultural, Leadership, and Community Education, Virginia Tech (<https://www.alce.vt.edu/signature-programs/team-ag-ed/teacher-resources.html>)

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