

# Using the Table Saw ... Or Not

## Thinking and Communication: Draft a New Procedure

**Info in red font is for the benefit of the teacher (ideas for differentiated learning etc). Delete text in red font from the copies that are distributed to students. In a document / template that is intended to be "filled in" by students for assessment / evaluation purposes, the Version History table can be retained for students to use. Making an improved version is great learning.**

**Version History:**

V #	Date	Author	Short Listing / Description of Changes
1	June 7/12	D.B. McCowan	Initial Version -- uploaded to OCTE Safety Portal
2			

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### 1 Expectations and Self-Reflection

<b>Design / Build a Marketable Picture Frame Using Scrap Wood Flooring</b>	
<b>1</b>	<b>2</b>
<b>Curriculum Expectation</b> <i>In this unit the student will demonstrate / practise the following:</i>	<b>Activity -- What You Will Do Now – See Section 2</b> <b>Reflect – How Well Did You DO?</b>
D1.2 – Carefully re-read this expectation in the previous document (1.9.1)	<b>Do the Assessment in Sect 2 – Thinking; Communication</b>  <b>Reflection:</b> Now reflect on how well you met the expectations. What additional knowledge and skills do you need before you believe that you can work safely and effectively on the table saw? What have you not yet mastered in Expectation D1.2? Enter a brief reflection in the space here or in a separate file if you prefer.

## 2 For Safety's Sake, Show Your Critical Thinking by Doing Some Technical Communication (TC)

### *Extend Your Thinking – Write a Procedure for Ripping*

Without even seeing a demonstration of ripping on the table saw, write a ten step procedure for ripping a 1 x 8 x 36" board down to 1 x 7". Based on what you already know, think critically about what it would take to accomplish this task. Be sure to address both safety and accuracy in your procedure. The teacher will demonstrate ripping later.

#### **Sample Procedure:**

1. Wear personal protective equipment, tie back hair remove jewellery, take everything out of your shirt pocket and follow other shop rules for use of power equipment. Turn on the dust extractor and open the damper at the table saw.
2. Do a safety checkout of the table saw. The splitter must be perfectly collinear with the saw blade. Use a long straightedge to make sure – this cannot simply be eyeballed. The guard must be in place and must not bind or be at all unstable. If the blade appears to be seated incorrectly, poorly aligned, loose or dull, call the teacher over. Make sure that nothing on the table or on the insert or on the splitter / guard will prevent smooth passage of the workpiece fully past the blade.
3. Check the board for nails, screws and staples – make sure you pull any out completely.
4. Make sure that one edge of the board is true – ie straight. If it is not straight, it should be jointed or planed beforehand. A warped or twisted or cupped board can bind between the blade and fence and possibly kickback. At the very least, your cut using the fence will tend to take on a curve somewhat similar to the curve in the edge that is moving along the fence.
5. Set the fence to 7.00 inches from the side of the blade's teeth that are nearest the fence. (The waste piece will be 1 inch wide less the thickness of the blade kerf.)
6. Make sure the fence is perfectly parallel to the saw blade. At both ends of the fence, measure the distance from the fence to the mitre gauge slot. On a decent table saw, the blade will be exactly parallel to the mitre gauge slot. If the workpiece is binding between the back of the blade and the fence, kickback could suddenly result.
7. Set height of blade to about 1/2 inch above the surface of the workpiece.
8. Stand somewhat to the side, out of the way of possible kickback. Use two push sticks to feed the board. You need to be pushing both forward into the blade and downward onto the table. And you also need to be pushing slightly toward the fence to keep the workpiece tight to the fence throughout the cut. If your table saw has a featherboard and / or hold-down devices, obtain further instructions from the teacher on how to set them up and use them.
9. Proceed with caution when cutting through a knot. If it seems that you need to apply significantly more force to advance the workpiece, you are well-advised to carefully push the stop button. If the workpiece is binding, a violent kickback could suddenly result. Residual stresses that may have resulted from deficient kiln-drying (or even where the

board was cut from the tree) can cause the workpiece cut to close in on the back of the blade, possibly resulting in kickback.

- When the cut is complete, either push the workpiece all the way past the blade and splitter or hold the workpiece perfectly still until the blade has come to a complete stop.

**Notes to teacher:**

Take up the above procedure in class. There should be class discussion and critical thinking around at least some of the steps. For example, what are the pros and cons of setting the blade 1/2 inch above the workpiece? Why should you not set the blade as low as 1/8 inch above the workpiece? How safe is it to shut off the motor when the workpiece appears to be stuck?

<b>Differentiated Learning Ideas</b>	
<b>Abbrev</b>	<b>Description / Notes</b>
DL-L	For students with lower abilities. --Give these students all procedures on paper and give thorough demonstrations so that they can't possibly make any mistakes
DL-M	For students with moderate / mid-range abilities. This should generally be the default, always involving some level of critical thinking. --Give these students a deficient procedure for performing some particular operation on the table saw. --Declare that the procedure is missing one key step, ask them to determine which step is missing and then write that step --Declare that the procedure includes one step that is incorrect or ambiguous, ask them to determine which step this is and then rewrite that step more correctly
DL-H	For students with higher abilities or, ideally, "for any students who want to do more". --Ask these students to write a thorough procedure for cutting 10 identical isosceles trapezoids on the table saw --The parallel sides are 3.00 inches apart. --The non-parallel sides are at an angle of 70.0° to the base --The longer of the parallel sides is 12.00 inches in length --The material that is available to be used is a quarter sheet of 1/2 inch plywood

**3 Peer Assessment**

NOTE: In the feedback, the Peer Assessor must “make the student think” – not give the student the answer! Be sure to include comments justifying the assessment value that you are giving. Peer Assessor must put his / her comments in red font.

**Assessor’s Name and Additional Notes:**