

Lesson #1: Table Saw and Safety Packet

Objectives

Students will be able to...

- Identify each of the major components of the Table Saw, and their purpose.
- Describe the uses of the Table Saw.
- Demonstrate the safe operation of the Table Saw.

Common Core Standards

RSIT 11-12.2
RLST 11-12.2
Problem Solving – 5.1 & 5.4
Health and Safety – 6.1, 6.2, 6.3 & 6.10
Cabinetmaking and Wood Products Pathway A4.1, 4.3, A4.4 & A6.1
Responsibility and Flexibility – 7.4
Technical Knowledge and Skills 10.1, 10.2
Demonstration and Application 11.1
Residential and Commercial Construction Pathway D2.1

Materials

Table Saw
Table Saw Identification and Safety Worksheet

Lesson Sequence

- Introduce a table saw to the students. (10 minutes)
- Hand out the *Table Saw Identification and Safety Worksheet* Complete the table saw component I.D. portion with students gathered around the saw. As you name the parts of the saw, not only discuss what their function is, but also demonstrate how they function. If possible, include anecdotes about personal experiences or other's experiences with the saw. (15-20 minutes)
- Return to the classroom and continue reviewing the questions as a whole class. Answer any questions as needed. (15-20 minutes)

Assessment

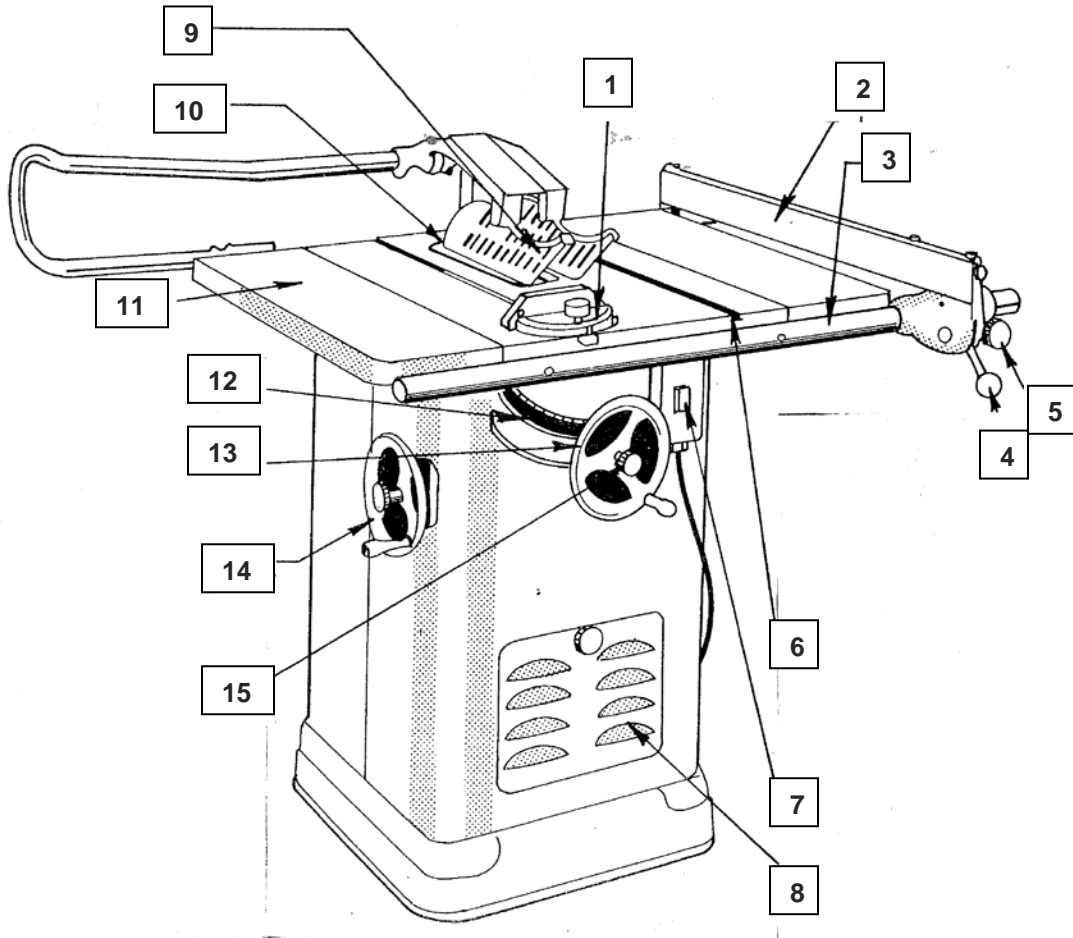
Check for understanding through questioning. Call on random students to answer questions during whole group lesson.

Accommodations/Modifications

One on One Support
Check for Understanding
Partner Students Up If Needed
Visuals

Table Saw Identification and Safety Worksheet

Part 1: Identify the numbered parts on the saw illustrated below.



- | | |
|----------|-----------|
| 1. _____ | 9. _____ |
| 2. _____ | 10. _____ |
| 3. _____ | 11. _____ |
| 4. _____ | 12. _____ |
| 5. _____ | 13. _____ |
| 6. _____ | 14. _____ |
| 7. _____ | 15. _____ |
| 8. _____ | |

Part 2: Safe Operational Procedures

1. Crosscutting:

- a. Use a crosscut or combination blade. Always use sharp blades. Make sure blade is always cutting down toward from or operator's side of table.
- b. Adjust the depth of cut so that the teeth clear the thickness of material by the depth of the teeth.
- c. Be sure saw guard and splitter are in place. Check anti-kickback device to make sure it is working.
- d. Always use the miter gage when crosscutting. A wood facing is recommended for the miter gage.
- e. Never use the ripping fence as a guide when crosscutting short pieces. Use a stop on the miter gage or stop blocks clamped to the ripping fence or the tabletop.
- f. Place board against miter gage and saw the board, saving the cutting line.
- g. Do not force work through the saw.

2. Ripping:

- a. Use a ripping or combination blade.
- b. Use ripping fence as a guide. Never saw freehand.
- c. Double check cutting width by measuring from fence to outer teeth. Also check front and back of blade so fence will not bind material to blade.
- d. When ripping narrow pieces, use a push stick.
- e. Be sure guards are in place for all sawing operations.
- f. Use a helper or a roller stand to support long pieces of material while sawing.
- g. Adjust blade to proper height, ¼" to ½" above the material being sawed.
- h. Do not force material into blade. If blade overheats, stop saw immediately and check for dullness or binding of blade.

3. Plowing:

- a. Use a dado blade if available. A combination blade may be used, and the fence varied with each piece.
- b. Raise the saw to the desired depth of cut. Make pass on waste piece before cutting into actual work piece.
- c. This operation may require the guard to be removed if the material is to be dadoed on edge.

4. Bevel cuts (ripping):

- a. Use a combination or ripping blade.
- b. Adjust saw by tilting the arbor to the angle desired.
- c. Adjust blade to proper height, ¼" to ½" above work.
- d. Adjust ripping fence to desired width of cut.

5. Bevel cuts (cross cutting):

- a. a combination or crosscutting blade.
- b. Use miter gage (not the ripping fence) and follow the steps as listed in Item

Part 3: General Safety Practices

1. Wear eye protection, hearing protection, and proper clothing when operating this machine.
2. Obtain permission from instructor to operate table saw.
3. Use only sharp blades of the proper type for the job.
4. Be sure blade is correctly installed in the saw. Make certain power is off and properly disconnected before removing blade insert. To loosen arbor nut, turn wrench toward normal direction of travel holding blade with waste piece of wood. Do not over-tighten arbor nut when replacing blade.
5. Do not stand in line with the blade while sawing or allow fingers or hands to be in line of cut.
6. Be sure that all adjustments are tight, and the table part of the saw is free of tools, chips, small pieces of wood, or other materials.
7. Do not talk to anyone while using the saw. The operator should be the only person inside the safety zone.
8. Be sure the floor is clean and free from scraps and rubbish. Do not work on wet or slippery floors. Non-skid materials are recommended.
9. Saw only material that has a straight edge. To avoid chipping of material such as plywood or Masonite, saw with face grain or good surface down.
10. Study the adjustments and make sure they are understood before starting to work.
11. Use the saw guard where possible.
12. Use a "push" stick for ripping narrow pieces.
13. Hold material against the ripping fence when ripping, and the miter gage when crosscutting. Never saw freehand.
14. Never use the ripping fence for a gage when crosscutting short pieces.
15. Do not place the hands over or in front of the blade. Never reach over the blade.
16. Turn off the saw before removing short pieces from near the blade.
17. Be sure the power is "locked" off before adjusting or working on the saw.

Part 4: Completion Questions

1. A _____ or _____ is used to support long pieces of material while sawing.
2. The _____ is used for a guide when ripping.
3. The _____ is used as a guide when crosscutting.
4. A _____ or _____ blade may be used for crosscutting.
5. A _____ is used when ripping narrow pieces.
6. When making a bevel cut, the saw is adjusted by tilting the _____.
7. Saw only material that has an _____ edge.
8. The saw should be _____ before removing short pieces from the blade.
9. A _____ or _____ blade can be used when plowing.
10. The blade should extend above the material the depth of one _____.

Table Saw Identification and Safety Worksheet – *Answer Key*

Part 1:

1. Miter gage
2. Fence
3. Guide bar
4. Fence clamp
5. Fence micro set knob
6. T slot for miter gage
7. Switch
8. Clean out
9. Saw guard
10. Blade inserts
11. Table
12. Title scale
13. Raising wheel
14. Tilt handle
15. Lock knob

Part 4:

1. Helper or roller stand
2. Ripping fence
3. Miter gage
4. Crosscut or combination
5. Push stick
6. Arbor
7. Straight
8. Turned off
9. Dado blade or combination
10. Fourth or one half