

### Lesson #7: Disc Sander Identification and safety

#### Objectives

Students will be able to...

- Identify the Disc Sander's major components and safety operation.

#### Common Core Standards

LS 11-12.6  
RSIT 11-12.2  
RLST 11-12.2  
Health and Safety 6.0, 6.2, 6.3, 6.5, 6.6  
Technical Knowledge and Skills 10.0, 10.1, 10.2  
Demonstration and Application 11.1  
Cabinetmaking and Wood Products Pathway A4.1, 4.3, & A4.4  
Residential and Commercial Construction Pathway D2.1, D3.1, D3.2, D3.3

#### Materials

Disc Sander Identification and Safety Worksheet

#### Lesson Sequence

- Complete the *Disc Sander Identification and Safety Worksheet* with students gathered around the drill. As the parts of the drill, not only discuss what their function is, but also demonstrate how they function. (30 minutes)
- Return to the classroom and have students work on the safety questions. (15-20 minutes)

#### Assessment

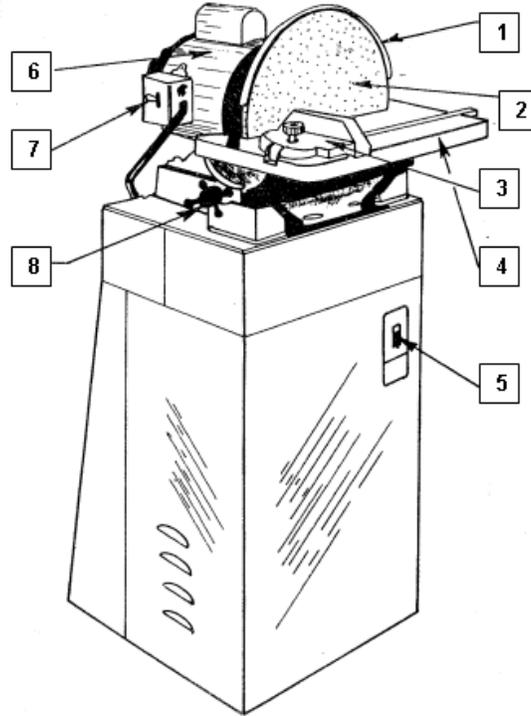
Monitor student learning through questioning. Monitor student learning by roaming around the classroom while students are working on their safety questions.

**Accommodations/Modifications**

One on One Support  
Partner as Needed  
Check for Understanding

## Disc Sander Identification and Safety

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



- |          |          |
|----------|----------|
| 1. _____ | 5. _____ |
| 2. _____ | 6. _____ |
| 3. _____ | 7. _____ |
| 4. _____ | 8. _____ |

## **Part 2: Safe Operational Procedures**

1. The disc sander is useful for sanding or shaping edges and end grain of stock.
2. The disc sander is sized by the diameter of the disc in inches, with 12 inches being a common size.
3. Select the coarseness of the abrasive disc according to the more common sanding jobs to be completed. Keep the sandpaper clean and in good condition.
4. The sanding pad is attached to the metal disc with special adhesive that will securely hold the sandpaper to the disc yet allow it to be removed when it becomes smooth or filled with sanding dust.
5. The disc sander is usually equipped with an adjustable table on which a miter gage is used to guide the stock when sanding bevels and angles. The table can be adjusted up and down to sand bevels on the edge of stock. A square can be used to check the angle between the table and the disc.
6. Adjust the table so edge is 1/8" or less from the disc. Make all adjustments with motor power off and disc stopped.
7. Keep the disc guard in place at all times.
8. To sand or smooth the end of a board, place the board on the sander table so the disc cuts in a downward direction on the board.
9. Turn the motor on, allow the motor to gain full speed, and then move the work-piece carefully into the disc with enough pressure to keep the disc cutting.
10. Move the stock sideways (back and forth) slightly to reduce the heat caused by friction between the disc and the edge of the stock.
11. When the stock is smooth, or to the desired sanding line, removes it from the table and turn off the motor.
12. Do not leave the safety zone area until the motor has completely stopped.

## **Part 3: General Safety Practices**

1. Wear eye protection at all times during operation of this machine.
2. Obtain permission from the instructor to operate the disc sander.
3. Never operate the machine if the sandpaper is loose, torn, or filled with sanding dust.
4. Make all adjustments with the motor off and the disc completely stopped.
5. Do not allow hands or fingers to get near or touch the revolving disc.
6. Always sand on the side of the disc that is moving down toward the table.
7. Keep table edge within 1/8" of the disc.
8. Do not overload the motor with excessive pressure.

9. The disc sander is designed to smooth edges or end grain of stock and not for cutting excessive amounts from edges or ends of boards. Long periods of continuous sanding will overheat the disc, causing the stock to be discolored and possibly damaging the machine.
10. Make sure the machine is grounded electrically.
11. Do not talk to others while operating the machine.
12. Keep all guards in place, and the machine clean and well lubricated.

**Part 4: Completion Questions**

1. The disc sander is sized by the \_\_\_\_\_ of the disc with a common size being \_\_\_\_\_ inches.
2. The \_\_\_\_\_ can be tilted for sanding bevel edges.
3. The abrasive pad is attached to the disc with a special \_\_\_\_\_.
4. The disc sander is designed for sanding \_\_\_\_\_ and \_\_\_\_\_ grain of stock.
5. Sanding should be done on the side of the disc that is moving \_\_\_\_\_ toward the table.
6. The edge of the tilting table should never be more than \_\_\_\_\_ inch from the disc.
7. The \_\_\_\_\_ should be used when sanding mitered edges.
8. Continuous sanding in one location on the disc could cause the disc to \_\_\_\_\_.
9. A \_\_\_\_\_ could be used to check the angle between the tabletop and sanding disc.
10. Allow the disc to gain full \_\_\_\_\_ before beginning the sanding operation.

**Disc Sander Identification and Safety – *Answer Key***

**Part 1:**

1. Disc guard
2. Abrasive disk
3. Miter gage
4. Tilting table
5. Machine switch
6. Motor
7. Motor switch
8. Lock knob

**Part 4:**

1. Diameter; 12
2. Table
3. Adhesive
4. Edges; end
5. Downward
6. 1/8
7. Adjustable table
8. Overheat
9. Square
10. speed