BUILDING TRADES

Mrs. Feliz-Patron

Name_____

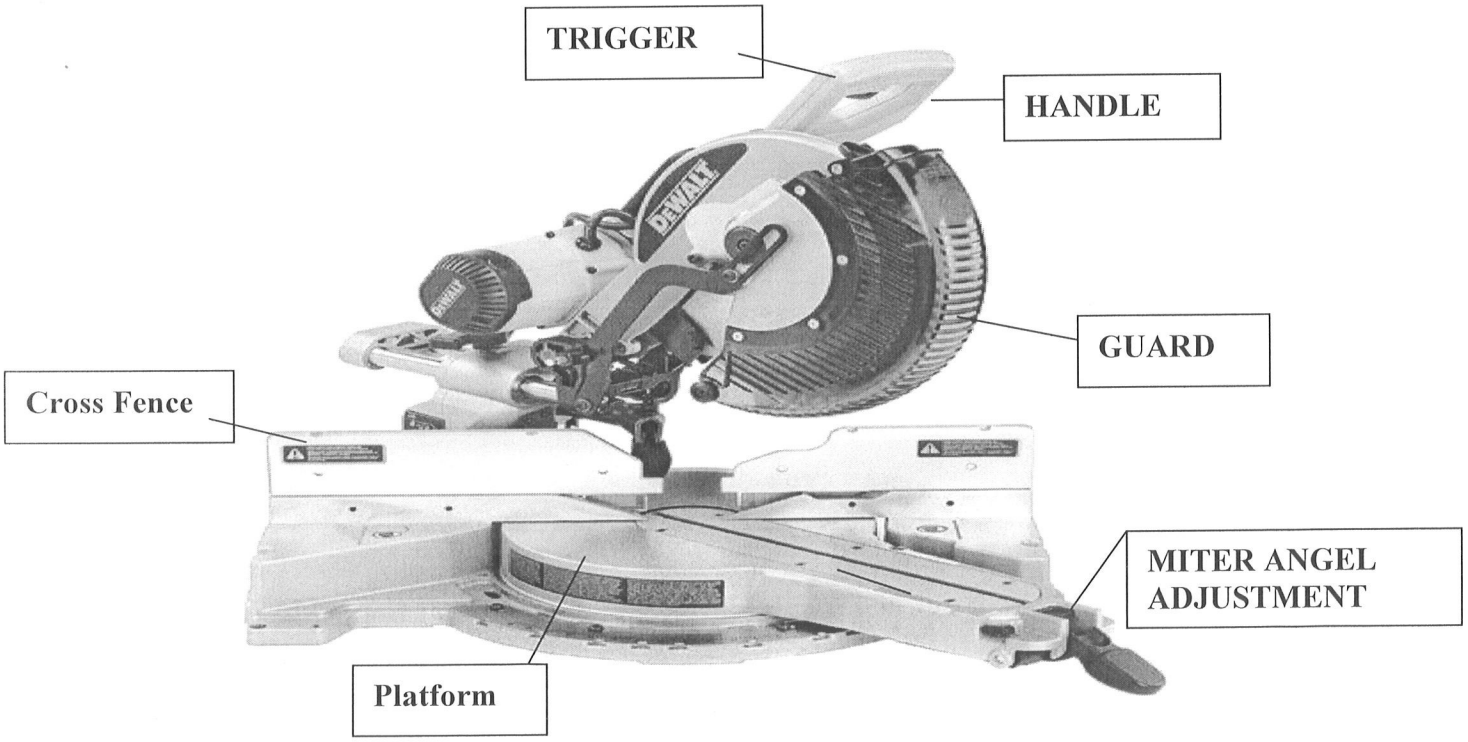
Date_____ Period_____

STUDY GUIDE: Miter Saw / Chop Saw

The miter saw or what is sometimes referred to as a chop saw is one of the woodshops most useful tools. It is quick, can be portable and is very accurate. Its speed comes from its ability to be quickly set up and used. Though our saw is fasten securely to the bench, in general when we find a miter saw in use in a personal shop it can be transported and placed where it will be most convenient. These saws are designed to be very accurate when cutting angles and fitted with the proper blade will perform outstandingly.

Safety Rules

1. Always wear **eye protection**.
2. Stay **four inches** from the blade at all times.
3. Do not operate saw without guards in place.
4. Make sure the stock you are about to cut is free of metal.
5. Keep work area free of clutter such as scrap cutoffs or sawdust.
6. Keep one hand on the handle and the other on the stock. **Keep your eyes on the blade.**
7. Hold the handle firmly.
8. Do not perform any operation freehand.
9. Never reach around saw blade.
10. Before making a cut with the miter saw make sure that the machine is **operating safely**.
11. Make sure the blade is not contacting the stock/work piece before the switch is turned on.
12. Stop operation immediately if you notice anything abnormal.
13. Inform the teacher if the tool seems to be malfunctioning or is damaged.
14. Shut off power and wait for the saw blade to stop with the handle at the down position.
15. Make sure saw blade has stopped before servicing or adjusting tool.



BUILDING TRADES

Mrs. Feliz-Patron

Name_____ Date_____ Period_____

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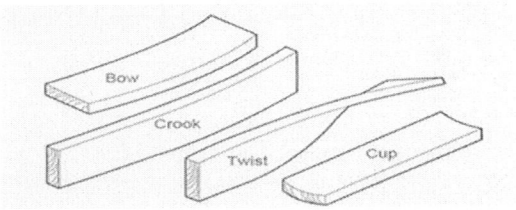
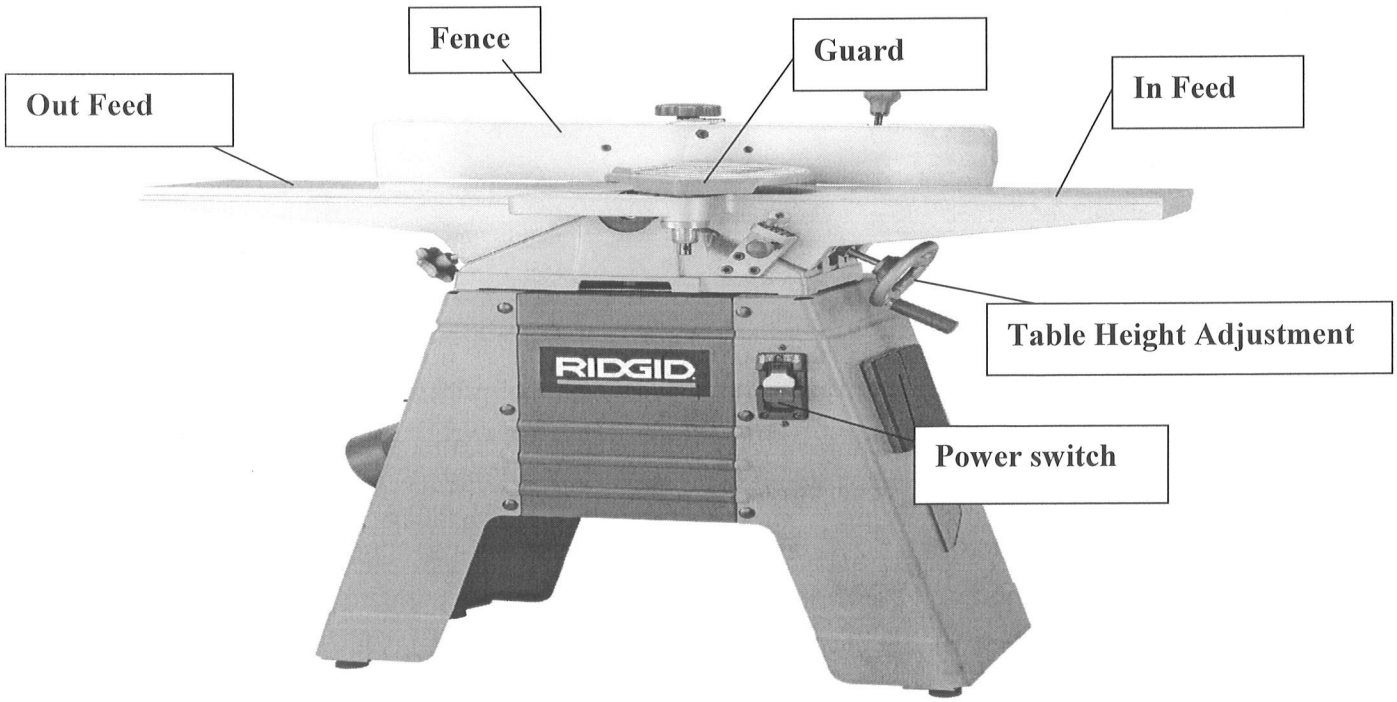
STUDY GUIDE: Jointer

A **jointer** is a woodworking machine used to produce a flat surface along a board's length (along the long grain side). The jointer derives its name from its primary function of producing flat edges on boards prior to joining them edge-to-edge to produce wider boards.



Safety Rules

1. Wear safety glasses at all times.
2. Tie back or tuck in long hair and loose clothing.
3. Keep your **fingers 4" away** from the blade at all times.
4. Always keep your hands on top of the stock when jointing.
5. Never allow your hand to pass directly over the cutter.
6. Never joint a work piece that's less than 12" in length or 4"in width.
7. Make sure the guard is covering the cutter at all times.
8. Do not distract the person using jointer while the blade is running.
9. Turn jointer on and make sure it is running properly before you begin jointing.
10. Shut off the jointer and wait for it to stop before moving away.
11. If something goes wrong with the jointer back off then turn off the power.
12. Make sure that all adjustments take place ONLY when the blade has stopped.
13. Properly clear off wood chips before making another cut. Never with your hands



BUILDING TRADES

Mrs. Feliz-Patron

Name_____ Date_____ Period_____

STUDY GUIDE: Table Saw / Circular Saw

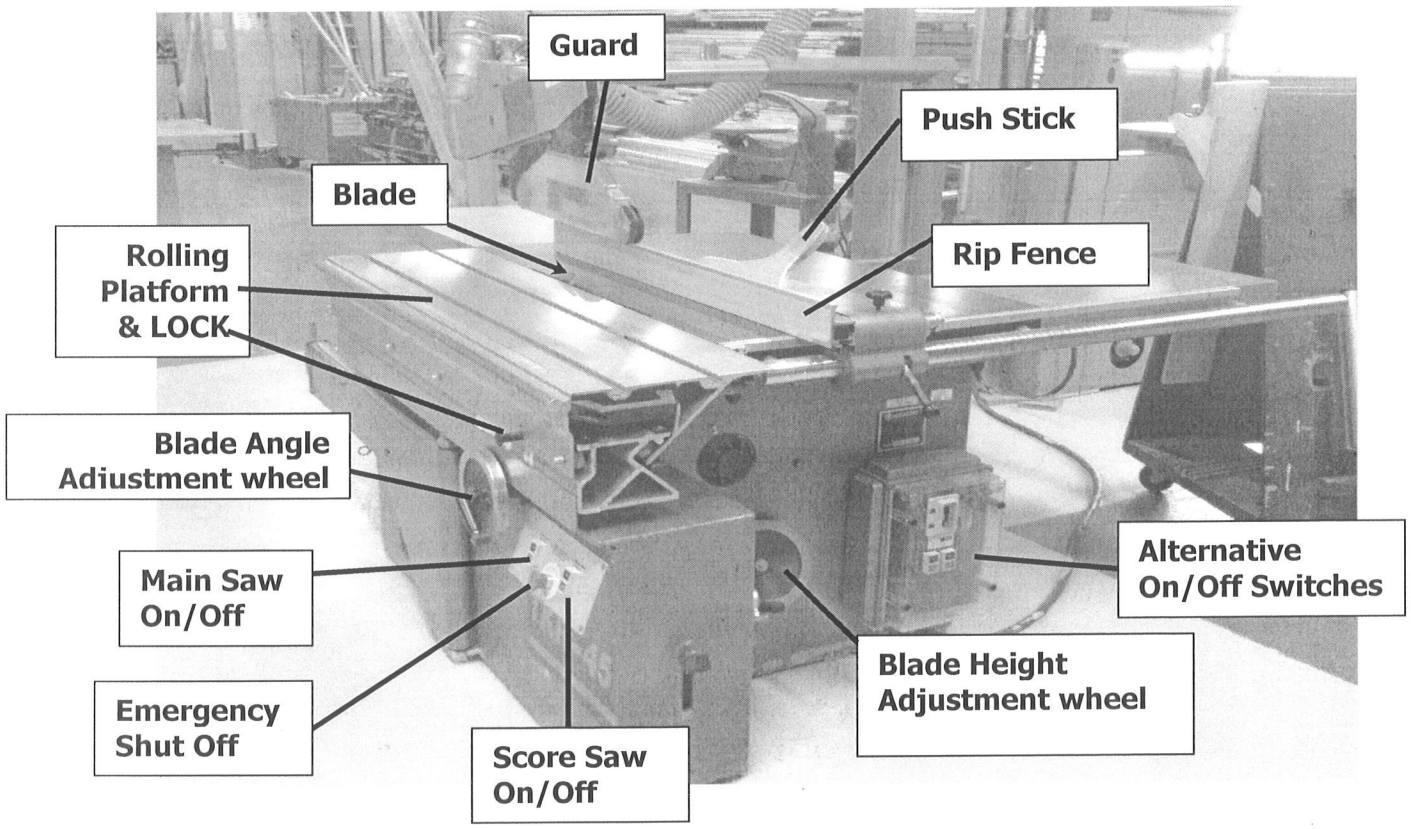
It's the most powerful machine in the shop, primarily used for Rip Cuts. The table saw is famous for Kickbacks, which happens when the blade catches the work piece and violently throws it back to the front of the saw, towards the operator.

6 Check Points

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Safety Rules

1. Wear **safety glasses** at all times.
2. Keep your **fingers 4" away** from the blade at all times.
3. Make sure the board you are cutting is **free of metal** and other imperfections
4. Proper position and posture are important. Stand slightly to the left of the blade
5. Make sure the **rip fence** is accurately set and **locked** in place.
6. Make sure blade is ¼"- ½" above the stock you are about to cut.
7. Keep the guard over the blade whenever possible.
8. Never keep your hands directly in front of the blade.
9. Always use a push stick when ripping stock less than 6" wide.
10. When cutting, keep the stock tight against the rip fence and moving steady towards the blade.
11. Do not distract the person using the table saw, CAUTION while the blade is running.
12. Turn table saw on and make sure it is running properly before you begin cutting.
13. Shut off the saw and wait for the blade to stop before moving away.
14. If something goes wrong with the table saw back off then turn off the power.
15. Properly clear off the table saw when the blade has completely stopped.



Name _____ Band Saw Period _____ Date _____

Mrs. Feliz-Patron

STUDY GUIDE: Vertical Band Saw

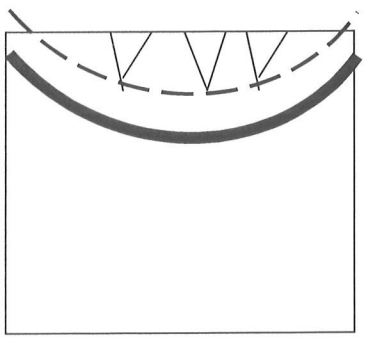
A **bandsaw** is a power tool which uses a blade consisting of a **continuous band of metal** with teeth along one edge to cut various work pieces. The band usually rides on two wheels, pulled in tension, rotating in the same plane. Bandsaws are used for woodworking, metalworking, or for cutting a variety of other materials, and are particularly useful for cutting irregular or curved shapes, but can also be used to produce straight cuts.

SAFTEY RULES:

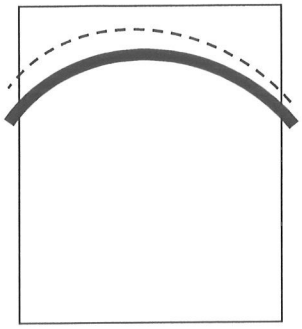
1. Wear safety glasses at all times.
2. Make sure the board you are cutting is free of metal and other imperfections
3. Do not stand to the right of the band saw. If the blade breaks that is where it will escape to.
4. Adjust the upper guide close to your stock (1/4" above), about the thickness of your pinky.
5. Keep your fingers clearly away from the saw blade (4" minimum). Use a push stick to keep your fingers away.
6. Allow the band saw to reach full speed before starting and don't feed too fast
7. Do not back the blade out of a curved cut or longer than one inch while the blade is still moving. Plan your cut in advance
8. A clicking sound may indicate a cracked blade. Turn off the saw and contact the instructor.
9. Never hold stock with your hands in front of the blade
10. Securely hold down the stock before cutting using both hands to guide it. There should be three points of contact, the Table and your two hands.
11. Make relief cuts on tight curves so not to break the blade.
12. Cut all relief cuts first.
13. Clear wooden chips with a brush or another piece of wood NEVER YOUR HANDS. Do not pick out small cut out pieces with your fingers while the saw is on
14. Clear away cut off scraps with a pencil or another scrap piece only after blade has completely stopped.
15. Shut off the saw and bring the blade to a complete stop by stepping on the brake before backing out of a long or curved cut.
16. Cut on the dashed (cut) line leaving room to sand down to the traced/project line.
17. If something goes wrong with the band saw back off then turn off the power.
18. Make sure the saw is off and the blade has come to a full stop before walking away.

PLAN YOUR CUTS: DRAW EXAMPLES, use cutting line about 1/8" away from object line

Use relief cuts for Concave Curves

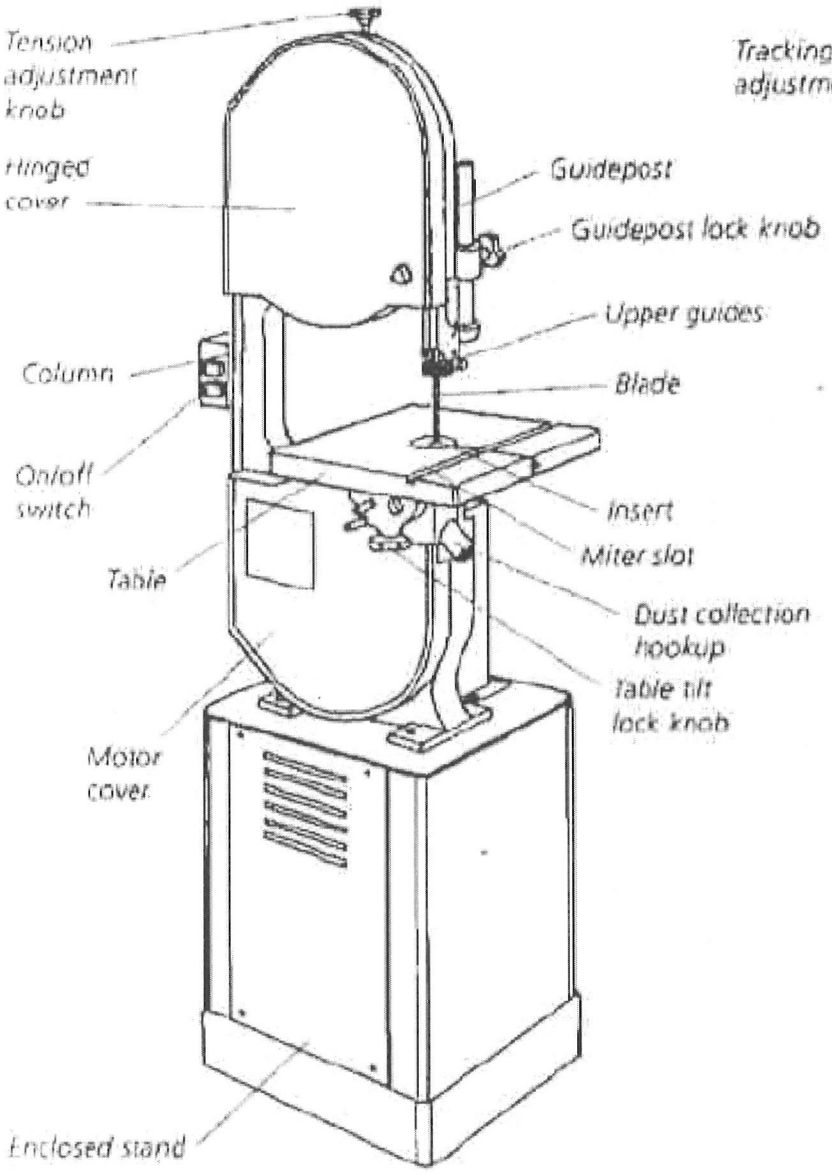


Convex Curves

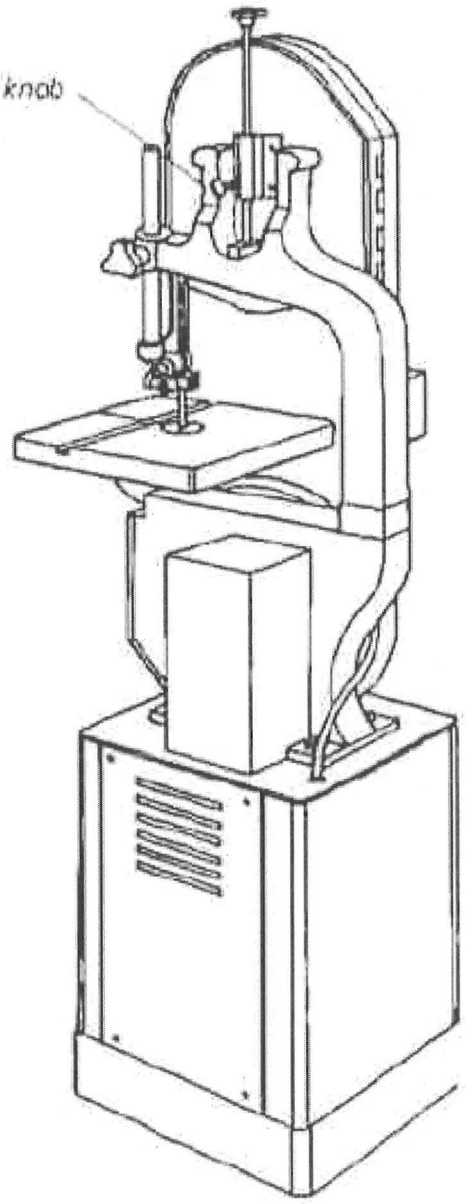


The Parts of a Bandsaw

This is the prototypical 14-in. bandsaw made by Delta. Many other companies make similar saws.



Front of Machine

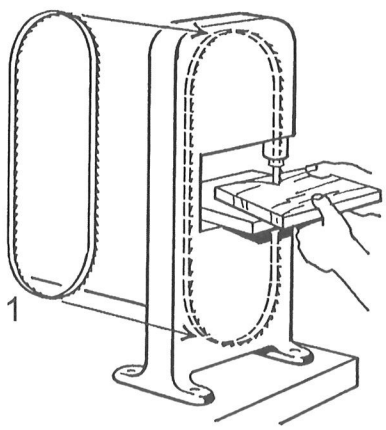


Back of Machine

A. Why is the name of this machine BANDSAW?

B. Where is the most dangerous side to stand while someone is working on the bandsaw?

C. How is the blade attached to the machine?



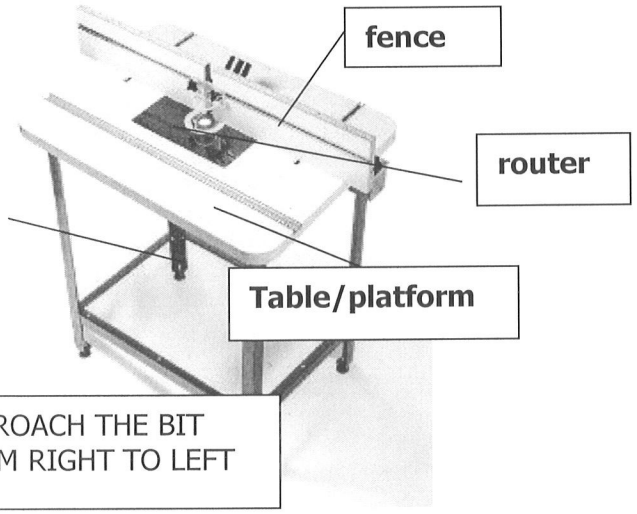
Name_____ Date_____ Period_____

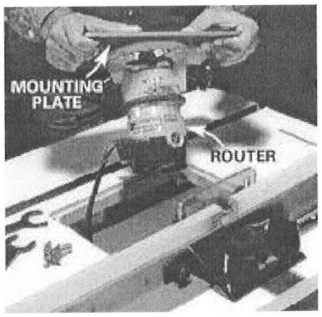
STUDY GUIDE: Router

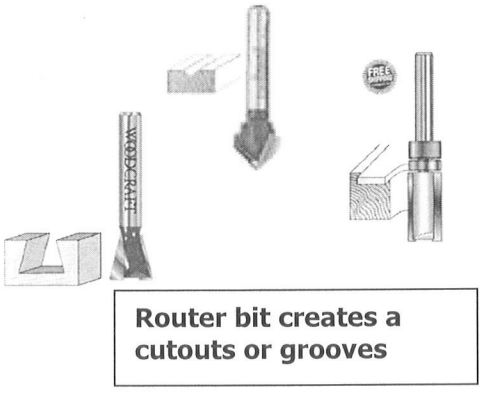
The router is mainly for decorative edging and/or creating profile edges. It can be hand held, mobile but we are using it as a stand still machine using a table and fence.

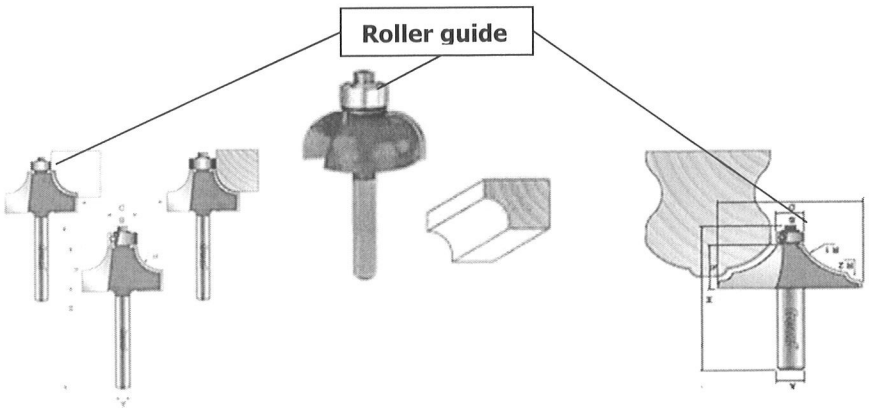
Safety Rules

1. Wear safety glasses at all times
2. Tie back or tuck in long hair and loose clothing
3. Keep your **fingers 4" away** from the cutter at all times.
4. Do not distract the person using router table while the blade is running.
5. Make sure the router bit is secured and the router is fastened on its base.
6. Turn router on and make sure it is running properly before you begin using it.
7. Make sure to move the work piece in a clockwise direction.(opposite to the cutter)
8. Hands are to be pushing down against the table, up against the guide wheel and from right to left across the bit.
9. Shut off the router and wait for the it to stop before making any setting adjustments
10. If something goes wrong with the router back up then turn on the power.
11. Use a scrap board to check the profile and depth of your setting.
12. Properly clear off the router table using a brush or piece of wood. Never clean with your hands.







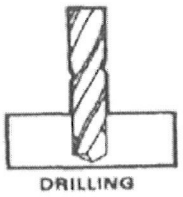


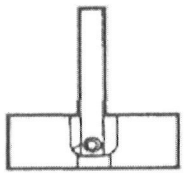
Name_____ Date_____ Period_____

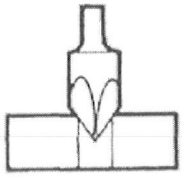
STUDY GUIDE: Drill Press

A drilling machine, called a drill press, is used to bore holes into or through a project piece.

Safety Rules


DRILLING


BORING


COUNTERSINKING

1. Wear Safety glasses at all times
2. Tie back or tuck in long hair and loose clothing
3. Make sure the drill bit is securely fastened in the **chuck**
4. Keep your fingers 4" away from the blade at all times
5. Always have a large piece clamped
6. Make sure to adjust and lock the table have about an 1" gap between bit and stock
7. Do not distract the person using the drill press especially while the bit is running
8. Turn drill press on and make sure it is running properly before you begin drilling/boring
9. Mark the center of the holes with cross hairs, then use a scratch awl to indent a starter hole
10. Shut off the drill and wait for the drill to stop before clearing and moving away
11. If something goes wrong with the drill press back off then turn off the power
12. Use a scrap board under your project to eliminate damage on the back side
13. Properly clear off scraps and sawdust form the drill press table

1. **Top Cover** - pulley safety guard, protecting the pulleys and the belt linking the motor to the drill.
2. **Drive belt and drive belt pulley**- inside
3. **Motor**- runs machine
4. **Drill Chuck**-Device with jaws for attaching the bit or drill to the tool
5. **Feed Handle/Spindle**-Lever activating a mechanism for lowering or raising the chuck.
6. **Table**-Flat surface whose height is adjustable; it supports the piece to be drilled.
7. **Column**-it supports the tool's table, motor and head
8. **Table locking clamp**- Locking device used to keep the table at a desired height
9. **Base**-Support on which the tool rests, which can be bolted down to ensure maximum stability.
10. **Power Switch**-Button for turning the device on or off.