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Cabinetmaking 1

***Lesson Topic***: Table Saw

***NYS LEARNING STANDARD(S) ADDRESSED BY LESSON:***

**Math Science Technology 2:**

Students will access, generate, process, and transfer information using appropriate technologies.

**Career Development Occupational Standards 2:**

Integrated Learning Students will demonstrate how academic knowledge and skills are applied in the workplace and other settings.

**Career Development Occupational Standards 3a:**

Universal Foundation Skills Students will demonstrate mastery of the foundation skills and competencies essential for success in the workplace.

***Aim:*** What Are The Components of a Table Saw?

***Instructional Objectives:*** At The End Of This Lesson Students Will Be Able To:

* *Identify the table saws external anatomy*
* *Identify the table saws internal anatomy*
* *Identify several safety tips*

***Do Now:*** Why the name table saw, what does this machine do?

***Answer****: A table saw is a woodworking tool consisting of a circular saw blade, mounted on an*

*arbor, that is driven by an electric motor. You can make rips, crosscuts, and resaw.*

***Presentation:***

 ***The Table Saw***

*Question: What are the important external parts of the table saw anatomy and the role it holds?*

***Answer:***

1. *Base - Holds the table at about 34 inches from the ground*
2. *Table - Working surface that the work rides on*
3. *Rails - They support the rip fence and any extension tables*
4. *Rip fence - Guides the workpiece during ripping operations*
5. *Height adjustment handwheel - located under the front of the saw*
6. *Blade tilting adjustment handwheel - Usually located on the left or right of the base. Has a corresponding degree gauge, on the front of the saw*
7. *Safety push button magnetic controls - This is the on and off switch, the magnetic switch helps prevent the button from sticking*

*Question: What are the internal parts of the table saw anatomy and the role it holds?*

***Answer:***

1. *Trunnions - Located at the front and rear of the saw, they support the cradle assembly and allow the blade to be tilted*
2. *Arbor assembly - Consists of a metal piece with two support bearings for the arbor*
3. *Cradle assembly - Rides in channels milled into the trunnions, Supports the arbor assembly*
4. *Arbor -A metal shaft, usually 5/8” diameter. One end is threaded and holds the saw blade*
5. *Rack gears - The blade-tilting handwheel and the height adjustment handwheel turn rods with worm gears on their ends that engage the rack gears, allowing the blade to be raised, lowered, and tilted.*

*Question: What are the safety concerns that come with operating the table saw?*

Answer:

* Stand to the left of the cutting blade when operating the table saw. Never stand directly in front of the cutting blade, because a board may accidentally kick back.
* Do not run a workpiece threw the table saw until the machine is at full speed.
* Alignments should be checked often
* Saw should sit solidly on the floor and be fairly level
* Table surface must be perfectly flat

***Medial Summary:***

*Question: What adjustment wheel causes the blade to go up and down?*

*Question: What size diameter is the arbor?*

*Question: What is the fence used for?*

*Question: What is the standard height of a table saw?*

*Question: What is the purpose of the rails on the table saw?*

***Activity:***  Fill out the diagram of the external anatomy of a table saw.

***Homework:*** Become familiar with the internal components of a table saw. Complete the diagram of the internal parts of the table saw.