

Newspaper in Education Presents

inquiziKidz

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What Brightens Your Day?

Discover the Future

Electricians work in a variety of fields:

New Home Construction

Home Repair and Remodeling

Lighting Design

Assembly Line Maintenance and Repair

Job Estimation

Engineering

Automotive Industry

Manufacturing New Products

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kidzbiz

Wired for Success

by Vickie Miller

This electricity student at **Manatee Technical Institute** has found his niche. Joe Dickerson first got interested in electricity when he began learning about it in the Automotive Technology course. Since automobiles utilize a lot of electricity, Joe learned the basics of electricity and said that it fascinated him. As a result, he decided to choose a career in electricity.

Joe said that he especially enjoys doing electrical projects. At MTI he has helped install electricity in the Habitat for Humanity house that will soon be donated to a needy family. Joe has also done some home projects, such as wiring his family's hot water tub. Since Joe grew up helping his grandfather with many home projects, he enjoys the challenge.

Joe graduated last year from Manatee High School. As a long-time resident of Manatee County, he also attended elementary school and middle school here. His goal is to continue his education after graduating from MTI to get his journeyman's license. Eventually, he hopes to become a master electrician. According to his instructor, Mr. Icely, Joe has the right attitude and goals to be on his way to success.



Joe Dickerson

Electricity and the Light Bulb

Electricity Brightens Holidays

by Vickie Miller

Happy Hanukkah. Hanukkah is known as the festival of lights; and since the discovery of electricity, Christmas has also become a holiday filled with lights.

The light bulb was invented in 1879, and only three years later the first Christmas tree with lights was decorated by Thomas Edison's assistant. What a phenomenon it became! Some families started hosting Christmas-light tree parties, but at that time it cost about \$300 to light a tree (\$2000 in today's money). Many stores began renting out Christmas lights so people could have them in their homes. Aren't we lucky that today we can buy a string of lights for just a few dollars?

We are also fortunate to have electricity in our homes to power our lights and all of our appliances. Electricity is one of those strange things that is difficult to understand. You can't see electricity, just like you can't see sound. We can hear, see, and feel the effects of electricity such as a radio playing, a disc turning, or an iron heating. We can imagine that electricity flows through wires like sound flows through the air, but it is a little more complicated than that.

Electricity is present in our universe, such as in lightning or in static electricity. Electrons, protons, and neutrons exist in all things; and electricity is something that is created when electrons begin moving together. Metals are especially good conductors for electrons to help them move; when electrons move through a wire they generate electrical charges.

However, that still doesn't explain how the electricity gets to your lights. One electrician explained it like this. She said that an electrical cord sort of works like a garden hose. When you turn on the water, it runs through the hose and out the other end. In the same way, when you plug an electrical cord into a wall outlet, energy from the outside power lines runs through the wires in the cord and begin pushing the charged electrons to your Christmas tree lights or choo choo train. With the miracle of electricity, we can all have bright and shiny holidays.

School biz

A Glowing Instructor

by Vickie Miller

Electricity instructor, Mr. William Icely, finds many ways to spark up his Electricity class at **Manatee Technical Institute**. He brings to his students the benefit of numerous years of electricity experience. Mr. Icely is a certified electrical contractor and owned his own business for many years.

As a business man he oversaw a variety of projects that ranged from homes to nuclear power plants. One of his most technical projects was to wire the control rooms in a nuclear power plant to make them explosion-proof. This required him to use specialized switches and wires that would not spark or catch on fire.

Mr. Icely's classroom and lab areas at MTI give his students some of the same experiences he had as an electrician. In his class, he has built many walls and ceilings that are similar to what you would find in a house. This allows students to practice wiring switches, hooking up ceiling fans, or installing breaker boxes.

One of the best things about electricity, says Mr. Icely, is that there is something new every day. There are also new products coming out all of the time and new ways of doing things. About his students, he says that those who have good discipline and work ethics are the most successful. Thanks to Mr. Icely, we have many glowing reports about the graduates from the MTI electricity program.



William Icely

explore it Electric Potato

Need: Potato

**Copper wire
Paper clip or nail
Headphones or ear plug**



In this experiment you will construct an electric cell.

Instructions: Stick a piece of copper wire into the potato. About an inch away, stick the nail or paper clip into the potato. Take the headphones and touch both the copper wire and the aluminum wire to the metal plug on the headphones. Notice that on the headphones there are two or three sections of metal on the plug. Make sure that you touch one piece of metal to one section of the headphones and the other piece of metal to one of the other sections. If your potato is generating electricity you should hear a clicking sound. You can try this experiment with other fruits or vegetables. The louder the click, the better your electric cell works.

How it works: The acid in the potato causes reactions in both the copper wire and the nail. The electrons in the copper wire move out of it and into the potato to produce hydrogen gas. In the nail, the acid in the potato dissolves the zinc in the nail, which allows the electrons in the nail to escape into the potato. This flow of electrons makes an electrical current. This experiment produces about 1/2 of a volt. Note that AA and AAA batteries produce 1.5 volts.

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Manatee Technical Institute

Ballard Elementary Magnet
 Daughtrey Preparatory Magnet
 Harllee Middle Magnet
 Johnson Middle Magnet
 Lee Middle Magnet



Lincoln Middle Magnet
 Manatee Elementary Magnet
 Rowlett Elementary Magnet
 Tillman Elementary Magnet
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