

Newspaper in Education Presents

inquiziKidz

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Do you have what it takes to be an engineer?

kidzbiz Family influence

By Steve Graham

Computer engineering and software design are his primary interests, but John Nguyen has been involved in many areas of engineering technology at **Harlee Middle School**. He has been attending the school since he was in the sixth grade. Currently in the eighth grade, John credits his family and his teachers for his success at school. "My family has influenced me the most. They've molded me into who I am," John says. His older brother started him using the computer when John was about six.

About his years at Harlee John says, "My work habits have definitely changed. I realized I needed to step up my game, to focus more on school." He says that two of his teachers especially influenced him. Mrs. Wicklund, his sixth grade social studies teacher, is one. He points to her attitude about learning and work as a model. "Knowledge alone won't get you in the door; you have to have a good attitude." The other teacher he credits is Mrs. Chambers. She teaches Project Lead the Way, Harlee's pre-engineering class as another important influence. "She helped me realize this school was really something different," John says.

John has been active in the school's Technology Students of America organization. At last year's state competition, he finished in the top ten in five different events: Manufacturing, Inventions and Innovations, Technical Writing, the Environmental Challenge, and Parliamentary Procedure. He looks at engineering as a way to solve problems; his Inventions and Innovations project is an example. When a pizza deliveryman couldn't find the house number, John was inspired to create a solar powered display for the mailbox. He has since seen it marketed, but for more money than it took John to create it.

Another project John especially liked was the reef ball project at Harlee. He researched the design process involved with their creation, but he especially enjoyed the hands-on aspects. Mixing the concrete and using the molds to create elements for an artificial reef incorporated several strands of engineering: Civil, Mechanical, Environmental, and Materials Engineering. John plans a career in the computer field, either refining applications to make them more user-friendly or creating computer games. When asked where he hopes his interests will take him, John responded with, "Hopefully into Bill Gates' chair."



John Nguyen

School biz Striving for an "A"

By Steve Graham

All students can learn; all students will learn. We need to keep striving to be simply the best in all areas," says Ms. Carol Felton, the new principal at **Harlee Middle School**. She describes herself as being a person who is, "structured, disciplined, and who has high expectations." Ms. Felton sees the role of principal as someone who can "assist, motivate, and inspire." She takes very seriously the job of being a role model and expects every adult on campus to model the same behavior. She says, "They watch and observe, even when you don't expect it."

As Ms. Felton begins her tenure at Harlee, she is proud of the school's grade. "Good things occur at Harlee; that's evident by the "B." She plans to build on those good things, but recognizes that changes "might not happen overnight." She would like everyone connected to Harlee to "be prepared to go to the next level."

Her vision for Harlee is to create, "a school where people will line up to be there." She plans to build on the school's magnet theme, Engineering and Technology, and expose students to as many of the new technologies as possible. Ms. Felton's plans include offering higher level classes in all subjects.

She knows that she and the staff at Harlee cannot do these things alone. She invites parents to visit and become involved with the school, "Come and help the staff and me to reach the highest level of achievement. I believe we can be an 'A.'"

Ms. Felton is a product of Manatee County and values our sense of community. She attended Palmetto Elementary, Lincoln Middle School, and Manatee High School. Her college degrees come from Florida State and Nova Universities.

When asked what her hopes are as she takes over the job of leading Harlee Middle, she responded, "To be the best and inspire others to be their best. I'm so excited to be at Harlee."

Engineering Technology

Engineering makes life easier

Engineering and Engineering technology are two closely related but distinct fields. **Engineering** is the art of applying science and mathematics to make things that benefit humankind. Throughout time, engineers have built the Great Pyramids, created our water and electrical systems, built roads and bridges, and landed us on the moon. Except for arts and crafts, almost everything that is made by humans contains the influence of an engineer. We could not power our homes, cook a meal, or make a phone call without the work of an engineer. We couldn't drive to an airport and take a flight without engineers. The cars, the roads, the airport, and the airplanes are all the work of engineers. The clothes we wear, the medicines we take, and the packaging for all the products in our stores are affected by engineers. Without the work of engineers, our lives would be almost primitive.

There are many branches of engineering and within those branches there are many jobs an engineer might be doing. Engineers might choose to work in research, design, analysis, development, product testing, or even sales. The wide variety of jobs means there is probably a job in engineering that would match your special interests.

There is such a demand for engineers that each year engineering jobs go unfilled. A college degree is required to become an engineer, and an advanced degree is helpful. A starting salary of more than \$50,000 is not unusual.

Engineering Technologists often work with engineers as part of a team. While engineers frequently design the product, it is the **Engineering Technologist** who translates those designs into a product. Technologist might oversee a construction site. Some might direct the manufacturing process in a plant. Others might operate large public works projects like our dams or electrical plants. **Engineering Technicians** can find high paying jobs with a two-year degree. To be an **Engineering Technologist** requires a four-year degree.

Engineering Technicians and Technologists must have enough background in a field to work directly with engineers, but must also have enough hands-on experience to work with craftsmen.

Students might begin preparing for a career in engineering or engineering technology by taking challenging courses in math and science. Technology classes offered in middle school are a good way to start. Project Lead the Way, a pre-engineering class at **Harlee Middle School**, is designed to interest students in engineering. Tech prep programs in the high schools also serve to prepare young people for a career in the field.

If you want to know how things work, if you're interested in finding the solution to real-life problems, if creating a new product or process appeals to you, then engineering and engineering technology might be where you belong.



Discover the Future

Some Careers in Engineering and Engineering Technology

- Project Construction Manager**
- Construction Cost Estimator**
- Manufacturing Engineer/Manager**
- Product Manager**
- Electrical Engineer**
- Engineering Technician**
- Mechanical Engineering Technician**
- Electro-Mechanical Technician**
- Engineering Aide**
- Drafter**
- Manufacturing Assistant**
- Computer-Aided Design Operator**
- Surveyor**
- Building Inspector**
- Programmer**
- Network Administrator**
- Systems Analyst**

For more career information see your school counselor and get information on-line at:

<http://jobstar.org/tools/career/spec-car.cfm>
OR
<http://www.acinet.org/acinet/default.asp>



explore it

SOME TYPES OF ENGINEERS

L C G N I R U T C L H A F U C E N A S M V
L C I G A G E O T M I N R R L A T R N C
P L A G A R O E A N I N O F H O F A T E R
Y I R T M T S U D N I U R E T S U D N I
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C V O E P E E Q C V O E P E E Q
P S O R E A N A P S O R E A N A
E R R A C T E R R A C T E R R A C T

Word List

CERAMIC MATERIALS CHEMICAL CIVIL ELECTRICAL COMPUTER ENVIRONMENTAL INDUSTRIAL MANUFACTURING MECHANICAL STRUCTURAL GEOTECHNICAL AGRICULTURAL MINING OCEAN SOFTWARE

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- Sugg Middle School
- Ballard Elementary Magnet
- Daughtrey Preparatory Magnet
- Harlee Middle Magnet
- Johnson Middle Magnet
- Lee Middle Magnet



- Haile Middle School
- Lincoln Middle Magnet
- Manatee Elementary Magnet
- Rowlett Elementary Magnet
- Tillman Elementary Magnet
- Wakeland Elementary Magnet

Schools listed in red offer instruction in the subject area featured in today's InquiziKIDz

webwize

- <http://www.pltw.org/aindex.htm>
- <http://www.howstuffworks.com/>
- <http://www.engineeringsights.org/>
- <http://www.discoverengineering.org/>
- <http://www.greatachievements.org/>
- <http://www.ieee-virtual-museum.org/>
- <http://www.pbs.org/wgbh/buildingbig>
- <http://www.iei.ie/steps/house/index.html>
- <http://www.engineeringk12.org/precollege/default.cfm>
- <http://education.usace.army.mil/clubhouse/science.html>