

Newspaper in Education Presents

inquiziKIDZ

BROUGHT TO YOU BY MANATEE COUNTY'S MAGNET SCHOOLS & ADULT CAREER & TECHNICAL EDUCATION

Do you have blue genes?

kidzbiz

Involved in technology

Monica Carrington was not your average middle school student. Before she became a Medical Academy student at Manatee High, Monica was the President of Sugg Middle's Technology Student Association (TSA). Monica and her friends, Kayla Clark, now a freshman IB student at Southeast High and Sunny Cumpler, current Sugg TSA President, know that technology is the future and they want to learn all they can, so they really got involved in Sugg's TSA. Sugg students compete in 28 different challenges in technology at their TSA conference each year. In their



Monica Carrington

classroom, they work with biotechnology, medical technology and cyberspace. One of the things Monica really enjoyed was job shadowing companies in the community. They went to Oshkosh and learned about welding and producing fire trucks. It provided them with the opportunity to connect what they were learning with real world experiences. When asked about the importance of technology, Monica replied, "Technology is involved in everything we do... transportation, medical research, and broadcasting."

school biz

Virtual make-over

Sugg Middle School technology teacher Dan Crumpler, a 29-year education veteran, is making great strides with students. Utilizing past



Dan Crumpler

experience in the business world Crumpler encourages his students to work with community businesses to broaden their understanding of adult interaction and further their learning opportunities. Crumpler introduces his students to the newest trends in Technology Education that include experiences with a wide variety of software and equipment, including the area of biotechnology.

Students experience a *virtual make-over* program that allows them to combine knowledge of digital photography and computer skills. Another popular software package employs architectural design to allow students to create their own *dream house*. Students first sketch their ideas onto graph paper then transfer the ideas to the computer. Employing their computer skills, the students cover all details, including drafting the house plan and decorating the interior of the home. Additional projects include the use of a desktop publishing program and the creation of a two-minute commercial using video equipment.

Deoxyribonucleic Acid (DNA)

Blonde or brunette?

How can a family with three children have one child with blonde hair, one with black hair, and one with red hair? The answer can be found in the study of genetics. Genetics have been studied and understood by scientists since Gregor Mendel began his research in the 19th century. However, the recent emphasis on *Deoxyribonucleic Acid* (DNA) has opened new doors for scientific advancement. DNA is big news today. DNA is what makes up the genetic material that is found in all cellular organisms. Other than identical twins, no two people have the same DNA. It is what makes us unique.

DNA is a long, twisted strand made up of two parts that stick together. The strand resembles a long piece of fishing line, but it is so thin and tiny that it cannot be seen by the human eye without the assistance of today's technology.

Our DNA contains the information our bodies need to replicate cells. Replication is the process that DNA uses to copy itself, creating descendant cells. Proteins anchor themselves to the DNA and help the different strands within the DNA to form into a chromosome in preparation for the cell to divide. Each human has 43 chromosomes. Each chromosome is composed of two alleles. We

receive one allele from each parent, as our bodies develop prior to our actual

Strawberry-Blond Father's Alleles (F)	Black-haired Mother's Alleles (M)	Child's Alleles (Received one from each parent)	Child's Resulting Hair Color
Red	Black	Blond (F)	Blond
Blond	Blond	Blond (M)	
Red	Black	Blond (F)	Black
Blond	Blond	Black (M)	
Red	Black	Red (F)	Red
Blond	Blond	Blond (M)	

birth. One allele may be dominant over the other, resulting in a gene that is ruled by the trait of that allele. The chart below provides an example:

This is how we "inherit" characteristics like hair color, eye color, being tall or short and other physical attributes. We call it *heredity*. The study of genetics has always fascinated people.

explore it

Did you know that biotechnology has been used in the preparation of foods for hundreds and even thousands of years? A very popular type of food is a perfect example of biotechnology. That food is yogurt! Yogurt is made by inoculating milk with certain types of bacteria. The bacteria feed on the lactose or sugar of the milk, turning it to lactic acid. The lactic acid gives yogurt its distinctive sour taste, and eventually thickens the milk. Spend some time with your parents and WOW them with your biotechnology knowledge, by showing them how to make yogurt from scratch.

Ingredients:

- * gallon whole milk (you can use lo-fat milk)
- * cup of plain yogurt

Bring the milk to just a boil (little bubbles will form along the side of the pan) and then set it aside to cool. Cool the milk to so that it doesn't burn your finger when you touch it (about 120 degrees) Pour the warm milk into a glass bowl and add the plain yogurt. Mix well, stirring the starter in, then cover the bowl. To maintain an even temperature, completely cover the bowl with towels. Let the yogurt set for 3 – 4 hours at room temperature. Refrigerate for 8 hours before serving. You can flavor yogurt with a little sugar or honey and vanilla, you might even want to add fresh fruit. To store, keep in refrigerator. The yogurt will keep well for a week or more.

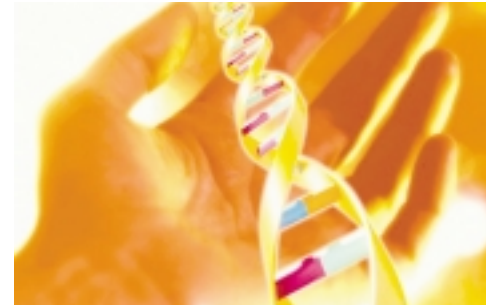
Discover the Future

Biotechnology has become a more complicated subject due to recent news in the field of genetic engineering. It is important to understand that genetic engineering is only one type of biotechnology. Biotechnology is also the process by which human beings use living things as tools to create new products. Biotechnology is a fast growing career field. Below are a few of the many exciting possible career areas in the field of Biotechnology.

- Cancer Research
- Applied Mathematics
- Quality Engineer
- Geneticist
- Pharmaceuticals
- Agricultural Sciences
- Research Scientist
- Chemist
- Data Analyst
- Developmental Scientist

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

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



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Sugg Middle School

- Ballard Elementary Magnet
- Daughtrey Preporatory Magn
- 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

Next Weeks Inquizikidz - How can a licorice stick make music?



Technology Student Association
<http://www.Florida-TSA.net>

Sci4Kids US Dept of Agriculture
<http://www.ars.usda.gov/is/kids/>

Eureka Science
<http://www.eurekascience.com/>

Kids Only
http://www.genecrc.org/site/ko/index_ko.htm

Designer Genes
<http://library.thinkquest.org/18258/index2.htm>

News story about kids looking at own DNA
<http://www.hhmi.org/news/storybrookgia.htm>

Cat Fanciers
<http://www.fanciers.com/other-faqs/color-genetics.html>

