GYSTC
GEORGIA YOUTH SCIENCE & TECHNOLOGY CENTERS

STEM Today

STEM EDUCATION
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Our Centers

Central GYSTC
Mercer University

Chattahoochee-Flint GYSTC
Georgia Southwestern State University

Etowah GYSTC
Georgia Highlands College

Gordon GYSTC
Gordon State College

Magnolia Midlands GYSTC
East Georgia State College

Oconee River GYSTC
Northeast Georgia RESA

Southwest GYSTC
ABAC at Bainbridge

West GYSTC
University of West Georgia

GYSTC @ Augusta
Georgia Cancer Center – Augusta University

GYSTC @ Gainesville
Lanier Technical College

GYSTC@ South Georgia
ABAC at Tifton

GYSTC State Office
Kennesaw State University

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Note from the Director's Desk

Spring is here, Georgia Educators

For this month, GYSTC has included a Simple STEM Activity to do with your students to celebrate DNA Day. You will find a summary and link for the activity below. On **DNA Day, Monday, April 25, 2022**, join GYSTC as we demonstrate this month's Simple STEM Activity live on the GYSTC Facebook Page. Also, don't forget to celebrate our planet on **Earth Day on Friday, April 22, 2022.**

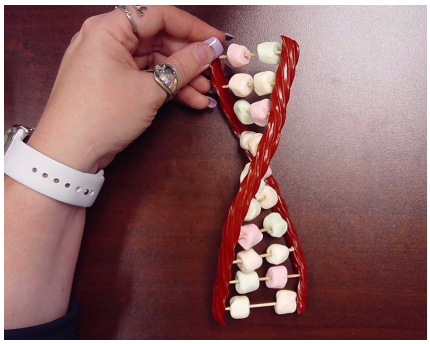
Chat-Flint GYSTC holds Science on the Farm Event

This past month, Chattahoochee-Flint GYSTC held its first of two Science on the Farm events at the historic Jimmy Carter Boyhood Farm. The event showcased agricultural innovation through farming techniques. Agribusiness has a $75 billion impact every year and is Georgia's leading industry.

Clay County, Dooly County, and Southland Academy Students learned about: honey bees and how important pollinators are vital to all life on Earth and Georgia's Agriculture; compost gardens and how they produce nutrient-rich soil for crops; watersheds and the impact different pollutants have on Georgia's water supply; chickens, specifically broiler chickens and eggs, that are some of the top agricultural products for our state; and much more.

April Simple STEM Activity

In honor of DNA Day on **Monday, April 25, 2022**, this month's Simple STEM Activity will be about the importance of DNA and how they store and transfer genetic information. The activity is entitled ***Incredible Edible DNA***.



In this activity, your task is to construct an edible model of DNA. DNA stands for deoxyribonucleic acid and is a molecule made of two backbones and four types of chemicals bases. The backbone is composed of a chain of phosphates and sugars. The sugar molecules provide a place for the chemical bases to attach. There are four types of chemical bases: adenine, thymine, guanine, and cytosine.

DNA provides 'instructions' to the cells on how to make specific proteins which are used by the cell to function, grow, and survive. In groups of three, these are called codons. In larger sections they are called genes. These genes are passed down to offspring during DNA replication. During DNA replication, the double helix untwists, and the two strands separate, and a copy is made. This must happen before cell division occurs so that the new cell will have the same genetic information as the old cell.

This activity is an excellent STEM exploration to do with your students. The link for the activity can be found here.

Don't forget to join us on ***Monday, April 25, 2022,*** as we demonstrate this month's Simple STEM Activity live on the *GYSTC Facebook Page.*

GYSTC Spotlight

This month, in honor of Earth Day on Friday April 22, 2022, we are shining a light on one of our **Chattahoochee-Flint GYSTC Board Members, Dr. Michele Smith**. Dr. Smith is the Professor of Chemistry and STEM Coordinator at Georgia Southwestern State University in Americus, GA. She received her bachelor's degree from Wilson College with a major in Chemistry and a minor in Biology. She received her Ph.D. from Auburn University in Inorganic Chemistry.

Dr. Smith is involved with the Georgia Adopt-A-Stream program as a local community coordinator for the Lower Flint River Watershed. The Georgia Adopt-A-Stream program is Georgia's volunteer water quality monitoring program. She started as a chemical and bacterial monitoring volunteer in 2014 and became a community coordinator in 2016. As a community coordinator, she trains and certifies individuals who are interested in chemical and bacterial monitoring of their local waterways. Chemical monitoring involves determination of water temperature, pH, conductivity, dissolved oxygen levels, alkalinity, phosphates, and nitrates. Bacterial monitoring is utilized to determine levels of E. coli in surface waters, since high levels may indicate potential pathogens. Since becoming a community coordinator, she has had the privilege of working with K-8 teachers in the Chattahoochee-Flint GYSTC region, Georgia Southwestern students, area residents, members of local homeowner's associations, local business owners, and staff from the Flint Riverkeeper, Flint RiverQuarium, and Chehaw Park and Zoo.

As the STEM Coordinator for Georgia Southwestern, Dr. Smith has been able to interact with K-8 students in the Chattahoochee-Flint GYSTC area and speak with them on a variety of environmental topics. Her favorite topics are water quality and pollution, ultraviolet light and the ozone layer, and recycling the plastics that we use in our everyday lives. She is always amazed at the knowledge that students possess about the environment and their eagerness to learn even more.

We are excited to share this **lesson** with your students so that they see what it is like to be a environmental engineer just like Dr. Smith!

GYSTC Gems

Our April "Gem" is a special "thank you" to all of the sponsors of the Science on the Farm 2022 event.

We want to thank, Georgia Southwestern State University, South Georgia Technical College, Citizens Bank of Americus, Daddy Rabbit Aviation, Lowe's, Americus - Junior Service League, Findley Gin, Georgia Farm Bureau, Georgia Foresty Commission, International Paper, Global Graphics, and especially the Jimmy Carter National Historic Site and staff of the Jimmy Carter Boyhood Farm.

Without the help from you all, this event would not have been possible! Thank you so much!

Upcoming State Office Events

Summer Programs

STEM Discovery Camp Facilitator Training:

The theme for this year's **STEM Discovery Camp** is "Rediscover Your World". GYSTC staff will present a **STEM Discovery Camp** facilitator guide for you to be able to have your own **STEM Discovery Camp** with your students.

- ***Free to all, limited spots available. (Class sets of materials NOT included)***

- Thursday, May 5, 2022 - Gordon State College - 9:00 a.m. - 3:00 p.m.

Summer STEM Institute:

This hands-on and exploratory institute will engage teachers as learners as they make the key items of each exploration. Along the way, we will discuss key concepts, share ideas, and build our repertoire of interesting and engaging STEM learning lessons.

- ***Cost per teacher is $99 for a member system and $199 for a non-member system.***

- June 7 - June 8, 2022 - Mercer University - Macon Campus - 9:00 a.m. - 3:00 p.m.

STEM Discovery Camp:

GYSTC's STEM Discovery Camp is an exciting four-day learning experience for bright-forward thinking elementary school (grades 3-5) students. The theme for this year's STEM Discovery Camp is "Rediscover Your World". Students will have the opportunity to meet new friends while engaging in challenging activities, workshops, and simulations in a friendly environment. The Discovery Tracks of Earth Science, Life Science, Physical Science, as well as Technology and Careers in STEM will be explored.

- ***(Registration is limited to the first 30 students)***

- Monday, June 13, 2022 - Thursday, June 16, 2022 - Kennesaw State University - 9:00 a.m. - 12:00 p.m.