

GEORGIA YOUTH SCIENCE  
& TECHNOLOGY CENTERS

2019

**GYSTC | SUMMARY  
REPORT**

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PROMOTING INTEREST IN SCIENCE, TECHNOLOGY, ENGINEERING, AND MATH FOR K-8 TEACHERS AND STUDENTS



# 2019

## Executive Message:

Surely, one of the obvious signs of an organization's success is its longevity. Surviving the common obstacles that every nonprofit or corporate group faces – structural and staffing issues; strong leadership; defining and refining objectives and strategies to meet them; sustainable funding and of course staying true to the organization's mission and purpose – are ongoing challenges to be met and answered. Having arrived at our 30th Anniversary, I'm gratified and very proud that GYSTC has passed the test of longevity because we've faced each of these challenges and won.

And we're still winning! Our purpose and mission are more important than ever as the demands for greater access to proficiencies in STEM in and outside the classroom continue to grow. Each day, society, our teachers and students require that we do more and do it better. To that end you will read in this Summary Report a few of the program highlights we've already achieved in 2019 as well as some planned structural improvements to increase GYSTC's performance and deliverables to the community. These modest but important changes will carry us into the future with a more efficient infrastructure that ensures uniformity in goals and operations throughout the nine GYSTC regions. We're also placing increased emphasis on strategies to widen and enhance outreach communications within and outside the organization.

So although 30 years longevity is proof enough of our grit and determination, we're not resting on our laurels. We're entering our next cycle with vigor and enthusiasm. As always you are invited to join us on the GYSTC Journey as a volunteer, financial supporter or cheerleader -- plug in wherever you like. We're fired up and ready to go!

*Betsy Green*

Executive Director



# 30 and counting *Years*

Thirty years ago, the Georgia Youth Science and Technology Centers struggled into existence through the persistent vision and nurturing of a few dedicated souls with a dream. A doting cadre of GYSTC “parents” comprised some of Georgia’s mostinfluential and hard-working movers and shakers.

The late, great duo of Beverly Golden and Jim Thompson – both of the former Southern Polytechnic College – and the still active Don Cargill, Bobby Welch and Cathy Wright - are but a few of the notable creators and supporters who have overseen the birth and development of GYSTC for three decades.

“When GYSTC began in 1989, it was a great idea. Today, its continued growth is a necessity as STEM applications have become part of everyone’s daily life. I’m proud that the ground-work we laid is continuing to flourish.”  
- Don Cargill, Founding and Current board member

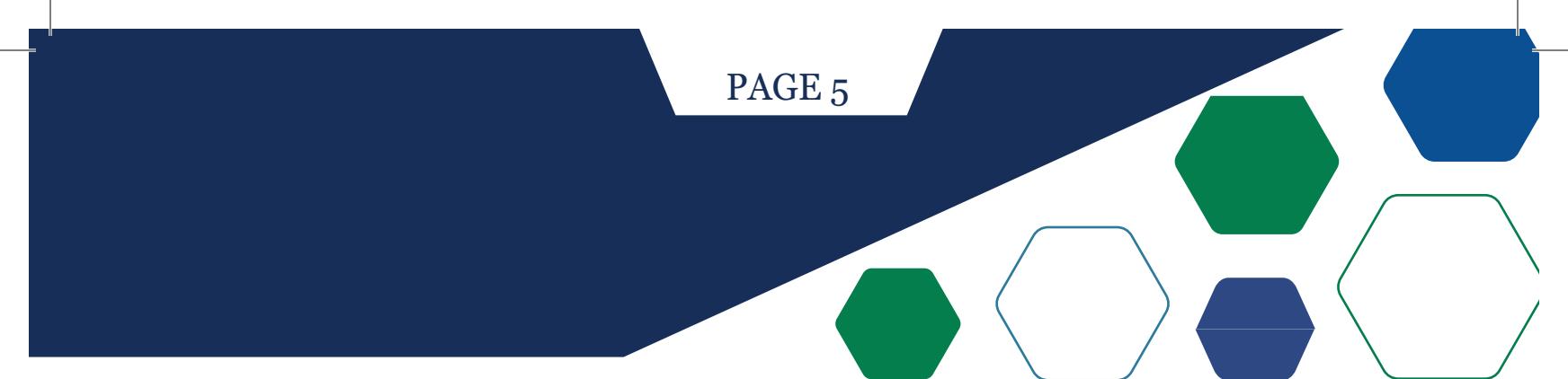
In 1990, GYSTC toddled into early childhood with a \$500 seed money donation from Siemen’s Corporation at the behest of long-time supporter Jim Sheahan. Later, GYSTC opened Shenandoah, its first center in Coweta County. There, Georgia Power gifted GYSTC with operations space and shared resources through its own Environmental Education Center.

“GYSTC was an opportunity for me to help empower teachers to incorporate hands-on and inquiry science methods in their classrooms.”  
- Kay Marshall, First GYSTC employee

As the years passed, GYSTC flexed its adolescent muscles opening eight more centers around the state during the 90’s. All were the result of hard work by small groups of dedicated volunteers at the community level. Working closely with local school boards, each had to develop STEM curricula that met state guidelines while incorporating new discoveries and teaching methods that would excite and motivate students. Bobby Welch was enormously instrumental in recruiting the involvement of many school superintendents around the state to buy-in to the GYSTC dream.

Building confidence and STEM aptitude among teachers was and is a top priority. GYSTC teachers are the Stars we honor daily for their year-round commitment to teach and enhance educational experiences for children – sometimes with severely limited resources.

“My goal for GYSTC going forward is to close the learning gap in science and technology, especially for girls and minority children.”  
- State Representative Lynn Smith, First Regional GYSTC Board Chair



The State Administrative Office of GYSTC, housed at Kennesaw State University and guided by the capable leadership of Executive Director Betsy Green, works tirelessly to create and oversee multiple programs that allow students and teachers to learn and teach in standard classroom environments, summer camps, weekend and after-school programs, field trips, science festivals, museums and other venues to afford kids and faculty exposure to the latest and best in STEM disciplines.

“My vision for GYSTC going forward is to widen exposure to teachers to GYSTC.”

- State Senator Jack Hill, Former GYSTC Regional Board Member

Offering excellence is expensive and while state and corporate giving has been generous since GYSTC’s founding in 1989, ensuring consistent funding has always been a challenge. In 2008, eight GYSTC centers were forced to close because of the national economic downturn. That impacted thousands of individuals and groups in both the public and private sector. Reassembling those closed centers has been daunting and in some cases unsuccessful. GYSTC went from a high of 13 centers statewide to its current standing of ten centers and programs. Rebuilding funds and resources as well as gifted and dedicated personnel to lead at the local level remains a challenge for communities throughout the state.

“Our challenge is always to replace outstanding talent at the director level as attrition occurs while ensuring continued alignment with school superintendents in meeting their goals for training and education in member systems.”

- Paul Chambers, Board Chair, Oconee County GYSTC

Still, GYSTC’s future is bright as teachers and staff continue to educate and innovate at the highest levels. GYSTC ‘s annual Teacher Academies allow educators to gather, learn and exchange with each other at the peer level. The Academies are incubators for new ideas that are taken back to local classrooms and shared with students and parents.

“I offer my congratulations to Executive Director Betsy Green, her board members and all those who are bringing great science instruction and support to teachers around the state. I join all of you in celebrating a great 30 years!”

- Dr. Stephan Cheshier, Founding GYTSC Board Member and President Emeritus of Southern Polytechnic State University

As GYSTC moves firmly into its 30th year of adulthood, many lessons have been learned and taught. We look back with pride at the estimated two million young students whose lives have been touched and whose futures have been impacted by a first exposure to science and technology that would not have been possible without GYSTC. We look back with gratitude for the thousands of dedicated supporters – many of whom have been with us from the beginning and are with us still – dreaming of bright futures for Georgia’s children, educators and industries as we embrace improved lifestyles made better by advanced technologies.

“I look forward to witnessing GYSTC’s support to teachers and students transforming the work skills and jobs in Georgia’s rural and underserved communities.”

- Betsy Green, GYSTC Executive Director

We look back with a forever Thank You for the unwavering support so many corporations, individuals, local schools and districts, colleges, universities and the state of Georgia have provided. Special thanks must go to the former Southern College of Technology and Southern Polytechnic University now merged with Kennesaw State University, which was GYSTC’s first and present administrative home.

At 30, we are in full young adulthood – still energetic, still enthusiastic but seasoned and wiser for our peaks and valleys. Our future glows as bright as the starry night, full of promise and possibility. You are welcome to journey with us as we continue to explore the Wonderful World of GYSTC!



The 2019 STEM SCHOLAR AWARD winners after receiving their award

## STARGAZING MADE EASY: GYSTC CELEBRATED 23 STEM EDUCATORS AT 30TH ANNIVERSARY CELEBRATION

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Twenty-three Georgia K-8 teachers were honored with \$500 awards for excellence in teaching children science, technology, engineering & math (STEM) under the Georgia Youth Science & Technology Center (GYSTC) umbrella at a Gala event celebrating GYSTC's 30th Anniversary on Saturday, March 23, 2019 at Cobb Energy Performing Arts Centre.

The GEORGIA STEM SCHOLAR AWARD recognizes innovation in integrating STEM curricula in elementary education. Each awardee was nominated by his/her local school district which received the award in the teacher's name. Award dollars were used to purchase classroom supplies in support of continued STEM education.

The Gala served as a fundraiser for STEM add education throughout Georgia to expose children to current and future STEM careers. The GEORGIA STEM SCHOLAR AWARDS represents GYSTC's 30-year commitment to fostering excellence in science education throughout the state. GYSTC will be accepting applications for FY 2020 GEORGIA STEM SCHOLAR AWARDS beginning October 1, 2019.



Mr. and Mrs. Jim Sheahan, Ms. Denise Quarles (Siemens), and GYSTC Executive Director Ms. Betsy Green



Mr. Ed Spencer, Ms. Jennifer Spencer and STEM Scholar Awardee Mrs. Stephanie Spencer.



Immediate Past Chair Ms. Tanya Blalock, STEM Scholar Awardee Ms. Corey Orr, and Georgia's School Superintendent Richard Woods.



Kennesaw State University Computer Science Student introduces dancing robot.



**Ms. Chandra  
Hammond Brandel**  
Gwinnett County Schools  
Coleman Middle  
School



**Mr. Josh  
Bearden**  
Polk County Schools  
Northside Elementary



**Ms. Ann  
Catherine Cox**  
Carrollton City Schools  
Carrollton  
Elementary  
School



**Ms. Donna Fouts**  
Thomaston-Upson  
Count Schools  
Upson-Lee  
Elementary



**Ms. Lawana  
Gurley**  
Polk County Schools  
Northside Elementary



**Mr. Matthew  
Nauman**  
Douglas County Schools  
Bill Arp Elementary



**Ms. Kimberly  
Hutcheson**  
Cobb County Schools  
Baker Elementary



**Ms. Christine  
Hiers**  
Brooks County Schools  
Brooks County  
Middle School



**Ms. Tori Jones**  
Lumpkin County  
Schools  
Lumpkin County  
Middle School



**Ms. Stacie  
Pottenger**  
Savannah-Chatham  
County Schools  
East Broad Street  
K-8



**Ms. Corey Orr**  
Whitfield County  
Schools  
Eastbrook Middle  
School



**Ms. Brittany  
Nichols**  
Baldwin County Schools  
Lakeview Primary  
School

## GEORGIA STEM SCHOLAR AWARD RECIPIENTS



Spring, 2019 was a season of robust competition as one group of Georgia elementary educators enjoyed peer acknowledgement for overall excellence in teaching, while a second group vied for grants to launch or expand ambitious science programs in the classroom. In the first category, grants of \$500 were awarded to 23 GYSTC K-8 teachers at the annual STEM SCHOLARS AWARDS ceremony held in March at a gala event marking GYSTC's 30th anniversary. These awards are given each year to reward overall excellence by individual teachers who hail from GYSTC regional centers throughout Georgia.

***The 2019 STEM SCHOLARS are***

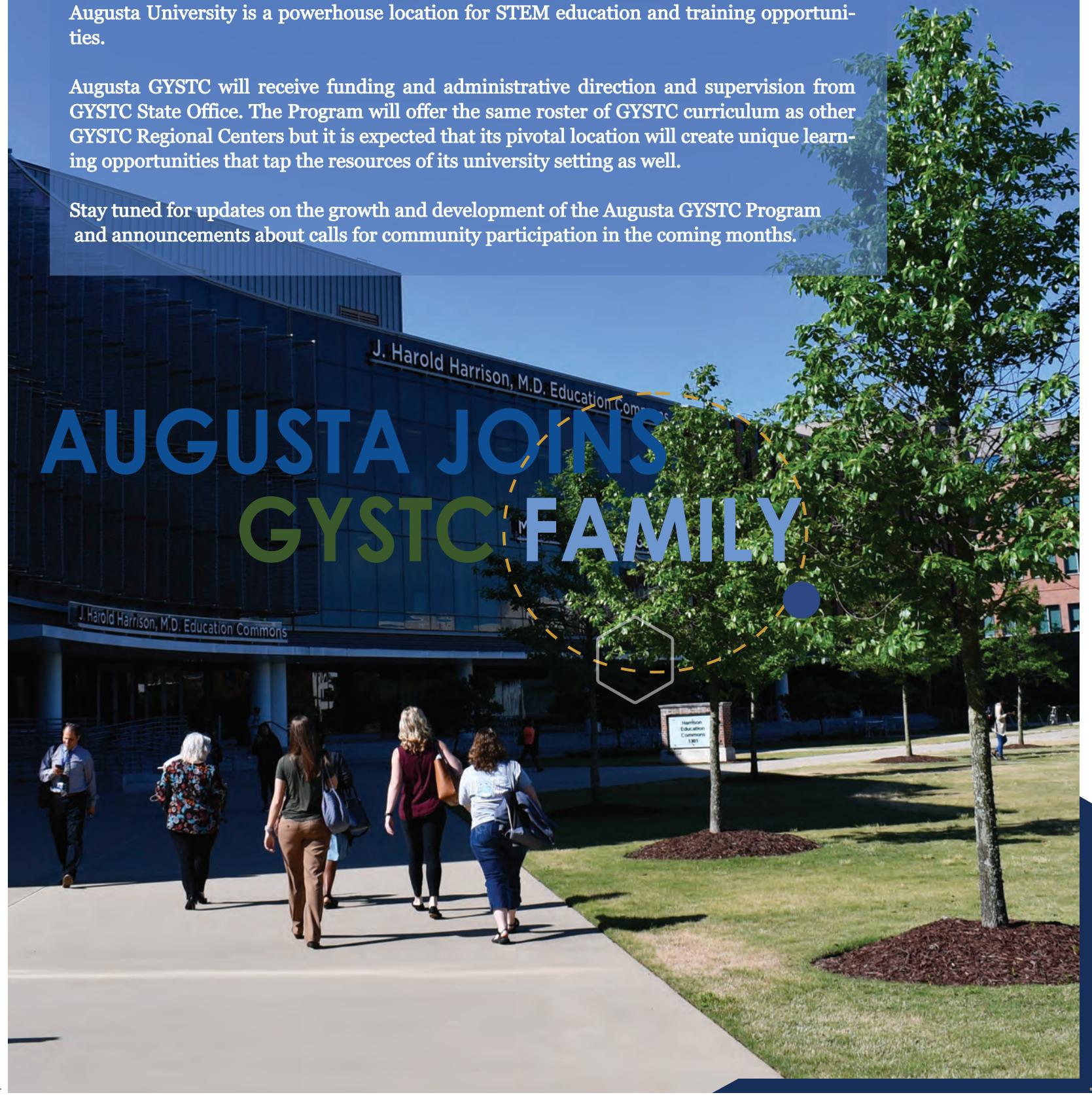


Augusta, GA and neighboring communities are now included as the tenth service area under the GYSTC umbrella. The new Augusta GYSTC Program is housed at Augusta University, formed when Augusta State College merged with the Medical College of Georgia to create a state-of-the-art public research university and medical center that is part of the University System of Georgia.

GYSTC program participants – students and teachers alike – are well advantaged to be housed in a facility that boasts nearly inexhaustible resources to study STEM. From the Georgia Cancer Center to the Area Health Education Centers Program, among much more, Augusta University is a powerhouse location for STEM education and training opportunities.

Augusta GYSTC will receive funding and administrative direction and supervision from GYSTC State Office. The Program will offer the same roster of GYSTC curriculum as other GYSTC Regional Centers but it is expected that its pivotal location will create unique learning opportunities that tap the resources of its university setting as well.

Stay tuned for updates on the growth and development of the Augusta GYSTC Program and announcements about calls for community participation in the coming months.



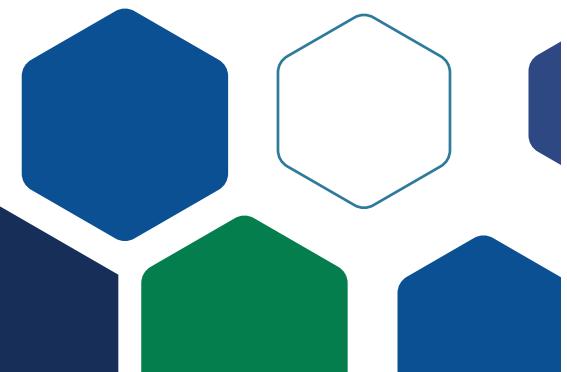
# 2018-2019

## STEM Teacher Academy Summary

This year's STEM Teacher Academy focused on using engineering to help children with limb reduction defects. The Academy began, August 2018, at Lockheed Martin Aeronautics Company Marietta, where teachers learned how the company is using engineering to help design and construct aircraft for our military. Teachers engaged in tours of the facility, participated in hands-on activities, and experienced Lockheed's new Hercules Full Mission Simulator.

The next three STEM Teacher Academy sessions focused on using the Engineering Design Process to design and build prosthetic hands in individual grade-level cohorts. In an effort to strengthen their science content knowledge, teachers learned about the various types of upper limb reductions and selected a type to design their prosthetic. To strengthen math content knowledge, teachers completed scaling exercises to help choose the best design based on the type of defect. Teachers then created computer aided designs of their prosthetic hands in the Open Source TinkerCad Software and 3-D printed and assembled their components. Finally, each grade-level cohort worked together to assemble and test their prosthetic hands. Throughout this process, teachers learned various strategies on how to create a STEM culture within their schools. In addition, we shared various practical STEM technologies with the teachers that could be used in their classrooms.

Overall, this year's cohort of teachers learned how to join altruism, using standards-based activities, with their instruction. They engaged in hands-on work at every session, which they can replicate and share at their schools across the state of Georgia. The recognition ceremony was held at the Georgia Cancer Center at Augusta University and provided a noteworthy conclusion to our overall theme, "Cracking Codes to Engineering Solutions". Most importantly this opportunity allowed our teachers to explore engineering and technology in STEM related careers.



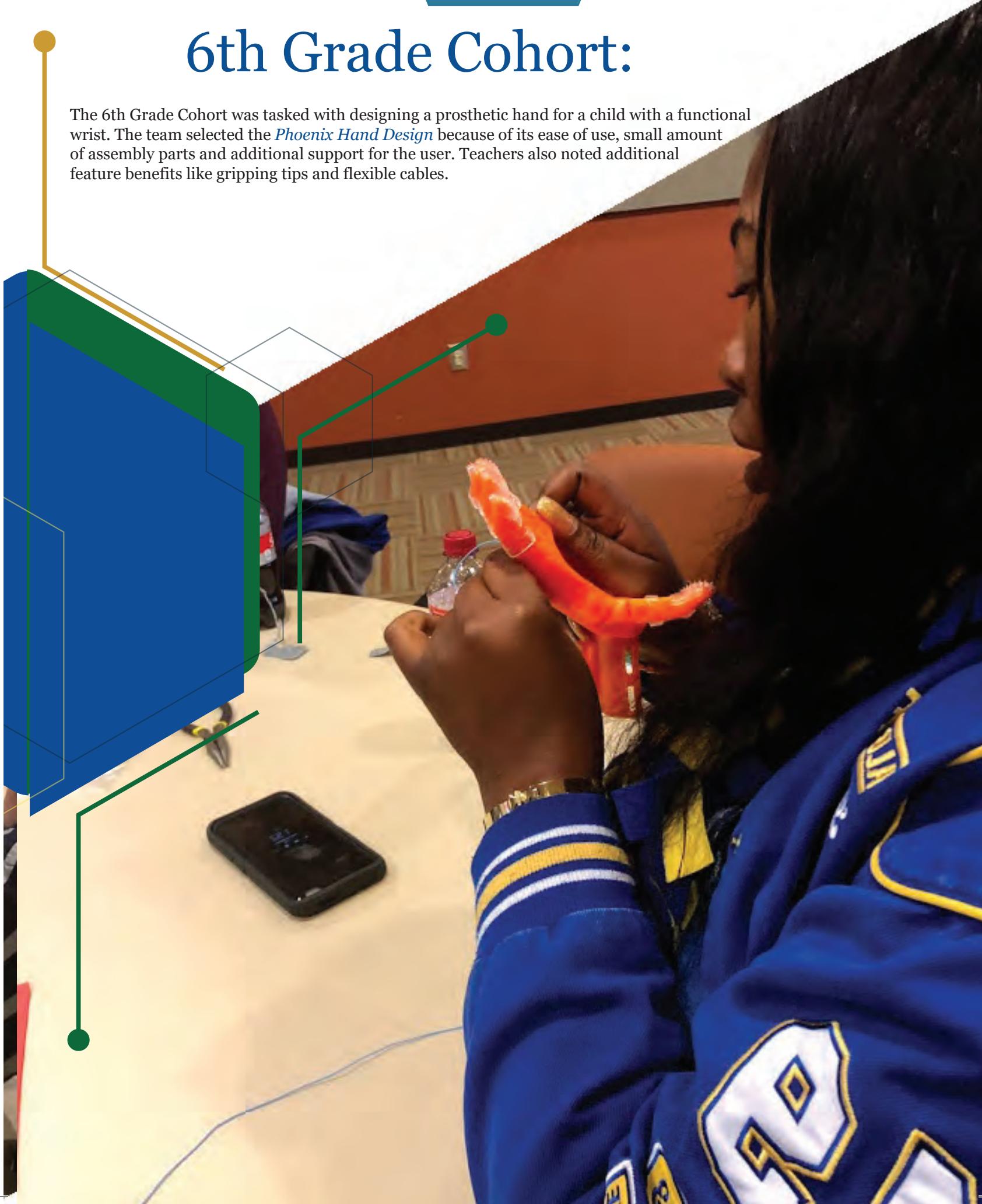
The 5th Grade Cohort was tasked with designing a prosthetic hand for a child with a functional wrist. The team wanted a design that would allow for optimal movement of fingers for grasping so they selected the *Raptor Reloaded Hand Design*. The team felt it would be easier to print and assemble this compact design.

## 5th Grade Cohort



# 6th Grade Cohort:

The 6th Grade Cohort was tasked with designing a prosthetic hand for a child with a functional wrist. The team selected the *Phoenix Hand Design* because of its ease of use, small amount of assembly parts and additional support for the user. Teachers also noted additional feature benefits like gripping tips and flexible cables.



7th

## Grade Cohort

The 7th Grade Cohort

was inspired by one of their own team member's carpal tunnel syndrome and designed a brace to reduce discomfort and restrictions associated with the condition. Teachers were pleased with their design and noted the importance of using the engineering design process to aid in refining the design.



8th

# Grade Cohort



The 8th Grade Cohort was our largest group. In order to offer a worthwhile design experience, the group was split in two teams.

Team 1 selected the Phoenix Hand Design because of reasons similar to the 6th Grade Cohort.

Team 2 selected the Talon Hand Design because of its durable and comfortable low-profile universal-fit bracer.

The team felt that it would be optimally comfortable for the user.



# INNOVATION

In June, teams from seven GYSTC regions were also awarded grants to implement or continue diverse STEM projects that aim to solve real world problems and raise visibility for solution-based outcomes that will improve quality of life in each competing region. INNOVATIVE PROJECT GRANTS were awarded to the teams for diverse and exciting projects including “Riveting Robotics & Computer Coding” / Chattahoochee-Flint GYSTC; “Soaring to New Heights: Drone Operations & Safety” / Etowah GYSTC; “Let’s BEE an Advocate to Help Pollinators” / Magnolia Midlands GYSTC; “From Maker Space to Outer Space” / Oconee River GYSTC; “Water Conservation, Honey Bees & Agricultural Sustainability” / Southwest GYSTC; “The STEM Behind Hollywood” / GYSTC State Office, “Solarize the Classroom” / West GYSTC.

## ***Riveting Robotics and Computer Coding for Striving Successful Students Chattahoochee-Flint GYSTC***

According to the Bureau of Labor Statistics, U.S. Department of Labor, in the state of Georgia there are more than 20,000 jobs in STEM/Robotics and coding career fields that remain unfilled because of a deficit of employees with the needed skill sets to perform those jobs. However, according to the United States Census Bureau, the Chattahoochee-Flint GYSTC serves 14 counties with poverty rates that exceed the national average by 6-29%. It is the belief of Chattahoochee-Flint GYSTC that if students are introduced to those skill sets at an earlier age, passion will grow of those career fields and students will be more likely to pursue those careers in post secondary institutions.

Chattahoochee-Flint GYSTC is striving to offer students in our 14 county region those educational opportunities to become more involved and have a better understanding of STEM, robotics, and coding. By offering STEM Saturdays, Robotics and Coding STEM Nights, In Class Field Trips including various robotics and coding, professional learning, and regional wide events, students will become more aware of the career fields that will better not only their own futures, but the future economic growth of our region.

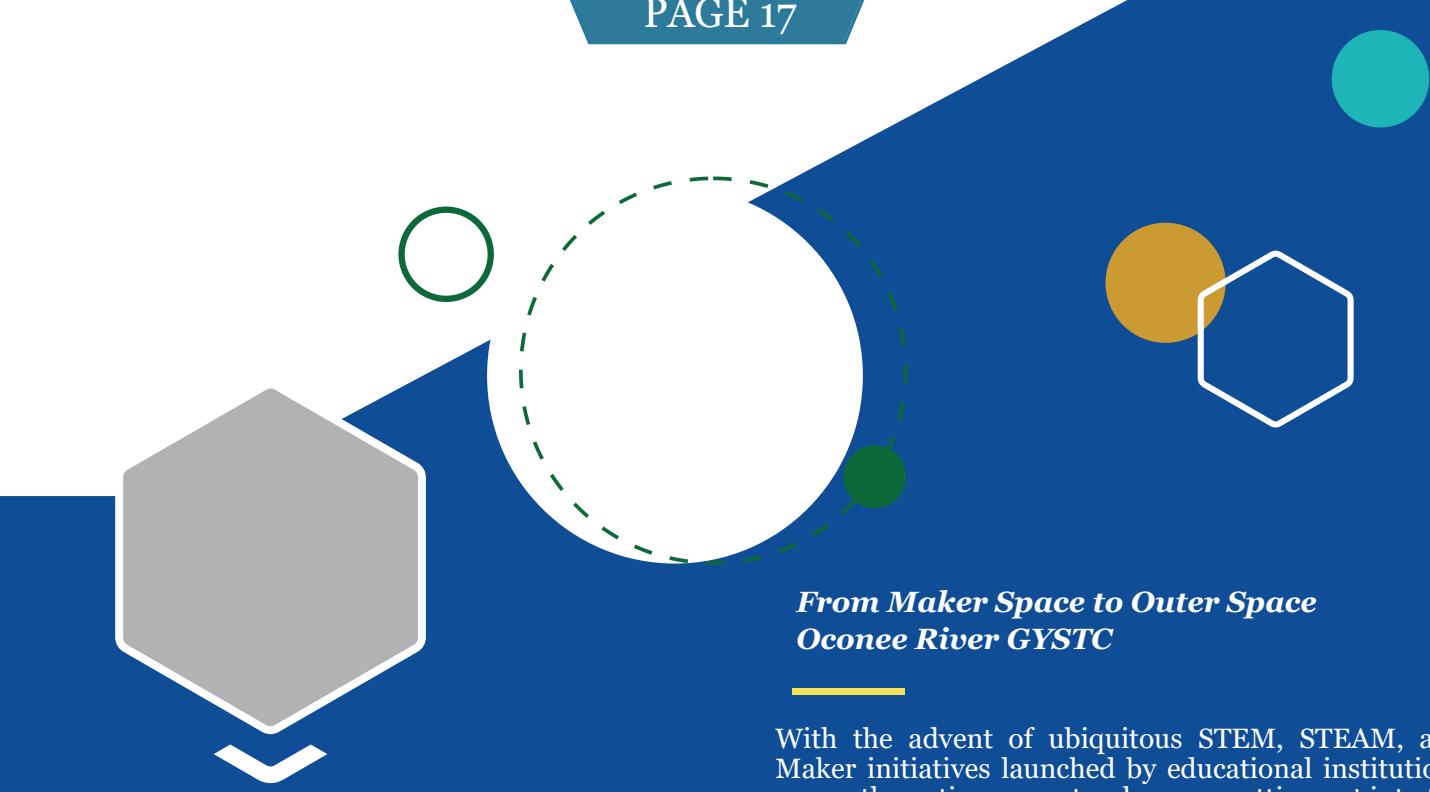
It is our mission at Chattahoochee-Flint GYSTC to educate our students, families, teachers, and communities through these engaging learning experiences with enhanced teaching methods and a better understanding of content knowledge. Chattahoochee-Flint GYSTC will promote interest and enthusiasm for various STEM subject areas and will encourage students to enter those career fields. This in turn will provide better-qualified employees for our states industries in the future.

## ***Soaring to New Heights Etowah GYSTC***

Today, it is commonly accepted that Engineering, one of the elements of Science, Technology, Engineering, and Math (STEM), has taken an ever-expanding level of importance. One dimension that has evolved out of engineering is the drone program. Drones impact our daily lives in the way we see real-time events. The evidence of the use of drones is all around us. The “Nightly News”, military application, search and recovery efforts with first responders, and agriculture studies, just to name a few.

This program, “Soaring to New Heights”, will take engineering from the classroom into the sky. Lesson plans have been developed for the students to master as part of the evaluation of the program. Our students will be tested on the rules and regulations associated with safe drone flight, the mechanics of how drones fly, how to manipulate and fly them in a safe and responsible manner. This program will train the drone pilots of the future. Students will become marketable in the drone industry.





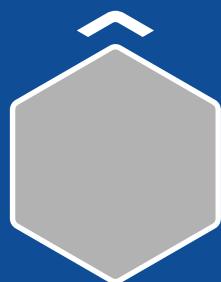
### ***Let's "Bee" an Advocate: Help Pollinators! Magnolia Midlands GYSTC***

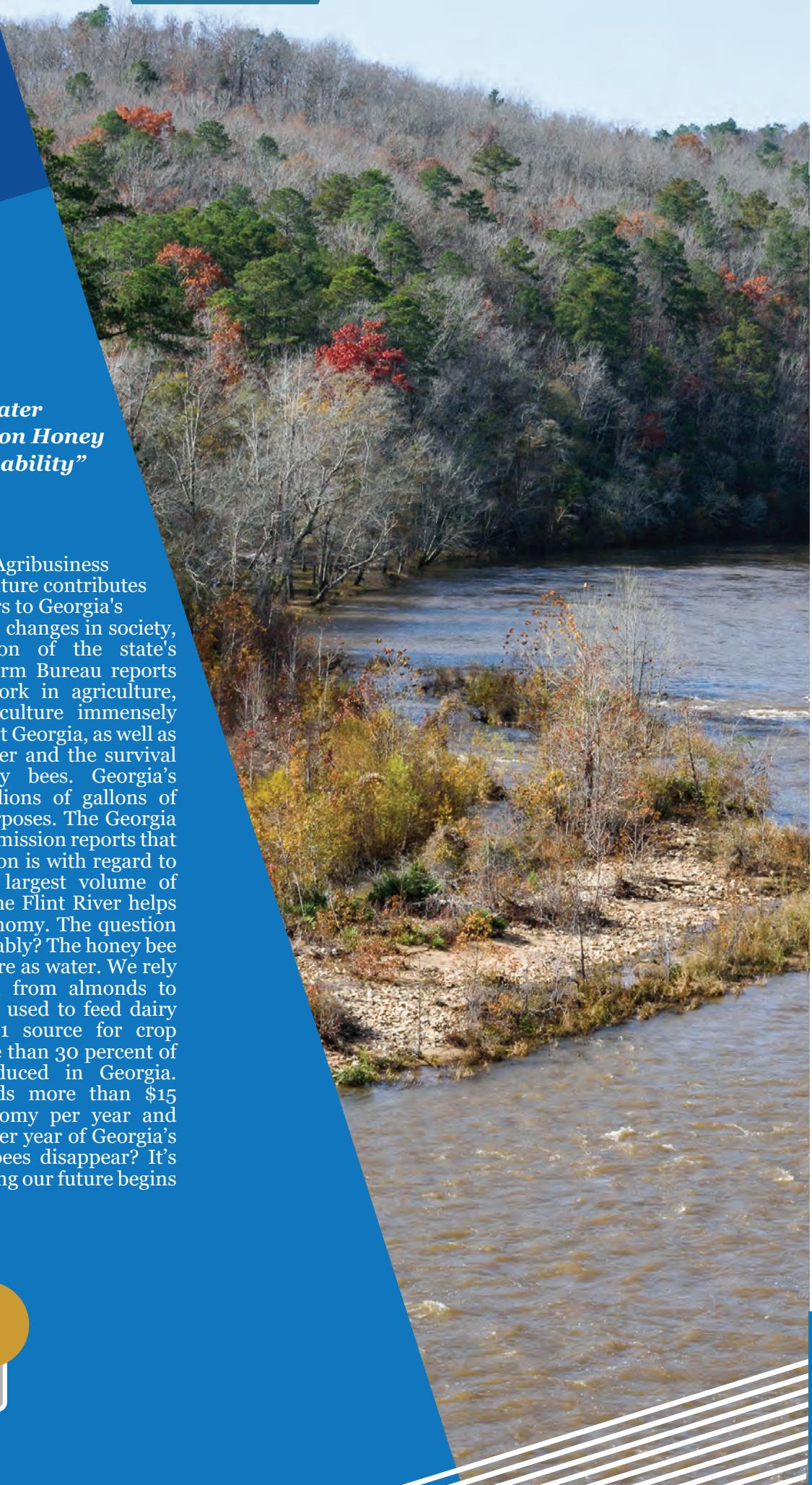
The honey bee project that I have worked on over the past several years has been successful. Students in my region have been exposed to numerous activities and events that have taught them the importance of honey bees and the challenges they face. This year's project is an expansion project to include pollinator gardens and various other pollinators. Over the years, I have encouraged students to plant pollinator gardens as a way to help the honey bees. Now, I feel that it is time to step back and provide the students with real experiences designing and planting pollinator gardens on their school campus. The objective of this project is to not only help students see the real impact of a pollinator garden but will also provide needed nutrition throughout the region for pollinators. Project plans include in-class visits outlining and explaining the pollinator garden challenge. Students will participate in soil sampling, researching pollinator plants, creating budgets, drawing to scale, and design layouts. By participating, students will learn more about pollinators, sustainability, and innovative ideas through the engineering design process. As a result of this project, each member county/school (7) can apply for \$100 towards their own pollinator garden plus it will be open to two current non-members as well. As a way to showcase our program, one community garden will also be planted in downtown Swainsboro. The impact of this project will potentially be ten well designed pollinator gardens in my region, an increased awareness of pollinators and sustainability, and publicity and recognition for Magnolia Midlands GYSTC.

### ***From Maker Space to Outer Space Oconee River GYSTC***

With the advent of ubiquitous STEM, STEAM, and Maker initiatives launched by educational institutions across the nation many teachers are setting out into the unknown to create these programs at their own schools. Often schools express a need for support in starting or bolstering STEM initiatives with effective use of technology. To achieve this teachers require a basic knowledge of computer science and engineering skills, but have received no training in these areas. Oconee River GYSTC's Innovative Grant project aims to create in class field trips, STEM Night Kits, and Professional Learning Sessions that will be used for both teacher and student programming, and will support teachers in setting up a culture to support STEM education in their own schools while allowing them to develop computer science and engineering skills.

Through a partnership with our 12 member school systems Oconee River GYSTC will pilot in class field trip STEM lessons involving technologies purchased through the Innovative Grant, as well as create and host the first Northeast Georgia Regional RoboRumble robotics competition, open to all 12 GYSTC member school systems. For teachers, embedded professional learning sessions will be provided through the S(TEAM) Van in class field trips to expose them to materials available for use through the lending library, as well as "on the job" training in using the digital StarLab to illustrate GSE Earth Science / Astronomy standards. Finally, Oconee River GYSTC will provide Professional Learning Sessions in which teachers will develop skills in coding, robotics, and 3D printing in order to reserve and use equipment available through our lending library.

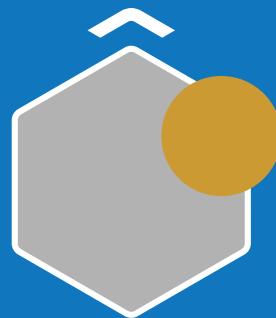




***Preserving Our Future: “Water Conservation with a Focus on Honey Bees in Agriculture Sustainability”***

***Southwest GYSTC***

According to the UGA Center for Agribusiness & Economic Development, agriculture contributes approximately \$74.9 billion dollars to Georgia's economy annually. Despite all the changes in society, farming remains the foundation of the state's economic well-being. Georgia Farm Bureau reports that one in seven Georgians work in agriculture, forestry, or related fields. Agriculture immensely affects the population of Southwest Georgia, as well as the conservation of the Flint River and the survival and significance of our honey bees. Georgia's agriculture industry utilizes millions of gallons of water each year for irrigation purposes. The Georgia Soil and Water Conservation Commission reports that much of the concern with irrigation is with regard to efficiency. Agriculture uses the largest volume of water in the Flint River Basin. The Flint River helps feed the world, and the local economy. The question is, how can we use it more sustainably? The honey bee plays as vital of a role in agriculture as water. We rely on bees to pollinate everything, from almonds to strawberries to the alfalfa that is used to feed dairy cows. Honeybees are the No. 1 source for crop pollination and accounts for more than 30 percent of the fruits and vegetables produced in Georgia. Pollination from honeybees adds more than \$15 billion dollars to the U.S. economy per year and accounts for some \$336 million per year of Georgia's economy. What happens if the bees disappear? It's simple: No bees, no food. Preserving our future begins with educating our students now!



## **The STEM Behind Hollywood**

### **State GYSTC**

Currently, there is a need for well-developed talent in front of and behind the camera along with ways to keep all aspects of TV & Film projects in Georgia that also utilize Georgia's workforce. The State of Georgia offers tax incentives to attract film producers to create movies in the state. However, there is a shortage of skilled workers who can meet this growing need. The STEM Behind Hollywood Project allows students the opportunity to explore STEM careers and media arts through applied technology and project-based learning. STEM skills in this industry include jobs such as audio engineering, commercial and film music composition, computer-generated special effects, 3D printing renderings, and the usage of CAD technologies. Entertainment careers in STEM such as sound and set designers, animators, gaffers, and computer-generated effects supervisors are all vital roles for establishing a workforce for meeting Georgia's growing need.

To meet the changing need for STEM careers in Georgia, we must introduce students to coding and computational thinking at a young age. According to Bers (2017), coding is a playground that offers kids opportunities for exploration, creativity, mastery of new skills, and ways of thinking. Bers asserts that coding is a form of literacy that, like writing, provides a medium for human expression. While coding, students can create projects to communicate ideas and creatively express who they are. Along the way, they also engage in problem-solving, sequencing, storytelling, and computational thinking. Developing this kind of digital literacy will allow our students to move from passive consumers to thoughtful producers of these emerging technologies.

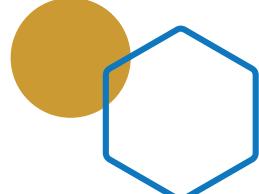
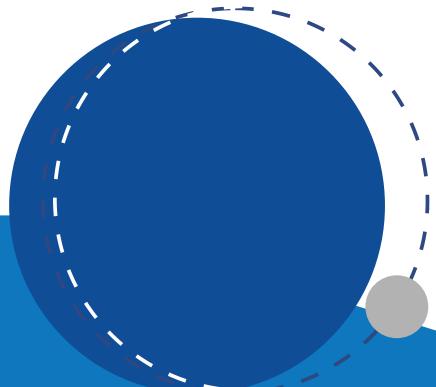


## **Solarize the Classroom**

### **West GYSTC**

America's schools spend more than \$7.5 billion annually on energy: more than they spend on textbooks and computers combined. (Source=State of Our Schools 2016) The cost of cooling school buildings, lighting the interior and exterior areas of the schools and all of the plug loads (computers, copiers, and printers) can easily be reduced if students became knowledgeable of ways to use alternative energy in their lives.

In continuation of previous year's innovative grant projects, West GYSTC and community partners, Southwire, Roopville Elementary School in Carroll County, University of West Georgia Fusion Center and a volunteer panel installers would like to develop a package for solarizing a single classroom to include: 1) providing equipment to solarize one classroom temporarily as an overlay of the current classroom: Solar panels, inverter, batteries, and outlets, 2) providing installation and set up, 3) developing a curriculum to use with the solar classroom, 4) providing professional learning on use of solar classroom and curriculum, 5) provide guidance for future schools to find grant funding for their solarized classroom.

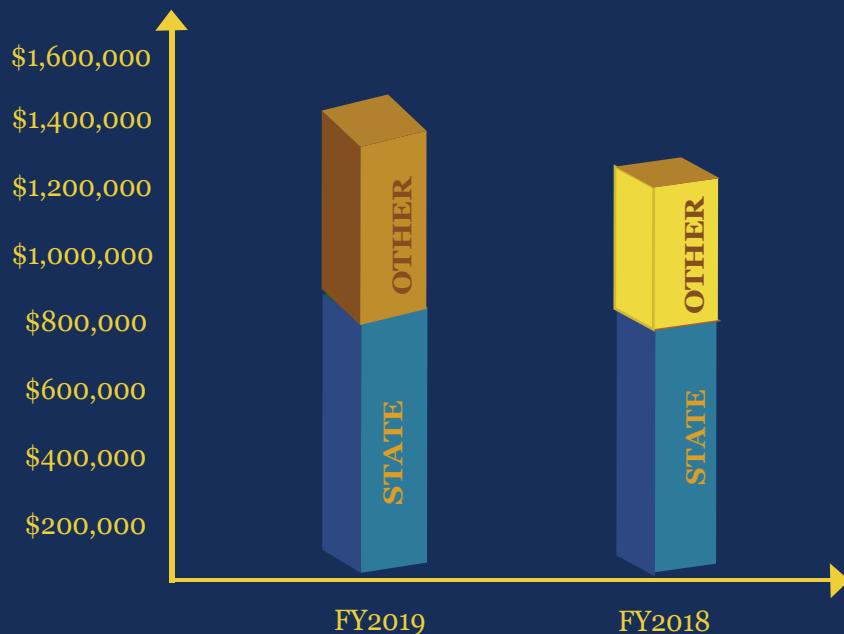


## GYSTC Teacher and Students Served FY 2019

Consistently, GYSTC strategies have been to implement its mission through Professional Learning Workshops, STEM Teacher Academies, STEM Discovery Camps, Saturday Sciences, In-Class Field Trips, Family STEM Events, and Afterschool Activities.



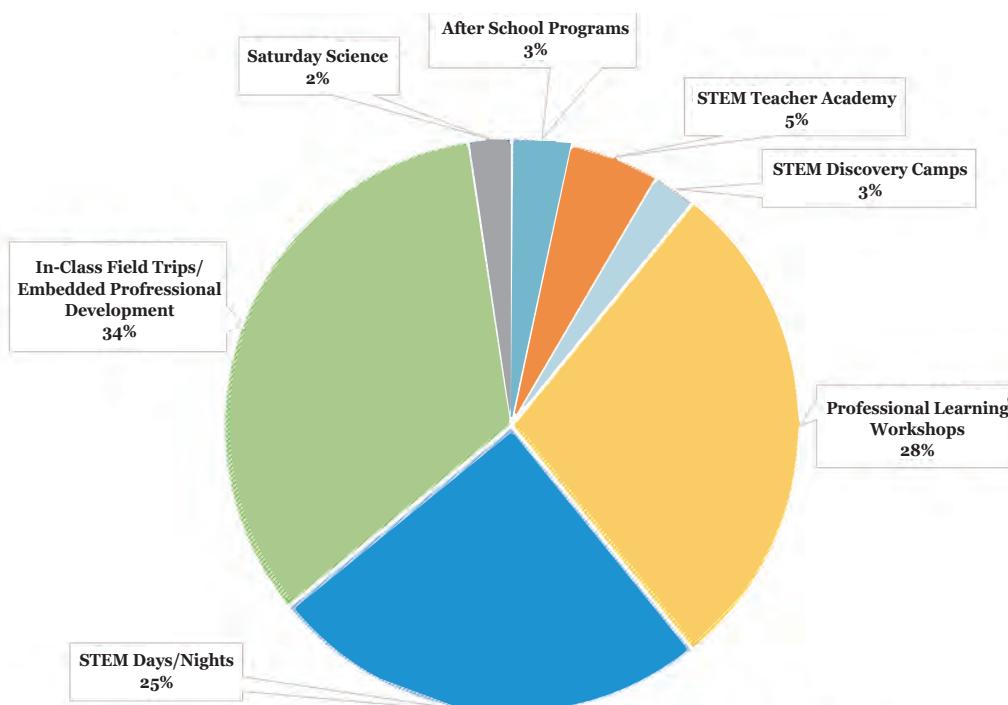
## GYSTC Funding Source FY 2019



GYSTC operates efficiently. More than 80% of its functional budget is used for programs and instructional support. GYSTC operating funds come from state and other funds such as private and program income.

## FY 2019 GYSTC Program Distribution

GYSTC distribution percentage for teacher programs is nearly 70% for FY 2019. GYSTC has a greater focus on programs for teachers because the greater number of teachers we engage will result in impacting a larger number of students.



# SIEMENS Foundation

## ON THE HORIZON

### Siemens Foundation Grant Supports STEM DAY

Siemens Foundation has awarded a \$15,000 grant to GYSTC to launch Siemens signature STEM DAY in 25 rural Georgia school districts served by GYSTC. Both Siemens and GYSTC are dedicated to workforce development in science, technology, engineering and math and regard early exposure to STEM careers as critical for elementary students who are the STEM workers of the future.

The Siemens STEM DAY aligns well with various STEM DAY activities already offered from time to time in GYSTC's nine regional centers, but the Siemens program focuses solely on STEM career exposure and development. Siemens STEM DAY features a comprehensive, multi-faceted curriculum to engage students in imaginative thinking about targeted course work and areas of study that will prepare them for careers in math, engineering, science and related fields.

Since it is projected that the majority of future STEM jobs will exist at the middle skill level – that is, jobs that may require special training, but not necessarily a college degree – the presentations during STEM DAY emphasize that STEM careers are within reach for every student.

Siemens Corporation has provided ongoing financial and leadership support to GYSTC since its founding in 1989. The Siemens Foundation ignites and sustains today's STEM workforce and tomorrow's scientists and engineers with an increasing focus on workforce development in the United States.

GYSTC provides quality programs for kindergarten through 8th grade students and their teachers that improve both the learning and teaching process. We present programs that change students' perceptions and inspire an appreciation for STEM. Siemens STEM Days at GYSTC will begin in September 2019.

# Farewell

MS. TANYA  
BLAYLOCK

## BIDS FAREWELL AS GYSTC BOARD CHAIR

"Privileged to serve" is how Tanya Blalock described her tenure as GYSTC board chair for the past six years. As a retired official in environmental affairs with Georgia Power, Ms. Blalock always enjoyed STEM, so guiding the direction of GYSTC was a natural complement to her professional life. Her Georgia Power career also made her acutely aware of the continuous need for well-prepared workers with aptitudes in Science, technology, engineering and math – the kind of education GYSTC has embraced as its mission for 30 years.

"It's been rewarding, exciting and sometimes nerve-wracking helping GYSTC remain viable through times of struggle and times of growth," she says. "But working with dedicated staff, my fellow board members, our corps of wonderful teachers and eager students has been so rewarding." Among the things she will miss most is the collegial work relationship with other board members, some of whom have been with GYSTC since the nonprofit's founding in 1989.

"I'm amazed that the foresight we had 30 years ago to embark on a journey to introduce Georgia's children to STEM has now blossomed into a critical need for a competent workforce that will propel our industries well into the future. We were way ahead of our time," she said.

Ms. Blalock will continue to serve on the GYSTC board as past president, supporting the efforts of new board chair, Don Barbour. Together, they will work with other board members and staff to develop new resources to help GYSTC's ongoing mission. "I'm stepping down but not out," Ms. Blalock says, "I plan to be around to see our cycle of excellence continue for years to come!"

The GYSTC Family thanks you, Tanya Blalock, for your years of inspired leadership, dedication and optimism. It's been "a privilege to serve" with you!





## AT&T EXECUTIVE MR. DON BARBOUR

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### ELECTED 2020 GYSTC STATE BOARD CHAIR

Mr. Don Barbour was elected to chair the board of the Georgia Youth Science & Technology Centers, Inc. (GYSTC) at the board's June meeting. Mr. Barbour, who served as Vice-Chair of the board under the 8-year tenure of outgoing Chairperson Ms. Tanya Blalock, will serve as the new board chair to oversee the 17-member governing body.

Mr. Barbour has had a long and distinguished career as Regional Director of External Affairs for AT&T Georgia and government affairs responsibility on behalf of AT&T for all of Northwest Georgia and North Fulton, a 24 county region. In this role, Mr. Barbour serves as the company representative for all business, civic, community, cultural, education, economic development and governmental activities within this region.

An active community leader, in addition to the GYSTC board, Mr. Barbour also serves on the Berry College Board of Advisors; Past Chairman of the Board of Trustees of the Chattahoochee Tech Foundation; Friends of the Strand, Inc. Advisory Board; Cobb Chamber of Commerce Board of Directors; Douglas County Chamber of Commerce Board of Directors and Governmental Affairs Committee Chairman; Regional Business Coalition of Metro Atlanta Board of Directors and 2016 Board Chairman; Rotary Club of Marietta and Literacy Committee Chairman.

Mr. Barbour looks forward to broadening participation, volunteerism and donor support for GYSTC which marked its 30th Anniversary in March, 2019. The GYSTC mission is to provide quality programs for teachers of STEM subjects that improve the teaching and learning process at K-8 levels. We present programs that change students' perceptions and inspire an appreciation for science, technology, engineering and mathematics. Community engagement in the many GYSTC programs offered to students, their teachers, parents and the larger community statewide, is encouraged.

Welcome Aboard

# GYSTC | OUTLOOK

# 2020

Take a look on the horizon at the exciting professional learning opportunities coming up for Georgia teachers next year. Also, on tap is continuation of GYSTC signature programs like Discovery Summer Camps and special STEM Days & Nights offered throughout the year with a new spin to keep students and their parents engaged and eager to learn. Stay informed about these and other upcoming GYSTC programs by visiting our website at [www.gystc.org](http://www.gystc.org).

## GYSTC PARTNERS WITH GEORGIA BIOED INITIATIVE IN LIFE SCIENCE TEACHER TRAINING

A new partnership between GYSTC and the BioEd Life Science Initiative will provide Georgia middle and high school teachers a life science training opportunity January 13 – 14, 2020. The specialized training will specifically target teachers working in the largely rural counties.

Teachers committed to preparing students for careers in the bio-manufacturing of pharmaceuticals, agri-science, food processing and industrial products will take advantage of this invaluable opportunity.



## DISCOVERY CAMPS AGAIN

It's never too early to plan ahead – especially when there are opportunities to relieve boredom and educate kids simultaneously. GYSTC's Summer Discovery Camps will be open for enrollment in communities throughout Georgia starting in late spring, 2020. Parents and teachers of elementary and middle school-age children are encouraged to sign up children in their care. Discovery Camps offer exciting exposure to science activities that are educational and fun. The four-day sessions emphasize observation and experimentation in natural sciences that provoke young imaginations to explore new frontiers in their own environments. Some Discovery Camps include field trips, guest lecturers and accessible outdoor activities appropriate for the targeted age groups. Discovery Camps curriculum and training is open and available, free of charge, to all Georgia teachers and no previous relationship with GYSTC centers are required to attend.

## STEM ESSENTIALS K-8 TEACHER TRAINING

GYSTC professional learning workshops will help change your STEM culture while staying in your district. GYSTC travels to you to make workshops convenient and close to home to accommodate the schedules of busy teachers who wish to enhance their professional learning while maintaining other commitments.

GYSTC will provide the STEM Essentials workshop that models a practical and hands-on approach to STEM instruction. Each exploration emphasizes the Georgia Standards of Excellence while also showing how to incorporate both engineering practices and crosscutting concepts into instruction utilizing the 3-D approach. The STEM workshop will include a focus on utilizing the 5E approach and making 3-D connections in ways that promote student passion for and understanding of STEM endeavors. Like students, teachers will create, design, collaborate and solve as you engage in relevant, hands-on explorations.

## GYSTC Partners

GYSTC, Inc. Board of Directors would like to thank the GYSTC donors, regional board members, pals, partners, sponsors and employees for their continued support and commitment to empower Georgia's students for STEM careers.

### **Founders Club (\$10,000 – above)**

- Siemens Foundation
- Kirbo Foundation

### **STEM Teacher Club (\$5,000 - \$9,999)**

- IBM
- Georgia Power
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- Dalton State College
- East Georgia State College
- Flint RiverQuarium
- Georgia Cancer Center at Augusta University
- Georgia Highlands College
- Gordon State College
- Kennesaw State University
- Middle Georgia State University
- Northeast Georgia RESA
- South Georgia State College
- South Georgia Technical College
- Southern Regional Technical College
- University of West Georgia

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- Clarke County Schools
- Clay County Schools
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- Jackson County Schools
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- Jefferson City Schools
- Lamar County Schools
- Macon County Schools
- Madison County Schools
- Marion County Schools
- McIntosh County Schools
- Mitchell County Schools
- Morgan County Schools
- Oak Mountain Academy
- Oconee County Schools
- Oglethorpe County Schools
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- Social Circle City
- Stewart County Schools
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- Talbot County Schools
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- Taylor County Schools
- Thomas County Schools
- Thomaston – Upson County Schools
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- Vidalia City Schools
- Ware County Schools
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- Ms. Martin Smith, Carroll Electric Membership Cooperative
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- Ms. Delisa Gledhill, Oak Mountain Academy
- Ms. Sarah Graham, Paulding County School District



### GYSTC Pals

- Dr. Roneisha Worthy, Kennesaw State University

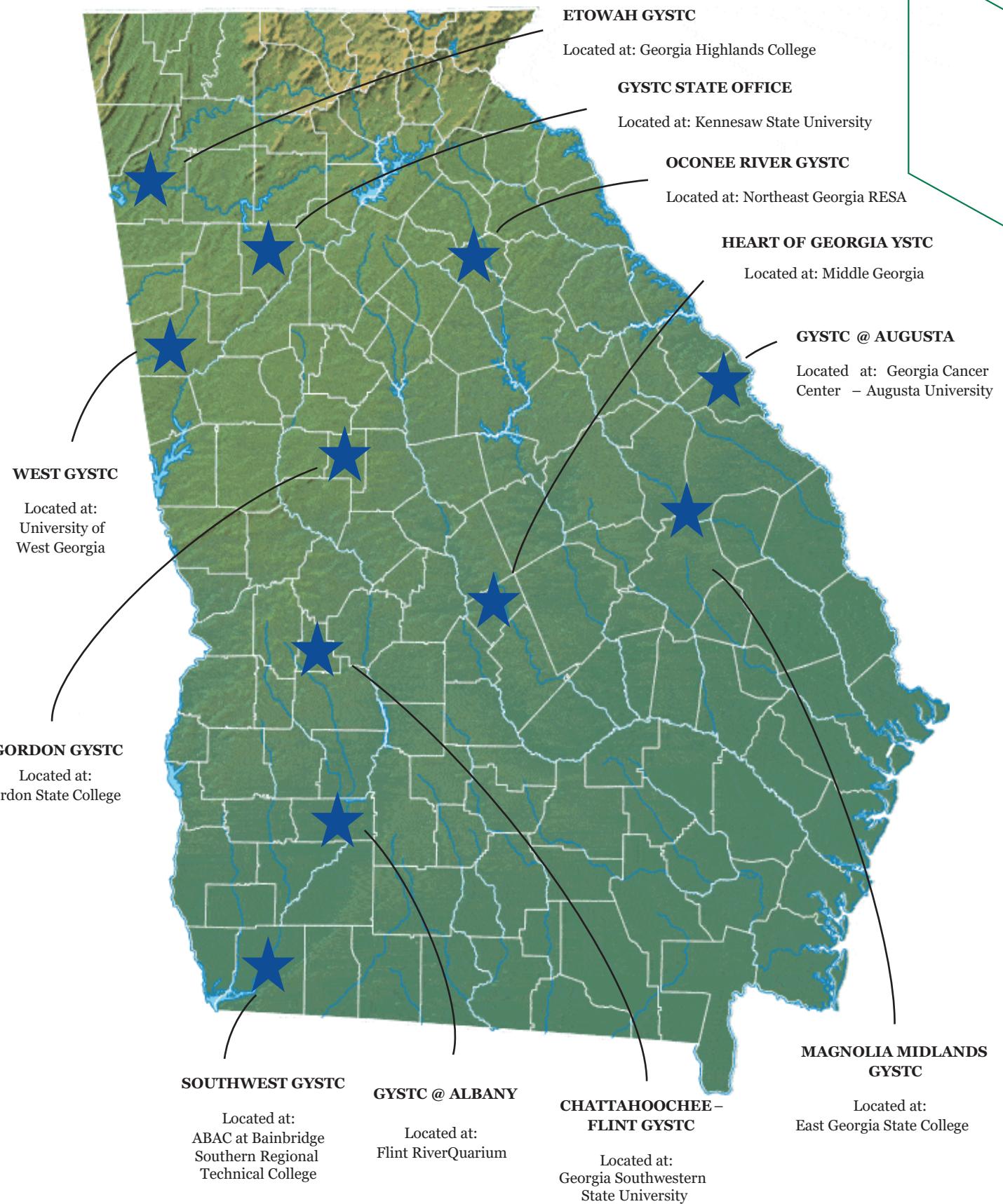
### GYSTC Employees

- Dr. Tom Brown, Director of Statewide Initiatives
- Ms. Cheryl Cooley, Center Support Specialist
- Mr. Aubrey Crook, Director of STEM Programs
- Ms. Argenail Darrington, Program Coordinator
- Mr. Will Dodd, Regional Coordinator
- Ms. Cathy Fontenot, Regional Coordinator
- Ms. Betsy Green, Executive Director
- Ms. Rhonda Harris, Financial Services
- Ms. Darlene Jordan, STEM Teacher
- Ms. Lynn Larsen, Director of Strategic Initiatives
- Ms. Tammy Nowell, Regional Coordinator
- Ms. Pam Parks, STEM Teacher
- Mr. Cody Richards, Marketing and Communications Specialist
- Ms. Trina Williams, STEM Teacher
- Ms. Erin Youmans, Regional Coordinator
- Dr. Robert Young, Regional Coordinator

# Support GYTSC!

GYSTC invites your support and involvement in our mission to provide cutting edge science education for Georgia teachers and students. Contributions to assist with our education initiatives in rural communities are welcomed! For more information on ways you can help, contact GYSTC State Office at (470) 578-7592.

# GYSTC LOCATIONS



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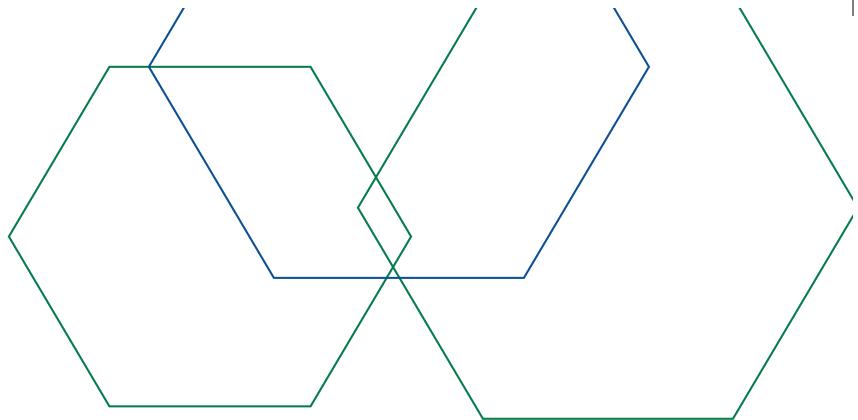
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## CONTACT

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THANK YOU!

# GYSTC Partners



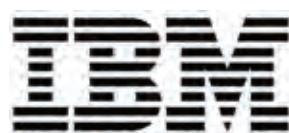
**East Georgia  
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