

Georgia Science Teachers Association



Strategic Goals 2021

***Building Georgia's Next Generation
of Science Education***

Written by the 2020-2021 GSTA Board of Directors

www.georgiascienceteacher.org

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**Georgia
Science
Teachers
Association**



GSTA FAST FACTS:

State Chapter of the National Science Teachers Association

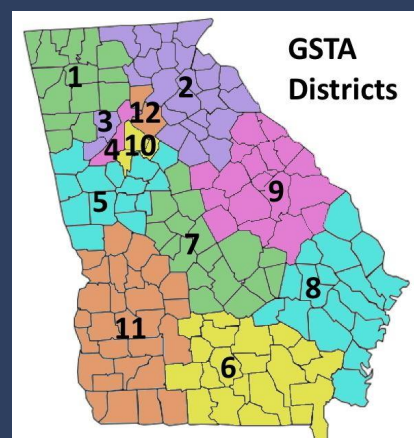
Non-profit, fully volunteer-run professional organization

Members include K-12 teachers, pre-service teachers, higher education faculty, informal educators, & education leaders

24 Volunteer Board Members

12 Districts Covering Georgia

1400+ Active Members



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Introduction

*The Georgia Science Teachers Association (GSTA) is committed to supporting excellence in science teaching for the students of Georgia. GSTA works to **CONNECT, INFORM, SUPPORT, and ADVOCATE** for science teachers in Georgia. We also seek to **PARTNER** with like-minded formal and informal science education organizations to further GSTA's mission and goals.*

GSTA's guiding documents shape the organization's work toward achieving this mission. The current strategic goals were developed by the 2020-2021 GSTA Board of Directors, based on input from the membership. These goals will frame the work of the organization over the next five years. We are pleased now to share these goals with our membership, and we invite you to continue to engage with the organization as we work to bring these goals to fruition.

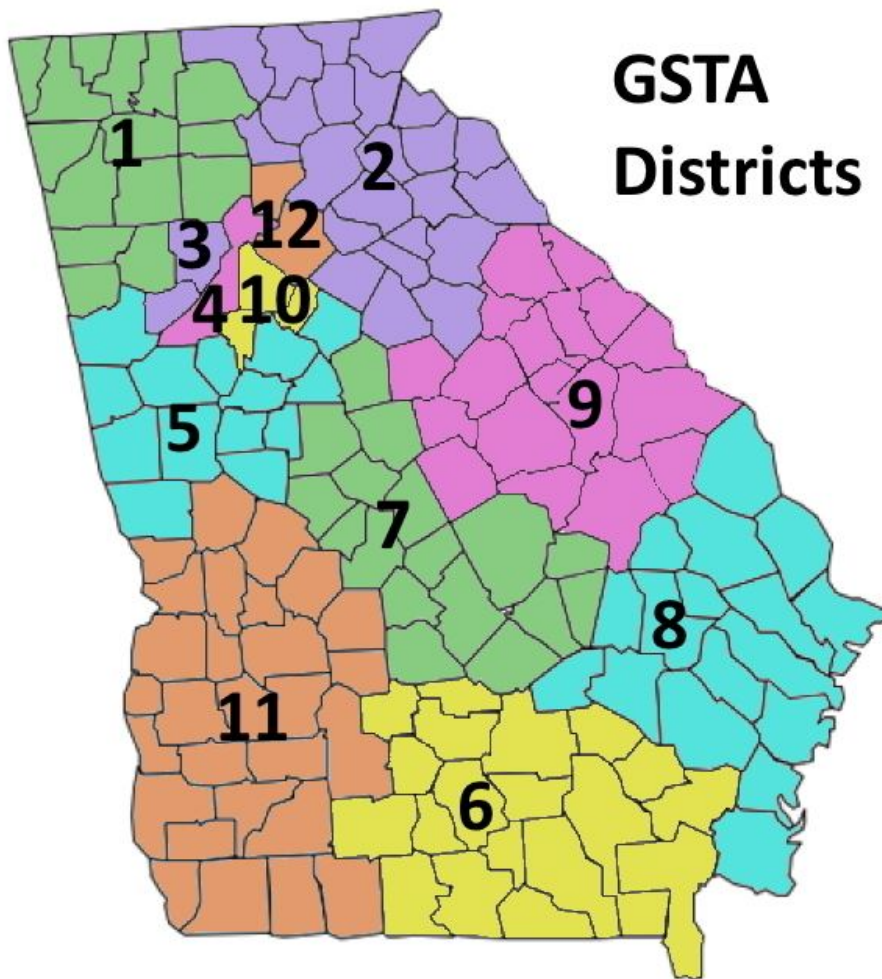
The following strategic goals are based on the GSTA board's recognition that excellent science teaching results from research-based best practices translated through the experience of expert teachers and connected to students' diverse identities and interests. The research base from which to draw those best practices for the science classroom is presented in *A Framework for K-12 Science Education* and associated research. The *Framework* sets out a vision for three-dimensional science learning in which students engage simultaneously in science and engineering practices (e.g., developing and using models) while learning and applying core ideas (i.e., content standards) and crosscutting concepts (i.e., big ideas like matter and energy) as they explain real-world phenomena and solve authentic problems. This three-dimensional approach should be reflected in all aspects of curriculum, instruction, and assessment in Georgia's science classrooms.

In order to continue to fulfill this vision for science education, Georgia's teachers need resources, support, and professional learning. GSTA will play a key role in implementing and sustaining this vision over the coming years. This vision comes along at the same time as an intense focus on STEM careers and STEM education. GSTA will lead the effort to promote a vision of STEM education that recognizes and builds upon the central role of science in STEM learning and careers.

Strategic Goal 1: Membership

CONNECT Georgia science teachers to vibrant local and statewide professional networks that enhance their classroom practice and the value of their membership.

Professional growth happens best when teachers are supported by collegial networks of like-minded professionals. GSTA will provide value to Georgia science teachers and grow the organization's membership by connecting members to active professional communities within GSTA districts and statewide that build on teachers' interests, grade-level needs, and content expertise.



GSTA membership districts, effective spring 2016

- Recognize excellence in science teaching through awards and grants.
- Develop services and resources that meet the unique needs of elementary, middle, and high school science teachers.
- Foster local professional networks through GSTA district events.
- Facilitate communication and collaboration through special-interest (grade-level, disciplinary, STEM, etc.) areas on the GSTA website and through targeted events during GSTA's annual conference.
- Leverage online social networks to enhance value to members, build awareness of the association, and foster collaboration among GSTA members and their colleagues.

Strategic Goal 2: Professional Learning

INFORM GSTA members through a variety of professional learning opportunities that enhance access to current, research-based practices for teachers at all levels, for all disciplines, and in all settings (face to face and virtual) across Georgia.

GSTA professional learning will provide members with resources and programs, both in person and through virtual programs, that actively engage all members of the GSTA community in continuous professional growth, designed to increase the success of all students in science. Through an environment of collegiality and collaboration, all GSTA members will have opportunities to increase knowledge, improve performance, and enhance professional satisfaction.



Zoo Atlanta Session During an Online GSTA Mini-Conference

- Provide the premier science professional learning experience in Georgia through the annual conference and mini-conferences throughout the year.
- Develop virtual workshops and professional development opportunities to extend the reach of the GSTA conference.
- Increase statewide access to and communication about professional learning through face-to-face district events and by increasing the number of those events that include virtual access.
- Develop GSTA branded professional learning opportunities available online to members.
- Utilize professional training, experience, and skills of the membership, Board members, and previous Board members for professional development

Strategic Goal 3: Professional Resources

SUPPORT GSTA members through professional resources that help teachers improve their practice, the academic lives of their students, and their school communities.

In the ever-changing world of science education, it is vital that teachers stay up to date with instructional resources and materials that will enable them to provide the best education to their students. Two key factors make it increasingly difficult for teachers to find and vet resources that are of high quality and appropriate for their students and learning goals. These include a move toward digital resources, which places a greater onus upon teachers to filter through a large number of unvetted resources to make ongoing curriculum decisions. Another factor is that Georgia's teacher-driven, state-specific standards require great care as teachers adopt and adapt instructional materials designed for other standards. The result is a void of high-quality, vetted resources that support mastery of Georgia's science standards within the specific contexts of classrooms across our state. GSTA must take the lead in filling the gap by creating, hosting, and disseminating professional resources that meet the particular needs of Georgia's science teachers and students.

- Continue to use GSTA's website and publications to provide access to and increase awareness of existing resources and content, while engaging more GSTA members with new and relevant resources.
- Leverage the experience and expertise of GSTA leaders to create resources that support research-based best practices for science and STEM education.

Science GSE Phenomena Bank

Search Phenomena	Submit Phenomena	What's the big deal about phenomena?	What makes a good phenomenon?	Phenomenal Resources
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One of the top requests from teachers as they implement the science GSE has been for a bank of phenomena ideas aligned to the standards. So, we are building such a collection. You can browse or search that collection below. You can also use the buttons above to submit your own phenomena ideas and learn more about phenomena and their role in 3D science learning. Email communications@georgiascienceteacher.org if you have any questions about this resource.

Grade or Course + GSE Standard GSE Element

Text search

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What's That Sound?



Students will hear a sound clip of a clicking insect noise.


Possible Guiding Question(s): What is this sound? What makes this sound and why?

Possible Instructional Use(s): This is the engagement/introduction to interactions of organisms with one another and their environments.

[View Phenomenon](#) | [Read More](#) | [Lesson Resources](#)

Grade/Course: 7th - Life Science

What can we learn from tracking marine organisms.




OCEARCH is an organization that tracks a variety of marine organisms including sharks, sea turtles, whales, and dolphins. Students are able to track the data over a period of time. In this phenomenon, students brainstorm investigable question and design an investigation to answer their question.

Possible Guiding Question(s): Why do we track marine organisms?

Possible Instructional Use(s): Show the students the OCEARCH site and ask them what do you notice - what do you wonder? Review the features of the site (pings, tracking

7 Coolest Active Space Probes



The video from SciShow highlights 7 space probes include the two Voyager missions, Juno, ACE, the Opportunity Mars Rover, etc. It will lead to the question "why do we study space?". The probes could be used throughout an astronomy unit.

Possible Guiding Question(s): Why do we study space?

Possible Instructional Use(s): After showing the video, start a driving question board with students. What do they want to learn about space? The video should inspire their interest in

GSTA's [Phenomena Bank](#)

Strategic Goal 4: Advocacy

ADVOCATE for excellent science education in Georgia on behalf of teachers and students and encourage our members to raise their own voices in support of excellent science education for all students in our state.

While the STEM movement is bringing important attention to science education at all levels, other social and political forces are working to undermine the importance of science and science education in our society. To support excellent science teaching for all students in Georgia, GSTA and our members must advocate for the importance of science, science education, and the science teaching profession at local, state, and national levels. GSTA must work to support the central role of science in STEM education, along with approaches to science curricula, instruction, and assessment that are based on research and best practices and that engage all students, including traditionally underrepresented student populations, in authentic science learning.

- Engage and support GSTA members and other science educators in advocating at the local, state, and national levels.
- Position GSTA as a resource representing science teachers' perspectives to relevant state policy makers.
- Promote a positive image of science, science education, and the science teaching profession among other stakeholders.



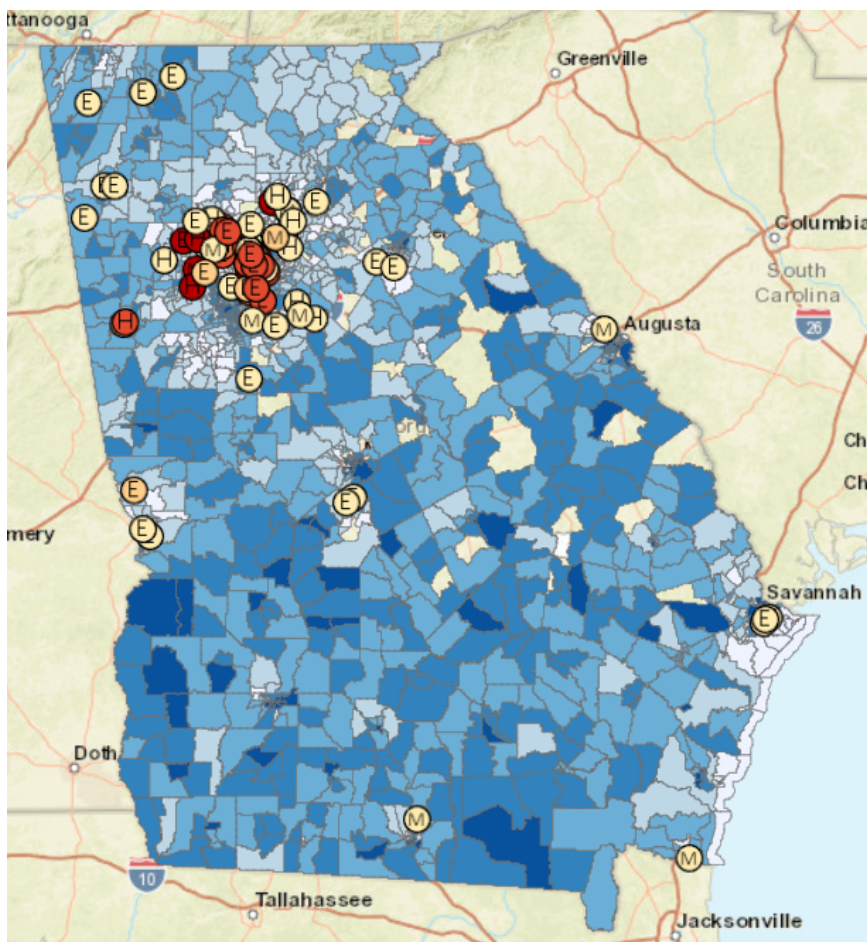
GSTA board members with State Superintendent Richard Woods during 2020 Annual GSTA Conference

Strategic Goal 5: Community Outreach

***PARTNER* with informal science education stakeholders to facilitate science literacy opportunities for learners of all ages in real-world communities.**

Participation in science experiences and opportunities in the home and community promotes lifelong learning and a scientifically literate society. Students that come to school with exposure to and acceptance of science concepts through immersion in science experiences at home and in the community are better prepared to learn in the science classroom. GSTA will partner with formal and informal science education organizations to support science learning in all settings. Some examples of informal science learning opportunities are museums, nature centers, science festivals, competitions, camps, science cafes, community science activities and more.

- Create and maintain a statewide informal science asset map and database to support teachers in making classroom-to- community learning connections.
- Seek local and statewide partnerships with informal science education organizations to further GSTA's mission and goals.



Georgia STEM/STEAM Asset Map - This will serve as a model for GSTA's informal science resource map.