



## A GUIDE TO A GLOBE ALUMNI NETWORK

### Abstract

The GLOBE Program offers significant benefits to students and educators aiming to make a difference in their communities. GLOBE fosters relationships among young people who share an interest in science by collecting and sharing data with NASA, which encourages more research and a better understanding of the environment. An appeal from high school students to “not be cut off” after graduation has renewed focus on the importance of GLOBE Alumni and a GLOBE Alumni Network. The network design will optimize personal and program connectivity.

0

Sponsored by:



Supported by:



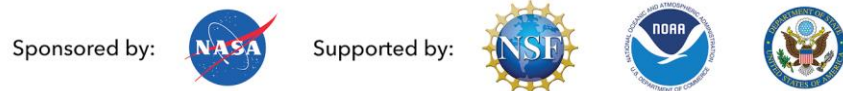
## TABLE OF CONTENTS

SECTION I: INTRODUCING GUIDING PRINCIPLES .....	4
1:1 Foundational Vision .....	4
1:2 Participant Schema .....	8
SECTION II: RIGOR, RELEVANCE AND RELATIONSHIPS .....	9
2:1 GLOBE Data.....	9
2:2 Student Engagement Value Propositions .....	10
Classroom Implementation of GLOBE .....	11
Classroom Implementation for Student Scientific Research Skills .....	12
Student Engagement Level 3 Focuses on Legacy and Sustainability .....	13
Reflection.....	14
SECTION III: DETERMINING THE ROLE FOR YOU.....	18
3:1 Participation Schema.....	18
3:2 What is Your Role.....	18
Teacher Engagement Level 1.....	19
Teacher Engagement Level Two .....	19
Teach Engagement Level Three.....	20
3:3 Alumni Recruitment Activities .....	21
3:4 Alumni on the GLOBE Website .....	22
3:5 Implications for Educator Training .....	22
Reflection.....	23
4:1 Customer/Alumni Value Propositions.....	24
4:2 Responsive strategies for Delivering Value.....	27
Reflection.....	28
SECTION V: ALUMNI PARTICIPATION IN 2024 ANNUAL MEETING .....	29
5:1 Populate the Alumni Biography Sequential from Entry.....	29
5:2 Host a VIP Reception for High School Students and Alumni .....	29
5:3 Plan Alumni Working Sessions for GLOBE Alumni .....	29
5:4 Develop a Communication Plan.....	30



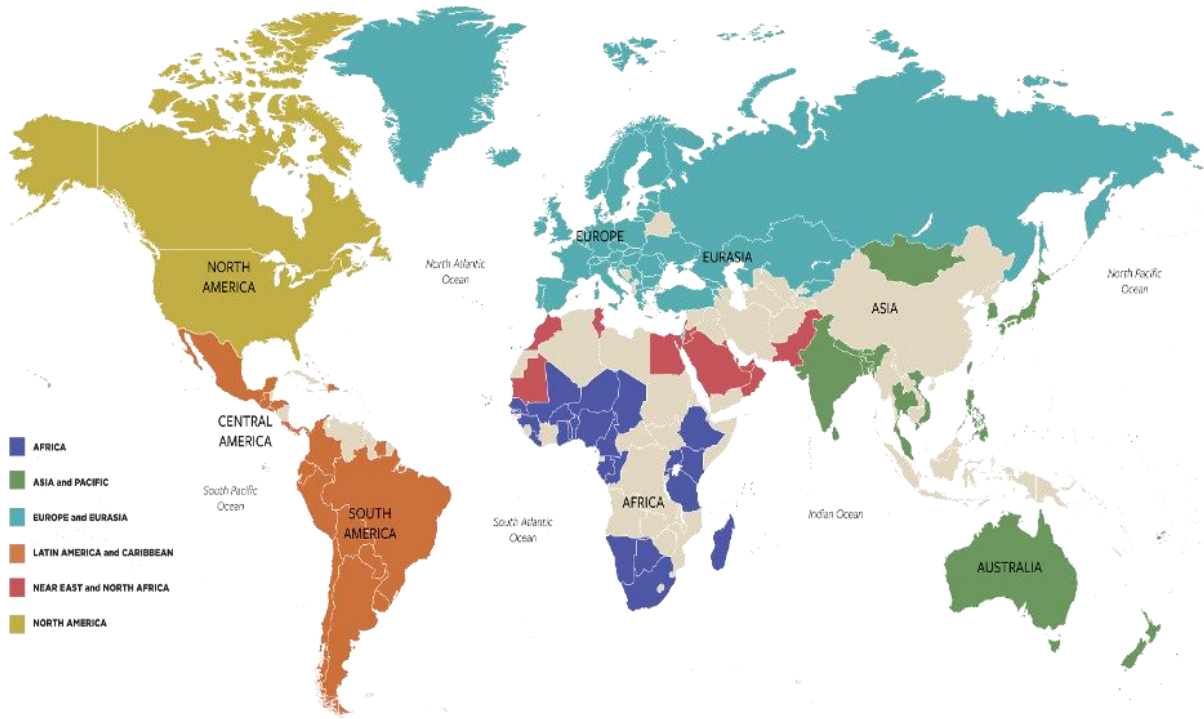
# THE GLOBE PROGRAM

5:5 Create an Action Plan for 2024-2025 .....30  
Reflection.....30  
SECTION VI: AN ASPIRATIONAL LEGACY .....32  
BEGGING THE QUESTION.....35



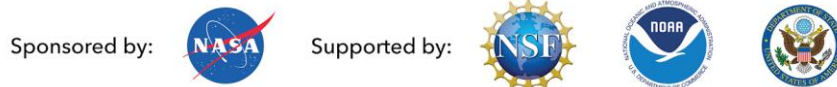


**THE GLOBE PROGRAM HOLDS HOPE AND PROMISE FOR OUR  
21<sup>ST</sup> CENTURY WORLD**



**During 2024, as we prepare for globe’s 30th anniversary, we look to our students and imagine what the next 30 years will be!**

The GLOBE Program offers a comprehensive package as a worldwide science and education program. It brings together a global community of scientists, students and teachers who are dedicated to fostering an informed and committed citizenry. This community understands the stakes and is stepping forward. In this guide, we present how alumni can fill a vital role in the GLOBE community.



## SECTION I: INTRODUCING GUIDING PRINCIPLES

**PURPOSE:** Developing a sustainable GLOBE Alumni Network with measurable goals.

**VISION:** To create a vibrant GLOBE Alumni Network, where alumni and the GLOBE community find mutual benefits to advance environmental science individually and programmatically.

This guide is intended to develop a vision and provide a conceptual framework and practical guide for how GLOBE educators, leaders and the rest of the GLOBE community can continue engaging with alumni. The principles and strategies in this guide assume that The GLOBE Program will actively endeavor to foster and sustain relationships within the GLOBE community. It also aims to uphold the rigor of science education and to ensure the continuous progress of students through GLOBE learning experiences, while also supporting the quality of teaching in the pursuit of faithfulness to [the mission of The GLOBE Program](#) as stated on the website.

### 1:1 Foundational Vision

A shared vision is an essential success factor for the development of a GLOBE Alumni Network. This will be a corps of volunteers and citizen scientists actively pursuing engagement in regional initiatives. These alumni will support and assist Country Coordinators, Partners, educators and students in their implementation and expansion of GLOBE, and they will contribute to the sustainability of The GLOBE Program and the global environment.

A conceptual framework for a GLOBE Alumni Network needs to identify the simultaneous processes fundamental to actualizing the vision and mission of GLOBE. These foundational documents identify an implicit and essential process. Embedded in The GLOBE Program is a





# THE GLOBE PROGRAM

curriculum of caring – caring for the natural world, the cultural world and the world of scientific ideas. There is potential to nurture this caring to the point where students want to continue engaging as alumni. Caring then rises to moral purpose when given the opportunity to partner with a diverse community of people studying how to live together, sustainably (Noddings N., 1992, [The Challenge to Care in Schools](#)).

Using an ecological lens guides an understanding of how caring can function successfully to support a process of continuous engagement for a GLOBE student, leading to engagement in and commitment to the Alumni Network. [An ecological model](#) highlights the essential processes of energy source and flow.

An ecological system<sup>1</sup> is powered by the sun as an energy flow and permeates all spheres simultaneously for the life of the system.

---

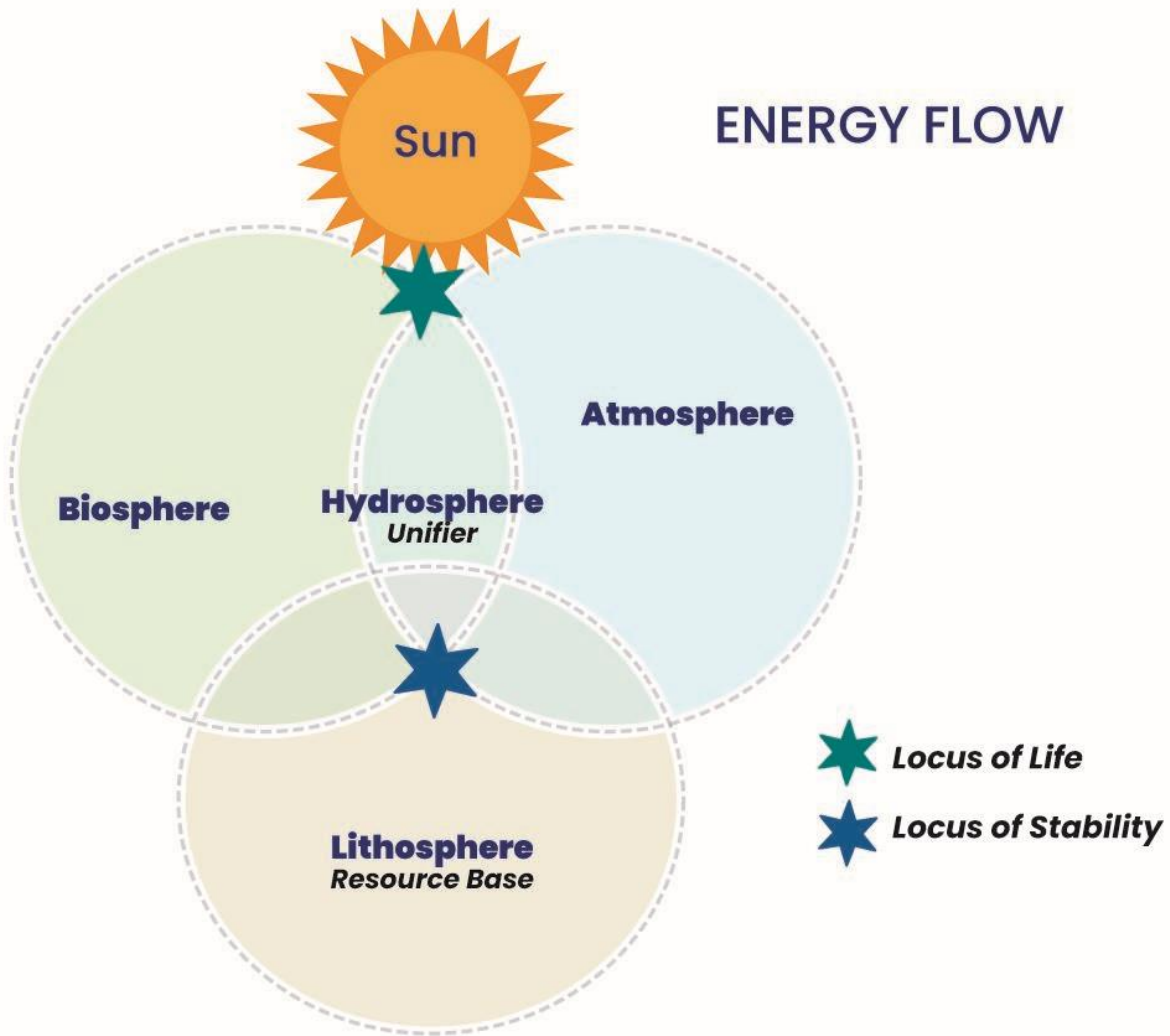
<sup>1</sup> Bronfenbrenner, Urie., 1981 [The Ecology of Human Development of Human Development](#).

Sponsored by:



Supported by:



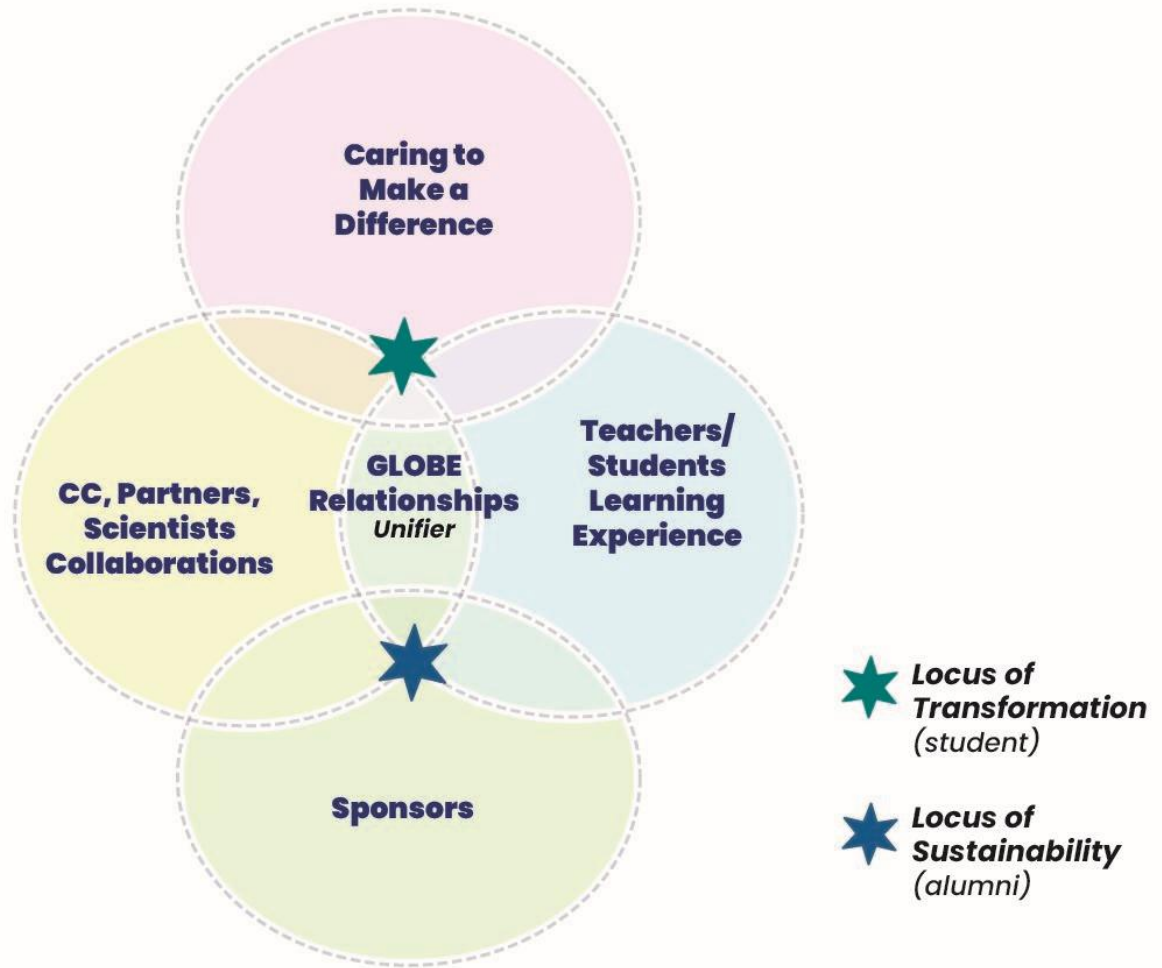


A student is empowered by their passion and desire. They experience their energy flow<sup>2</sup> through their learning experiences.

---

<sup>2</sup> Csikszentmihaly, Mihaly., 1990 Flow: The psychology of Optimal Experience.





Students’ experience flow in those “aha” moments, when meaning in learning connects to their passion. Flow is being in awe, when understanding meets their sense of being valuable and able to contribute. Psychologists described it as being in the zone where a person is fully immersed in a feeling of energized focus. Teachers, too, are energized by students experiencing these moments (Ashinoff, Brandon K., Abu-Akel, Ahmad 2021, "[Hyperfocus: the forgotten frontier of attention](#)"; Guy-Evans, Olivia, 2024, "[Bronfenbrenner’s Ecological Systems Theory](#)").

The GLOBE Program contributes to the development of caring – caring for the natural world, the cultural world, one another and the world of scientific ideas. There is potential to nurture this





# THE GLOBE PROGRAM

caring to the point of desire for continuous engagement as an alumni. Caring rises to moral purpose when given the opportunity to partner with a diverse community of people studying how to live together sustainably. Using an ecological lens guides an understanding of how this network can function successfully to support a process of ongoing engagement for a GLOBE student, which leads to engagement in the Alumni Network. Equally significant, the conceptual framework provides insights into how each aspect of The GLOBE Program interacts with and works to support *simultaneous* processes of personal growth and capacity for students.

## 1:2 Participant Schema

This guide follows a student from their initial engagement with GLOBE to graduation from high school. It may be a one-time classroom experience, or a progression of experiences generated by access to opportunities. In most cases GLOBE is delivering a transformative education. This guide recognizes the transformative processes at each transition point and will recommend strategies that facilitate continuous engagement for elementary, middle, and high school students, as well as GLOBE alumni in college.

The format design is sequential, speaking first to the student engagement possibilities through their GLOBE studies and identified as Student Engagement Levels 1, 2 and 3. Teacher engagement possibilities follow with three similar levels, which are juxtaposed with the student engagement levels and approached as inquiry, allowing for teachers to respond within their areas of expertise and opportunity. Teacher Engagement Level 3 focuses on how teachers can facilitate a motivated student's continuous engagement as they leave that teacher's sphere of influence.

### Community Stories

Diana Johns acknowledged the importance of student "Aha" moments. "I continue to work as a GLOBE Teacher in my AP classes because I get to work with extremely motivated and enthusiastic students, and I feel I can help them achieve excellence." -- Diana Johns, teacher, Crestview HS. Dearborn Heights, Michigan, USA

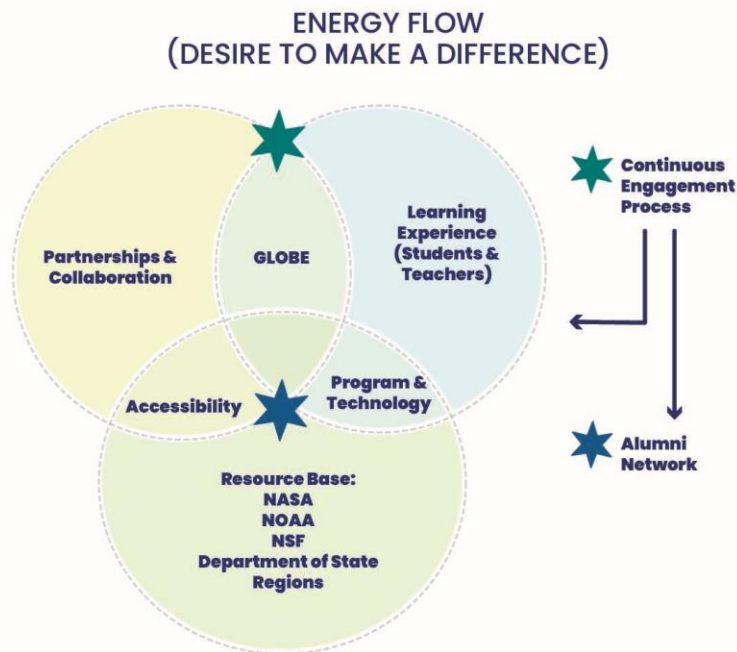


## SECTION II: RIGOR, RELEVANCE AND RELATIONSHIPS

**PURPOSE:** The purpose of this section is to highlight how the GLOBE Program science education offers all the components of a transformation in alignment with the mission to a worldwide community of students, teachers, scientists, and citizens working together to better understand, sustain, and improve Earth’s environment at local, regional, and global scales. This section highlights transformative points in the learning experience.

### 2:1 GLOBE Data

Data is central to both student and teacher engagement levels in the GLOBE science education program. All interactions in school settings or regional field activities should be focused on data collection and recording, analyzing, and sensemaking. The interactions within these settings are open to all active schools, students, and alumni. They can sustain a movement to improve and grow the scope of the programs while developing the skill change agency in the student and leadership levels.



## Community Stories

Diana Johns from Crestview High School in Dearborn Heights, Michigan USA confirms this progress: “The student-teacher relationship deepens into a partnership as we work together on scientific research.”

## 2:2 Student Engagement Value Propositions

**Proposition 1:** Essential to GLOBE science is the individual gathering of data and its subsequent recording on the GLOBE website, leading to subsequent student research (see Proposition 2). It serves as a guide for GLOBE students’ initial connection with The GLOBE Program. GLOBE data and protocols facilitate the development of the data-collection skills required for entry into the GLOBE learning environment. It is important to note that scientific understanding initially develops with discoveries that a student makes within their data sets. Each student’s data mark the beginning of their data story, with other data sets incorporated as students collaborate.

In Student Engagement Level 1 the activities are developed as *practice*. The teacher-student relationship develops within the “aha” celebrations of discovery. These moments of wonder often influence the student’s participation in challenging activities and teacher enthusiasm.

## STUDENT ENGAGEMENT LEVEL ONE



 **Finding Value and Voice**

### LEARNING AS DOING (Formal Education)

<https://www.globe.gov/do-globe/globe-protocols>

<https://www.globe.gov/do-globe/measurement-campaigns/new-campaign>

### GLOBE LEARNING EXPERIENCES

[https://www.globe.gov/news-events/meetings\\_symposia/virtual-conferences](https://www.globe.gov/news-events/meetings_symposia/virtual-conferences)

<https://www.globe.gov/news-events/globe-stars/stars-instructions>

[https://www.globe.gov/news-events/meetings\\_symposia/student-research-exhibition](https://www.globe.gov/news-events/meetings_symposia/student-research-exhibition)



## Classroom Implementation of GLOBE

1. [GLOBE Protocols \(Teacher’s Guide\)](#)
2. [GLOBE Measurement Campaigns and Intensive Observation Periods](#)
3. [Establish student accounts.](#)
4. [Introduction to data visualization.](#) The need for regular data reporting is emphasized here. The more data the more understanding.
5. [Introducing collaboration research skill development](#) through partnerships with fellow classmates and encouraging exploring individual opportunities on the GLOBE website.
6. [Encourage students to submit a research report.](#)
7. [International Virtual Science Symposium](#)
8. [Student Research Exhibition](#)
9. [Stars and STEM Stories](#)

Students should experience a transformation in their perception of the value of what they have learned and their sense of being able to voice valuable knowledge.

**Proposition 2:** New relationships nurtured with collaborative activities nurture a student’s sense of belonging and identity. Combining individual data with other data sets is an experience of meaning-making on a wider scale. Students experience learning on higher levels. In addition, collaboration introduces a whole new range of social skills needed in their developing skill set.

Student Engagement Level 2 activities transform students’ experience with data within collaborative settings, as they perceive that they are being given the tools to “make a difference.” This is the transition point from data gathering and analysis to student scientific research.

The teacher-student relationship nurtures the center of caring that a student may develop for world environments (natural, cultural, scientific and technological). The development of a student voice is aided by continuous improvement and the expansion of scientific literacy, and



# THE GLOBE PROGRAM

the development of collaborative and social skills, combined with empowerment opportunities. These also help provide students with a growing sense of value in what they are learning and encourage commitment to further study and influence possible career interests. Relationships at this level build on the teacher-student relationships and include those developed with the wider GLOBE community.

## STUDENT ENGAGEMENT LEVEL TWO



LEARNING AS PARTICIPATION

<https://www.globe.gov/get-trained/user-roadmaps/stem-professionals>

<https://www.globe.gov/web/alumni>

---

### Classroom Implementation for Student Scientific Research Skills

1. Expand collaborative research to a local base of students and scientists.
  - a. Partner locally with nearby schools, informal environmental education centers and agencies, such as Water Alliance and Soil Conservation.
  - b. Collaborate with local research scientists.
    - a. Encourage participation in state and regional science fairs, as well as GLOBE Student Research Exhibitions.
    - b. Work with [GLOBE Alumni](#)
2. Prepare students for continuing their engagement independently, outside of a formal setting, through resources on the website and opportunities with Country Coordinators and Partners. [User Roadmaps](#)
3. Provide guidance on the GLOBE website on how to find local projects.
4. Encourage field study campaigns that are supported by GLOBE scientists.

12

Sponsored by:



Supported by:



5. Guide access to GLOBE in-person events, such as GLOBE Learning Expeditions (GLE’s), and online face-to-face opportunities, challenging them to reach out.

**Proposition 3:** This proposition speaks to a student’s aspirational goal of caring and making a difference. Access to opportunities that are relevant in the life of individual students is essential to their belief that they have something of worth to contribute to their worlds. Reminding ourselves that some of these students are still in middle school or junior high school, it is important that the student/teacher relationships are solid. Teachers can then serve as mentors and guides to events and opportunities. As students benefit from networking with peers, K-12 students and science professionals in the GLOBE International STEM Network, they build their science literacy and begin to explore career endeavors and strengthen their commitment to making a difference where they can.

## STUDENT ENGAGEMENT LEVEL THREE



LEARNING AS CONTINUOUS ENGAGEMENT

<https://www.globe.gov/web/alumni>

### Student Engagement Level 3 Focuses on Legacy and Sustainability

1. The value added in a student’s commitment to join the GLOBE Alumni Network lies in their capacity to partner. Alumni help former teachers by aiding in classroom implementation. They help with data gathering, accompany teachers on field trips and facilitate connections with the local community.



# THE GLOBE PROGRAM

2. Networking with other alumni through the network can provide momentum to their engagement in GLOBE and their efforts to make a difference in their worlds.
3. University and High School assignments serve as opportunities to engage with GLOBE's community projects.
4. GLOBE alumni working in environmental and technology fields can encourage and support GLOBE student and school participation in local events, such as Earth Day activities.
5. As an incentive for participating in the GLOBE Alumni Network, those alumni working in higher education and scientific research settings can provide opportunities for others in the network.

## Reflection

Each facet of the system design simultaneously focuses on the relationships, rigor, and relevance of GLOBE student engagement activities, ensuring that the steps needed to grow the Alumni Network within each sphere of responsibility are firmly established and secure. The commitment to and support of the engagement reside in the GLOBE communities of practice.





The benefits of communities of practice are exemplified in The GLOBE Program. A student’s transformation can begin within the classroom as the experience of practice and, within that same classroom learning environment, extend through these stages of learning to include the skill set of each learning stage, from practice to identity. This identity holds the hope and promise of each student.

Specifically, the GLOBE learning experience can be encapsulated in a classroom setting, a scientific research setting or in an informal local science setting. Each setting provides opportunities for students to develop the skills needed to collaborate in knowledge-sharing and learning. Each setting also provides for collaborations through networking and relationship building.

In all stages of development, students can share their expertise, experiences, and best practices within the community. This collaborative learning helps everyone improve their skills and knowledge. Communities of practice provide a platform for students to connect with like-minded





individuals of any age who share similar interests or work in related fields. These networking opportunities can lead to valuable relationships, mentorships, and collaborations.

As students advance through their education levels with GLOBE, their sense of what can be achieved increases. Each experience offers an opportunity to grow their skill sets and enthusiasm for their studies. Networking brings together diverse perspectives, helps with problem solving, and provides the cheerleading all students need.

Finally, active networking among GLOBE alumni as participation in a community of practice enhances individual skills, competencies, and career growth. Alumni can find career opportunities and share ways to give back to the GLOBE community. Any student desiring to make a difference and positively impact their communities will find continuous engagement within the GLOBE Alumni Network.

### **Community Stories**

Dr. Elena Sparrow, Director of Education and Outreach for the International Arctic Research Center (IARC) GLOBE Partnership proudly speaks about how relevance in scientific exploration can lead to continuous engagement in GLOBE science and educational advancement. She tells the story of a Kindergarten student's desire to know about the impact of a proposed dam. She began studying using GLOBE hydrosphere protocols. This became an ongoing study through middle school and received the attention of the Army Corp of Engineers in charge of building the Dam. They collaborated with the student and used their data. "The student is now a high school student and part of the North Star College UAF. She presented this project at an AGU Conference."

Dr. Sparrow attributes the motivation to research to the inclusion of Indigenous ways of study. Beginning with the love of the land and place, students observe and appreciate. Observation leads to noticing small changes and wondering what is happening. This is where data becomes significant to the understanding of what changes may indicate. The relevance of the information and the commitment to making a difference seem to guide so many of the studies mentioned in the IARC GLOBE Partnership on the website.



**1. Knowledge Sharing and Learning**

- Members can share their expertise, experiences, and best practices within the community. This collaborative learning helps everyone improve their skills and knowledge.
- Learning occurs through informal interactions, discussions, and problem-solving within the community.

**2. Networking and Relationship Building**

- Communities of practice provide a platform for professionals to connect with like-minded individuals who share similar interests or work in related fields.
- Networking opportunities can lead to valuable relationships, mentorships, and collaboration.

**3. Innovation and Creativity**

- By bringing together diverse perspectives, communities of practice foster creativity and innovation.
- Members can explore new ideas, challenge assumptions, and develop novel solutions to common problems.

**4. Problem Solving and Support**

- When faced with challenges, community members can seek advice, share experiences, and receive support from others.
- Collective problem-solving helps address complex issues more effectively.

**5. Organizational Learning and Adaptation**

- Communities of practice contribute to organizational learning by disseminating knowledge across different teams and departments.
- They help organizations adapt to changes, stay updated and remain competitive.

**6. Professional Development**

- Active participation in a community of practice enhances individual skills, competencies, and career growth.
- Members can learn from each other's successes and failures.

Additional Resource:

[The Rs: Rigor, Relevance and Relationships](#)



## SECTION III: DETERMINING THE ROLE FOR YOU

**PURPOSE:** The student-teacher relationship serves as the starting point for cultivating future alumni. “Alumni” refers to students who have graduated from a GLOBE class at any level from elementary school to college. Teachers are encouraged to identify the roles and responsibilities for each engagement level. Understanding your role in the nurturing of a citizen scientist/GLOBE alumni provides a rich sense of fulfillment and experience of flow within your contribution. This guidance document poses essential questions for each level. There are no set strategies for teachers; teachers determine their role based on the requirements for their own local educational setting.

### 3:1 Participation Schema

The GLOBE student learning experience has three levels of teacher engagement, Level 1, 2, 3. Students can enter these levels at any time in their school career. GLOBE data is central and the medium through which a student’s understanding is transformed through each level. As students find meaning in GLOBE data there is a concurrent experience of personal meaning. This meaning is nurtured through the progressive levels of teaching practices supporting more comprehensive data learning experiences.

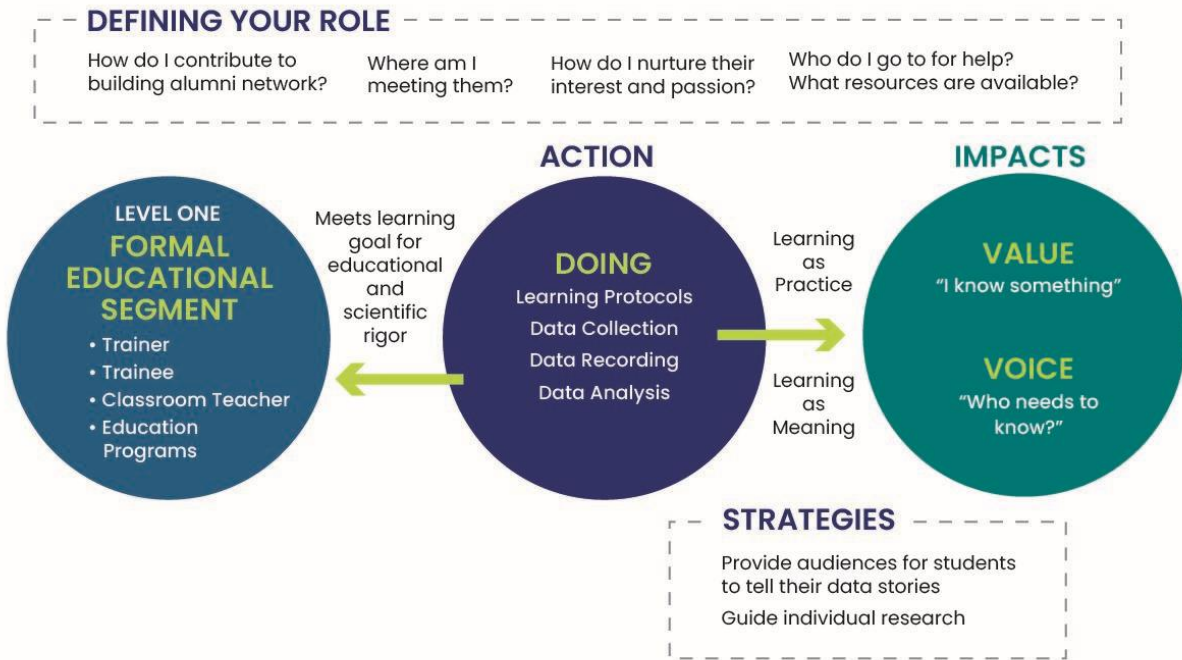
### 3:2 What is Your Role

Identify roles and responsibilities that will help you find activities that support students' personal sense of value and voice.



## Teacher Engagement Level 1

### TEACHER ENGAGEMENT LEVEL ONE



## Teacher Engagement Level Two

What can help you design students' learning so that you can guide activities that contribute to a student's growing sense of identity and of belonging to a community of practice?

## TEACHER ENGAGEMENT LEVEL TWO



### Community Stories

Dr. Kevin Czajkowski (University of Toledo, GLOBE Partnership) told his GLOBE story through examples, citing partnerships, teachers, and approaches to offering students access to opportunities. He talked about his relationship with Dr. David Bydlowski with the Midwest Collaborative in Earth System and Wayne County RESA. <https://www.resa.net/> This partnership has helped the GLOBE teacher, Diana John, and GLOBE students in Crestwood High School become highly successful. Dr. Czajkowski notes how important teacher retention is for continuity in GLOBE educational activities.

### Teach Engagement Level Three

Student learning leans to a commitment to “staying with GLOBE” and serving its mission. How can you advise and guide a student’s direction?



### 3:3 Alumni Recruitment Activities

Alumni recruitment emerges from solid relationships formed throughout the framework processes. The quality of these relationships forms expectations for relationships in the GLOBE Alumni Network. Discovery for students that there is a history of students “not wanting to be cut off” from their engagement with the GLOBE community or from the mission of GLOBE can be exciting for graduating highschoolers. Students often ask the following questions about their peers and fellow alumni:

**“Who are they?”**

**“How did they start?”**

**“Where are they now?”**

**“What is their career path?”**

**“Do they still stay in touch?”**

Examples of ways teachers can guide students’ discovery of alumni include:

- **Report on a GLOBE Story:** Encourage students or alumni to share a GLOBE-related experience or project they have been involved in. This could be through a written report, a presentation or even a video showcasing their work and its impact.
- **Discuss Initial Strategies:** Engage students or alumni in discussions about how to take the first steps towards meaningful involvement in GLOBE activities.
- **Explore Alumni Participation:** Look for alumni participation in GLOBE meetings and GLEs. Consider how they got there and who were their connections.
- **Identifying Interests and Opportunities:** Guide students or alumni in identifying their interests within the realm of citizen science and environmental research. Help them explore potential opportunities available through GLOBE and related organizations.



### Community Stories

According to Isaac Edwards, GLOBE alumnus and college student, “Stewardship is the best form of leadership. It was through this belief that Isaac became interested in The GLOBE Program.” His mother, a teacher, and older sister were both involved in the program when Isaac was young. “I remember when they got the chance to travel to India,” Isaac said. “My whole grade skyped them and we were all so amazed at the work they were doing.” His awe was not fleeting either. Three years later he was involved in The GLOBE Program—giving back to his community through scientific research, just as his sister and mom had done before when they participated with GLOBE.”

## 3:4 Alumni on the GLOBE Website

New updates to the GLOBE website will set the stage for the autonomous growth of an alumni directory.

1. **First Level Entry:** A link on in the global menu under **ABOUT/JOIN**.
2. **Second Level Entry:** Alumni provide new links. These links will highlight useful information for new alumni engagement. The events linked on the [User Roadmaps page](#) represent a good example.
3. **Third Level Entry:** Add alumni through the [Create an Account page](#).
4. Rework the Alumni pages on the GLOBE website and student accounts so they provide a progressive flow for students from all entry points. This will allow tracking of students as they progress to alumni status.
5. Design a way to extend and track the nurturing capacity of teachers beyond their current classroom. Allow teachers to recommend former and current students with easy and relevant engagement. Ensure that resources such as the Roadmap and Student Research Seminars are user-friendly for all using the site.

## 3:5 Implications for Educator Training

GLOBE teacher training is the preliminary step to developing a teacher’s capacity to understand how their commitment to data submission supports the system. Explicit emphasis needs to be placed on immediate training follow-up for teachers in their efforts to record data as an essential



practice at all levels of engagement. Rigor demands that students understand the data they are collecting and recording form the basis of GLOBE scientific research.

Tracking identifies intervention points for improvement and innovation strategies. Examples include:

- Determine outcomes for trained teachers' expected engagement in data recording.
- Determine outcomes for trained teachers' timely setting up of student accounts.
- Determine how to track site-based data entry.
- Determine if teacher engagement year-to-year is affected by students' identification of their impact on learning.
- Determine how teachers engage with former students beyond the classroom.

All tracking efforts remind teachers of their value as a teacher, guide, and expert. Tracking tells teachers they are pivotal and that support for them is a priority. Teachers also discover they are not alone, that as GLOBE teachers they are vital and integral to the GLOBE community. The GLOBE alumni can serve in these efforts as interns, volunteers in service projects or as resources in a class assignment.

## Reflection

The first and maybe most significant GLOBE relationship that a student develops is with their GLOBE teacher within their learning experience. This relationship transforms from teacher to partner as student engagement develops. The website must develop with an eye on how it functions to grow the nurturing capacity of a teacher to reach beyond the classroom and help in the development of an alumnus/citizen scientist. Access to and participation in outreach activities are exhilarating for both teachers and students.

As with students, teachers who feel their impact – those magic moments – are more likely to continue their commitment as GLOBE teachers.





## SECTION IV: BECOMING AND COMMITTING

**PURPOSE:** Align alumni value propositions with GLOBE organizational needs.

Delivery of value to alumni happens with a series of nurturing strategies that are identified based on the skills, capabilities, and resources available to deliver value. These strategies will provide structure, guide methodology, and determine how to effectively measure results. The strategies will focus on connections and relationships.

An essential starting point for generating meaningful relationships with GLOBE students is to develop a solid alignment with customer value propositions (CVPs) and development strategies throughout the framework process. This will also provide guides for measurement objectives. The potential for alumni engagement proceeds from the nurturing of relationships throughout their GLOBE educational experiences.

### 4:1 Customer/Alumni Value Propositions

The identified alumni as CVPs for GLOBE were derived from interviews with present and past GLOBE students.

- [“The Alumni Engagement Model”](#)

Examples include:

**Proposition 1:** Access to continued professional knowledge and enhanced scientific literacy/skill development through:

- a) Mentor Trainer recruitment
- b) Scientific Partnerships
- c) Internships
- d) Fellowships
- e) STEM mentorships

**Proposition 2:** Access to social and networking events through:



- a) GLOBE Annual Meetings
- b) GLEs
- c) Research Seminars

### **Community Stories**

In 2018, The GLOBE Program hosted their GLOBE Learning Expedition (GLE) in Killarney, Ireland. Among the many attendees was Isaac Edwards. “The conference is one of the fondest memories I have,” he says. “I met so many people, and from all over the world, who care about the environment and science just as much as I do.” Isaac found sharing with others about their work in their respective communities to be a profound experience.

### **Proposition 3:** Recognition and rewards by GLOBE through:

- a) Expansion of the current system of recognition and rewards
- b) Public expressions of service and accomplishment

### **Proposition 4:** Autonomy in alumni operations through:

- a) Management of Listserv
- b) Entry of news and events
- c) Design of new alumni directions
- d) Alumni reaching out to local businesses to contribute funds for instrumentation, hosting events and food, in turn for business signage as a GLOBE sponsor.

### **Proposition 5:** Guidance to opportunities to “Give Back” to The GLOBE Program and to society through:

- a) Mentorships
- b) Funding data collection supplies to schools
- c) Speaking engagements
- d) Reunions



### Community Stories

Mohamed Elwan is our representative GLOBE Alumni Professional. He is a civil engineer working for Tomorrow Water. When asked if he would feel comfortable asking for support for GLOBE students with water quality measuring instrumentation needs, his reply, “Yes.” He described his organization’s goal as supportive of The GLOBE Program.

“Tomorrow Water, an innovative environmental solutions provider with a vision of a Clean and Beautiful World Beyond Waste, contributes to the world through clean water and sanitation Sustainable Development Goal (SDG) 6, affordable clean energy (SDG 7), industry, innovation, and infrastructure (SDG 9), sustainable cities and communities (SDG 11), and climate action (SDG 13). Learn more about the [Tomorrow Water Project](#). Also given Tomorrow Water's involvement in top-notch environmental and water conferences and dedication to corporate social responsibility, I believe Tomorrow Water would be highly receptive to engaging with the GLOBE Program.”

He described his approach: “I would begin by convening a meeting with key stakeholders within Tomorrow Water, including senior management, business development teams and relevant departments involved in activities related to community outreach and education. During this meeting, I would present the benefits of partnering with the GLOBE Program and outline potential areas of collaboration, such as mentorship programs, educational workshops, or joint research projects.

Emphasizing the alignment between the GLOBE Program's objectives and Tomorrow Water's mission, I would seek to garner support for the initiative and establish a framework for engagement. Additionally, I would leverage Tomorrow Water's existing networks and partnerships within the environmental sector to amplify the impact of our collaboration with the GLOBE Program.”

Continuing he describes other ways he and his organization could engage:

“In addition to direct collaboration with the GLOBE Program, Tomorrow Water could offer a range of resources and expertise to support GLOBE students in their educational journey.

This might include:

- Providing access to our state-of-the-art water treatment facilities for educational tours and hands-on learning experiences.
- Offering internship opportunities for GLOBE students interested in gaining practical experience in environmental science, engineering, or related fields.
- Facilitating guest lectures or workshops led by Tomorrow Water professionals on topics such as water conservation, pollution prevention, and sustainable development.
- Supporting GLOBE students in conducting research projects or capstone initiatives related to water quality monitoring, ecosystem conservation, or other relevant areas.

By engaging with GLOBE students in these ways, Tomorrow Water can play a meaningful role in nurturing the next generation of environmental leaders and fostering a culture of sustainability within our communities.”



## 4:2 Responsive strategies for Delivering Value

Design a set of strategies that nurture the skills, capabilities and resources needed to deliver value. These strategies will provide structure, guide methodologies and how to effectively measure results. Once a student leaves a classroom, school or The GLOBE Program, it is difficult to refocus their direction to reconnecting with GLOBE as an alumnus. It is prudent to design a set of nurturing strategies that can be enacted.

Examples include:

### 1) Transition Strategies from Formal Education Levels

- a. Website graduation notifications during annual graduation season.
- b. Host an appropriate culmination event awarding student level progress, in alignment with The GLOBE awards program. Invite a current alumnus to speak.
- c. Award some GLOBE merchandise for self-identification in the program.
- d. Further develop the alumni portal on the GLOBE website.
- e. Students receive an alumni recruitment letter upon graduation from a GLOBE school/class from an active alumnus.

### 2) Start-up Strategies

- a. Continuous recruitment. By attending to follow-up strategies throughout the GLOBE learning experience, the stage is always set for the next step of joining the GLOBE Alumni Network.
- b. Feedback loops. By actively and frequently asking for feedback about alumni, you demonstrate the value of alumni and their voice as an essential element for substantive conversations about improvements.
- c. Effective Feedback techniques.
  - i. Build on early methods of follow-up. This provides a built-in disposition to responding.



- ii. Use crowdsourcing. Crowdsourcing content for your web portal is a win-win for GLOBE and the alumni, providing a nurturing strategy for alumni contributions while providing essential information.

### 3) Sustaining Momentum

- a. Provide easy networking engagement with young alumni.
- b. Provide links to LinkedIn or other appropriate media sites.
- c. Create an alumni ambassador program for outreach tasks.
- d. Create alumni-targeted communication strategies.
- e. Get alumni involved with current students.
- f. Host relevant events for alumni.
- g. Provide resources for GLOBE students, schools and the program at large.

### 4) Streamlining Enhancements

- a. Build open lines of communication.
  - i. Post contact information for the GLOBE Alumni Coordinator.
  - ii. Host “Office Hours” opportunities.
  - iii. Build automated ways to communicate and respond.
- b. Post “Calls to Action” for continuous engagement opportunities.
  - i. Participation events, online and local.
  - ii. Donation events of time, talent or resources.
  - iii. GLOBE Conferences and GLEs.
- c. Database that tags data collected by alumni.

## Reflection

Meaningful activities will always connect to the mission of GLOBE and the desire of alumni to make a real difference in their worlds. The technological approaches must always follow security and privacy protocols of the GLOBE sponsors.



## SECTION V: ALUMNI PARTICIPATION IN 2024 ANNUAL MEETING

**PURPOSE:** To include GLOBE alumni in the design of the governance and management strategies needed for functional and successful alumni networking, through the following suggested actions.

### 5:1 Populate the Alumni Biography Sequential from Entry

Populate the alumni bio section with timeframe entries by current alumni:

- Design database tags for any data or information submitted by a GLOBE Alumni.
- Have a similar tag for any GLOBE Alumni events, stories, and contributions submitted by teachers, scientists, or the GLOBE Community.
- Have ‘Call for Participation’ with online training sessions.

### 5:2 Host a VIP Reception for High School Students and Alumni

Host a VIP reception for high school students and alumni attended by GPO and GIO.

### 5:3 Plan Alumni Working Sessions for GLOBE Alumni

Establish alumni working sessions for the 2024 GLOBE Annual Meeting.

- Development of Media use in support of Alumni Network needs. GIO communication/social media staff will facilitate this session.
- Working session on alumni management of the network. GPO and GIO personnel will participate and will be facilitated by former and current alumni.
- Meeting with Partners and teachers for a “How to use GLOBE alumni as a resource” session.



## 5:4 Develop a Communication Plan

Invite a volunteer to serve as an alumni liaison with GIO/GPO to provide information and request how the alumni can help support GLOBE. This position would be a two-year sponsored fellowship. Alumni liaison would then work with GLOBE alumni to develop governance and management and activities for sustaining and maintaining alumni activities.

## 5:5 Create an Action Plan for 2024-2025

Identify where a funding proposal will be needed for sustaining and maintaining alumni activities (for example, sponsoring students for attending GLEs).

- Develop a high-level internal-external communication plan. Identify the most effective communication strategies for integration in the GLOBE community communication system.
- Create an implementation action plan with a timetable. For example, coordinate with the training schedule for timely opportunities to provide support for setting up teacher and student accounts.
- Present how to contribute to this Guide as a “Living Document.” These contributions will feature GLOBE community stories of what is working well for them in the pursuit of providing continuous engagement for alumni. The stories benefit the community by providing models and lessons learned while at the same time continuous dialogue.

## Reflection

Alumni are typically overlooked in the organizational life cycle, but in this design the guided evolution of a student is not relegated to a desk project; rather, it is nurtured by the entire system.

GLOBE alumni by design are intentionally distinct from affiliates of GLOBE. Alumni form a network that actively supports strategic objectives aligned with the GLOBE mission, with the talents and personal capacity to make a difference.



# THE GLOBE PROGRAM

The Alumni Network that emerges from processes described in this Guide will be managed by alumni volunteers, requiring the services of only an Alumni Network liaison within GIO. This, too, could be a rotating alumni volunteer position.

Sponsored by:



Supported by:





## SECTION VI: AN ASPIRATIONAL LEGACY

**PURPOSE:** This section guides GLOBE in continuous engagement and dialogue through the lens of the student development throughout the design of the program. Continuous engagement refers to dialogue and connectivity within the community.

The benefit of an approach of applying a system-thinking model as the framing schema for the GLOBE Alumni Network is evident in how it functions for optimizing personal and program connectivity, from connection and engagement to commitment.

The GLOBE Program, as a worldwide science and education program, stands on a foundation of educational and scientific theory and best practices. The potential for GLOBE to be a model of education for sustainability is vast. GLOBE alumni emerge as informed and engaged citizens, equipped with creative problem-solving skills, scientific literacy, social competencies and the commitment to engage in individual and collaborative behaviors to ensure sustainability in their environmental and economic futures.

This Guide is an initiative aimed at fostering a dialogue about how the GLOBE community, in all areas of responsibility related to alumni, can reach an understanding of how each member can contribute to a shared vision, fostering consensus on how alumni can give back to the program. The work ahead builds on that dialogue to develop agendas of action within each sphere of influence. The impetus for this endeavor flows through the moral purpose of the GLOBE community.

This Guide contains features allowing for the voices of the GLOBE community to affirm their experiences, and it guides efforts for teachers and those seeking ways to add benefits for their students' engagement. Voices are encouraged from the 2024 GLOBE Annual Meeting to the



# THE GLOBE PROGRAM

2025 Annual Meeting, inviting contributions from all perspectives of alumni and alumni support. An action plan for the GLOBE Alumni Network will emerge in ideas from the GLOBE community. It is anticipated that the GLOBE Alumni Network will launch at the 2025 Annual Meeting, when The GLOBE Program celebrates its 30<sup>th</sup> anniversary.

Sponsored by:



Supported by:



# THE GLOBE PROGRAM



Sponsored by:



Supported by:

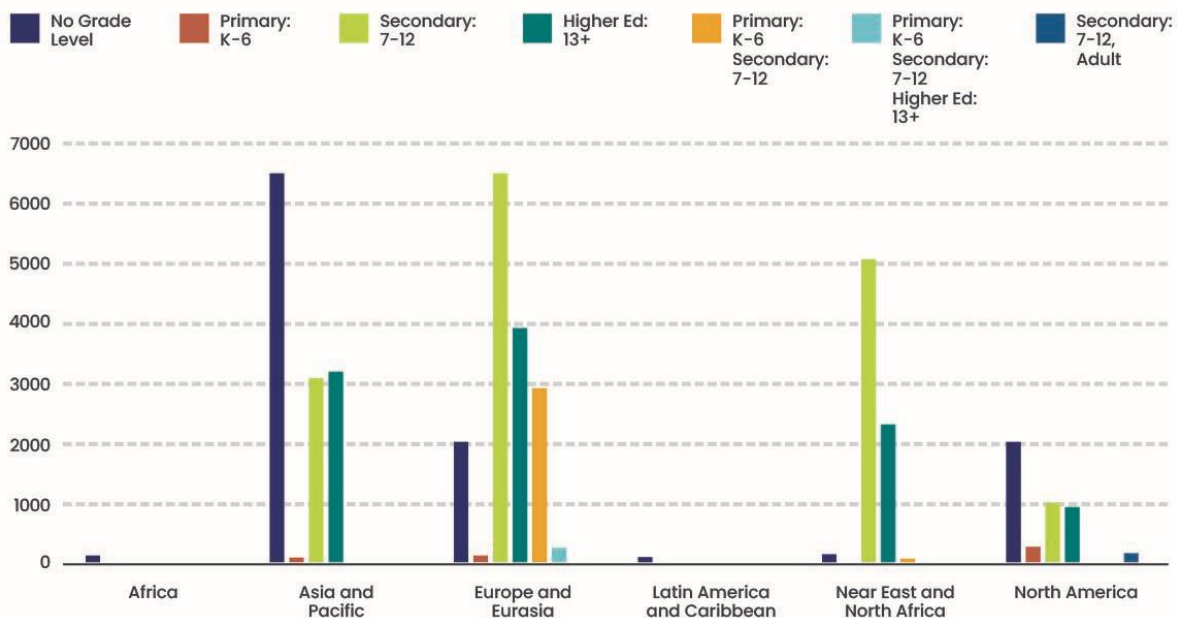


## BEGGING THE QUESTION

**PURPOSE:** Highlight how data collection, recording and analysis is essential throughout the students’ GLOBE learning experience. It takes the student full circle.

This guidebook begs the question of whether all GLOBE systems are working as intended, spotlighting how the GLOBE Program website works as the hub for GLOBE interaction and connectivity. It needs your information!

### All Time Student Data Submissions for Air Temp, Surface Temp, and Precipitation Protocols Per Region Per Grade Level



Students who graduate from a GLOBE school or complete a GLOBE learning experience are GLOBE alumni, with stories full of riches. There is a wealth of information to be gained from

the stories of our youngest elementary alumni transitioning from elementary school, as well as from those who seek further study and engagement, and, finally, from those who teach them. GLOBE alumni hold the key to program sustainability and citizen action for the benefit of the environment. We remind ourselves the GLOBE alumni did not come out of nowhere, as they were nurtured by experts in their fields: teachers, scientists, Partners, and their peers through the GLOBE website.

Many teachers, partners and students were interviewed in the development of this guide. Their stories enriched and affirmed the process we have identified here. The inspirational appeal is phenomenal! The scope of this guidebook is limited, and there are too many stories with valuable information that need to be recorded. GLOBE education depends on “*Each One Teaching One*” through their contributions of data, activity level and personal testimonials to the GLOBE website.

**Imagine!**

A request for a case study of your GLOBE website practice. What would your story feature? Are there gaps you can fill in? Are your personal accounts up to date? How would your data records help with collaboration/comparison searches? Have you participated in local studies? Are there any student scientific research studies uploaded? Do you know where the link is for information about news and events? How well do you know your GLOBE community?

**Imagine Again!**

You were given a year, 2024-2025, to tell your awesome story through the GLOBE website. What would you need in terms of support and resources? Who can help you? Can you find a model on the site?

**Imagine Again and Again?**

If you could find former students who are GLOBE alumni to help you? What steps would you take to make it happen? What can you do to participate in a GLOBE website update during 2024-2025?

