GLOBE International Virtual Science Symposium

2017

www.globe.gov

http://www.globe.gov/science-symposium
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GLOBE Implementation Office
GLOBE International Virtual Science Symposium

- Online space for students to share and discuss GLOBE research with other students, scientists, GLOBE community
- Open to all GLOBE students K-16
  - Rubrics by grade level
# 2016 International Virtual Science Fair Metrics

## Student Reports:

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of Entries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>0</td>
</tr>
<tr>
<td>Asia and the Pacific</td>
<td>22</td>
</tr>
<tr>
<td>Europe and Eurasia</td>
<td>10</td>
</tr>
<tr>
<td>Latin America and the Caribbean</td>
<td>7</td>
</tr>
<tr>
<td>Near East and North Africa</td>
<td>44</td>
</tr>
<tr>
<td>North America</td>
<td>22</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>105</strong></td>
</tr>
</tbody>
</table>
New for 2017!

- Open to K-16
- New optional badge (Exploring STEM Careers)
- Later due date (03 April 2017)
Merit Based Student Research Badge

• Students earn points
• No limit to projects that earn top ranking

Optional Badges

• Possible for students to earn up to 3 out of 6 additional badges
• Students describe how each badge was earned in their report document

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• **Collaboration:** Team members and their roles, student contributions, advantages of collaboration

• **Community Impact:** Describes how a local issue led to the research question and what impact the students have on their community

• **Connection to a STEM Professional:** Collaboration with a STEM professional and how it enhanced the student research

• **Engineering Solution:** An engineering solution to a real world problem based on student research

• **Exploring STEM Careers:** Understanding how student research relates to STEM careers

• **Interscholastic Connection:** Describes interscholastic or international collaboration and how it benefits the research

http://globe.gov/science-symposium
Drawing

• Earn 4 star Student Research Badge AND at least two optional badges → entered into a drawing

• Projects drawn will receive funds to help offset the cost of attendance at the 21st GLOBE Annual Meeting

• 4 projects will be drawn: 2 international ($2,000 each), 2 US ($1,000 each)
How to Enter

- Entries include:
  - Abstract
  - Research Report
  - Narrative on each badge completed
  - Presentation
    - Narrated Power Point
    - Video
    - Scientific Poster
  - Photo Releases

Determining the presence of heavy metals in the air by using GLOBE protocols for aerosols, conductivity and pH

**Organization:** Prirodoslovna i graficka skola, Prirodoslovna i graficka skola
**Student(s):** Dino Bešić, Sarah Budgan
**Grade Level:** Secondary (9-12)
**GLOBE Teacher:** Marina Pavlić, Irena Sabo
**Contributors:**
**Presentation:** View Document
**Optional Badges:** Engineering Solution
**Date Submitted:** 03/11/2016

**View Research Report**

Aerosols are solid or liquid particles or both, suspended in air with diameters between about 0.002 μm to about 100 μm. Aerosol particles vary greatly in size, source and chemical composition. Some of the components are heavy metals, which can be measured by GLOBE protocols. We used the method of moist sedimentation to acquire a sample of air in Bakar, and then analysed it with GLOBE protocols. We were inspired to use these methods when the citizens of Bakar invited us to see the black blot in the middle of The Bakar Bay and the black particles in their homes. As we collaborated with them investigating the sea, soil and the bottom of the sea in our previous projects, we determined that the pollution was coming from the air. We decided to investigate the quantity of suspended particles (aerosols) in the air and determine their chemical composition. Analysing the samples we concluded that the sample with heavy metals had higher pH and conductivity levels than normal. By tracking the aerosols, air temperature and rainfall our data showed that the aerosols are highest when temperature and rainfall levels were low. This method could help more GLOBE researchers to study heavy metals in air.

**General News/Events Topics:** Virtual Science Fair

**Return to Student Research Report Listing**

**Comments**

- Add Comment
- Subscribe to Comments

1. I really enjoyed reading your abstract, sounds interesting and educative. Your Abstract does not exceed 200 words. And contains The problems, Questions, Objectives, conclusion and recommendations.

2. Your explanation under reseach question does not identified your Research question
How to Enter

http://globe.gov/science-symposium

Student Research Reports

Check out student research reports from around the world! Would you like to have your report added? Click on the graphic to the right to submit your report.

<table>
<thead>
<tr>
<th>Year</th>
<th>Organization</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>All</td>
<td>All</td>
</tr>
</tbody>
</table>

06/16/2015
Changes in the amount of rainfall runoff in the basin of Nysa Kłodzka river in the area of Nysa
Research project

06/07/2015
"LET OUR ISTRIA SHINES, BUT NOT AT NIGHT" PART 2
On the occasion of World Environment Day 2015, and the International Year of Light 2015, we published results of our project "LET OUR ISTRIA SHINES BUT NOT AT NIGHT!" PART 2 on school and local medias (www.snim.hr)
Student Research Reports

Required Fields

School / Organization
- Select
- Add Another Organization/Teacher

GLOBE Teacher
- Select

Student(s)

Additional Contributors

Grade Level
- Lower Primary (K-2)

Report Title

Report Description

Report Date
- mm/dd/yyyy

Abstract or Summary

Type of Student Research Report
- Standard Research Report
- International Virtual Science Symposium Report

Presentation
- Link to Video URL

Upload Poster Presentation
- Choose File
- No file chosen
- Delete

Photo Releases
- Choose File
- No file chosen
- Delete

Optional Badges (maximum of 3 badges)
- Collaboration
- Community Impact
- Connection to a STEM Professional
- Engineering Solution
- Exploring STEM Careers
- Interscholastic Connection

Submit Report
Cancel

Note: Reports are subject to review before being posted on the website.
Presentations

Important to communicate science!

• Poster
• Narrated PowerPoint (or similar)
• Video

http://globe.gov/science-symposium
The Cove River Biome contains a river drainage system and a 15.24 km long scenery path for public use. This project is aimed at understanding the impact of nitrate concentration on the Cove River biome and the biodiversity within the ecosystem. The study was conducted by taking water samples from seven different spots within the Cove River system. The nitrate concentration was then measured and analyzed to understand the impact of nitrate on the biotic and abiotic factors within the ecosystem. The project concluded that the nitrate concentration in the Cove River is relatively low and the system is able to maintain its biodiversity despite the presence of nitrate. The study also highlighted the importance of monitoring nitrate concentration in water bodies to ensure the health of the ecosystem.
Resources (available on the website)

- Mentor scientists
- The Scientific Process
- How to Create a Student Research Report
- Guide to Asking Questions
- Webinars – new ones this fall as well as archived
- GLOBE student reports and virtual conferences
- What else?

http://globe.gov/science-symposium
2017 GLOBE International Virtual Science Symposium

The GLOBE Program is pleased to announce the 2017 GLOBE International Virtual Science Symposium for students around the world. With GLOBE, students learn the practices of science through hands-on investigations in their own communities, sparking their curiosity and interest in science. This often leads to inquiries that help solve real-world problems and further understanding of our global environment. Now it's time for your students to show the world what they've learned!

Notice the name change? Read the Frequently Asked Questions (FAQs) to see why!

Keep checking back to this page to see more news and instructions!

Overview:

The 2017 GLOBE International Virtual Science Symposium takes place online, and K-16 students from any GLOBE country may participate. GLOBE students use the GLOBE data they entered into the database and should collaborate with scientists, including STEM (science, technology, engineering, and math) professionals who are part of the GLOBE International STEM Network (GISN). This is a great opportunity for students to practice the skills they've learned through their involvement in The GLOBE Program and apply them to address real-world problems. It can be hard work, but the excitement that comes with discovery and new insights makes it worthwhile.

Every project that is submitted will be hosted on the Student Research Reports section and students will receive virtual badges to reward them for their work. There is no limit to the number of entries per student or per school and there is no limit to the number of students per project.

View past projects in the 2016 GLOBE International Virtual Science Fair.

Webinar announcement:

"2017 GLOBE International Virtual Science Symposium Informational Webinar"

Dr. Julie Malinberg of the GLOBE Implementation Office and Matt Silberg of WestEd will host an informational webinar on 19 October 2016 at 10:00 am MT/12:00 pm ET. (Click here to convert to your timezone.) The webinar will cover the instructions, badges, rubrics, and guidelines for the science symposium. Click here to register for the webinar.
GLOBE International Virtual Science Symposium Instructions - 2017

How and What to Submit:

Each student project should include the following components and should be submitted via the Virtual Science Symposium Report Tool. Make sure to have all the items prepared when accessing the tool.

1. **Abstract or Summary**: A 200 word or less description of the research project.
2. **Research Report**: The complete research report as .PDF or .DOCX/DOC. If including more than one language, make sure the report is just one file. Elements of the Research Report are described in the rubrics.
3. **Badge Description**: For any of the optional badges (you may select up to three). Include a short summary of how each badge has been completed.
4. **Presentation**: Either the link to an uploaded video hosted on an online video sharing site (YouTube, Vimeo, TeacherTube, etc) or the presentation poster. Whether presented as a video, a narrated PowerPoint, or as a poster, the presentation should describe the student research. Videos should be 10 minutes or less.
5. **Thumbnail Image**: An image to be displayed with the student report.
6. **Photo Release Forms**: All Individuals who appear in photos or video must send in a photo release. Save all the photo releases into one file.

Scoring:

Information about scoring is provided on the Rubrics page. All projects will be scored by a team of judges from the GLOBE International STEM Professionals Network.

Every student project will receive a virtual Student Research Badge. Scored projects will receive between one and four stars on the Student Research Badge, with a 4-star research badge representing superior projects. Additionally, students have the option to complete up to three additional badges including collaboration, community impact, connection to a STEM professional, engineering solution, exploring STEM careers, and interscholastic connection.

Please note that if students choose to submit a report in a language that is not English, it will be shared with the community via the Virtual Science Symposium webpages, but it will not be scored. Only reports in English will be scored by the team of judges. However, students are encouraged to submit their reports in English and their first language (as one document).

Awards:

All students who submit a project will receive a virtual Student Research Badge and up to three additional badges (out of six choices total). These badges can be displayed on GLOBE School Profile Pages, shared via Social Media, or printed out and shared with the students.
GLOBE International Virtual Science Symposium Resources - 2017

Below are resources to help in the completion of your student research report. If you need any additional resources, please contact the Community Support Team at help@globe.gov.

**Previous Virtual Conferences**
- 2012
- 2013
- 2016

**Creating a Research Project**
- Steps in the Scientific Process
- Worksheet to Evaluate Possible Research Questions
- How to Create a Student Research Report
- Sample Research Report
- Purdue Online Writing Lab Research and Citation Resources

**Tips for preparing a presentation:**
- Webinar - Scientist Skills: Presenting your Results
- Ten Secrets to Giving a Good Scientific Talk
- Poster Template PowerPoint | PDF (note: this includes the high school and undergraduate elements, modify as needed for middle school and primary school)

**Data Resources:**
- Setting Up Your Data Site
- Entering Measurement Data
- Retrieve and Visualize Your Data
- Advanced Data Access Tool

**Webinars**

**Upcoming:**
- 19 October 2016 at 14:00 UTC (10:00 a.m. MT/12:00 p.m. ET): 2017 GLOBE International Virtual Science Symposium Informational Webinar (registration)
- TBD: An In-Depth Look at the Badges
- TBD: K-4 Research Projects

**Archived:**
- Teacher Webinar: Conducting Field Investigations
- Teacher Webinar: Writing Research Questions
- Teacher Webinar: Analyzing GLOBE Data
- Teacher Webinar: Writing Conclusions using the CER Framework
- Putting It All Together - the Science Fair Poster (Communication)
Frequently Asked Questions - 2017 GLOBE International Virtual Science Symposium

Q. Why did the name change from a science fair?
A. A science symposium is a place for researchers to present and discuss their work. In order to reflect the overarching goal of students sharing their GLOBE research, we thought a science symposium better represented this event than a science fair.

Q. Can I submit my project in a language that is not English?
A. Yes! However, it will not be scored. We are only able to score projects submitted in English.

Q. Can I use Google Translate or another translating program to translate my project?
A. Yes, the judges will then be able to score your project. However, keep in mind that Google Translate often makes mistakes. If possible, have someone familiar with English read over the translation.

Q. I'm a science, technology, engineering, or math (STEM) professional. How can I be involved?
A. If you are part of the GLOBE International STEM Professionals Network (GiSN), we would love for you to help score the projects. If not, think about applying to be part of the network! If you are interested in scoring or mentoring projects, fill out the interest form (coming soon!). If you are interested in being part of the GiSN, send an email to help@globe.gov.

Q. What if the scientist or other STEM professional I want to work with is not part of the GLOBE International STEM Professionals Network (GiSN)?
A. That's fine! But, encourage the scientist or STEM professional to join the GiSN.

Q. I teach 1st grade. Can my students also submit a project?
A. Yes! We have customized the scoring rubrics by grade level. Younger students will be scored differently than older students.

Q. How do the badges work?
A. All students who submit a project will receive a virtual Student Research Badge. Scored projects will receive between 1 and 4 stars. Additionally, students can elect to be scored for five more optional badges. These badges, which are described in the rubrics, are collaboration, community impact, connection to a local or network scientist, international connection, and engineering solutions.

Q. Can I still get a badge if my project is not in English?
A. Yes! All student projects will receive a Student Research Badge, however only scored projects (those in English) will
Scientist Participation

GISN Interest Form: 2017 GLOBE International Virtual Science Symposium

The 2017 GLOBE International Virtual Science Symposium will showcase student research projects from around the world. Student projects are due on 03 April 2017 and judging will take place 23 - 29 April 2017.

There are two volunteer opportunities for GISN members to be involved with this exciting event. First, you can volunteer to work as a research mentor for student groups. While volunteering does not guarantee that you will be contacted, groups are looking for mentors. Second, you can volunteer to help judge the student projects in 2017. If you are interested in working as a mentor and judging, feel free to check both boxes.

We appreciate your interest in helping with the Science Symposium! If you have any questions, please contact help@globe.gov or see the Science Symposium webpage at http://www.globe.gov/news-events/globe-events/virtual-conferences/2017-international-virtual-science-symposium

Your Name

Your answer
Mentors

Looking for a mentoring scientist? These scientists have volunteered to help! Are you a scientist and want to mentor students? Fill out the form on our Scientist Participation page.

Africa | Asia & Pacific | Europe & Eurasia | Latin America & Caribbean | Near East & North Africa | North America

Africa Region

Charles Mwangi, Nairobi, Kenya, maina.charles AT gmail.com, Atmosphere, Hydrosphere, Engineering, English

LAWANI Yliass Destin, Cotonou, Benin Republic, yliass AT gmail.com, Atmosphere, Biosphere, Hydrosphere, Pedosphere, Climate changes, French, English (writing)

Ayodeji Awodugb, Ogbomoso, Oyo State, Nigeria, aoawodugba AT lautech.edu.ng, Pedosphere, Soil, English

Asia and Pacific Region

Dr. Sunita Bai, Bhubaneswar, India, sunitabal2009 AT gmail.com, Atmosphere, Hydrosphere, Pedosphere, Pesticide analysis, Physical Organic Chemistry, Micellar catalysis, Pesticide analysis, Soil analysis, Wine analysis, English

Europe and Eurasia Region

Latin America and Caribbean Region

Ana B. Prieto, Junín de los Andes, Neuquén, Argentina, anabeatrizprieto AT gmail.com, Atmosphere, Biosphere, Hydrosphere, Pedosphere, Science Education- STEM, Spanish, English

Claudia Caro, Coimbra, Portugal, ccaro AT gmail.com, Biosphere- Ecology, English, Spanish, Portuguese

Virginia Aguilar, San José, Costa Rica, virginia.aguilar AT fcd.ac.cr, Hydrosphere, Hydrology and Oceanography, Spanish

Javier Sabas Francarci, Buenos Aires, Argentina, francarci AT stmary.edu.ar, Atmosphere, Hydrosphere, Spanish
Timeline

• Entries accepted starting in early 2017 (look for announcements)
• Projects Due: 03 April 2017
• Scoring & Comment Period: 23-29 April 2017
• Badges Announced: 15 May 2017
• Live Drawing: 15 May 2017
• GLOBE Annual Meeting: July/August 2017
Find info Online

http://www.globe.gov/science-symposium

GLOBE.gov ➔ News & Events ➔ Meetings & Symposia ➔ Virtual Science Symposia

Next: Badges Informational Webinar on 18 January 2017 at 1:00 pm ET
Questions? Comments?

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