

# SRS "DO" GUIDE

Based on the 2019 and 2022 Student Research Symposia Evaluation

## **ACTIVITIES**

- > STUDENTS: Enjoyed interacting with scientists the most, and sitting and listening to speakers the least.
- ➤ **TEACHERS:** Most satisfied with the review from scientists; least satisfied with keynote speakers, opening remarks, and evening activities, although still highly rated.

➤ DO Reduce the time students spend sitting and listening in favor of more active and hands-on learning experiences.



I enjoyed hearing someone's experience and I felt professional and important with the scientists.

- 2019 SRS Student

# **ACTIVITY SUGGESTIONS**

- ➤ Invest the most time in student activities we know to be greatest strengths of the GLOBE SRS:
  - Meeting scientists
  - Research presentations to reviewers
  - Review from scientists
  - Experiential science activities
- ➤ Other teachers suggested:
  - Organized icebreakers
  - Mixing up student teams for activities
- ➤ Example Activity: <u>GLOBECaching</u>

## SCIENCE CAREER

- ➤ HIGHLIGHT: Overall, the GLOBE SRS appear to be effectively improving students' science self-efficacy, building confidence in the science skills that are practiced at the event, and getting students excited about science.
- ➤ HOWEVER, "I want to have a career in science someday" averaged *below* "agree" at both pre-test and post-test in student surveys in 2019.
- ➤ Career talks make a difference. Average interest in a science career increased more than twice as much among students who attended events with a career talk (17%) than among students who attended events without a career talk (7%) in 2022.

- ➤ DO Showcase science-related jobs at the SRS.
- ➤ DO Make efforts to recruit diverse representation of teachers, scientists, and reviewers so that all students can see themselves as future science professionals.



I really enjoyed the feedback and criticism. I now know what to do better next time. ... Before this event, I thought scientists were old men. Now I know we have a lot more diversity in this area, it's truly inspiring!

- 2022 SRS Student

#### SCIENCE CAREER SUGGESTIONS

- ➤ Teachers suggested:
  - Opportunities for students to meet scientists and learn about their field of study
  - Introduction to the reviewers
  - Scientist presentations for the students

Example Scientist Panel

## RESOURCES

➤ Resources used by the greatest number of teachers and students in 2019 and 2022 were "Consultation/support from your local partnership" and "Science Practices resource pages." Both were rated helpful or very helpful by the majority (>79%) of teachers that used them.

➤ DO Continue building and strengthening regional partnerships.



## **RESOURCE SUGGESTIONS**

- ➤ Provide as much support for science engagement and experiential learning (mentoring, equipment grants, scholarships, etc.) as feasible to GLOBE low- and middle-income community partner schools, not just at the SRS, but throughout the year.
- Grant opportunities from YLACES
- Examples of local Symposia and Travel Support

## LOGISTICS

➤ Much of the constructive feedback from teachers and reviewers regarded event logistics.

- ➤ DO Plan out the details of scheduling, transportation, and accommodations as thoroughly and as early as possible.
- ➤ **DO** Provide as much information as possible to attendees.
- ➤ DO Stick to the advance plans as closely as possible.
- ➤ DO Communicate in advance with reviewers about expectations, reviewer role, and process. Plan a review schedule with organized rotation and flow to prevent delays and provide adequate time.



Modeling real conference relationship-building!
So powerful! ... I can say that
from initial review of field notes, youth definitely
made comments that
indicated at least some participants came away
valuing and understanding
relationships—with others, with self, with land
—as part of doing science.

-2022 SRS Reviewer

## LOGISTIC SUGGESTIONS

- > Provide:
  - Detailed information packet
  - Orientation for schedule and logistics
  - Reviewer orientation

- ➤ Example Logistics Letter
- ➤ Example <u>Agenda</u>
- Reviewer Overview Flyer

## TEACHER PROFESSIONAL DEVELOPMENT

➤ Teachers generally found the professional development useful, relevant, and interesting, and anticipated that it would help improve their teaching.

➤ DO Offer more teacher training on the GLOBE protocols and more options for teacher professional development.



Please provide GLOBE training. I would love to learn the protocols or more tips on how to facilitate projects, scientific writing.

-2019 SRS Teacher

## PD SUGGESTIONS

- ➤ Teachers suggested:
  - More professional development on GLOBE protocols and research
  - A sample class by a professor on GLOBE-related activities
  - More interactions with SMEs (subject matter experts) and GLOBE Partners
  - Materials loaded onto a flash drive
  - More time to network and chat with other educators about teaching "tricks" and strategies
- ➤ Example Professional Development: GLOBE Carbon Cycle <u>agenda</u> and <u>slides</u>.

#### LINKS TO EVALUATION AND SRS WEBPAGES:

- ➤ 2019 SRS Evaluation can be found here: <a href="www.globe.gov/web/">www.globe.gov/web/</a>
  <a href="united-states-of-america/home/student-research-symposia/">united-states-of-america/home/student-research-symposia/</a>
  <a href="mailto:media/publications">media/publications</a>
- ➤ 2022 SRS Evaluation summary can be found here: www.globe.gov/documents/14718/68789401/ NARM+SRS+Evaluation+11-3-22.pdf
- ➤ SRS Webpage: <u>www.globe.gov/srs</u>
  - Project Review Information: <u>www.globe.gov/web/united-</u> <u>states-of-america/home/student-research-symposia/rubrics</u>
  - Science Practices Pages: <u>www.globe.gov/web/united-states-of-america/home/student-research-symposia/teacher-resources/science-practices</u>