



Iowa State University • University of Iowa • University of Northern Iowa • Drake University

2019 Partner Schools Application Packet

The [Iowa Space Grant Consortium](#) (ISGC) announces a **new and exciting** change to this year's opportunity for Iowa educators. The ISGC sponsors Science, Technology, Engineering, and Math (STEM) school partnerships to help connect schools to learning opportunities that move the NASA mission forward and increase awareness of STEM careers, especially at NASA.

New & Revised: The program provides support for educator-teams and preservice STEM educators to attend exciting professional development (PD) to bring their experiences back to their classrooms, schools, and colleagues. This year, the program will provide funding to attend the [Space Exploration Educator's Conference \(SEEC\)](#) at Space Center Houston and NASA's Johnson Space Center in Houston, Texas. The conference will be February 7-9, 2019. Travel to Houston will be on February 6 with return on February 10 (based on flight availability). K-12 educators that apply to the SEEC (**at least one team member**) will be expected to apply for an additional opportunity, the **Spaceflight Operations Workshop (SOW)** ([click here for info](#)).

The SOW will be held at Iowa State University, tentatively scheduled for August 2-12, 2019. It engages educators and engineering students as teams to think and act like an astronaut. The program, in its sixth year, will immerse participants in a series of experiences and classroom activities that are a microcosm of the training NASA astronauts undergo to develop "operational thinking" necessary for space exploration. Participants learn to scuba dive and will receive scuba certification from the workshop. Also included are skydiving and wilderness training experiences. The 2018 workshop is described below from a press release, see pages 4-5. The workshop has a lab fee (approximately \$450) that is paid by participants, but is less than the cost of the scuba certification alone.

ISGC will provide registration, onsite travel, and housing for each participant for the SEEC. This does not include expenses for travel to and from the airport or those expenses incurred by the school district related to the teachers absence. Meal expenses incurred during travel, which are not included in the conference, will be the participant's responsibility. Baggage check fees are also not included.

All Partner School Teachers will be expected to participate in *The ISGC Academy* and provide two or more PD sessions for colleagues related to their sponsored experiences. (*The ISGC Academy* is the set of learning experiences conducted by Partners sharing their STEM-related learning to educators, students, and the public.) Participation can include providing teacher and student activities, hosting a NASA event, or other appropriate activities in Iowa. The *ISGC Academy* can be face-to-face or an on-line resource for educators, students, and the public. Presentations at professional meetings, in-district workshops, AEA courses, student events, and teacher/student workshops are a few suggested venues to fulfill this requirement.

Educator-teams are invited to review eligibility and, if interested, complete the application process. The application must be downloaded, and a hard copy printed for completion. Electronic form submission is not available. **Applications are due December 3, 2018.**

Applications will be reviewed with selections based on the following criteria:

- ◆ Application completed accurately and submitted by deadline
- ◆ Essay response
- ◆ Need
- ◆ Partnering plan
- ◆ Budget match (can be in-kind)

Eligibility:

Applicants that are in-service must apply in teams of at least two with a minimum of one educator teaching K-12 STEM. These partners may be teachers from the same district or others working in STEM education (i.e. 4-H educators, science museum staff, higher education science education faculty, or other creative partners) that will improve STEM learning. **Preservice educators may apply as part of a team or individually.** The applicants agree to conduct in-service training for their district as well as other educators from their area if any are interested in NASA educational materials and career information acquired at the SEEC. The district must agree to these stipulations, as well as provide time for the in-service. Applicant requirements:

- ◆ U.S. Citizen of the United States
- ◆ Employed in the State of Iowa as a K-12 educator*
- ◆ One year of experience in education*
- ◆ Employer agreement with support of Partner Schools requirements*

*Not applicable to preservice educators. See preservice instructions below.

Consideration:

This is a competitive process. The ISGC anticipates awards for eight teachers and will consider the following on applications:

- ◆ Ability to communicate understanding and commitment to the conference goals:
 - 1) To provide educators with the background and experience that will add to their knowledge base as an educator.
 - 2) To make connections between space science and school curriculum that will allow educators to enhance their instruction.
 - 3) To create a network of educators within the State of Iowa to act as space science resources for the STEM education community.

Deadline:

All applications must be **received** by 3:00 p.m. Friday, **December 3, 2018**. Notifications will sent by December 21, 2018.

- ◆ *Late applications will not be considered*
- ◆ Scan and e-mail to: isgc@iastate.edu
- ◆ Or mail to: **Jay Staker, Associate Director, ISGC
Iowa State University, Aerospace Engineering
1234 Howe Hall, 537 Bissell Road
Ames, IA 50011-1096**

The application packet is also available on the ISGC website at: www.iaspacegrant.org on the precollege page under FUNDING: <http://www.iaspacegrant.org/funding/precollege/>.

Space Exploration Educators Conference: *The ISGC Academy* February 7-9, 2019

Experience three days of complete immersion into the out-of-this world adventure of space exploration!

This conference is for grades kindergarten to 12th – and not just for science teachers! Space Center Houston strives to use space to teach across the curriculum. The activities presented can be used for science, language arts, mathematics, history, and more.

Attend sessions hosted by the actual scientists and engineers working on exciting endeavors like the International Space Station and explorations of Mars and the planets beyond. Hear from the astronauts leading the charge in exploration! Come learn about the bold vision to send humans back to the Moon and off to Mars! Attend sessions presented by educators and receive ready to implement classroom ideas and experience minds-on, hands-on fun. Network with fellow educators, take back a multitude of cross-curriculum ideas and activities and earn 24 hours of continuing professional education credit.

Learn more about SEEC at <https://spacecenter.org/educator-resources/teachers-seec/>

The ISGC will provide each participant with round-trip airfare, lodging, admission fees, and transportation for the duration of the conference.

Questions may be directed to isgc@iastate.edu or 515-294-3106.

Spaceflight Operations Workshop

Thinking and acting like an astronaut became daily life for a group of undergraduate students who are about to embark on an unforgettable journey with the Department of Aerospace Engineering's 2018 Spaceflight Operations Workshop.

The program, in its fifth year, ran from August 3-13, 2018, immersed participants in a series of experiences and classroom activities that are a microcosm of the training NASA astronauts undergo to develop "operational thinking" necessary for space exploration.



Scuba training in the workshop adds the benefit of certification for all participants.

Retired NASA astronaut, Iowa State alumnus and Distinguished Faculty Fellow in the Department of Aerospace Engineering Clayton Anderson, who developed and manages the program, says "Spaceflight Operations is a concept – it's a thought process. When you live and work as an astronaut, you think in an operational sense. The idea with this workshop is to change the students' way of thinking – to open their eyes to a way to think more operationally." There's no shortage of those eye-opening opportunities for participants. In a span of 12 days scuba diving training (which includes gaining certification), skydiving, flight simulation, wilderness preparedness training and more are all on the agenda. "We put them in some extreme environments, which is exactly what space travel is all about," says Anderson. There's also a healthy dose of classroom activities covering topics such as operations development (with Aerospace Engineering faculty member and former NASA flight director Tomas Gonzalez-Torres), leadership and teamwork, pilot performance, decision analysis, spacecraft control panel design, payload and science operations, astronaut training, and more.



Participants perform skydiving as part of the workshop curriculum.

A total of 12 students (divided into two crews of six to simulate the six-person crews aboard the International Space Station) will take part in the workshop. The crews are to be composed of a blend of engineering students and educators.

The benefits of the program are many. Department of Aerospace Engineering graduate student Tor Finseth, a co-developer of the program with Anderson, says, "This workshop is a chance for students to experience something hands-on. More than theory, it's a way to gain knowledge, understand and evaluate a situation and apply that knowledge in future situations. So when you are hired after graduating and go into industry, you have first-hand knowledge of how things work in practical situations." "This program develops leadership skills and teaches students how to work with teammates and take that mindset to tasks in school and with their future employers," adds Anderson.



Virtual Reality drills for space flight scenarios add another layer of realism to the workshop (Photo by Christopher Gannon, Iowa State University)

Preservice Application Process and Essays:

Preservice educators please complete the 2019 APPLICATION FOR ISGC Partner School Program Application for Applicant One or Preservice Educator. For “School” enter where you are enrolled in the education program. Then complete and attach answers to the following essay questions:

1. Please describe how you would use NASA’s vision and mission to enhance STEM learning in your teaching.

NASA Vision: *“To reach for new heights and reveal the unknown, so that what we do and learn will benefit all humankind.”*

NASA Mission: *“Drive advances in science, technology, and exploration to enhance knowledge, education, innovation, economic vitality, and stewardship of earth.”*

2. How would you use what you learn from this experience to provide PD for your fellow classmates and colleagues as a result of this conference?
3. NASA has emphasized reaching those who would not traditionally enter math, science, and engineering careers. How will you use this experience to reach those groups that are under-represented in these areas?

Questions may be directed to isgc@iastate.edu or 515-294-3106.

Preservice application checklist:

1. Page 8 – 2019 APPLICATION FOR ISGC Partner School Program
2. Page 12 – PERSONAL LETTER OF COMMITMENT
3. Page 14 – SOW LETTER OF COMMITMENT
4. Page 16 – PHOTOGRAPHY RELEASE FORM

In-Service Educator Application Process and Essays:

Please answer these (individually or as a team) and include them with the application.

1. Please attach a one-page outline of course material you teach during the school year.
2. Please describe how this PD experience will improve STEM opportunities for students.
3. Please describe the units or projects currently in your curriculum that relate to NASA's mission.

NASA Vision: *“To reach for new heights and reveal the unknown, so that what we do and learn will benefit all humankind.”*

NASA Mission: *“Drive advances in science, technology, and exploration to enhance knowledge, education, innovation, economic vitality, and stewardship of earth.”*

4. Please describe how you as a team would implement a plan to support your school as well as provide PD for your colleagues as a result of this conference.
5. NASA has emphasized reaching those who wouldn't traditionally enter math, science, and engineering careers. How will you use this experience to reach those groups that are under-represented in these areas?

In-Service Educator application checklist:

1. Page 8 – 2019 APPLICATION FOR ISGC Partner School Program (Applicant One)
2. Page 9 – 2019 APPLICATION FOR ISGC Partner School Program (Applicant Two)
3. Page 10 – School Information
4. Page 11 – INSTITUTIONAL LETTER OF COMMITMENT
5. Page 12 – PERSONAL LETTER OF COMMITMENT (Applicant One)
6. Page 13 – PERSONAL LETTER OF COMMITMENT (Applicant Two)
7. Page 14 – SOW LETTER OF COMMITMENT (Applicant One)
8. Page 15 – SOW LETTER OF COMMITMENT (Applicant Two)
9. Page 16 – PHOTOGRAPHY RELEASE FORM (Applicant One)
10. Page 17 – PHOTOGRAPHY RELEASE FORM (Applicant Two)

2019 APPLICATION FOR ISGC Partner School Program

Applicant One or Preservice Educator Name: _____

School Name: _____

School Address: _____ City: _____ State: _____ Zip: _____

Home Address: _____ City: _____ State: _____ Zip: _____

Primary Phone: _____ Primary E-mail Address: _____

Do you wish to receive information at your school or home address?

_____ School _____ Home

U.S. Citizen: Yes No School District % Free and Reduced Lunch _____%

Have you attended any other NASA educational events? Yes No

If yes, please list below:

| Workshop Title or Topic: | Month/Year: |
|--------------------------|-------------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

Completion of this section is voluntary.

This information is used to determine how well the program serves all segments of the diverse population.

Gender: Male Female Individual with Disabilities? Yes No

Race: African American Asian Caucasian Hispanic Pacific

Islander

Native American, Tribal Affiliation _____

Other _____

2019 APPLICATION FOR ISGC Partner School Program

Applicant Two Name: _____

School Name: _____

School Address: _____ City: _____ State: _____ Zip: _____

Home Address: _____ City: _____ State: _____ Zip: _____

Primary Phone: _____ Primary E-mail Address: _____

Do you wish to receive information at your school or home address?

_____ School _____ Home

U.S. Citizen: Yes No School District % Free and Reduced Lunch _____

Have you attended any other NASA Educational Events? Yes No

If yes, please list below:

| Workshop Title or Topic: | Month/Year: |
|--------------------------|-------------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

Completion of this section is voluntary.

This information is used to determine how well the program serves all segments of the diverse population.

Gender: Male Female Individual with Disabilities? Yes No

Race: African American Asian Caucasian Hispanic Pacific
Islander

Native American, Tribal Affiliation _____ Other _____

2019 APPLICATION FOR ISGC Partner School Program

School Information:

School Name: _____

School Address: _____ City: _____ State: _____ Zip: _____

School Phone: (_____)_____-____- School Fax: (_____)_____-____-

School District: _____

Principal's Name: _____

Administration Signature (Signature on the "institutional letter of commitment" on the following page indicates district support of the project including teacher team release time, substitute pay, and district support for follow-up in-service)

School Type (Mark all that apply):

Public Private Urban Suburban Rural

Current School year ends: Month: Select Month Day: _____ Year: _____

Grades and subjects, you currently teach: _____

Current position/title (Mark all that apply): Teacher Media Specialist Resource Teacher

Curriculum Specialist Other: _____

Length of Current Position: _____

In your current position, how many students do you teach in one school year? _____

INSTITUTIONAL LETTER OF COMMITMENT

To be completed by principal or supervisor.
(Please complete, sign, date, and either scan to pdf, or print to mail.)

Your endorsement of this PD opportunity for your employee is a key element to the effectiveness of the conference. The ISGC is confident that you and the applicant will both find the experience an excellent investment of time, focus, and energy. Please read the agreement and sign below.

I have reviewed this application and believe that *The ISGC Academy* will be a beneficial training experience for this applicant and our district and/or service area. If this applicant is selected, our school/agency is willing to support him or her in:

- implementing space-based science in the classroom,
- conducting an in-service during the current school year to our teaching community including other area schools,
- having year-round access to e-mail and the Internet, and
- providing release time with substitute for PD identified by the applicant based upon agreement of the ISGC.

Applicant One Name: _____
(please print)

Applicant Two Name: _____
(please print)

Principal/Supervisor Name: _____
(please print)

Phone Number: (____)____ - _____

I am authorized to make this commitment on behalf of my school district or agency.

Principal/Supervisor signature

Date

PERSONAL LETTER OF COMMITMENT: Applicant One

(Please complete, sign, date, and either scan to pdf, or print to mail.)

I, _____, am applying to enroll in the 2019 ISGC Partner School Program and wish to attend the selected PD, *The ISGC Academy*. The information in my application is accurate to the best of my knowledge. If selected as a Partner, I agree to commit myself, with the highest standards of my profession, to complete the following:

- Full attendance and participation in the selected PD.
- Conduct PD or student events for the STEM community to be completed before the end of the current school year.
- Submission of a final report of activity related to the project by June 15, 2019.
- Keeping ISGC up-to-date if there are any changes in my teaching assignment or contact information before I have completed my workshop commitments.

Signature of applicant one

Date

PERSONAL LETTER OF COMMITMENT: Applicant Two

(Please complete, sign, date, and either scan to pdf, or print to mail.)

I, _____, am applying to enroll in the 2019 ISGC Partner School Program and wish to attend the selected PD, *The ISGC Academy*. The information in my application is accurate to the best of my knowledge. If selected as a Partner, I agree to commit myself, with the highest standards of my profession, to complete the following:

- Full attendance and participation in the selected PD.
- Conduct PD or student events for the STEM community to be completed before the end of the current school year.
- Submission of a final report of activity related to the project by June 15, 2019.
- Keeping ISGC up-to-date if there are any changes in my teaching assignment or contact information before I have completed my workshop commitments.

Signature of applicant two

Date

**Spaceflight Operations Workshop LETTER OF COMMITMENT:
Applicant One**

(Please complete, sign, date, and either scan to pdf, or print to mail.)

Only available to preservice and in-service K-12 educators.

I, _____, am agreeing to apply to the 2019 ISGC Partner School Program and will apply* to the **Spaceflight Operations Workshop (SOW)**, and attend if selected, tentatively scheduled for August 2-12, 2019. The information in my application is accurate to the best of my knowledge.

Signature of applicant one

Date

*At least one team member must apply to the SOW.
Please add note for which team member/s plan to apply to the SOW.

**Spaceflight Operations Workshop LETTER OF COMMITMENT:
Applicant Two**

(Please complete, sign, date, and either scan to pdf, or print to mail.)

Only available to preservice and in-service K-12 educators.

I, _____, am agreeing to apply to the 2019 ISGC Partner School Program and will apply* to the **Spaceflight Operations Workshop (SOW)**, and attend if selected, tentatively scheduled for August 2-12, 2019. The information in my application is accurate to the best of my knowledge.

Signature of applicant two

Date

*At least one team member must apply to the SOW.
Please add note for which team member/s plan to apply to the SOW.

PHOTOGRAPHY RELEASE FORM: Applicant One

(Please complete, sign, date, and either scan to pdf, or print to mail.)

For good and valuable consideration, the receipt of which is hereby acknowledged, I hereby consent to the photographing of myself and the recording of my voice for the use of these photographs and/or recordings singularly or in conjunction with other photographs and/or recordings for advertising, publicity, or other business purposes. I understand that the term "photograph" as used herein encompasses both still photographs and motion picture footage. I also understand that others, with or without the consent of the Iowa Space Grant Consortium (ISGC) may use and/or reproduce such, photographs and recordings. I hereby release the ISGC and any of its associated or affiliated programs, their directors, officers, agents, employees and customers, and appointed advertising agencies, their directors, officers, agents and employees from all claims of every kind on account of such use.

Signature of applicant one

Date

PHOTOGRAPHY RELEASE FORM: Applicant Two

(Please complete, sign, date, and either scan to pdf, or print to mail.)

For good and valuable consideration, the receipt of which is hereby acknowledged, I hereby consent to the photographing of myself and the recording of my voice for the use of these photographs and/or recordings singularly or in conjunction with other photographs and/or recordings for advertising, publicity, or other business purposes. I understand that the term "photograph" as used herein encompasses both still photographs and motion picture footage. I also understand that others, with or without the consent of the Iowa Space Grant Consortium (ISGC) may use and/or reproduce such, photographs and recordings. I hereby release the ISGC and any of its associated or affiliated programs, their directors, officers, agents, employees and customers, and appointed advertising agencies, their directors, officers, agents and employees from all claims of every kind on account of such use.

Signature of applicant two

Date