

Interdisciplinary National Science Program Incorporating Research and Education Experience (INSPIRE)

At this time, NASA wishes to solicit comments, suggestions and innovative ideas from non-profit organizations, academic institutions and private industry for the implementation and management of the Interdisciplinary National Science Program Incorporating Research and Education Experience (INSPIRE) designed to encourage secondary school students to pursue education and careers in Science, Technology, Engineering and Mathematics (STEM) fields. INSPIRE is designed to be a student pipeline program to link NASA's elementary programs to university level programs.

NASA recognizes professional discipline organizations, industry partners, academic institutions, museums, science centers, and federal agencies invest in projects to enhance STEM education. Innovative approaches exist that includes digital, as well as more traditional channels, which have broad reach and impact from cost and scalability standpoint. As a result, NASA is also seeking potential sources of strategic partnerships, cooperative agreements, and entrepreneurial relationships to enhance the INSPIRE program and build upon existing programs that encourages secondary school students to pursue education and careers in STEM related fields.

A study is being funded that may influence INSPIRE's final design by leveraging on existing best practices from other similar successful programs.

A description of INSPIRE follows as it is currently envisioned.

1.0 Tier 1, INSPIRE Explorers

Using NASA mission developed content, INSPIRE Explorers are exposed to STEM/NASA-related careers through participation in four separate space-related "hand-on" workshops per academic year. Tier 1 targets underserved and underrepresented 7th through 10th graders with a demonstrated interest in STEM, with emphasis on family involvement and lifelong learning. Workshops would be conducted by experienced educators, and would consist of age appropriate activities that correlate to their curriculum. Workshops would provide opportunities to encourage learning and interaction between the student and their parent/guardian and be designed to enhance their understanding of the sciences and mathematics. Individual workshops providing separate information for students and parents would provide information and resources to help their pursuit of STEM education and careers. A separate workshop would be held for parents/guardians to provide information and resources to help prepare their student for college.

NASA is seeking suggestions and innovative ideas of how these activities could be conducted and what contractor support would be required. In addition, ideas to help nurture and build parent and student communities of practice are being sought.

2.0 Tier 2A, Collegiate Experience. Two-week residential experience

Students entering 11th grade will participate in a two-week, residential, short course in engineering at a partner college or university. This two-week experience will expose and encourage students to pursue careers in engineering, enhance study skills, enhance the study of mathematics, science and engineering, provide contact with engineers and engineering students who serve as positive role models and mentors, and build and enhance positive self-esteem. Twenty five students from each center would participate.

[NASA is looking at ways to partner with organizations affiliated with universities, or universities, to provide this experience.](#)

2.1 Tier 2B, Six-week Internship Experience

Students entering 11th grade participate in an inquiry-based, multifaceted, six-week, mentored research experience at a NASA Center or similar STEM facility such as a university or research lab.

[NASA is looking at ways to partner with organizations affiliated with universities, or universities, to provide this experience.](#)

3.0 Tier 3, Eight Week Internship Experience

Students entering 12th grade participate in an inquiry-based, multifaceted, eight-week, mentored research experience at a NASA Center or similar STEM facility such as a university or research lab.

[NASA is looking at ways to partner with organizations affiliated with universities, or universities, to provide this experience.](#)

NASA is seeking comments, suggestions and innovative ideas regarding the following issues:

As currently designed, participants would be underserved and underrepresented and limited to students within a 50 mile radius of each NASA center and the Jet Propulsion Laboratory in CA. It is envisioned participants would start in tier 1 and as satisfactory academic progress is made, be eligible to participate in subsequent tiers.

[Suggestions and innovative ideas on ways to expand and deliver the project outside the 50 mile radius that will, enable INSPIRE to be a truly national project is also sought.](#)

Education Framework and Metrics

NASA's Office of Education's "Education Strategic Framework" is a strategic management tool that allows the Agency to monitor participant movement through

education activities and aligns education programs to NASA's Strategic Plan. Inherent in the framework is the use of specific and measurable outcome metrics to conduct program evaluations.

Suggestions and ideas are being sought regarding what type of output and outcome measurements could be used in the evaluation of INSPIRE to demonstrate increases in the quality of the student's education and number of students pursuing STEM education and careers.