Introduction

The Iowa Science Foundation (ISF) provides funds for furthering science and science education in Iowa. The Foundation considers proposals for projects promoting the public understanding of science, science education, **AND** scientific research. The knowledge gained through projects sponsored by ISF is expected to improve science in Iowa.

Examples of projects eligible to receive funding include, but are not limited to, the following: museum exhibits, nature center programs, science teaching, basic research, curation of collections, conferences, curriculum projects, pilot programs, equipment, and cooperative arrangements (e.g., colleges and high schools; academic institutions and corporations).

Who May Submit

Any scientist or science teacher may submit a proposal. Student applications are not accepted.

Categories of Applicants

Proposals are to be submitted through the organization or institution with which the applicant is affiliated and must be submitted electronically.

1. **Academic Institutions**: persons employed by universities, colleges, and school districts may submit proposals.

2. **Nonprofit, nonacademic institutions**: ISF accepts proposals from independent museums, research laboratories, professional societies, and other similar organizations that are directly associated with educational or research activities.

3. **Independent Scientists in Iowa**: qualified scientists in Iowa who have no regular affiliations with institutions/agencies listed above must establish such an affiliation for purposes of managing ISF grant administration.

Electronic Submission Deadline: The deadline for electronic submission is no later than January 31. The e-mail must have a time stamp of before 11:59pm on January 31st and must be received by IAS by 5:00pm on February 1st. Late proposals will not be funded. Funds will not be available until July 1 of year the grant is made, provided the legislature allocates the funds for ISF grants. Applicants will be informed in late spring by the Executive Director of the Iowa Academy of Science on the decision on their grant proposal. Grantees of accepted proposals will receive a registry number. Any further communications about the proposal should be addressed to the Executive Director and include the ISF registry number.

Submission Process - There are three parts to the submission process:
1. **Online ISF Application/Cover Page submission:** Open http://www.iacad.org/research.html#isf in a browser. Click on the Iowa Science Foundation Online Application link. Complete and submit the application form. (This form serves as your proposal **Cover Page** & **Project Summary** and is used to generate the confirmation/authorization e-mail (explained in 3).
2. **Electronic submission of proposal narrative**: Proposal narratives should be sent to iascience@uni.edu. Only the following file formats are accepted (.pdf, .doc, .docx, .xls, & .xlsx). The proposal narrative includes: the Table of Contents, Project Description, Bibliography, and Biographical Sketches, Budget, & Facilities (see below). **This should include no more than 3 attachments.**
3. **Submission of Confirmation Email/Proposal Authorization form**: After you submit an online ISF Application, you will receive a confirmation email. Print your ISF Submission Confirmation Email and have this document signed by the project PI and an authorized representative of your organization (executive director, grants office, etc). Mail an original ink signed copy of this document to: ISF Grants, Iowa Academy of Science, BRC 50, University of Northern Iowa, Cedar Falls Iowa, 50614-0508 postmarked no later than February 7th.

Proposal Guidelines

The proposal should present:
1. The objectives and scientific significance of the proposed work;
2. A description of and justification for the methods or approach to be employed;
3. The qualifications of the project director and the grantee's affiliated organization or institution;
4. The amount of funding required;
5. An outline on how the attainment of each objective will be determined.

Since the proposal will compete with others, it should present the scientific or educational merit of the proposed project clearly and convincingly. The knowledge gained from the proposal must contribute to science in Iowa, it is important that the language of the Project Summary be understandable to the general public.

<u>**What to Submit**</u> - Proposals should cover the following points insofar as they are applicable.

1. **Cover Page**: Submitted electronically. The title of the proposed project should be brief, utilizing - understood scientific or educational terms suitable for use in the public press. ISF may consult with the applicant concerning the advisability of editing the title of a project before making an award. The proposed duration for which ISF support is requested should be no more than one fiscal year.

2. **Project Summary**: The proposal must contain a summary of the project (approximately 200 words) that must be suitable for publication at the discretion of the ISF Committee. This summary should be a statement of the project objectives, methods to be employed, and the significance of the proposed research to the advancement of science in Iowa. <u>It should be informative to other scientists in the same or related fields and, insofar as is possible,</u> <u>understandable by the lay reader</u>.

3. **Table of Contents**: A table of contents is required and should include the location of the: Project Description, Bibliography, Biographical Sketches, Budget, and Appendices.

4. **Project Description**: The project description should outline the general plan of work, including the broad design of activities to be undertaken and an adequate discussion of procedures. Any substantial collaboration with individuals not referred to in the budget should be described and documented with a letter from each collaborator. Brevity will facilitate effective review. **The project description should not exceed ten double-spaced pages. The project descriptions must be double-spaced.**

   The project description should be divided into the following subsections in so far as they are applicable:

   > **Summary of previous work**
   > **Objectives**
   > **Methods/Procedures**
   > **Equipment or materials**—*Equipment requests should thoroughly document how the equipment will be used, and to what advantage (i.e., how it will benefit public information, science education, or scientific research). Such proposals will be viewed more favorably if an evaluation plan for use of such equipment is included.*
   > **Significance**—*Describe how the results will be evaluated and disseminated and how they will benefit science or the public understanding of science in Iowa*.
   > **Previous ISF Support**—*The applicant must state whether or not they have received funding from the ISF within the last 5 years. If the applicant has received funding from ISF the applicant must describe the title of the funded project, the amount funded, and a lists of papers, manuscripts or presentations that resulted from this ISF funded project.*

5. **Bibliography**: a bibliography of pertinent literature is required. The bibliography should not exceed three pages.

6. **Biographical Sketches**: An abbreviated vita is required for each senior member of the project staff. This should include a list of the recent (within the last five years) and relevant publications and/or equivalent professional contributions such as presentations at professional meetings**. Each abbreviated vita is limited to three pages maximum.**

7. **Budget**: Proposals must contain a budget for the full term of requested ISF support. Proposals are limited to $5,000 of ISF support for a one-year period, July 1 to June 30. The proposal may request funds

considered necessary to perform the project including stipends paid to high school and undergraduate students engaged in the research project. No other salaries or stipends will be paid.

The ISF will not fund the following:

- Routine operational expenses of institutions or established programs
- Overhead by sponsoring agency or institution
- Salary of principal investigator and graduate students
- Tuition and fees for students
- Meeting expenses
- Page charges for publication of results

Questions regarding eligible reimbursements should be forwarded to the Iowa Academy of Science Executive Director.
Indicate any matching funds committed to this project by the institution or other partners. Charges cannot be made to a grant for costs associated with a project that were incurred before the effective starting date designated in the grant award letter. In unusual circumstances, however, pre-award costs may be allowed with prior ISF approval.

8. **Facilities**: An appendix to the proposal should describe available facilities and major items of equipment to be used in the project.

9. **Special Considerations - Research Projects**: Several situations require that special information and supporting documents be included in the proposal, normally in an appendix, before funding can be approved:

- Research that has an actual or potential impact on the environment.
- Research at a registered historic or cultural property.
- Research involving the use of recombinant DNA molecules generated *in vitro.*
- Research involving the use of such things as: human subjects, hazardous materials, laboratory animals, or endangered species. (Please submit any applicable forms used by your institution.)

Checklist for Proposal Submission

Complete proposals expedite the review process and assist the applicant in carrying out a planned program. To assure that research proposals submitted to the Foundation are complete, use this administrative checklist before mailing:

- ☐ Online ISF Application/Cover Sheet Submitted
- ☐ Project Summary (less than 200 words) - required (submitted with above)
- ☐ Table of Contents
- ☐ Detailed description of proposed project with applicable subsections **(10 pages maximum – double spaced required)**
- ☐ Bibliography of pertinent literature
- ☐ Biographical sketches of all senior personnel **(3 pages maximum/sketch)**
- ☐ Budget
- ☐ Brief description of available facilities and major items of equipment to be used in the proposed project **(no more than 3 attachments)**
- ☐ Confirmation Email/Authorized Signature Form. All required signatures (project director(s) organizational) on cover page or online application email
- ☐ Human Subjects Certification, if required
- ☐ Recombinant DNA Certification, if required
- ☐ IACUC Approval, if required
(original paper copies required for the above four sections, postmark deadline of February 7th for Authorized Signature Form and other required certifications only, all other parts of the proposal must be submitted electronically by 11:59pm January 31st.

Proposal Processing and Evaluation

All proposals are reviewed carefully by scientists serving on the ISF Committee. Peer reviews of each proposal will be sought by the Committee. The ISF Committee will make awards on behalf of the Foundation. When decisions are announced, the principal investigator or project director will be notified by e-mail. In order to provide for the fair and equitable selection of the most meritorious projects for support, the ISF has established criteria for evaluation of proposals. These are listed in the proposal evaluation form (Attachment 1).

Declinations, Returns, and Withdrawals

A declined proposal may be resubmitted for consideration only after it has undergone appropriate revision. ISF will treat the revised proposal as a new one and follow the usual review and evaluation procedures. An applicant whose proposal has been returned because it is inappropriate for consideration by ISF may also request reconsideration of this determination. An applicant may withdraw a proposal at any time before a final decision is made.

Grant Requirements and Reporting

Grants for financial assistance are subject to compliance with the laws of the State of Iowa. All grantees shall publish their results in the Journal of the Iowa Academy of Science (JIAS) and/or present their results as a paper delivered at the Annual Meeting of Iowa Academy of Science or the ISTS Fall Conference. JIAS publication fees are waived for ISF awardees.

Project directors are required to submit a technical progress report to ISF at times specified in the award letter. Such reports will usually be provided annually, although semi-annual reports may be required in some cases. The report should briefly summarize progress, identify any significant scientific developments, and describe any problems encountered. Within 90 days after the expiration of a grant, the grantee is required to submit a Final Project Report (Attachment 2).

Adherence to Original Objectives/Budget

Project directors may pursue important leads that arise during the conduct of a project. ISF support will not be jeopardized for the remainder of the grant period if a project director discontinues or modifies the originally-planned approach in favor of one that appears to have more promise. ISF must give prior approval, however, when a modification would result in a major deviation from the original project objective(s) or project scope, including activities specifically excluded from support when the award was negotiated. The grant proposal includes a budget that lists the items for which funds are provided. While the project director has reasonable flexibility to alter the direction of a project, prior approval is required for budgetary changes that deviate more than 15% from any line item.

Changes in Personnel

Written ISF approval is required for any change in project director(s). Further, ISF must be informed when it appears that a project director will devote substantially more or less effort to the work than described in the approved proposal.

Transfer of Principal Investigator

The ISF does not transfer grants from one institution to another. If a project director changes organizational affiliation, a new proposal may be initiated through the new organization, provided it is in the State of Iowa. The original grantee organization may terminate the grant or, when appropriate, propose a substitute project director to continue the research. ISF encourages the project director and the appropriate representatives of the grantee organization or the new organization to notify the Executive Director of the Academy well in advance of the anticipated departure.

Extensions

The project director may request, in writing, a one-time one-year extension of ISF grant funds. The request must explain why additional time is necessary and how the project will be completed in the additional time. Requests for extension should be received at least one month before the end of the granting period. The ISF

committee will approve extensions based upon the merit of the request and the availability of funding. Only approved extensions will receive funding after the original grant deadline.

Termination of Grants

Foundation grants may be terminated by the ISF Committee for reasonable cause. Grants also may be terminated by mutual agreement. Termination by mutual agreement shall not affect any financial commitment of grant funds that, in the judgment of the Foundation and grantee, had become firm before the effective date of the termination.

Reassignments of Funds

At the completion of each granting year (on or about July 1) the ISF committee may reassign unused/unclaimed funds to other worthy proposals. Projects that do not claim all funds or obtain approval for an extension before this time forfeit the remaining award. This does not free the project director from the obligations of the grant.

Software, Copyrights, and Patents

Grants for support of data banks or the creation of computer software of wide usefulness are subject to conditions reserving to the Foundation and to the general public certain rights of access to these data. The Foundation encourages the publication and distribution of the results of research performed under its grants, and expects the results to be generally available to the public. Usually, the results of research are published in scientific journals. The Foundation retains the right to use published materials and unpublished technical reports resulting from the performance of work under an ISF grant for government purposes. The Foundation may arrange for the dissemination of substantive technical reports if it is warranted by the circumstances.

If work conducted under an ISF-sponsored grant results in a patent, patent rights will be considered vested in the recipient of the grant. However, the ISF retains rights to the unlimited use of the patent for government purposes. Notification of potential patents should be incorporated in periodic or final project reports submitted to the ISF. If the grantee does not pursue patents within 60 days of these notifications, the ISF Committee has the option to pursue them.

Upon approval from the ISF Committee, written material prepared for the general public may be copyrighted by the grantee's institution. It is understood that such printed material will be made available to the public at or near cost; therefore, no stipulations are made concerning distribution of the proceeds resulting from sales.

Acknowledgment of Support and Disclaimer

Any publication, exhibit, publication, or special project supported by the Foundation must contain the following acknowledgment:

> *This _____ is made possible through a grant from the Iowa Science Foundation administered by the Iowa Academy of Science.*

All materials (except scientific articles or papers published in scientific journals) must contain the following statement:

> *Any opinions, findings, and conclusions or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the views of the Iowa Science Foundation.*

Iowa Science Foundation Proposal Evaluation Form
Attachment 1

CONFIDENTIAL

Project Registry Number:

Principal Investigator/Project Director:

Project Title:

Please review the proposal using the criteria listed below:

1.   Performance Competency
    -    Qualifications of project director/staff
    -    Adequacy of available resources
2.   Intrinsic Merit
    -    Has potential to increase public awareness and understanding of science; or
    -    Has potential to increase effectiveness of science teaching; or
    -    Likely to lead to new discoveries/advances, or have substantial impact on progress in the field.
    -    Does the project have particular implications for new or improved technology and/or does it assist with solving societal problems in Iowa?
3.   Soundness of Proposed Procedures
    -    Are procedures appropriate to solving the proposed problem?

Write any comments you might have in the space provided, and check the appropriate blanks giving your evaluation relative to the three major categories indicated in the table at the bottom of the page.

Comments: (Continue on reverse side as necessary)

_____

_____

	Qualifications of director; adequacy of resources	Intrinsic Merit	Soundness of proposal procedures
Excellent			
Good			
Average			
Below Average			
Poor			

Please return this form and the proposal by:

TO:

_____THANK YOU

PROJECT IDENTIFICATION INFORMATION

PROJECT TITLE

PROJECT REGISTRY NUMBER   AWARD AMOUNT

Institution Name & Address:

Select One:
☐ The Project has been/will be published in the Journal of the Iowa Academy of Science, Issue # _____
☐ The project was presented at the _____ (yr) IAS Annual Meeting
☐ The project was presented at the _____ (yr) ISTS Fall Conference

SUMMARY OF COMPLETED PROJECT (For Public Use) - Single Space

INSTRUCTIONS FOR FINAL PROJECT REPORT
This report is due within ninety (90) days after the expiration of the award. Two copies of the report should be submitted to:

>   Executive Director, Iowa Academy of Science
>   BRC 50
>   University of Northern Iowa
>   Cedar Falls, IA 50614-0508

The summary (about 200 words) must be self-contained and intelligible to a lay reader. Without restating the project title, it should begin with a topic sentence stating the project's major thesis. The summary should include, if pertinent to the project being described, the following items:

- The primary objectives and scope of the project
- The techniques or approaches used
- The findings or results stated

Authors should realize that the summary may be used to answer inquiries of non-scientists as to the nature and significance of the research. Scientific jargon and abbreviations should be avoided.

The nature of the final report narrative will be specified in the proposal and reiterated in the award letter. The type of report will vary with the nature of the project:

1. For publications (published and planned) include title, journal or other reference, data, and authors. Provide two copies of any reprints as they become available.
2. Material or information specifically required in the award letter (e.g., special technical reports or information on projects such as films, exhibits, workshops, or curricular materials).

These guidelines may be obtained through a written request to the Iowa Academy of Science (address above) or online at http://www.iacad.org (see Science Research).