Science Learning+ Partnership Grants

PROGRAM SOLICITATION
NSF 16-548

National Science Foundation

Directorate for Education & Human Resources
Research on Learning in Formal and Informal
Settings

Wellcome Trust, Education & Learning Department

U.K. Economic and Social Research Council

Full Proposal Deadline(s) (due by 5 p.m. proposer's local time):

June 14, 2016

IMPORTANT INFORMATION AND REVISION NOTES

Any proposal submitted in response to this solicitation should be submitted in accordance with the revised *NSF Proposal & Award Policies & Procedures Guide* (PAPPG) (NSF 16-1), which is effective for proposals submitted, or due, on or after January 25, 2016.

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

Science Learning+ Partnership Grants

Synopsis of Program:

Within the National Science Foundation (NSF) context, **Science Learning+** is a strand within project type 3, Research in Service to Practice, of the **Advancing Informal STEM Learning (AISL)** program (NSF 15-593).

Science Learning+ is an open call for proposals for Partnership Grants through an international partnership between the NSF and the Wellcome Trust with the UK Economic and Social Research Council (ESRC).

The aims of Science Learning+ are to strengthen the research and knowledge base; bridge the practice and research gap; and/or share knowledge and experience in informal science, technology, engineering and mathematics (STEM) experiences. Furthermore, the initiative seeks to support practice-based research which falls within or across the following priority areas: understanding learning; engagement in STEM; skills development; equity; diversity; access to informal learning settings; and measurement of outcomes.

Proposals must address at least one priority area and include: collaborations between at least one organization in the US and one in the UK/Republic of Ireland. In addition, the proposal should include a substantive research program, not solely a public engagement activity; genuine partnerships between researchers and practitioners of STEM engagement; experts from more than one STEM area; and more than one informal STEM learning location, platform, or environment. Proposers should submit a single, comprehensive proposal with two budget components, one for US activities and one for UK/Republic of Ireland activities, to NSF.

Cognizant Program Officer(s):

Please note that the following information is current at the time of publishing. See program website for any updates to the points of contact.

Proposers based in the US are encouraged to talk to the NSF Program Officers, while proposers based in the UK are encouraged to talk to the Wellcome Trust or ESRC Program Officers.

- Catherine Eberbach, telephone: (703) 292-4960, email: ceberbac@nsf.gov

- Ellen McCallie, telephone: (703) 292-5115, email: emccalli@nsf.gov

- Mat Hickman,Wellcome Trust, telephone: +44 (0)20 7611 8825, email: m.hickman@wellcome.ac.uk

- Ann Jeffcott,ESRC, telephone: +44 (0)17 9341 3023, email: ann.jeffcott@esrc.ac.uk

Applicable Catalog of Federal Domestic Assistance (CFDA) Number(s):

- 47.076 --- Education and Human Resources

Award Information

Anticipated Type of Award: Standard Grant or Continuing Grant

Estimated Number of Awards: 5
Pending availability of funds, it is anticipated that five Science Learning+ Partnership Grants will be made in FY 2017 (October 1, 2016-September 30, 2017). Projects may request start dates no earlier than January 2017.

While projects should submit a single, comprehensive proposal to NSF, it is anticipated that each Science Learning+ Partnership Grant will be comprised of two awards, one from NSF to the lead US organization, and one from the Wellcome Trust to the lead UK/Republic of Ireland organization. Grants from the Wellcome Trust will be made in accordance with the Wellcome Trust's policies and will include support from the ESRC.

Anticipated Funding Amount: $12,000,000
Total anticipated funding: $12 million/£7.5 million; that amount includes approximately $6,000,000 from NSF, dependent upon availability of appropriations, for new standard or continuing awards and up to £3,750,000 from the Wellcome Trust and ESRC. See instructions under sections *Budgets* and *Budgetary Information* for further details.

The maximum award size is $2.4 million/£1.5 million, with a duration of up to five years. For longitudinal studies, durations of greater than five years may be requested; the maximum award does not change.

Eligibility Information

Who May Submit Proposals:

> The categories of proposers eligible to submit proposals to the National Science Foundation are identified in the Grant Proposal Guide, Chapter I, Section E.

Who May Serve as PI:

> There are no restrictions or limits.

Limit on Number of Proposals per Organization:

> There are no restrictions or limits.

Limit on Number of Proposals per PI or Co-PI: 1

> Individuals are permitted to serve as PI or Co-PI on only one submitted proposal. They may serve in other capacities on additional proposals. In the Project Management section, each proposal should indicate one PI from the US and one PI from the UK/Republic of Ireland. If an individual is listed as a PI or Co-PI on more than one Science Learning+ proposal, the first proposal to be received by NSF will be accepted. All subsequent proposals in excess of the limit for any individual PI or Co-PI will be returned without review.

> While an individual may only serve as a PI or Co-PI on one Science Learning+ proposal, the number of Co-PIs on any one proposal from the US and UK is determined by the Grants Proposal Guide limits and based on the discretion of the respective PI organizations.

Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

- **Letters of Intent:** Not required

- **Preliminary Proposal Submission:** Not required

- **Full Proposals:**

  - Full Proposals submitted via FastLane: NSF Proposal and Award Policies and Procedures Guide, Part I: Grant Proposal Guide (GPG) Guidelines apply. The complete text of the GPG is available electronically on the NSF website at: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg.
  - Full Proposals submitted via Grants.gov: NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov Guidelines apply (Note: The NSF Grants.gov Application Guide is available on the Grants.gov website and on the NSF website at: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=grantsgovguide)

B. Budgetary Information

- **Cost Sharing Requirements:**

  Inclusion of voluntary committed cost sharing is prohibited.

- **Indirect Cost (F&A) Limitations:**

  Not Applicable

- **Other Budgetary Limitations:**

  Other budgetary limitations apply. Please see the full text of this solicitation for further information.

C. Due Dates

- **Full Proposal Deadline(s)** (due by 5 p.m. proposer's local time):

    June 14, 2016

Proposal Review Information Criteria

Merit Review Criteria:

National Science Board approved criteria. Additional merit review considerations apply. Please see the full text of this solicitation for further information.

Award Administration Information

Award Conditions:

Standard NSF award conditions apply.

Reporting Requirements:

Standard NSF reporting requirements apply.

TABLE OF CONTENTS

I. INTRODUCTION

Science Learning+ seeks to understand the impacts of informal science, technology, engineering, and mathematics (STEM) learning experiences, articulating what works, why, and in what contexts.

Almost any environment can result in informal STEM learning for young people from birth to age 19, including, but not limited to, exhibitions and programs in museums, zoos, aquaria, planetariums, nature centers, parks, libraries, and other environments; science communication; early childhood, after-school, and out-of-school time (OST) programs; radio, television, film, or media programs or series; Do-It-Yourself (DIY)/maker initiatives; research-related experiences such as citizen science; and on-line experiences (e.g., games, simulations, social media, mobile computing, distributed networks, and massive online open courses).

This Science Learning+ opportunity is established through an international partnership between the National Science Foundation (NSF) and the Wellcome Trust with the UK Economic and Social Research Council (ESRC). The goal of this joint funding effort is to make transformational steps toward improving the knowledge base and practices of informal STEM experiences to better understand, strengthen, and coordinate STEM engagement and learning. See the Resources section for links to previous Science Learning+ activities, relevant publications, and background information.

Science Learning+ seeks to reduce some of the barriers that researchers and practitioners may encounter to working internationally. For Science Learning+ Partnership Grants, US and UK/Republic of Ireland researchers and practitioners submit a single proposal that will undergo a single review process administered by NSF that includes reviewers with US, UK, Republic of Ireland, and/or international expertise.

The initial proposal idea may originate from PIs in either the US or UK/Republic of Ireland. However, the proposed project should, in the end, represent a strong collaborative effort. As such, the proposal narrative should describe the entire collaborative project, both

the US and UK/Republic of Ireland components of the project. Proposal foci should align specifically with at least one priority of Science Learning+.

NSF, the Wellcome Trust, and ESRC have all contributed to the design of Science Learning+ Partnership Grant requirements, solicitation, and review process. Through this collaboration, the three funders intend to share expertise in research and practice between the US and UK/Republic of Ireland. The positioning of Science Learning+ within the wider NSF AISL Program is to facilitate the most efficient mechanism for soliciting proposals and funding successful proposers. Proposers for Science Learning+ Partnership Grants are required to use NSF's application portals, Fastlane.gov or Grants.gov, to provide a single route for applications and reviews.

II. PROGRAM DESCRIPTION

Science Learning+ is a strand within project type 3, Research in Service to Practice, of the **Advancing Informal STEM Learning (AISL)** program (NSF 15-593).

Science Learning+ seeks to make a transformational step to improve the knowledge base and practice of informal science, technology, engineering and mathematics (STEM) experiences, to better understand, strengthen, and coordinate STEM engagement and learning. One of the key aims of Science Learning+ is to help facilitate relationships between those who deliver STEM public programs and engagement activities ("practitioners") and those who undertake research into those activities ("researchers").

The aims of Science Learning+ are to:

1. strengthen the research and knowledge base by:

- investigating the value, outcomes, and impacts of informal STEM experiences, especially upon young people from birth to age 19;
- developing theoretical understandings of the processes which lead to these outcomes and impacts;
- developing better methodologies to measure the impacts of informal STEM experiences, especially upon learning and mediation of learning; and
- building research capacity in informal STEM learning.

2. bridge the practice and research gap by:

- increasing partnerships, understanding, and influence between STEM education/learning researchers and practitioners;
- developing collaborations among institutions and individuals engaged in informal STEM experiences; and
- documenting and communicating the outcomes of research-practice collaborations, such that they inform and affect practice.

3. share knowledge and experience by:

- encouraging the sharing of knowledge and skills relating to informal science learning between researchers and practitioners, across different countries (particularly the US and UK/Republic of Ireland), and across different areas of research expertise.

Priority Areas

Science Learning+ seeks to support practice-based research which falls within or across the following priorities:

A. Understanding learning

- Builds a better theoretical understanding of the extent to which people learn STEM as a result of informal experiences and how this compares qualitatively and quantitatively with more formally acquired knowledge, skills, practices, interest, and identity.
- Explores how informal learning fits into the wider learning and educational environment, in understanding whether and how methods of teaching in informal settings work, and in recognizing whether there are informal learning methods which could benefit formal STEM education.
- Explores how people learn in different informal settings and with different practitioners and how the impact of such learning varies with participant characteristics (e.g. age, gender, prior STEM knowledge and expectations).

B. *Engagement in STEM*

- Seeks to understand how informal STEM experiences can spark people's desire to learn STEM in formal settings and beyond, convey information about possible careers in STEM, and improve STEM literacy more generally.
- Engages in research that explores potential negative impacts of informal STEM experiences (e.g. accentuating gender stereotypes or increasing the impact of social disadvantage) and how any such outcomes can be avoided.

C. Skills development

- Identifies how informal STEM learning experiences build learners' confidence, social and communication skills, and other inter- and intra-personal skills and competencies, and how these may vary with different participant characteristics and across different learning environments.
- Explores the skills development of practitioners and researchers in informal learning. There is interest in how to build stronger collaborations between informal STEM educators and STEM education researchers, especially in understanding how best to incorporate practitioner needs into research designs and how best to enhance practitioners' use of research to improve practice.

D. Equity, diversity and access to informal learning settings

- Investigates how informal STEM settings particularly attract and engage under-represented and/or under-served groups in STEM learning, including those young people who are not highly engaged in formal learning environments. Science Learning+ is interested in how informal experiences can act as a bridge to engage young people from lower socio-economic groups in STEM.

E. Measurement of outcomes

- Develops common instruments or ways to measure the outcomes of informal STEM learning. There is interest in developing and researching new tools and frameworks to enable the sector to better understand the impacts they have on learners.
- Explores how proximal outcomes from informal learning, such as observations of participants and results from post-visit

surveys, are linked to distal outcomes, such as increased attainment and progression, in STEM. Greater understanding of the links between proximal and distal outcomes might enable providers of informal learning to focus their evaluations on the proximal outcomes which are easier to measure.
- Examines the impact of informal STEM experiences through the exploration of large datasets.

Required components

In addition to addressing at least one Science Learning+ priority area, all Partnership Grant proposals must also include five required components:

1. International collaborations between individuals and/or organizations from the US and UK/Republic of Ireland that clearly demonstrate the nature and added value of the international collaboration;
2. Substantive research activity, not solely a public program or engagement activity and/or its evaluation;
3. Genuine partnerships between researchers and practitioners, such that the project is important and relevant to both research and practice;
4. Experts from different disciplinary areas, such as: researchers in science education; STEM professionals e.g., mathematicians, biologists, engineers or computer scientists in academia, industry, or other settings; and social scientists e.g., psychologists, learning scientists, cognitive scientists, or anthropologists; and
5. More than one informal STEM learning location, platform, or environment, such as focusing on multiple botanical gardens or examining the intersection of gaming and citizen science.

Resources

The following sites are potential resources for prospective PIs.

Background on Science Learning+ is available on the Wellcome Trust website: http://www.wellcome.ac.uk/slplus

The Wellcome Trust's Review of Informal Science Learning (http://www.wellcome.ac.uk/About-us/Publications/Reports/Education/WTP040865.htm). A subsequent publication from the authors of the review is:

Falk, J.H, L.D. Dierking, J. Osborne, M. Wenger, E. Dawson, and B. Wong. (2015). *Analyzing Science Education in the United Kingdom: Taking a System-Wide Approach.* Science Education*, 99(1)145–173.

Further guidance from ESRC on maximizing the impact of the project is available at http://www.esrc.ac.uk/research/evaluation-and-impact/what-is-impact/

The Center for Advancement of Informal Science Education (CAISE) provides resources for principal investigators, ISE professionals, and STEM researchers. See http://www.informalscience.org/projects/funding/nsf-aisl and http://www.informalscience.org/projects/funding/science-learning-plus.

III. AWARD INFORMATION

Pending availability of funds, it is anticipated that five Science Learning+ Partnership Grants will be made in FY 2017 (October 1, 2016-September 30, 2017). Projects may request start dates no earlier than January 2017. Total anticipated funding: $12 million/£7.5 million; that amount includes approximately $6,000,000 from NSF, dependent upon availability of appropriations, for new standard or continuing awards and up to £3,750,000 from the Wellcome Trust with ESRC. The maximum award size is $2.4 million/£1.5 million, with a duration of up to five years. For longitudinal studies, durations of greater than five years may be requested; the maximum award does not change. Note that NSF will fund both direct and indirect costs. The Wellcome Trust funds only direct costs; no indirect costs may be requested in the UK/Ireland budget to the Wellcome Trust.

A single project is anticipated to be comprised of two Partnership Grants, one from NSF, which will be awarded to the lead US organization, and one from the Wellcome Trust, which will be awarded to the lead UK/Republic of Ireland organization in accordance with the Wellcome Trust's policies. Grants from the Wellcome Trust will include support from the ESRC.

Estimated program budget, number of awards and average award size/duration are subject to the availability of funds.

IV. ELIGIBILITY INFORMATION

Who May Submit Proposals:

The categories of proposers eligible to submit proposals to the National Science Foundation are identified in the Grant Proposal Guide, Chapter I, Section E.

Who May Serve as PI:

There are no restrictions or limits.

Limit on Number of Proposals per Organization:

There are no restrictions or limits.

Limit on Number of Proposals per PI or Co-PI: 1

Individuals are permitted to serve as PI or Co-PI on only one submitted proposal. They may serve in other capacities on additional proposals. In the Project Management section, each proposal should indicate one PI from the US and one PI from the UK/Republic of Ireland. If an individual is listed as a PI or Co-PI on more than one Science Learning+ proposal, the first proposal to be received by NSF will be accepted. All subsequent proposals in excess of the limit for any individual PI or Co-PI will be returned without review.

While an individual may only serve as a PI or Co-PI on one Science Learning+ proposal, the number of Co-PIs on any one proposal from the US and UK is determined by the Grants Proposal Guide limits and based on the discretion of the respective PI organizations.

Additional Eligibility Info:

> Collaborative proposals to NSF must be submitted by a lead with subawards. Separately submitted collaborative proposals to NSF will be returned without review.

> The UK/Republic of Ireland teams of a Science Learning+ Partnership Grant should meet the Wellcome Trust's eligibility requirements and apply through an institution eligible to receive Wellcome Trust funding. Individuals based in the UK/Republic of Ireland and interested in applying to Science Learning+ are strongly encouraged to contact the cognizant Program Officer at the Wellcome Trust.

V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Full Proposal Preparation Instructions: Proposers may opt to submit proposals in response to this Program Solicitation via Grants.gov or via the NSF FastLane system.

- Full proposals submitted via FastLane: Proposals submitted in response to this program solicitation should be prepared and submitted in accordance with the general guidelines contained in the NSF Grant Proposal Guide (GPG). The complete text of the GPG is available electronically on the NSF website at: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg. Paper copies of the GPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from nsfpubs@nsf.gov. Proposers are reminded to identify this program solicitation number in the program solicitation block on the NSF Cover Sheet For Proposal to the National Science Foundation. Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.

- Full proposals submitted via Grants.gov: Proposals submitted in response to this program solicitation via Grants.gov should be prepared and submitted in accordance with the NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov. The complete text of the NSF Grants.gov Application Guide is available on the Grants.gov website and on the NSF website at: (https://www.nsf.gov/publications/pub_summ.jsp?ods_key=grantsgovguide). To obtain copies of the Application Guide and Application Forms Package, click on the Apply tab on the Grants.gov site, then click on the Apply Step 1: Download a Grant Application Package and Application Instructions link and enter the funding opportunity number, (the program solicitation number without the NSF prefix) and press the Download Package button. Paper copies of the Grants.gov Application Guide also may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from nsfpubs@nsf.gov.

See Chapter II.C.2 of the GPG for guidance on the required sections of a full research proposal submitted to NSF. Please note that the proposal preparation instructions provided in this program solicitation may deviate from the GPG instructions.

1. Cover Sheet

Proposers are reminded to include the number of this solicitation on the Cover Sheet. Failure to do so will delay processing of the proposal. (Grants.gov Users: The program solicitation number will be pre-populated by Grants.gov on the NSF Grant Proposal Cover Page).

The title of the proposed project should begin with "Science Learning+"

Collaborative proposals to NSF must be submitted by a lead with subawards. Separately submitted collaborative proposals to NSF will be returned without review.

It is assumed that proposals submitted to Science Learning+ have the potential for conducting research on human subjects. Proposers should refer to the NSF Grant Proposal Guide for information related to research on human subjects for the US component of the project and to http://www.wellcome.ac.uk/About-us/Policy/Policy-and-position-statements/WTP052064.htm for the UK/Republic of Ireland component of the project. ESRC's framework for Research Ethics can be found at http://www.esrc.ac.uk/funding/guidance-for-applicants/research-ethics/ and should be referred to for the UK component of the project.

2. Project Summary

Each proposal must submit a summary of the proposed project that is not more than one page in length. The Project Summary should be written in the third person, informative to other persons working in the same or related fields, and, insofar as possible, understandable to a scientifically or technically literate lay reader. It should describe the entire collaborative project, including both the US and UK/Republic of Ireland components. It should not be an abstract of the proposal.

The Project Summary consists of three sections:

(1) Overview

The first sentence must identify the project as Science Learning+.

The Overview includes a description of the activity that will result if the proposal is funded and a statement of objectives and methods to be employed.

(2) Intellectual Merit: a statement on the intellectual merit of the proposed activity

The statement on intellectual merit should describe the potential of the proposed activity to advance knowledge.

(3) Broader Impacts: a statement on the broader impacts of the proposed activity.

The statement on broader impacts should describe the potential of the proposed activity to benefit society and contribute to the achievement of specific, desired societal outcomes.

3. Project Description (Narrative)

In addition to the requirements outlined in the NSF Grant Proposal Guide (GPG) and this solicitation, the first sentence of the Project

Description, like the Project Summary, must identify the project as Science Learning+.

The proposal narrative should describe and refer to the entire collaborative project, both the US and UK/Republic of Ireland components of the project.

The narrative is limited to 15 single-spaced pages and should include the following information in section headings labeled A through E.

Please note that per guidance in the NSF Grant Proposal Guide GPG, the Project Description must contain, as a separate section within the narrative, a section labeled "Broader Impacts of the Proposed Work." This section should provide a discussion of the Broader Impacts of the proposed activities. Proposers may decide where to include this section within the Project Description (GPG, II C-2 d (i)).

A. Project Rationale

Provide a rationale for the project with respect to at least one Science Learning+ priority area.

Include a review of the literature and the underlying theoretical framework that informs the project and why the research is relevant and important to practice.

Results from prior support. Describe results of relevant prior NSF/Wellcome/ESRC support (within the past five years) for projects in which the PI or Co-PI have been involved, such that reviewers can judge the quality and impact of that work. Refer to the GPG for specifics about what must be included. Prior support is *not* a condition for applying to Science Learning+.

Please indicate if this proposal is based on a previous Science Learning+ Planning Grant. Preference is not given to recipients of Science Learning+ Planning Grants, however these proposers must indicate how the Planning Grant informed the development of the Partnership Grant proposal.

B. Project Design

Explain how the project will achieve its goals, based on Science Learning+ aims and priorities. Describe the research foci, area(s) of practice, methods and analyses, STEM content area(s), the multiple locations, platforms, or environments, and project deliverables.

Proposals should detail research methods, including qualitative, quantitative, or iterative design-based data collection and analysis plans, as appropriate. Projects may include qualitative or quantitative methods; involve methodological advances; develop or adapt assessment instruments or scales; use large databases; aggregate data across multiple or distributed settings; focus on post-hoc analyses of existing data; or conduct longitudinal studies that shed light on the impact of STEM learning activities on participants, institutions, or systems.

Science Learning+ encourages projects that provide research findings and recommendations, including academic, economic and social impact, that are useful for informal STEM education practitioners, researchers, and decision-makers.

Projects often include a number of research questions as well as a range of data to be collected and analyzed. To ensure clarity about the connections between the research questions, data, and analysis, proposers are encouraged to include a table summarizing this information.

C. Dissemination and Communication Plan

Science Learning+ proposals must include a creative communication strategy for dissemination of findings to professional and other interested communities including, where appropriate, practitioners, public audiences, other academics, and local, regional, national, and international decision makers and other user groups. Dissemination and communications may also include informing the development of policy and practice as well as contribute to the understanding of policy or economic issues. While the potential results of the proposed research are expected to be of sufficient significance to merit peer-reviewed and wide publication, approaches that reach broader audiences are strongly encouraged. Proposals should identify the key elements of a communication plan, e.g., target audiences and identification of the channels, media, and technologies appropriate for reaching relevant audiences.

D. External Feedback and Evaluation

For all projects, external feedback and evaluation processes are required components to achieve the following goals:

1. Ensure that the project gets appropriate, rigorous, external input throughout its life such that the quality of the project's research and development components improve as a result.

2. Ensure accountability. Processes should address questions such as: Is the project addressing the goals of the proposed project? What was the quality of the work?

Processes may include an external review panel, advisory group, and/or a third-party evaluator, as appropriate to achieving the project's goals and given the project's size and scope. The processes should be sufficiently independent and rigorous to (1) influence the project's activities at appropriate junctures in order to improve the quality of its findings and (2) near the completion of the project, determine if the project addressed its intended goals and comment on the quality of the project's work. Proposals should describe the expertise of those serving in these roles; explain how that expertise relates to the goals and objectives of the proposal; and specify how the PIs will incorporate results of the project's external, critical review process into the ongoing management of the project.

E. Project Management

Science Learning+ proposals should clearly demonstrate how the project maximizes the collaborative effort, including:

1. Describe the composition, experience, and expertise of the project's leadership team. The information provided should enable reviewers to judge the quality and capabilities of the project team as well as the nature and added value of the international collaboration between the US and the UK/Republic of Ireland.

2. Describe the key personnel, collaborators, advisory board members, consultants, and contractors. Include information on collaborations with individuals or groups connected to the proposal. Provide sufficient information such that reviewers may assess their potential contributions to the proposed work.

3. Explain the project's management plan and make clear how the project team will work collaboratively to achieve project outcomes.

4. Delineate a schedule or work plan with major milestones for key project tasks, indicating how the US and UK/Republic of Ireland components of the project align and integrate.

4. Budgets

All budget requests must be consistent with the project scope and duration. Each project is composed of two components: one for the US and one for the UK/Republic of Ireland. Together, the US and UK/Republic of Ireland project budgets should not exceed $2.4 million/£1.5 million.

For the US component of the project budget (supported by NSF):

1. All US budgets, both grantee and subaward budgets, must be in US dollars and be accompanied by budget justifications that include itemizations corresponding to each FastLane or Grants.gov budget line items and provide sufficient detail as to justify the expense and its relevance to achieving the project goals. Requested equipment must be essential components of project deliverables. **If personnel expenses are entered for postdoctoral scholars (section B of the budget) in the US portion of the budget, a one-page postdoctoral mentoring plan is required in the supplementary documents, otherwise the proposal will be returned without review (see GPG).**

2. Include under Travel (Line E on the FastLane budget and Field D on the Grants.gov budget) the cost for the US PI to attend a two-day meeting every other year at, or near, NSF.

3. Each subaward on Line G.5 (FastLane) or Field F.5 (Grants.gov) requires a complete set of proposal budget forms accompanied by a budget justification that includes the basis for selecting the subawardee, as well as itemization of expenses and explanations.

4. All PI organization and subaward budgets must apply their full federally approved indirect cost rate or apply a 10% *de minimus* rate. See GPG Chapter II.C.2.g.viii for further details.

For the UK/Republic of Ireland component of the project (supported by the Wellcome Trust/ESRC funds):

1. Proposers should familiarize themselves with the Wellcome Trust's policy on 'Full Economic Costs' and be aware of what costs the Wellcome Trust will or will not fund: http://www.wellcome.ac.uk/About-us/Policy/Policy-and-position-statements/WTX026852.htm.

2. Budgets should be in GBP and include all costs expected to be incurred, accompanied by a rationale for those costs. Indirect costs are not allowed.

3. Costs for the UK/Republic of Ireland component of the project should be entered offline onto the template form provided at http://www.wellcome.ac.uk/slplus. Once completed, the form should be save and sent to the US PI for inclusion as a Required Supplementary Document in the proposal. Full details on what is required can be obtained at http://www.wellcome.ac.uk/slplus.

4. The UK/Ireland PI should ensure that they contact the cognizant Program Officer at the Wellcome Trust to discuss the remit of their proposal.

5. The UK/Ireland PI is asked to include necessary travel costs to attend a two-day meeting every other year at, or near, NSF in the proposed budget.

6. As a key component of this solicitation is collaboration between the US and the UK/Republic of Ireland, **proposals that fail to upload a UK/Republic of Ireland budget as a Supplementary Document will be returned without review.**

5. Other Forms

Biographical Sketches: Sketches must be provided for PIs, Co-PIs, and other Senior Personnel. Sketches may not exceed two pages per person. These sketches may, but are not required to, follow the NSF prescribed format.

Current and Pending Support: Required for the US PI, Co-PIs, and senior project personnel. The proposal being submitted should be listed first and identified as pending.

Facilities, Equipment & Other Resources: In order to assess the scope of the project, all US organizational resources necessary for the project must be described in the Facilities, Equipment and Other Resources section (See the GPG Chapter II.C.2.i). The description should be narrative in nature and must not include any quantifiable financial information.

6. Supplementary Documents

Note: Supplementary Documents are distinct from Appendices, as stipulated in the Grant Proposal Guide: *Appendices may not be included* unless a formal deviation has been authorized. See GPG Chapter II.A for more information about deviations.

Required Supplementary Documents:

- Budget for the UK/Republic of Ireland portion of the application. **Proposals that fail to upload a UK/Republic of Ireland budget generated from the template form (provided at http://www.wellcome.ac.uk/slplus) as a Supplementary Document will be returned without review.**
- Data Management Plan: This should address both NSF and the Wellcome Trust requirements. The Wellcome Trust's policy on Data Management is set out at http://www.wellcome.ac.uk/About-us/Policy/Policy-and-position-statements/WTX035043.htm. The NSF-EHR requirements can be found at https://www.nsf.gov/bfa/dias/policy/dmp.jsp.
- Postdoctoral Researcher Mentoring Plan for US component (if applicable)

See the Grant Proposal Guide, Chapter II.C.2.j., for instructions for the preparation of these items.

Allowable Additional Supplementary Documents:

Letters of Collaboration from consultants, advisors, distributors, and organizational partners are allowed. They should indicate *their specific roles and duties in the project and their assurance to participate, if funded.* Only those directly involved in project activities may submit Letters of Collaboration. No other letters, such as Letters of Support or Endorsement, are allowed. In other words, if the person or organization writing a letter would not directly be involved in the implementation of the project, the letter should *not* be included in the proposal. **Proposals that include Letters of Support or Endorsement will be returned without review.**

Note: The 15-page Project Description must provide sufficient information for reviewers to make reasoned judgments about the proposed work. Reviewers may opt to read these Letters of Collaboration but are not required to do so.

B. Budgetary Information

Cost Sharing:

Inclusion of voluntary committed cost sharing is prohibited.

Other Budgetary Limitations:

This program does not support expenses for activities that are not integral to the conduct of the research and development efforts of the project. Examples typically include: capital or general operating expenses; purchase of major or office equipment; vehicles; undergraduate tuition; paid advertising; admissions or similar fees; operating costs for school field trips, camps, science festivals, science fairs or competitions; or writing or publishing of books.

Proposers should note that the NSF does not support projects whose primary focus is health or medicine. However, the Wellcome Trust does fund costs based upon activities that are linked to health and/or biomedical research.Proposers who are uncertain of whether their proposal would be eligible should contact the relevant national agencies for clarification.

C. Due Dates

- **Full Proposal Deadline(s)** (due by 5 p.m. proposer's local time):

    June 14, 2016

D. FastLane/Grants.gov Requirements

For Proposals Submitted Via FastLane:

To prepare and submit a proposal via FastLane, see detailed technical instructions available at: https://www.fastlane.nsf.gov/a1/newstan.htm. For FastLane user support, call the FastLane Help Desk at 1-800-673-6188 or e-mail fastlane@nsf.gov. The FastLane Help Desk answers general technical questions related to the use of the FastLane system. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this funding opportunity.

For Proposals Submitted Via Grants.gov:

Before using Grants.gov for the first time, each organization must register to create an institutional profile. Once registered, the applicant's organization can then apply for any federal grant on the Grants.gov website. Comprehensive information about using Grants.gov is available on the Grants.gov Applicant Resources webpage: http://www.grants.gov/web/grants/applicants.html. In addition, the NSF Grants.gov Application Guide (see link in Section V.A) provides instructions regarding the technical preparation of proposals via Grants.gov. For Grants.gov user support, contact the Grants.gov Contact Center at 1-800-518-4726 or by email: support@grants.gov. The Grants.gov Contact Center answers general technical questions related to the use of Grants.gov. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this solicitation.

Submitting the Proposal: Once all documents have been completed, the Authorized Organizational Representative (AOR) must submit the application to Grants.gov and verify the desired funding opportunity and agency to which the application is submitted. The AOR must then sign and submit the application to Grants.gov. The completed application will be transferred to the NSF FastLane system for further processing.

Proposers that submitted via FastLane are strongly encouraged to use FastLane to verify the status of their submission to NSF. For proposers that submitted via Grants.gov, until an application has been received and validated by NSF, the Authorized Organizational Representative may check the status of an application on Grants.gov. After proposers have received an e-mail notification from NSF, Research.gov should be used to check the status of an application.

VI. NSF PROPOSAL PROCESSING AND REVIEW PROCEDURES

For the Science Learning+ Partnership Grants, NSF and the Wellcome Trust with ESRC are using NSF's application portal to provide a single route for applications and reviews. NSF, the Wellcome Trust, and ESRC have all contributed to the design of Science Learning+, the solicitation, and the review process. Accordingly, the positioning of Science Learning+ within the wider AISL Program is to facilitate the most efficient mechanism for soliciting proposals and funding successful proposers.

Proposals received by NSF are assigned to the appropriate NSF program for acknowledgement and, if they meet NSF requirements, for review. All proposals are carefully reviewed by a scientist, engineer, or educator serving as an NSF Program Officer, and usually by three to ten other persons outside NSF either as *ad hoc* reviewers, panelists, or both, who are experts in the particular fields represented by the proposal. These reviewers are selected by Program Officers charged with oversight of the review process. Proposers are invited to suggest names of persons they believe are especially well qualified to review the proposal and/or persons they would prefer not review the proposal. These suggestions may serve as one source in the reviewer selection process at the Program Officer's discretion. Submission of such names, however, is optional. Care is taken to ensure that reviewers have no conflicts of interest with the proposal. In addition, Program Officers may obtain comments from site visits before recommending final action on proposals. Senior NSF staff further review recommendations for awards. A flowchart that depicts the entire NSF proposal and award process (and associated timeline) is included in the GPG as Exhibit III-1.

A comprehensive description of the Foundation's merit review process is available on the NSF website at: http://nsf.gov/bfa/dias/policy/merit_review/.

Proposers should also be aware of core strategies that are essential to the fulfillment of NSF's mission, as articulated in *Investing in Science, Engineering, and Education for the Nation's Future: NSF Strategic Plan for 2014-2018*. These strategies are integrated in the program planning and implementation process, of which proposal review is one part. NSF's mission is particularly well-implemented through the integration of research and education and broadening participation in NSF programs, projects, and activities.

One of the strategic objectives in support of NSF's mission is to foster integration of research and education through the programs, projects, and activities it supports at academic and research institutions. These institutions must recruit, train, and prepare a diverse STEM workforce to advance the frontiers of science and participate in the U.S. technology-based economy. NSF's contribution to the national innovation ecosystem is to provide cutting-edge research under the guidance of the Nation's most creative scientists and engineers. NSF also supports development of a strong science, technology, engineering, and mathematics (STEM) workforce by investing in building the knowledge that informs improvements in STEM teaching and learning.

NSF's mission calls for the broadening of opportunities and expanding participation of groups, institutions, and geographic regions that are underrepresented in STEM disciplines, which is essential to the health and vitality of science and engineering. NSF is committed to this principle of diversity and deems it central to the programs, projects, and activities it considers and supports.

A. Merit Review Principles and Criteria

The National Science Foundation strives to invest in a robust and diverse portfolio of projects that creates new knowledge and enables breakthroughs in understanding across all areas of science and engineering research and education. To identify which projects to support, NSF relies on a merit review process that incorporates consideration of both the technical aspects of a proposed project and its potential to contribute more broadly to advancing NSF's mission "to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense; and for other purposes." NSF makes every effort to conduct a fair, competitive, transparent merit review process for the selection of projects.

1. Merit Review Principles

These principles are to be given due diligence by PIs and organizations when preparing proposals and managing projects, by reviewers when reading and evaluating proposals, and by NSF program staff when determining whether or not to recommend proposals for funding and while overseeing awards. Given that NSF is the primary federal agency charged with nurturing and supporting excellence in basic research and education, the following three principles apply:

- All NSF projects should be of the highest quality and have the potential to advance, if not transform, the frontiers of knowledge.
- NSF projects, in the aggregate, should contribute more broadly to achieving societal goals. These "Broader Impacts" may be accomplished through the research itself, through activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to, the project. The project activities may be based on previously established and/or innovative methods and approaches, but in either case must be well justified.
- Meaningful assessment and evaluation of NSF funded projects should be based on appropriate metrics, keeping in mind the likely correlation between the effect of broader impacts and the resources provided to implement projects. If the size of the activity is limited, evaluation of that activity in isolation is not likely to be meaningful. Thus, assessing the effectiveness of these activities may best be done at a higher, more aggregated, level than the individual project.

With respect to the third principle, even if assessment of Broader Impacts outcomes for particular projects is done at an aggregated level, PIs are expected to be accountable for carrying out the activities described in the funded project. Thus, individual projects should include clearly stated goals, specific descriptions of the activities that the PI intends to do, and a plan in place to document the outputs of those activities.

These three merit review principles provide the basis for the merit review criteria, as well as a context within which the users of the criteria can better understand their intent.

2. Merit Review Criteria

All NSF proposals are evaluated through use of the two National Science Board approved merit review criteria. In some instances, however, NSF will employ additional criteria as required to highlight the specific objectives of certain programs and activities.

The two merit review criteria are listed below. **Both** criteria are to be given **full consideration** during the review and decision-making processes; each criterion is necessary but neither, by itself, is sufficient. Therefore, proposers must fully address both criteria. (GPG Chapter II.C.2.d.i. contains additional information for use by proposers in development of the Project Description section of the proposal.) Reviewers are strongly encouraged to review the criteria, including GPG Chapter II.C.2.d.i., prior to the review of a proposal.

When evaluating NSF proposals, reviewers will be asked to consider what the proposers want to do, why they want to do it, how they plan to do it, how they will know if they succeed, and what benefits could accrue if the project is successful. These issues apply both to the technical aspects of the proposal and the way in which the project may make broader contributions. To that end, reviewers will be asked to evaluate all proposals against two criteria:

- **Intellectual Merit:** The Intellectual Merit criterion encompasses the potential to advance knowledge; and
- **Broader Impacts:** The Broader Impacts criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes.

The following elements should be considered in the review for both criteria:

1. What is the potential for the proposed activity to
   a. Advance knowledge and understanding within its own field or across different fields (Intellectual Merit); and
   b. Benefit society or advance desired societal outcomes (Broader Impacts)?
2. To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
3. Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?
4. How well qualified is the individual, team, or organization to conduct the proposed activities?
5. Are there adequate resources available to the PI (either at the home organization or through collaborations) to carry out the proposed activities?

Broader impacts may be accomplished through the research itself, through the activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to, the project. NSF values the advancement of scientific knowledge and activities that contribute to achievement of societally relevant outcomes. Such outcomes include, but are not limited to: full participation of women, persons with disabilities, and underrepresented minorities in science, technology, engineering, and mathematics (STEM); improved STEM education and educator development at any level; increased public scientific literacy and public engagement with science and technology; improved well-being of individuals in society; development of a diverse, globally competitive STEM workforce; increased partnerships between academia, industry, and others; improved national security; increased economic competitiveness of the United States; and enhanced infrastructure for research and education.

Proposers are reminded that reviewers will also be asked to review the Data Management Plan and the Postdoctoral Researcher Mentoring Plan, as appropriate.

Additional Solicitation Specific Review Criteria

In addition to considering the two general NSF Merit Review Criteria, reviewers for Science Learning+ proposals will also be asked to evaluate the extent to which required SL+ components are included in the proposal.

B. Review and Selection Process

Proposals submitted in response to this program solicitation will be reviewed by

Ad hoc Review and/or Panel Review, or Reverse Site Review.

Science Learning+ seeks to reduce some of the barriers that researchers and practitioners may encounter when working internationally. For Science Learning+ Partnership Grants, US and UK/Republic of Ireland researchers and practitioners submit a single proposal that will undergo a single review process administered by NSF.

Proposals submitted to this solicitation will be reviewed alongside other Science Learning+ Partnership proposals. The review process may include Panel Review, Ad Hoc Review, and a Reverse Site Visit. The review process will include reviewers with US, UK, Republic of Ireland, and/or other international expertise.

Reviewers will be asked to evaluate proposals using two National Science Board approved merit review criteria and, if applicable, additional program specific criteria. A summary rating and accompanying narrative will generally be completed and submitted by each reviewer and/or panel.

For Science Learning+ proposals, the recommendations of the NSF Program Officer and unattributed reviews will be shared with a committee of representatives from NSF,the Wellcome Trust, and ESRC. This committee may review all submitted proposals.

NSF and the Wellcome Trust with ESRC intend to jointly decide on a set of approximately eight proposals to invite for Reverse Site Visits. For a Reverse Site Visit, PIs and project associates from both the UK/Republic of Ireland and US are invited to present to a panel of representatives of the three funders. Following the Reverse Site Visit, NSF and the Wellcome Trust with ESRC intend to jointly decide on a set of five proposals, pending availability of funds, for award recommendations.

After scientific, technical and programmatic review and consideration of appropriate factors, the NSF Program Officer recommends to the cognizant Division Director whether the proposal should be declined or recommended for award. NSF strives to be able to tell applicants whether their proposals have been declined or recommended for funding within six months. Large or particularly complex proposals or proposals from new awardees may require additional review and processing time. The time interval begins on the deadline or target date, or receipt date, whichever is later. The interval ends when the Division Director acts upon the Program Officer's recommendation.

After programmatic approval has been obtained, the proposals recommended for funding will be forwarded to the Division of Grants and Agreements for review of business, financial, and policy implications. After an administrative review has occurred, Grants and Agreements Officers perform the processing and issuance of a grant or other agreement. Proposers are cautioned that only a Grants and Agreements Officer may make commitments, obligations or awards on behalf of NSF or authorize the expenditure of funds. No commitment on the part of NSF should be inferred from technical or budgetary discussions with a NSF Program Officer. A Principal Investigator or organization that makes financial or personnel commitments in the absence of a grant or cooperative agreement signed by the NSF Grants and Agreements Officer does so at their own risk.

Once an award or declination decision has been made, Principal Investigators are provided feedback about their proposals. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers or any reviewer-identifying information, are sent to the Principal Investigator/Project Director by the Program Officer. In addition, the proposer will receive an explanation of the decision to award or decline funding.

Proposers are advised that all proposal documents submitted to NSF as well as unattributed peer reviews and panel summaries may be shared by secure online or digital communication among the funding partners: NSF, the Wellcome Trust, and ESRC.

VII. AWARD ADMINISTRATION INFORMATION

A. Notification of the Award

Notification of the award is made to *the submitting organization* by a Grants Officer in the Division of Grants and Agreements. Organizations whose proposals are declined will be advised as promptly as possible by the cognizant NSF Program administering the program. Verbatim copies of reviews, not including the identity of the reviewer, will be provided automatically to the Principal Investigator. (See Section VI.B. for additional information on the review process.)

B. Award Conditions

As a result of this competition, NSF and the Wellcome Trust with ESRC will each make their own awards. Project components funded by NSF or the Wellcome Trust with ESRC will be subject to their respective standard terms and conditions. Award letters will state that these activities were made possible by the NSF-Wellcome Trust-ESRC Memorandum of Understanding.

The UK PI of successful proposals, following peer review, must register on the Wellcome Trust Grant Tracker system (https://wtgrants.wellcome.ac.uk/) and add details of their final, agreed budget. The Wellcome Trust will be unable to award any grants until this step has been completed.

Science Learning+ Partnership Grants are expected to consist of two parts.

(a) The NSF award consists of: (1) the award notice, which includes any special provisions applicable to the award and any numbered amendments thereto; (2) the budget, which indicates the amounts, by categories of expense, on which NSF has based its support (or otherwise communicates any specific approvals or disapprovals of proposed expenditures); (3) the proposal referenced in the award notice; (4) the applicable award conditions, such as Grant General Conditions (GC-1)*; or Research Terms and Conditions* and (5) any announcement or other NSF issuance that may be incorporated by reference in the award notice. Cooperative agreements also are administered in accordance with NSF Cooperative Agreement Financial and Administrative Terms and Conditions (CA-FATC) and the applicable Programmatic Terms and Conditions. NSF awards are electronically signed by an NSF Grants and Agreements Officer and transmitted electronically to the organization via e-mail.

*These documents may be accessed electronically on NSF's Website at https://www.nsf.gov/awards/managing/award_conditions.jsp?

org=NSF. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from nsfpubs@nsf.gov.

More comprehensive information on NSF Award Conditions and other important information on the administration of NSF awards is contained in the NSF *Award & Administration Guide* (AAG) Chapter II, available electronically on the NSF Website at https://www.nsf.gov/publications/pub_summ.jsp?ods_key=aag.

(b) The Wellcome Trust award is subject to the Wellcome Trust's administration requirements as per its general Grant Conditions, available at http://www.wellcome.ac.uk/Managing-a-grant/.

C. Reporting Requirements

Given that each successful proposal is expected to result in two grants, one made by NSF and one by the Wellcome Trust with ESRC, there reporting requirements for each component follow.

(a) For the NSF component of a Science Learning+ Partnership Grant:

For all multi-year grants (including both standard and continuing grants), the Principal Investigator must submit an annual project report to the cognizant Program Officer no later than 90 days prior to the end of the current budget period. (Some programs or awards require submission of more frequent project reports). No later than 120 days following expiration of a grant, the PI also is required to submit a final project report, and a project outcomes report for the general public.

Failure to provide the required annual or final project reports, or the project outcomes report, will delay NSF review and processing of any future funding increments as well as any pending proposals for all identified PIs and co-PIs on a given award. PIs should examine the formats of the required reports in advance to assure availability of required data.

PIs are required to use NSF's electronic project-reporting system, available through Research.gov, for preparation and submission of annual and final project reports. Such reports provide information on accomplishments, project participants (individual and organizational), publications, and other specific products and impacts of the project. Submission of the report via Research.gov constitutes certification by the PI that the contents of the report are accurate and complete. The project outcomes report also must be prepared and submitted using Research.gov. This report serves as a brief summary, prepared specifically for the public, of the nature and outcomes of the project. This report will be posted on the NSF website exactly as it is submitted by the PI.

More comprehensive information on NSF Reporting Requirements and other important information on the administration of NSF awards is contained in the NSF *Award & Administration Guide* (AAG) Chapter II, available electronically on the NSF Website at https://www.nsf.gov/publications/pub_summ.jsp?ods_key=aag.

PIs are required to (1) post final evaluation reports or research/knowledge-building products of the project to the web site http://www.informalscience.org/ (or other sites designated by AISL) as part of submission of the Final Report and (2) provide project data via the AISL Online Project Monitoring System (OPMS). PIs may be requested to provide additional project data for AISL program analysis and evaluation.

(b) For the Wellcome Trust component of an award:

For the Wellcome Trust awards, grant holders will be required to follow the Wellcome Trust's end of grant guidelines, outlined at http://www.wellcome.ac.uk/Managing-a-grant/End-of-a-grant/index.htm.

The grant holder is encouraged to disseminate any results and outcomes of their work with a wide audience and especially the Science Learning+ community. This may include use of appropriate sharing platforms provided by the Wellcome Trust and its Science Learning+ collaborators. The results should be disseminated as soon as possible but in any event within six months of the end of the Grant Period unless there is good reason to delay dissemination, which the Wellcome Trust will not reasonably withhold. Unless otherwise agreed by the Wellcome Trust, the costs of dissemination of the results shall be included within the amount of the Grant.

The ESRC supports the UK Data Service (UKDS), which is responsible for the cataloguing and archiving of data. Further information on the UKDS is available at http://ukdataservice.ac.uk/. If your award will generate new datasets, you are requested to contact the UK Data Service (help@ukdataservice.ac.uk) to explore the possibility of data deposit. When contacting the UKDS, please make it clear that your award is partly funded by ESRC but is not subject to normal ESRC terms and conditions.

VIII. AGENCY CONTACTS

Please note that the program contact information is current at the time of publishing. See program website for any updates to the points of contact.

General inquiries regarding this program should be made to:

- Catherine Eberbach, telephone: (703) 292-4960, email: ceberbac@nsf.gov
- Ellen McCallie, telephone: (703) 292-5115, email: emccalli@nsf.gov
- Mat Hickman, Wellcome Trust, telephone: +44 (0)20 7611 8825, email: m.hickman@wellcome.ac.uk
- Ann Jeffcott, ESRC, telephone: +44 (0)17 9341 3023, email: ann.jeffcott@esrc.ac.uk

For questions related to the use of FastLane, contact:

- FastLane Help Desk, telephone: 1-800-673-6188; e-mail: fastlane@nsf.gov.

For questions relating to Grants.gov contact:

- Grants.gov Contact Center: If the Authorized Organizational Representatives (AOR) has not received a confirmation message from Grants.gov within 48 hours of submission of application, please contact via telephone: 1-800-518-4726; e-mail: support@grants.gov.

IX. OTHER INFORMATION

The NSF website provides the most comprehensive source of information on NSF Directorates (including contact information), programs and funding opportunities. Use of this website by potential proposers is strongly encouraged. In addition, "NSF Update" is an information-delivery system designed to keep potential proposers and other interested parties apprised of new NSF funding opportunities and publications, important changes in proposal and award policies and procedures, and upcoming NSF Grants Conferences. Subscribers are informed through e-mail or the user's Web browser each time new publications are issued that match their identified interests. "NSF Update" also is available on NSF's website.

Grants.gov provides an additional electronic capability to search for Federal government-wide grant opportunities. NSF funding opportunities may be accessed via this mechanism. Further information on Grants.gov may be obtained at http://www.grants.gov.

ABOUT THE WELCOME TRUST

The Wellcome Trust is dedicated to improving health for everyone, because good health makes life better. Wellcome's support for scientists, researchers and other creative people investigating great ideas helps to save and improve lives around the world.

People's lives and health are increasingly shaped by advances in science and medicine. Such advances are only possible through the knowledge and skills vested in people through their science education and learning.

The Wellcome Trust wants all young people to be inspired, motivated and well-informed when learning about science so that they can connect with science with confidence and with pleasure, use science to make sound choices about their own health and value scientific and medical research so it can prosper for future generations.

We are the Wellcome Trust, a global foundation dedicated to improving health for everyone.

We support great ideas from thousands of people, whether it's a scientist in Glasgow, an artist in Cape Town, an entrepreneur in Bangalore, a researcher in Ho Chi Minh City or a teacher in Belfast.

Our work is funded by investments that we manage ourselves. We work in partnership, connecting people and campaigning for change, to improve health around the world.

The Wellcome Trust is a charity registered in England and Wales, no. 210183.

ABOUT THE ECONOMIC AND SOCIAL RESEARCH COUNCIL

We are the UK's largest organisation for funding research on economic and social issues. We support independent, high quality research which has an impact on business, the public sector and the third sector. Our total budget for 2015/16 is £193 million. At any one time we support over 4,000 researchers and postgraduate students in academic institutions and independent research institutes.

We are a non-departmental public body (NDPB) established by Royal Charter in 1965 and receive most of our funding through the Department for Business, Innovation and Skills (BIS). Our research is vigorous and authoritative, as we support independent, high-quality, relevant social science.

We offer:

• Quality: All ESRC research awards are made in open competition, subject to transparent peer assessment at the outset and evaluation on completion. Rigorous standards are applied to all the training we support. Our research often involves multidisciplinary teams, collaboration with other councils, and frequently takes a long-term view. Our datasets, longitudinal and panel studies are internationally acclaimed resources.

• Impact: Our research makes a difference: it shapes public policies and makes businesses, voluntary bodies and other organisations more effective as well as shaping wider society. Our knowledge exchange schemes are carefully devised to maximise the economic and social impacts of the research that we fund.

• Independence: Although publicly funded, our Royal Charter emphasises the importance of independence and impartial research. We have no 'in-house' researchers, but distribute funds to academics in universities and other institutes throughout the UK.

Our role is to:

• promote and support, by any means, high-quality basic, strategic and applied research and related postgraduate training in the social sciences

• advance knowledge and provide trained social scientists who meet the needs of users and beneficiaries, thereby contributing to the economic competitiveness of the UK, the effectiveness of public services and policy, and the quality of life

• provide advice on, disseminate knowledge of and promote public understanding of, the social sciences.

ABOUT THE NATIONAL SCIENCE FOUNDATION

The National Science Foundation (NSF) is an independent Federal agency created by the National Science Foundation Act of 1950, as amended (42 USC 1861-75). The Act states the purpose of the NSF is "to promote the progress of science; [and] to advance the national health, prosperity, and welfare by supporting research and education in all fields of science and engineering."

NSF funds research and education in most fields of science and engineering. It does this through grants and cooperative agreements to more than 2,000 colleges, universities, K-12 school systems, businesses, informal science organizations and other research organizations throughout the US. The Foundation accounts for about one-fourth of Federal support to academic institutions for basic research.

NSF receives approximately 55,000 proposals each year for research, education and training projects, of which approximately 11,000 are funded. In addition, the Foundation receives several thousand applications for graduate and postdoctoral fellowships. The agency operates no laboratories itself but does support National Research Centers, user facilities, certain oceanographic vessels and Arctic and Antarctic research stations. The Foundation also supports cooperative research between universities and industry, US participation in international scientific and engineering efforts, and educational activities at every academic level.

Facilitation Awards for Scientists and Engineers with Disabilities provide funding for special assistance or equipment to enable persons with disabilities to work on NSF-supported projects. See Grant Proposal Guide Chapter II, Section D.2 for instructions regarding preparation of these types of proposals.

The National Science Foundation has Telephonic Device for the Deaf (TDD) and Federal Information Relay Service (FIRS) capabilities that enable individuals with hearing impairments to communicate with the Foundation about NSF programs, employment or general information. TDD may be accessed at (703) 292-5090 and (800) 281-8749, FIRS at (800) 877-8339.

The National Science Foundation Information Center may be reached at (703) 292-5111.

The National Science Foundation promotes and advances scientific progress in the United States by competitively awarding grants and cooperative agreements for research and education in the sciences, mathematics, and engineering.

To get the latest information about program deadlines, to download copies of NSF publications, and to access abstracts of awards, visit the NSF Website at https://www.nsf.gov

- **Location:**   4201 Wilson Blvd. Arlington, VA 22230

- **For General Information**   (703) 292-5111
  (NSF Information Center)**:**

- **TDD (for the hearing-impaired):** (703) 292-5090

- **To Order Publications or Forms:**

     Send an e-mail to: nsfpubs@nsf.gov

     or telephone: (703) 292-7827

- **To Locate NSF Employees:**   (703) 292-5111

PRIVACY ACT AND PUBLIC BURDEN STATEMENTS

The information requested on proposal forms and project reports is solicited under the authority of the National Science Foundation Act of 1950, as amended. The information on proposal forms will be used in connection with the selection of qualified proposals; and project reports submitted by awardees will be used for program evaluation and reporting within the Executive Branch and to Congress. The information requested may be disclosed to qualified reviewers and staff assistants as part of the proposal review process; to proposer institutions/grantees to provide or obtain data regarding the proposal review process, award decisions, or the administration of awards; to government contractors, experts, volunteers and researchers and educators as necessary to complete assigned work; to other government agencies or other entities needing information regarding applicants or nominees as part of a joint application review process, or in order to coordinate programs or policy; and to another Federal agency, court, or party in a court or Federal administrative proceeding if the government is a party. Information about Principal Investigators may be added to the Reviewer file and used to select potential candidates to serve as peer reviewers or advisory committee members. See Systems of Records, NSF-50, "Principal Investigator/Proposal File and Associated Records," 69 Federal Register 26410 (May 12, 2004), and NSF-51, "Reviewer/Proposal File and Associated Records," 69 Federal Register 26410 (May 12, 2004). Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of receiving an award.

An agency may not conduct or sponsor, and a person is not required to respond to, an information collection unless it displays a valid Office of Management and Budget (OMB) control number. The OMB control number for this collection is 3145-0058. Public reporting burden for this collection of information is estimated to average 120 hours per response, including the time for reviewing instructions. Send comments regarding the burden estimate and any other aspect of this collection of information, including suggestions for reducing this burden, to:

Suzanne H. Plimpton
Reports Clearance Officer
Office of the General Counsel
National Science Foundation
Arlington, VA 22230

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