General Programmatic Terms and Conditions (PTCs) for the Advancing Informal STEM Learning (AISL) (NSF 15-593) Cooperative Agreement(s)

NSF 15-593: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf15593

1. **Key Personnel.** Except for the Principal Investigator (PI) or Co-PIs identified in this award, requests to make any changes to personnel, organizations, and/or partnerships specifically named in the proposal, that have been approved as part of this award, shall be submitted in writing to the cognizant NSF Program Official for approval prior to any changes taking effect. Requests for prior approval of changes to the PI and Co-PIs must be submitted through FastLane for review by the cognizant NSF Program Official and approval by an NSF Grants Officer.

2. **Program/Project Description.** This award shall be for an Informal STEM Learning Resource Center (currently called the Center for Advancement of Informal Science Education – CAISE), a major asset that has been in operation since FY2007. It will benefit the following: the informal STEM learning (ISL) and science communication (SC) fields, NSF PIs and prospective PIs, targeted professionals (identified below), and the NSF Advancing Informal STEM Learning Program (AISL), as well as other NSF directorates and programs as appropriate.

- For the ISL and SC fields in general and for NSF PIs, potential PIs, ISL and SC researchers, evaluations and practitioners, CAISE will:
    - Build professional capacity, support continued professionalization, and provide resources that help characterize the state of the ISL and SC fields.
    - Differentiate itself from other professional organizations by working to foster a community-of-practice that bridges the many varied forms in which ISL and SC experiences are developed and delivered for audiences of all ages.
    - Further knowledge transfer between educational research, evaluation and practice and integrate resources to maximize accessibility.
    - Serve as a network and connectivity builder by organizing Task Forces, convening workshops and meetings on topics and themes of import, currency and critical mass within the AISL Program portfolio.
- For STEM researchers, education, communications and public outreach officers and program officers from other NSF directorates, CAISE will build strategic partnerships with ISL institutions, projects, and professionals and build capacity for stronger outreach, engagement, broadening participation and broader impacts efforts.
- For the NSF AISL Program and other NSF programs, CAISE will continue to iterate initiatives and activities in ways that help AISL and other NSF program officers understand the ISL and SC fields and, in particular, the AISL Program's portfolio and investments. CAISE will continue to convene workshops and meetings as appropriate to identify current themes, trends, and topics among AISL-funded projects in ways that will ISL and SC writ large.
- For other DRL Resource Centers: CAISE will collaborate with other DRL Resource Centers in ways that foster synergies among the centers and improve impacts on their targeted audiences.

- For all of the above audiences, CAISE will proactively include underserved and underrepresented groups and attend to important equity, diversity and inclusion needs in the ISL and SC fields.

3.   Project Governance.   The Awardee—Association of Science-Technology Centers (ASTC)—will ensure that an efficient and effective project governing structure is in place throughout the award period to support all critical or significant project activities. It will serve as the lead institution, providing the administrative infrastructure for *CAISE* and ensure efficient and effective performance of all project responsibilities by the governing components throughout the award period. The CAISE PI will work with the project Co-PIs to identify consultants and contractors to implement the Years 9 - 13 initiatives.

Awardee The ASTC Board holds legal and fiscal responsibility for the NSF award. The ASTC Chief Executive Officer is responsible to the ASTC Board for oversight of organizational services to CAISE and is the supervisor of Project PI.

The governing components of the project are:

Project PI: The PI administers the award in accordance with NSF policies and the Terms and Conditions of this Cooperative Agreement. The PI also makes operating decisions in consultation with the Co-PIs, Task-Force Advisors, Science Communication Liaisons, and staff. The PI oversees the planning and implementation of CAISE initiatives and activities in collaboration with the Co-PIs, consultants and contractors. As the CAISE Project Director, the PI is responsible for the day-to-day management, staffing, and resource allocation of CAISE, resulting in the development and delivery of services to the ISL and SC fields, PIs, and the AISL Program. The PI also prepares programmatic progress reports and expenditure reports for NSF and supervises CAISE staff.

Co-PIs/Research Partners: Co-PIs contribute to the planning, writing, and capacity-building activities described in the scope of work in the proposal and subsequent communications. With approval of the cognizant Program Official, starting in the first year of the cooperative agreement an additional co-PI may be added to the team for the purpose of strengthening the team's diversity and inclusion.

CAISE Cross-field Task Force Advisors: Provide strategic direction for development and operation of the Center and act in a leadership capacity overseeing Task Force operations. The Task Force Advisors meet virtually on a quarterly basis and confer with the PI and Co-PIs. They have two-year commitments that can be renewed. Changes to the Task Force Advisors will be made via communications with and mutual consent of the cognizant Program Official.

Science Communication Liaisons: These professionals will liaison with the science communication field around activities that strengthen connections between ISL and SC fields and that link with the on-going work of the Task Forces Changes to the Science Communication Liaisons will be made via communications with and mutual consent of the cognizant Program Official.

External Review Board (ERB): An external review board, meeting in person at least once per year, will provide input to the evaluation processes of CAISE, specifically by advising and evaluating CAISE with respect to the primary goal of strengthening and connecting the fields of ISL and SC. Changes to the ERB will be made via communications with and mutual consent of the cognizant Program Official.

Central Project Office (CPO) The CPO budget is managed by the awardee institution (ASTC). The CAISE PI and Co-PIs confer and collaborate on identifying and contracting ISL and SC professionals

to implement the CAISE initiatives, which are funded out of the CPO budget. The CPO is structured to provide opportunities to engage the ISL and SC fields for contract work as appropriate. As new activities are identified, prior approval of the application of these funds must be received from the cognizant NSF Program Official. These requests and approvals will be documented via email.

4.   Reporting Requirements. The Awardee will provide *ad hoc* and regular reports as designated by the NSF cognizant Program Official with content, format, and submission time line established by the NSF cognizant Program Official. The Awardee will submit all required reports via Research.gov using the appropriate reporting category; for any type of report not specifically mentioned in Research.gov, the Awardee will use the "Interim Reporting" function to submit reports.

The Awardee will cooperate with and provide data to any NSF-designated program evaluator. NSF may interview and administer surveys to CAISE or the field at-large to assess project performance.

Interim Reports: The PI will submit a semi-annual report that summarizes key accomplishments and identifies significant project schedule and budget variances. Furthermore, the Awardee must notify immediately the cognizant Program Official of any significant external or internal factors with potential to affect project management or outcomes negatively.

Annual Reports: The Awardee must submit an Annual Report at least 90 days prior to the end of each project year. It must include the status of project tasks and deliverables, discussion of progress against projected outcomes, as well as an analysis of project budget vs. actual expenses, accompanied by explanations of budget variances greater than 10% of a line item, lessons learned, and changes that will be made as a result. The Annual Report (or subsequent semi-annual report) must include a copy of the summary of the annual review conducted by the External Review Board (ERB) and any additional summative assessment required by the cognizant Program Official or recommended by the ERB.

Final Project Report: Within 120 days after expiration of the award, the Awardee is required to submit a Final Report. It must be accompanied by a summative evaluation that assesses and compares with projected outcomes the impacts on the ISE field, PIs and prospective PIs, and the ISE program.

5.   Awardee Support of Ongoing Management and Oversight. The Awardee will ensure full commitment and cooperation among the governing structure components, and all project staff during all ongoing NSF project management and oversight activities. The Awardee will ensure availability of all key institutional partners during any desk or on-site review as well as timely access to all project documentation.

Site Visits: NSF or its representatives may make site visits to the Awardee and other organizations participating or benefiting from the project. A Reverse Site Visit involving experts in informal science education will be held at NSF to review annual progress of CAISE prior to the close of each project year.

AISL Meetings: The PI/CAISE Director will meet at least monthly either face-to-face, virtually or via conference call with the cognizant Program Official and/or other NSF program officers to review progress of the project in achieving its impacts.

Communications: The Awardee will operate communications infrastructures to facilitate project management and timely sharing of information internally within the project team and externally with the ISE field. The CAISE web site will provide open access to project resources, facilitating wide dissemination of project deliverables, knowledge, and practice. Ongoing development and improvement of the site will be conducted with awareness of and alignment with other

complementary professional web infrastructure in the ISL and SC fields.

6. **Program-specific terms and conditions.**

Deliverables

Project deliverables will include, but are not limited to, the following:

A. Website: The website, www.informalscience.org, will continue as necessary to add new features and modify its design based on input from systematic user studies, from advisors and from timely consultation with or convenings of other field professionals engaged in website development, social media and related work as needed.

B. Cross-field Task Forces: CAISE will establish the following core cross-field task forces with representation from professionals in the ISL and SC fields. Changes to the number, composition and intent of these task forces will be made via communications with and mutual consent by the cognizant Program Official and others as needed.

   a. Research and Practice
   b. Broadening Participation/Broader Impact
   c. Evaluation and Measurement

C. Convenings: Convenings and related activities on topics of import, currency, and critical mass in the AISL Program portfolio. During the first year, NSF and CAISE will reassess whether and when CAISE might implement another AISL PI Meeting and any budgetary implications if it is decided to convene one or more.

D. Evaluation: CAISE staff, consultants, and an External Review Board will co-develop and continue to refine and adjust the evaluation plan that will be reviewed and approved by the NSF cognizant Program Official. The evaluation plan will attend to both macro-infrastructure impacts and to specific programmatic and associated activities. During the first year, and as necessary, in subsequent years, an IRB review process will reassess the status of any human subjects research implications for the evaluation plan and related activities. CAISE staff will implement aspects of the plan that do not compromise objectivity of data collection and analysis. A consulting team, approved by the cognizant Program Official, will provide general oversight of the evaluation processes and be the liaison between CAISE staff, Co-PIs and the External Review Board. The External Review Board will evaluate project processes, products and outcomes, providing guidance to CAISE staff who will implement procedures. Changes to these processes and participants will be made in consultation with the NSF cognizant Program Official.

In addition to the general NSF requirements for obtaining post-award approvals, any significant modifications to the project deliverables and/or budget must be approved in advance in writing by the cognizant Program Official.

Identity: CAISE shall continue to establish its own identity separate from ASTC in order to attract organizations and individuals from the informal STEM learning field who are not affiliated with science museums.

Synergistic Impacts: The grantee will seek synergies among the various project deliverables as well as with other NSF-funded projects, such as integration with the existing web site

www.informalscience.org, to achieve the greatest possible impact on the ISL and SC fields.

<u>Online Project Monitoring System:</u> As needed, CAISE will work with the NSF-designated contractor managing the AISL online project monitoring system (OPMS) to obtain information necessary for ongoing AISL program analysis.