

# AISL Project Type 1: Syntheses



### Reminders for AISL Solicitation 22-626

- Read the AISL solicitation (NSF 22-626) closely!
- Proposals should follow the NSF Proposal & Award Policies & Procedures Guide (PAPPG) (NSF 23-1)
- The annual AISL deadline is the second Wednesday of January at 5pm local time of the submitting institution
- Submit through <u>Research.gov</u> or <u>Grants.gov</u>
- Apply for a Unique Entity ID (UEI) from <u>SAM.gov</u> right away. It may take a while for new organizations to receive it.
- More resources are provided on https://www.informalscience.org/about-nsf-aisl-program



#### **AISL Goals**

- 1. Learning STEM in Informal Experiences and Environments
- 2. Advancing the Knowledge Base of Informal STEM Learning
- 3. Equity, Belonging, and Broadening Participation

  Goals 1, 2, & 3 are required for ALL proposals.
- 4. Intentionally Community/Practitioner Driven
- 5. Professional Capacity Building & Informal STEM Infrastructure
- 6. Support Learners' Participation in and Understanding of STEM practices

Goals 4, 5, & 6 depend on project type and focus.



## **AISL Project Types**

Project Type	Required AISL Goals	Budget Range	Duration in Years	Anticipated Number Funded (per year)
Type 1 - Synthesis	1, 2, 3	\$100,000-\$500,000	2 to 3	6-8
Type 2 - Conferences	1, 2, 3 & 5	\$75,000-\$250,000	1 to 2	10-15
Type 3 – Partnership Development & Planning	1, 2, 3 & 4	\$50,000-\$150,000	1 to 1.5	10-15
Type 4 – Integrating Research & Practice	1, 2, 3 & 4	\$250,000-\$2 Million	2 to 5	12-16
Type 5 – Research in Support of Wide-Reaching Public Engagement with STEM	1, 2, 3, 4 & 6	\$1 Million - \$3.5 Million	2 to 5	5-8



### **Project Type 1 - Synthesis**

Project Type	Required AISL Goals	Budget Range		Anticipated Number Funded (per year)
Type 1 - Synthesis	1, 2, 3	\$100,000- \$500,000	2 to 3	6-8

- Intent: Compile & integrate existing knowledge, practice and research findings to advance informal STEM learning
- How: Literature reviews, syntheses, meta-syntheses, and meta-analyses
- Deliverables: Evidence base for solutions or approaches, deeper understanding, new insights or questions



#### **Details to include**

- Amount, type and relevance of available literature to conduct synthesis work
- Literature selection process
- Systematic approach to structured literature reviews, syntheses, meta-synthesis, meta-analysis
- Quality, inclusion, & exclusion criteria
- Analytic approach
- Implications
- Limitations



### **Evaluation required for all AISL Projects**

All AISL project proposals are **required** to specify the evaluative processes they will use to achieve the following two goals:

- 1. Support iterative improvement. Evaluative processes should ensure that a project gets appropriate, rigorous, external input throughout the life of the project. Such input is essential for project monitoring, management, and continuous quality improvement. External feedback should enrich (and potentially challenge) teams' perspectives.
- 2. Promote accountability. Evaluative processes should address questions such as: Is the project addressing its stated goals? What is the quality of the work?

These requirements are consistent with the External Feedback component of the Common Guidelines for Educational Research and Development.



### Objectives of an evaluation may include

- Recommending adjustments to the project, process, or products
  - (e.g., attentiveness to equity, theory and methods implementation, management, etc.)
- Determining the effectiveness and impact of the products or processes
- Attesting to the integrity of outcomes reported by the project
- Assessing whether the project is making satisfactory progress toward its goals



### **Project Evaluation Elements**

Proposals should describe critical features of the evaluation:

- Evaluation goals and questions
- Rationale for the evaluation approaches taken
- Expertise of those responsible for evaluation
- Iterative improvement and accountability components
- How the project leadership will incorporate results into the project



### **Common Weaknesses of Synthesis Proposals**

Insufficient detail, rationale, and discussion of components...

#### Focus/rationale of project

- Why is a synthesis appropriate now?
- What is the value of a synthesis for the sector/area of ISE?
  - Practitioners? Researchers? Other?
- What are the systematic approaches being used to determine the literature available and included?
- Has the team determined if there is sufficient literature?
- What are the inclusion/exclusion criteria? Why?



### **Common Weaknesses of Synthesis Proposals**

#### How is equity being addressed?

• In the choice of topics? Guiding theory? Analytical approaches? How the work will inform the field?

#### What are the analytic approaches?

- What are the likely challenges?
- How will they be addressed?

#### How might possible findings inform the field?

• Why is this study relevant now? This circles back to the rationale for the project.

