**General Notes:**

**Medium RPP** proposals (maximum of $1,000,000 for up to 3 years, plus funds for embedded Research Experiences for Undergraduates supplements) are designed to support promising approaches and feasibility studies by a well-defined RPP team.

* For the **PreK-8 Strand**, the focus is on designing, developing, and piloting instructional materials that integrate CS and/or CT into preK-8 classrooms.
* For the **High School Strand**, the focus is on preparing and supporting teachers to teach rigorous CS courses.
* For **PreK-12 Pathways Strand**, the focus is on designing pathways that support school districts in developing policies and supports for incorporating CS and/or CT across all grades and potentially the transition into introductory levels at community or four-year institutions of higher education and/or the workforce.

PIs are cautioned that the Project Description must be self-contained, and that URLs **must not** be used

PROJECT SUMMARY

This is a separate, uploaded page. The limit is one page on this document

**Overview**

Must include:

* Proposal strand - Note - this is a change from earlier CSforAll solicitations, this is no longer **required** to be included in the **1st sentence**.
* Size class- Note - this is a change from earlier CSforAll solicitations, this is no longer **required** to be included in the **1st sentence**.
* School districts and other institutions involved in the project
* Intended population(s) to be served

**Keywords**: Word 1; Word 2;

Please provide between two and six sets of keywords at the end of the overview in the Project Summary. EDU and CISE personnel will use this information in implementing the merit review process. The keywords should describe the main scientific/engineering areas explored in the proposal. Keywords should be prefaced with "Keywords'' followed by a colon and should be separated by semicolons. Keywords should be of the type used to describe research in a journal submission and may include technical areas of expertise necessary to review the proposal.

**Intellectual Merit**

The statement on intellectual merit should describe the potential of the proposed activity to advance knowledge by including the (1) theoretical or theory-building approach, (2) research questions or problem statement, and (3) methodological approach.

**Broader Impacts**

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.

**NARRATIVE**

15pp begins here

The Project Description should provide a clear statement of the work to be undertaken and must include the objectives for the period of the proposed work and expected significance; the relationship of this work to the present state of knowledge in the field, as well as to work in progress by the PI under other support.

The Project Description should outline the general plan of work, including the broad design of activities to be undertaken, and, where appropriate, provide a clear description of experimental methods and procedures. Proposers should address what they 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. The project activities may be based on previously established and/or innovative methods and approaches, but in either case must be well justified. These issues apply to both the technical aspects of the proposal and the way in which the project may make broader contributions.

Reference the 2024 PAPPG ( [Proposal & Award Policies & Procedures Guide (PAPPG) (NSF 24-1) | NSF - National Science Foundation](https://new.nsf.gov/policies/pappg/24-1)) for full formatting details but, in general, there must be 1” margins, only certain fonts are allowed (some at 10 point, others at 11), spacing is “no more than six lines of text within a vertical space of 1 inch”, and paper size is standard letter. And these apply to ALL uploaded documents - not just your narrative.

Also, no embedded hyperlinks are allowable. Your documents will likely not upload if they are included. References must be handled in a References cited supplement attachment, not by embedded hyperlinks (nor is it necessary to utilize precious 15-page space on footnotes)

Significance

Make a case for the need for the project

* **Solicitation-specific merit review criteria**: Does the proposal identify the characteristics and needs of the intended population(s) to be served? (Be specific and refer to existing research on this population regarding your approach.)

Project Goal

How the development of the collaboration will have the potential to result in a future RPP with education researchers, experts in CS/CT and schools or districts

Work Plan: Objectives

Align these with your evaluation - what will you measure to show you have achieved your project goal?

Objectives should include those regarding the RPP outcomes.

The steps to build effective collaborations for achieving the project goals

Work Plan: The RPP Activities

* **Merit review criteria**: Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale?
* The steps and actions to further refine and develop the research question(s) and methods or design and development approaches, leveraging the expertise of the collaborators.(the FULL RPP - who has what role/responsibility/authority) specify jointly-developed research questions and document the investment of the partners in those questions;
	+ Describe your RPP and how they will work together on each activity There are many ways RPP teams can work together; however, central to the partnership is shared participation in rigorous research about problems of practice by all team members. Members of these teams *work together to iteratively define and refine common goals, research questions, metrics, and implementations.*They share a set of principles:
		- They are long-term collaborations;
		- They work toward educational improvement or equitable transformation;
		- They feature engagement of research with practice as a leading activity; and
		- They are intentionally organized to bring together a diversity of expertise.
* The contributions of collaborators representing multiple perspectives;
* **Solicitation specific merit review criteria:** Does the proposal include specific plans or strategies for addressing or accommodating the particular needs of participants of the intended population(s)? Address working with communities that support the full spectrum of diverse computing talent, including the participation of groups that have been traditionally underrepresented or under-served in computing; …providing concrete plans of action
* Delineate clearly the CS/CT content to be taught;
* Provide work plans for implementation, improvement, data collection, analysis, and use

Research Base

* RPPs involve a range of stakeholders in different stages of inquiry, and research findings from the field are translated into practical use
* Address working with communities that support the full spectrum of diverse computing talent, including the participation of groups that have been traditionally underrepresented or under-served in computing; demonstrating knowledge of the relevant literature on working with the identified communities

**Broader Impacts**

This section should provide a discussion of the broader impacts of 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 the 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 U.S.; use of science and technology to inform public policy; and enhanced infrastructure for research and education. These examples of societally relevant outcomes should not be considered either comprehensive or prescriptive. Proposers may include appropriate outcomes not covered by these examples.

Research Plan

Specify initial, jointly developed research questions and document the contribution of the partners to the proposed work to addressing those questions;

Projects in the RPP Strands should provide research results or findings on one or more of the following:

* strategies for improvement or implementation that address a shared goal of the researcher/practitioner collaborators;
* conceptual frameworks that address issues of scale, human capacity, and technical support for implementation and improvement in educational systems;
* measures of organizational learning that assess the progress of implementation and improvement;
* sustainable communities that can support implementation and improvement in the identified educational system; and/or
* documented practices with an ongoing forum for continued engagement of collaborators from various levels of the educational system.

**Evaluation Plan**

* **Medium size requires an external evaluator**
* Include plans for evaluating the success of the RPP itself.
* **Merit Review Criteria:** Does the plan incorporate a mechanism to assess success?
* Address working with communities that support the full spectrum of diverse computing talent, including the participation of groups that have been traditionally underrepresented or under-served in computing; demonstrating …clear metrics for documenting outcomes
* Draw from RPP literature on assessing/evaluating the quality of the partnership to articulate plans for assessing the success of the work of the RPP. Proposers may wish to consider resources on evaluating RPPs, such as: Henrick, E., Farrell, C.C., Singleton, C. Resnick, A.F., Penuel, W.R., Arce-Trigatti, P., Schmidt, D., Sexton, S., Stamatis, K., & Wellberg, S. (2023). *Indicators of research- practice partnership health and effectiveness: Updating the five dimensions framework*. National Center for Research in Policy and Practice and National Network of Education Research-Practice Partnerships.

**Medium** projects in the RPP Strands must include an evaluation plan that describes appropriate mechanisms to assess success through project-specific external review and feedback processes provided by an independent third party. All projects must have external, critical reviews of their designs and activities (including their theoretical frameworks, as well as data collection, analysis, and reporting plans). These might include an external review panel or advisory board proposed by the project or a third-party evaluator. The external critical review should be sufficiently independent and rigorous to influence the project's activities and improve the quality of its findings. Strong proposals will (1) describe the expertise of the individuals engaging in the external review; (2) explain how that expertise relates to the goals and objectives of the proposal; and (3) specify how the PI will report and use results of the project's external, critical review process. Proposers may wish to consider resources on evaluating RPPs, such as:

Henrick, E., Farrell, C.C., Singleton, C. Resnick, A.F., Penuel, W.R., Arce-Trigatti, P., Schmidt, D., Sexton, S., Stamatis, K., & Wellberg, S. (2023). *Indicators of research- practice partnership health and effectiveness: Updating the five dimensions framework*. National Center for Research in Policy and Practice and National Network of Education Research-Practice Partnerships.

Dissemination

There is no requirement for this section per se, but it will be hard to make a claim for intellectual merit if you are not intending to share what you learn. This should address multiple audiences who may be interested: STEM ed researchers, community members, other schools/districts, after school programs - think outside of the box here (and put money in the budget). If you are presenting at conferences - include BOTH research and practitioner focused conferences. Your dissemination should reflect core values: - of RPP (inclusivity of research AND practitioners) and of NSF, Knowledge mobilization - that is inclusiveness and value of the community you are serving.

Scaling and Sustainability

This is not a named section in the RFP, however, there is a strong expectation that projects at this class size have this planning in place. A competitive medium proposal will address these points.

Document the extent to which the approach has already scaled and its potential for further scaling;

**Results from Prior NSF Support**

If these results are directly related to the proposal, consider moving this much earlier in the narrative so that you can build upon it throughout.

The purpose of this section is to assist reviewers in assessing the quality of prior work conducted with prior or current NSF funding. If **any PI or co-PI** identified on the proposal has received prior NSF support including:

* an award with an end date in the past five years; or
* any current funding, including any no cost extensions

Information on the award is required **for each PI and co-PI**, regardless of whether the support was directly related to the proposal or not. In cases where the PI or any co-PI has received more than one award (excluding amendments to existing awards), they need only report on the one award that is most closely related to the proposal. Support means salary support, as well as any other funding awarded by NSF, including research, Graduate Research Fellowship, Major Research Instrumentation, conference, equipment, travel, and center awards, etc.

The following information must be provided:

* (a) the NSF award number, amount and period of support;

(b) the title of the project;

(c) a summary of the results of the completed work, including accomplishments, supported by the award. The results must be separately described under two distinct headings: Intellectual Merit and Broader Impacts;

(d) a listing of the publications resulting from the NSF award (a complete bibliographic citation for each publication must be provided either in this section or in the References Cited section of the proposal); if none, state “No publications were produced under this award.”

(e) evidence of research products and their availability, including, but not limited to: data, publications, samples, physical collections, software, and models, as described in any Data Management Plan; and

(f) if the proposal is for renewed support, a description of the relation of the completed work to the proposed work.

If the project was recently awarded and therefore no new results exist, describe the major goals and broader impacts of the project. Note that the proposal may contain up to five pages to describe the results. Results may be summarized in fewer than five pages, which would give the balance of the 15 pages for the Project Description.

Project Management Plan

Name the PI team and their individual responsibilities; recommend having AT LEAST one practitioner on the team. Lay out: How will you communicate? How often will you meet? If there are advisors or consultants, how will their input be accessed and used?

Describe the management and administrative structures with the capacity to administer the program

**Merit Review Criteria: H**ow well qualified is the individual, team, or organization to conduct the proposed activities address this with BRIEF bios here. Be strategic with space and know that you have the biosketches and synergistic activities to continue to make this case.

**Merit Review Criteria:** Are there adequate resources available to the PI (either at the home organization or through collaborations) to carry out the proposed activities? Some of this may be in this section as you discuss partners and what they bring - but use this space strategically in combination with your FEOR supplementary document where you can be more specific and detailed.