CALL FOR PROPOSALS
2022 NARST Annual International Conference
March 27-30, 2022
Vancouver, British Columbia, Canada

Table of Contents

95th NARST International Conference
March 27–30, 2022

UNITY & INCLUSION
for Global Scientific Literacy

INVITE as a community. UNITE as a community.

Vancouver, British Columbia, JW Marriott Parq

NARST 2022 Presidential Theme

I am pleased to announce the call for proposals for the 2022 NARST International Conference. We will gather in Vancouver, British Columbia, in the southwest region of Canada. We anticipate being able to offer virtual components to the conference in order to accommodate those who cannot travel. In whatever form the conference takes, *YOU ARE INVITED!*

I encourage everyone to consider the NARST Presidential theme throughout this year and in preparation for the conference. The theme for my Presidential year is: *Unity and Inclusion for Global Scientific Literacy: Invite as a Community. Unite as a Community*. There are many directions this theme can take, and that is by design. There are many meanings to global scientific literacy, unity, inclusion, and community. Let's explore these meanings and dig deeper into how our scholarship impacts these goals. Why is global scientific literacy important? How do we achieve global scientific literacy? We live in a time when science is central to life-threatening social issues (e.g. COVID, global climate change) as well as challenged through socio-political influences. Uniting science education and science communities, and actively pursuing inclusion of diverse voices that span cultures, ethnicities, races, and other identities, can move us toward the goal of scientific literacy. I pose several questions to the NARST community as we contemplate these issues. Consider broadly: **How do we, as scholars, teachers, and citizens, promote unity and inclusion in science and science education? What role and responsibilities does NARST have in the process?**

More specifically, to promote global scientific literacy:
In what ways can NARST unite as a research community? Why is unity important for our goals?
In what ways can NARST create a more inclusive research community? Why is inclusion important for our goals? These two questions require us to look inward, at our own community, and ask, "does everyone have a sense of belonging?" NARST, like many academic communities, can be seen as an exclusive club; tough to break into; challenging for newcomers to find their place. NARST has made progress over the last few years, but there is still work to do. One of my goals is to create welcoming spaces and opportunities that lead to growth and productive dialogue.

In what ways can NARST promote unity with respect to the scientific community? What is NARST's responsibility toward the public image of science? I ask you to consider how we communicate what science is and the practices of scientists in generating valid claims. Scientists do not have to agree on everything, yet such discussions often taint the public image of science with mistrust. As scholars and teachers, we have a responsibility to help the public understand the nature of scientific knowledge and the processes by which that knowledge is generated. What is our role toward building trust in science

In what ways can NARST promote inclusion in the scientific community? I ask you to consider who is invited into the scientific community? Who decides? As scholars, what questions are, and should, we pursue that disrupt exclusionary images of science? How are we uniting as upstanders, not bystanders, to address issues of racial inequities and social injustices related to science?

As I think about "invite as a community," I think about what I try to do when inviting people to my home. I truly want them to feel welcomed and included. NARST is our academic home. Let's send invitations to teachers, scientists, and scholars. Not only do we value diverse voices, NARST *needs* diverse voices. Our message must be: We welcome you to our home. We value your voice, your perspective, and the opportunity to learn with you.

As I think about how we "unite as a community," I have great anticipation for NARST 2022. We will gather in person for the first time after three years. I reflect on the immense losses we've experienced during this time. Gathering together will be bittersweet, as some familiar faces will be absent, but never forgotten. Let's look to NARST 2022 as a time to reunite with old friends, make new friends, laugh, share, and celebrate the richness of our professional and personal connections. Vancouver, BC is waiting for us. *You are invited!*

It is not the responsibility of the people who are targets of unjust treatment to build a table and invite others in for a conversation, it is the responsibility of all of us. - Brene' Brown

Renée Schwartz
NARST President

Program Strands

The 2022 NARST program will feature sessions focused on 14 Program Strands and delivered in several session formats. Persons wishing to be on the program must identify the *Strand* that most closely aligns with their proposed topic. The 14 NARST Strands and their descriptions are listed in the following table:

2022 NARST Strands and Descriptions

Strand 1. Science Learning: Development of Student Understanding How students learn from a variety of theoretical perspectives
Strand 2. Science Learning: Contexts, Characteristics, and Interactions Learning environments, teacher-student and student-student interactions, and factors related to and/or affecting learning
Strand 3. Science Teaching--Primary School (Grades preK-6): Characteristics and Strategies Teacher cognition, content knowledge, pedagogical knowledge, pedagogical content knowledge, instructional materials, and strategies
Strand 4. Science Teaching--Middle and High School (Grades 5-12): Characteristics and Strategies Teacher cognition; content knowledge, pedagogical knowledge, pedagogical content knowledge, and instructional materials and strategies.
Strand 5. College Science Teaching and Learning (Grades 13-20) Instructor cognition, content knowledge, pedagogical knowledge, pedagogical content knowledge, student understanding and learning, and conceptual change at postsecondary level
Strand 6. Science Learning in Informal Contexts Learning and teaching in museums, outdoor settings, community programs, communications media, and after-school programs
Strand 7. Pre-service Science Teacher Education Pre-service professional development of teachers, pre-service teacher education programs and policy, field experience, and issues related to pre-service teacher education reform
Strand 8. In-service Science Teacher Education Continuing professional development of teachers, in-service teacher education programs and policy, and issues related to in-service teacher education reform
Strand 9 *Dissolved (approved by Board March 15, 2020)*
Strand 10. Curriculum and Assessment Development, implementation, dissemination, and evaluation of curriculum. Development and validation of assessments, including alternative forms of assessment of teaching and learning
Strand 11. Cultural, Social, and Gender Issues Equity and diversity issues: sociocultural, multicultural, bilingual, racial/ethnic, and gender equity studies
Strand 12. Technology for Teaching, Learning, and Research Advancing applications of technology and digital tools to promote teaching, learning, and research
Strand 13. History, Philosophy, Sociology, and Nature of Science Historical, philosophical, and social issues of science as related to science education
Strand 14. Environmental Education and Sustainability Education related to Earth and environmental systems, ecology, environmental science literacy, experiential learning, health, indigenous education, place-based, public participation in science (citizen science), responsible citizenship, socioscientific issues, and sustainability and sustainable development
Strand 15. Policy, Reform, and Program Evaluation The construction, interpretation, and implementation of science education policies and reforms at the local, regional, national, or international levels

Program Presentation Formats

Stand-Alone Paper *by individual author or co-authors.*
Traditional presentation format allows for 15-20 minutes of individual presentation time in a theater-style setting. Typically, four papers are scheduled per session for 90 minutes total and will be grouped by Strand co-coordinators by theme.

Related Paper Set *by multiple authors or co-author groups.*
Groups of authors/co-authors must submit a set of four to five papers for presentation in a single 90-minute time block in the program. The proposal must show clearly the topic focus of the set. Papers within a set will be judged holistically. The group submitting the set will be required to identify their own presider (and possible discussant) for the session and will decide on the time allocations within the 90-minute block for presentations and discussion.

Interactive Poster Paper *by individual or co-authors.*
A single author or a group of co-authors may prepare a paper for presentation in an interactive poster format. Authors are required to have copies of their paper available for dissemination. Poster presenters will be grouped with other poster presenters from the same Strand for a 90-minute time block. Many posters will be scheduled at the same time, so individuals can interact with the presenters, and move to other posters in the same session.

Symposium *by multiple presenters.*
Groups of participants may propose a symposium on a topic or issue. The proposal must involve four to ten participants and explicitly relate to the Strand title and description. The goals of the symposium should be clear and focused, as should the role of each participant and their topic. Symposium sessions will have a 90-minute time block in the program. Symposium proposals must be submitted as a single document; they may not contain individual papers. The group submitting the proposal will be required to identify their own presider (and possible discussant) for the session and will decide on the time allocations within the 90-minute block for presentations and discussion. Representation from multiple contexts and countries is encouraged.

Roundtables
Roundtable sessions allow maximum interaction among presenters and with attendees. Papers accepted for a roundtable session will be grouped into tables with three to four papers per table, clustered around shared interests. The roundtable session will be scheduled for a 60-minute time slot with roundtable presenters proceeding according to guidelines distributed at the roundtable sessions. No additional audiovisual equipment, such as a screen or LCD projector, is provided. Authors wishing to display information may do so from their own laptop computer screens or distribute handouts. Please note that no power source will be provided.

Virtual Sessions
The NARST 2022 conference is being planned as an in person event, with consideration for possible virtual options. If you would like for your proposal to be considered for a virtual presentation, you will indicate this within the proposal submission form. All the above listed session formats may be considered for virtual sessions, but the time allotments may differ. We are not able to guarantee virtual or hybrid sessions to accommodate all requests.

The Co-Chairs of the Program Committee Renée Schwartz, NARST President, and Gillian Roehrig, NARST President-Elect, have the final decision in the assignment of presentation format; they may place proposed presentations into session types for which they were not submitted. If the proposer does not want the format assigned, the proposer will have the opportunity to withdraw the proposal.

Proposal Types: Empirical Research or Theoretical/Position

You will be asked to indicate if your proposal is a research paper or a theoretical paper. A **Research** paper reports on completed empirical study. Works in progress that do not have sufficient data to address the research questions at the time of proposal submission should not be submitted. A **Theoretical** paper can be a literature review, an evidence-based position paper, or a paper that presents an original perspective on a theoretical and/or conceptual framework. Theoretical papers should include recommendations for future research. Refer to the proposal review criteria to determine the best fit for your proposal type.

Presentation Limitations (Number and Originality)

NARST limits the number of times a person can appear as first author at the conference. The rules are that an author may be:

1. First author on only one stand-alone paper *or* a paper within a related paper set.
2. First author on only one interactive poster paper.
3. First author on only one roundtable.
4. Organizer of only one symposium.
5. Secondary author on any number of stand-alone, related paper set, and/or interactive poster papers.

Please note that if you **make more than one entry as first author in a category of presentation,** the system will delete the earlier submission you entered for that same category.

NARST proposals submitted for presentations at the Annual International Conference MUST be original work that has not been published or presented any other conference (e.g., AERA, ASERA, ASTE, ESERA).

Preparing and Formatting the Proposal

These guidelines apply to all proposals regardless of mode of conference attendance (in person or virtual).

- ❖ *Paper or Poster* submission by individual author or co-authors. There is a maximum of five single-spaced pages (excluding references, but including tables and figures). All in-text citations should be included in the reference list and references must be in APA format.
- ❖ *Related Paper Set* submission by multiple authors or co-author groups. There is a maximum of 10 single-spaced pages (excluding references, but including tables and figures). This should begin with a summary of the entire set describing how all of the papers are related, and then provide details of each individual paper integrated into one document. All in-text citations should be included in the reference list and references must be in APA format.
- ❖ *Symposium* submission by multiple presenters. There is a maximum of 10 single spaced pages (excluding references, but including tables and figures). This should include a description of the overall session topic or issue in one document and indicate how the session will run (e.g., panel discussion followed by group discussion). All in-text citations should be included in the reference list and references must be in APA format.
- ❖ *Roundtable* submission by individual author or co-authors. There is a maximum of five single spaced pages (excluding references, but including tables and figures). All in-text citations should be included in the reference list and references must be in APA format.

Proposals must be: **single-spaced with 1" (2.54 cm) margins all around, and in font no smaller than 12 on US Letter size paper (8.5" x 11")**. If you usually use A4 paper, please convert to US letter size as you finalize your proposal, *before* converting to a PDF format for submission.

Criteria for Review

Your proposal must address the five criteria that are part of the review process. See the rubric included in this call for details of each criterion.

(a) subject/problem

(b) design/procedure

(c) findings and analysis

(d) contribution to the teaching and learning of science

(e) How likely is this presentation to impact members?

Blinding the Proposal

All proposals submitted to NARST go through a **blinded, peer-reviewed process**. Blinded means there is no information within the proposal that could identify who the author/co-authors are or where they work. Authors are **required** to remove **any** identifiers in the proposal pertaining to the authors, including the institutions involved in or pertaining to the study and research grant or project identifiers. Authors must disguise any information that may lead to the identification of authors. For example, instead of the name of a University, use a general description like research university located in a the southeast of the United States. In addition, for self-citations please use the third person, instead of "we" or "I". Include in-text citations as "Author" (e.g. Author, 2019). In the reference list, use only the term "Author" or "Authors" followed by date of publication. These items should be alphabetized in the reference list using the term "Author" or "Authors." Not by the name of the actual author's name.

Please be aware that PDF files contain metadata that may identify you as the author. After creating your proposal PDF, open it and click on File/Properties. Check whether your name, institution or other identifying information are displayed. If so, delete that information and save the PDF file.

NOTE: Proposals that do not meet these criteria will not be reviewed.

Submitting the Proposal

To begin the submission process, go to https://proposals.narst.org/abstracts2022/index.cfm. This URL is the "home page" for conference proposals. **If you are a NARST member**, you may log on with your NARST membership login information. You may change any personal information by clicking on Update Profile. **If you are not a NARST member**, you will need to create an account and enter your identifying information, institution, telephone number, and e-mail address. Enter your e-mail address for your username and select a password that you will remember.

Please note: The email address provided in your member profile or your non-member account will be used for all official correspondence, including (but not limited to) the NARST Annual International Conference program. If you give permission to include your email address in the NARST program, then there is a button to click when entering your proposal to indicate this preference.

*At the **Abstracts and Proposals Home Page,** under **User Tasks**, you find the following links:*

- **2022 NARST Call for Proposals** is a pdf version of the Call for Proposals.
- **2022 Pre-Conference Workshops: Call for Proposals** This call will be posted in July.
- **Add New Paper / Edit Papers** allows you to select a category of proposal submission and submit your proposal. You may also edit your proposal from this link.
- **View and Edit Your Submitted Proposal** is a quick link to edit your proposal after submission, up until the submission deadline.
- **User Account/Volunteer to Review Proposals and Preside** allows you to change your personal information (e.g., university affiliation, email address, etc.). You will also use this link to volunteer to act as a proposal reviewer or a session presider. Strands need ample numbers of thoughtful reviewers; you are urged to volunteer for the strand that best corresponds with your research expertise. Please indicate if you also wish to be a conference session presider.
- **View Current Strands and Strand Coordinators** links to a list of NARST Program Strands and the current Strand Co-Coordinators, including contact information.
- **Program Formats** leads to descriptions of the different program formats available to presenters.
- **Reviewer Rating Sheet** indicates the criteria used by reviewers in the peer review process.

Under *User Tasks* when you select **Add New Paper / Edit Papers**, you will be given five format choices including: Stand-Alone Paper OR Related Paper Set (*the system forces you to select one of the two since you can be first author on only one*), Interactive Poster Paper, Roundtable, and Symposium. Click on the radial button for the type of paper you wish to begin and click on the button at the bottom that says **Continue**. There is a **Reset** button if you wish to change the type of proposal you want to enter.

Once you select the type of proposal you want, you will be taken to a web page where you will enter the information about your proposal. After you have submitted all mandatory information, the system will allow you to come back to the proposal to revise it at any time **until the August 15, 2021 deadline. Please note that you may only post once for each type of entry; otherwise, the system will delete (by writing over) the proposal you posted originally.**

Entering Proposal Information into the Web Site

Stand-Alone Paper. Enter the **title** of the paper (limit 15 words). Next select your proposal type: **Research Paper** or **Theoretical Paper**. Since we cannot always accommodate the type of session every proposer would like, please indicate if you are willing to present as an Interactive Poster Paper or Roundtable instead. Add up to 10 authors to your proposal by clicking on the "Lookup Names" button. If the author you wish to add is not in the NARST database, then you will be able to enter the name and affiliation manually. Then, type into the abstract box an abstract of up to 200 words (about 1200 characters). Please watch for accuracy and check for any stray characters that might appear if you pasted the abstract from a Word file. Next, you will be asked to upload a PDF file of your proposal (five single-spaced pages maximum excluding references—see formatting guidelines below). You will then click on a radial button indicating the Strand to which you are submitting; select two **Content Key Words** and one **Methodological Key Word** to help with assigning appropriate reviewers. Indicate your preference for in person presentation or virtual presentation. Finally, click on **Submit Stand-Alone Paper Information** at the bottom of the page.

You may come back to edit the proposal at any time until August 15, 2021. Any changes made after the initial submission will overwrite the previous version.

Related Paper Set. Enter an **overall session title** (limit 15 words). Next select your proposal type: **Research Paper** or **Theoretical Paper**. For each individual paper in the set, enter a **title** and add up to 10 authors per paper (with their role) by clicking on the "Lookup Names" button. If the author you wish to add is not in the NARST database, then you will be able to enter the name and affiliation manually. Then, type into the abstract box an **overall session abstract** of up to 200 words (about 1200 characters). Please watch for accuracy and check for any stray characters that might appear if you pasted the abstract from a Word file. Next, you will be asked to upload **one** PDF file of your proposal (10 single-spaced pages maximum excluding references—see formatting guidelines below) that includes an overall summary of your Related Paper Set and descriptions of individual papers. You will then click on a radial button indicating the **Strand** to which you are submitting; select two **Content Key Words** and one **Methodological Key Word** to help with assigning appropriate reviewers. Indicate your preference for in person presentation or virtual presentation. Finally, click on **Save Related Paper Set Information** at the bottom of the page. You may come back to edit the proposal at any time August 15, 2021. Any changes made after the initial submission will overwrite the previous version.

Interactive Poster Paper. Enter the **title** of the paper (limit 15 words). Next select your proposal type: **Research Paper** or **Theoretical Paper**. Since we cannot always accommodate the type of session every proposer would like, please indicate if you are willing to present as a Roundtable instead. Add up to 10 authors to your proposal by clicking on the "Lookup Names" button. If the author you wish to add is not in the NARST database, then you will be able to enter the name and affiliation manually. Then, type into the abstract box an abstract of up to 200 words (about 1200 characters). Therefore, please watch for accuracy and check for any stray characters that might appear if you pasted the abstract from a Word file. Next, you will be asked to upload a PDF file of your proposal (five single-spaced pages maximum excluding references—see formatting guidelines below). You will then click on a radial button indicating the **Strand** to which you are submitting; select two **Content Key Words** and one **Methodological Key Word** to help with assigning appropriate reviewers. Indicate your preference for in person presentation or virtual presentation. Finally, click on **Save Interactive Poster Paper Information** at the bottom of the page. You may come back to edit the proposal at any time until August 15, 2021. Any changes made after the initial submission will overwrite the previous version.

Symposium. Enter the **title** (limit 15 words) of the symposium. Next select your proposal type: **Research Paper**, **Theoretical Paper**, or **Both Research and Theoretical**. Add up to 10 authors to your proposal (with their role in the session) by clicking on the "Lookup Names" button. If the author you wish to add is not in the NARST database, then you will be able to enter the name and affiliation manually. Then, type into the abstract box an **overall abstract** of up to 200 words (about 1200 characters). Therefore, please watch for accuracy and check for any stray characters that might appear if you pasted the abstract from a Word file. Next, you will be asked to upload **one** PDF file of your proposal (10 single-spaced pages maximum excluding references—see formatting guidelines below) with an overall summary of your symposium. You will then click on a radial button indicating the **Strand** to which you are submitting; select two **Content Key Words** and one **Methodological Key Word** to help with assigning appropriate reviewers. Indicate your preference for in person presentation or virtual presentation. Finally, click on **Save Symposium Information** at the bottom of the page. You may come back to edit the proposal at any time until August 15, 2021. Any changes made after the initial submission will overwrite the previous version.

Roundtables. Enter the **title** of the paper (limit 15 words). Next select your proposal type: **Research Paper or Theoretical Paper**. Since we cannot always accommodate the type of session every proposer would like, please indicate if you are willing to present as an Interactive Poster Paper instead. Add up to 10 authors to your proposal by clicking on the "Lookup Names" button. If the author you wish to add is not in the NARST database, then you will be able to enter the name and affiliation manually. Then, type into the abstract box an abstract of up to 200 words (about 1200 characters). Next, you will be asked to upload a PDF file of your proposal (five single-spaced pages maximum excluding references—see formatting guidelines below). You will then click on a radial button indicating the **Strand** to which you are submitting; select two **Content Key Words** and one **Methodological Key Word** to help with assigning appropriate reviewers. Indicate your preference for in person presentation or virtual presentation**.** Finally, click on **Save Roundtable Information** at the bottom of the page. You may come back to edit the proposal at any time until August 15, 2021. Any changes made after the initial submission will overwrite the previous version.

A Note about Author Names

When submitting your proposals, please take care that you and your co-authors enter names exactly the same way each time. For example, if a proposal submitter includes a middle initial for one proposal, and does not use a middle initial for that same person on another proposal, these two proposals will show up as including two different presenters (e.g. Renée Schwartz and Renée S. Schwartz will appear as two different people and the two papers could be scheduled for presentation at the same time). Using the Lookup Names function in the proposal submission format will help to reduce variances. If a presenter's name is not in the NARST database, then enter the name exactly the same way each time to avoid schedule conflicts. Check for correct spelling of names. If you are a co-author on multiple papers that other people will be submitting, be sure to let those submitters know how they should include your name.

Consideration for In Person or Virtual Presentation.

In the online submission system, you are asked to indicate the format for which the proposal should be considered: in person presentation only, virtual presentation only, either in person or virtual presentation. These preferences are important for the conference planning team. Your selection will not impact the review process or decision to accept or reject the proposal.

Reviewer Rubric

See the Reviewer Rubric in this document for a more complete description of the review criteria. In addition, please complete the checklist at the end of this document for your own use to ensure you have addressed the proposal requirements.

Here is a link to **Frequently Asked Questions** (FAQs) regarding preparation and submission of proposals: https://narst.org/conferences/faq

Confirmation of Submission

Once you have completed the proposal submission process, you will receive a confirmation message on the Web screen. Each person on the proposal will be sent an e-mail confirmation provided his or her email information is in the NARST system. Only the proposal submitter will be able to track the proposal on their Abstract Submission Home Page, which will have a confirmation number for each type of proposal submitted. Keep this number in your records in the event you need to inquire about your proposal submission. The submitting author should contact all co-authors about the submission as well as decision results.

Submission Deadline

The submission deadline is **5:00 pm (17:00) YOUR local time on August 15, 2021** (the annual NARST proposal submission deadline). Typically, over 90% of proposals are submitted in the final 72 hours. This rush can result in system slow-downs. We encourage you to submit your proposal before these last hours to avoid potential delays.

Requirements for First Authors

All first authors on accepted proposals need to register for the conference to present. The **first author must register for the Annual International Conference by the close of the Advance Registration period to be announced at a later date.** First authors who do not register by the registration deadline may have their presentation removed from the conference program. It is the responsibility of each first author to comply with this requirement. **You will not be contacted in the event you do not register by the deadline.** By clicking on a radial button, you agree to register by the deadline or have your presentation removed from the program.

Requirement of Presented Paper, Roundtable, Poster, or Symposium

All presenters – and all conference attendees - are required to register for the NARST Annual International Conference. If you present either a paper, roundtable, *or* a poster, you are required to have a paper for distribution either at your presentation or through a personal link. It is each author's responsibility to provide access to a paper associated with the presentation.

Volunteer to Be a Reviewer

Please consider volunteering to be a reviewer (for peer review of proposals for the program) by checking the appropriate box and Strand on the Web page where you upload your proposal. You have this option when you register as a new user, or you may edit this information if you already have a username and password. You may volunteer for more than one Strand. Careful peer review is crucial to the quality of the Conference. Reviewers are leadership roles that may contribute to your professional development.

Volunteer to Be a Presider

Please consider volunteering to be a presider who structures how the session will proceed and facilitates discussion during sessions at the conference. To volunteer, check the appropriate box and Strand on the Web page where you upload your proposal. You have this option when you register as a new user, or you may edit this information if you already have a username and password. You may volunteer for more than one Strand. You will be notified of your presider status before the conference. Presiders are leadership roles that may contribute to your professional development.

Presentation Needs in Vancouver, BC

One LCD projector and screen are provided in each concurrent session presentation room throughout the conference for Stand-Alone Papers, Related Paper Sets, and Symposia. Computers, speakers, and other presentation devices are not provided, so you will need to make your own arrangement for the presentation of electronic material.

Present a Modified NARST Presentation at NSTA

The NARST Research Committee is soliciting proposals for NARST-sponsored sessions for the NSTA regional conferences in the Fall of 2022 and the Spring 2023 National NSTA conference. When submitting your NARST proposal, you have the opportunity to indicate your interest in presenting a practitioner's version of your NARST presentation at an NSTA practitioner conference. We normally allocate 2 proposals for each of the regional conferences and 10 for the national conference. NSTA has not yet determined where any of these conferences will be held or on what dates they will be held. If you are interested in submitting a workshop or presentation proposal based on your research to present to teachers at NSTA conferences please indicate if you're interested in a regional conference (one of which will likely be close to you) or the national conference. When details are available from NSTA, we will email you to finalize what location you would like to be considered for. The Research Committee will make final decisions about which proposals will be invited to participate at the NSTA meetings. Please note that NSTA prefers workshop sessions as opposed to typical "presentations" of academic papers and our adjudication of submissions is consistent with that.

If you are interested in presenting a version of your proposed NARST session at any of these conferences, please provide a proposal abstract of up to **350 words** addressing the following six criteria that the NARST Research Committee has developed for NARST-sponsored presentations at NSTA meetings.

1. Addresses themes relevant for the teaching and learning of science.
2. Bridges gaps between theory and practice and/or research and practice.
3. Addresses concerns and needs of practitioners.
4. Is interactive and designed to engage the practitioner audience.
5. Provides materials or ideas that can be used with a little or no modification by teachers, teacher educators, or administrators.
6. Has a title and "Session Abstract" written for teachers and will attract a wide NSTA audience.

In addition to the 350-word proposal abstract, please provide the following information and append it to your NARST proposal.

1. Session title (phrased for teachers)
2. The type of session (either presentation or workshop, with majority of chosen papers being workshop format)
3. The proposed length of the session (either 30 minutes or 60 minutes with workshops having a typical duration of 60 minutes and presentations for 30 minutes)
4. The intended teacher audience (examples: grade 3, grade 7, grades 8-12)
5. The list of co-presenters (including email and institution)
6. A very brief description of the session for the NSTA website (25 words and written for teachers)
7. A "Session Abstract" (150-200 words) written for teachers and for the NSTA website

Submissions for NSTA made with your NARST proposal will only be adjudicated after NARST proposals have been reviewed and accepted.

Note that merely re-submitting your NARST proposal abstract will reduce the likelihood of the proposal being selected for NSTA presentations. Successful proposals for presentation at NSTA in the past have generally been re-written for a teacher audience. Any presentations/ workshops must be safe and conform to NSTA written guidelines at http:// static.nsta.org/pdfs/SafetyPracticesAndRegulations.pdf.

NARST Proposal Review Rubric

For each category, three criteria are required. Given the constraints of the 5-page limit for individual paper and poster proposals (10-page limit for related-paper sets and symposia), please assign a numerical rating using the following descriptors as a guide:

5	**Highly evident:**	Proposal provides clear, substantive, and coherent evidence of **all** criteria
4	**Adequately evident:**	Proposal adequately describes **all** criteria in the category.
3	**Mostly evident:**	Proposal adequately describes **2 out of 3** criteria in the category
2	**Somewhat evident:**	Proposal adequately describes **1 out of 3** criteria in the category
1	**Not evident**	Proposal **does not** adequately describe **any** of the criteria in the category

You should explain your numerical ratings by responding to the rubric questions with constructive feedback identifying the proposal's strengths and weaknesses in the text boxes provided. Answering Yes or No to the criteria questions is not considered acceptable feedback. With respect to proposals for related paper sets and symposia, your comments should reflect the quality of each of the papers included in the proposal in addition to your summative recommendation and underlying rationale for the proposal as a whole. Reviews should be constructive and respectful.

Subject/Problem

1. Is there a clear focus for the study?
2. Does the proposal include a clear rationale for the study?
3. Does the proposal describe the model, theoretical framework, or philosophy of the study?

Design or Procedure

Research Papers [Empirical Studies]
1. Does the proposal clearly describe the methodology (theory of method)?
2. Does the proposal clearly describe the research methods, design, and study context?
3. Are the methodology, procedure, and design appropriate for the study and clearly aligned with the problem?

Theoretical Papers [Non-Empirical Studies (e.g., conceptual or position papers, reviews of literature)]
1. Does the proposal clearly describe the approach used to develop the argument or conduct the review?
2. Are the ideological/philosophical positions of the author and sources made clear?
3. Does the proposal include an appropriate range of literature?

Analyses and Findings

Research Papers [Empirical Studies]
1. Do the data analyses appear to be appropriate, coherent, complete, and aligned with the research questions?
2. Are the arguments or interpretations supported by the data and linked to prior literature?
3. Does the proposal discuss alternative interpretations, bias, reliability, or validity as appropriate?

Theoretical Papers [Non-Empirical Studies (e.g., conceptual or position papers, reviews of literature)]
1. Do the syntheses of ideas appear to be appropriate, coherent, and complete?
2. Are the arguments or interpretations supported by evidence?
3. Does the proposal discuss alternative interpretations, counter-arguments, or bias, as appropriate?

Contribution

1. Do the conclusions add to, refine, or refute theoretical constructs?
2. Do conclusions contribute valuable insights and implications into teaching/learning/researching science education?
3. Does the proposal clearly address, and have implications for, equity issues related to NARST's goal of helping all learners achieve science literacy, including, but not limited to, race, sex, gender expression, ethnicity, socioeconomic status, access, ability, sexual orientation, language, national origin, and/or religion?

Cohesiveness* (*Related Paper-Sets ONLY*)
1. Are all of the papers in the set focused on a similar concept/theme?
2. Do all papers contribute new information to the set, making a meaningful strongly-related whole?
3. Do all papers contain high quality information leading to a rigorous and comprehensive understanding of the theme?

General Interest

1. Does the content of the presentation promise to be of general interest to NARST members interested in this strand?
2. Is the content presented in a way that will be meaningful to NARST members interested in this strand?
3. Does the paper promise to be of interest to the education community at large?

Overall Rating (1-not recommended; 5 highly recommended)

To maintain the high quality of NARST presentations, please ensure your recommendation aligns with your ratings.

Proposal Submission Checklist

The completion of this checklist may be helpful in ensuring your proposal meets the requirements.

_____ Names of author(s) correct and consistent throughout

_____ Submission is properly blinded

      _____ Uses pseudonyms to mask locations that may identify author(s)

      _____ Omit names or other information that may identify author(s)

      _____ Specific descriptions (e.g., curriculum developed by authors) that may identify author(s) are made more general

      _____ Third person is used to refer to self-citations

      _____ In-text citations and the reference list, used "Author" or "Authors" followed by publication date for self-citations and alphabetized accordingly

_____ Format of the submission meets requirements

      _____ 1" margins all around

      _____ No font smaller than 12-inches

      _____ US letter size paper (8.5" x 11") is used

      _____ No more than 5 pages (excluding references) for paper, poster, or roundtable

      _____ No more than 10 pages (excluding references) for symposium or related paper set

      _____ Inclusion of abstract of no more than 200 words

      _____ All citations included in the proposal body are included in the reference list

      _____ References adhere to APA format

_____ Submission is converted to a PDF document

      _____ After creating PDF, opened it and clicked on File/Properties to check if name, institution or other identifying information were displayed. If so, deleted that information and saved the PDF

_____ Submission indicated alternative format, where applicable

_____ Submission indicated if email address could be included in program

_____ Submission indicated preference of presentation locale of in-person, virtual, or either.

Time Line

Target Date	Tasks
Week of June 21	Call for proposals.
Around August 15	Solicit reviewers for Strands.
August 15	Deadline for NARST proposals submitted to NARST online system. The website will shut down; so new proposals may be submitted after the deadline.
Around August 21	Requested revisions to proposal can take place directly on the website.
September 15	Reviewers post completed proposal ratings and recommendations to the online system.
September 30	Strand Coordinators submit Rating Summaries and grouping/format/title recommendations to NARST website.
Mid-late October	Decision notifications sent to authors. Reviews are available in the online system.