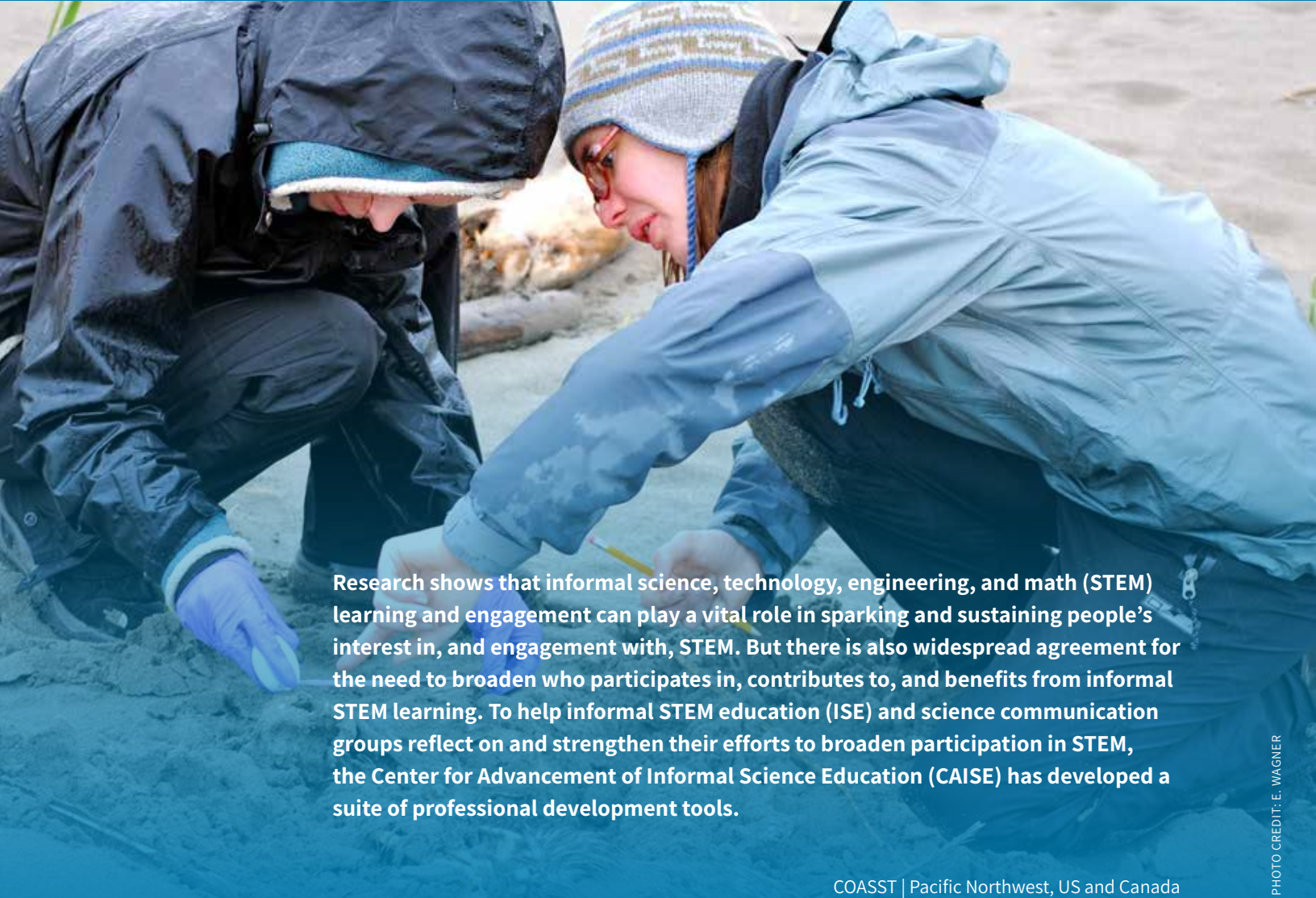# Broadening Perspectives on Broadening Participation in STEM

Toolkit Overview

Research shows that informal science, technology, engineering, and math (STEM) learning and engagement can play a vital role in sparking and sustaining people's interest in, and engagement with, STEM. But there is also widespread agreement for the need to broaden who participates in, contributes to, and benefits from informal STEM learning. To help informal STEM education (ISE) and science communication groups reflect on and strengthen their efforts to broaden participation in STEM, the Center for Advancement of Informal Science Education (CAISE) has developed a suite of professional development tools.

COASST | Pacific Northwest, US and Canada

Is this for me?

If you are a staff leader or trainer who is thinking about ways to strengthen your organization's or professional audience's efforts in broadening participation, these resources can help support your work. You can use them to plan and lead reflective discussions about current practices, with an eye on developing goals, strategies, and priorities that can make ISE and science communication work more inclusive.

What can I find here?

In this toolkit, you'll find resources that can support you and your organization's efforts in broadening STEM participation. The resources include:

1. **A report*, Broadening Perspectives on Broadening Participation in STEM*,** that identifies four key foundational issues that are essential to consider for any effort to broaden participation in STEM to be successful. This synthesis draws from both research and practice. It is intended **for you**, the person leading group discussions, to read in advance of talking with your colleagues or professional audiences.

2. **A two-page summary for stakeholders**, like a supervisor or board chair, that describes why engaging in this work is valuable for enhancing the relevance and impact of your organization in its community. It is intended **for them**, in order to gain support for your efforts.

3. **A set of practice briefs**, each focusing on a specific topic relevant to broadening participation in STEM, that includes ideas to consider and recommendations for action. Briefs also include examples of promising public engagement programs, further reading, and links to more tools and resources. They are intended **for your staff**, colleagues, or professional audiences/trainees to read in advance of having reflective conversations about professional practices. Briefs include:

I. Why Broaden Perspectives on Broadening Participation in STEM?

II. What Does Learning Have to Do With Science Communication?

III. What Does Asset-Based STEM Learning Look Like?

IV. What Are the Cultural Norms of STEM and Why Do They Matter?

V. What Is Considered "STEM" and Why?

VI. How Can We Help Scientists Adopt Equity Approaches to Science Communication?

VII. What Is a STEM Learning Ecosystem?

VIII. How Can We Re-Think Assumptions About Parent Engagement?

IX. How Can We Build on Existing Assets Within a Community?

X. How Can Institutions Model Inclusion in the Workplace?

XI. What Does Working "With" (not "For") Our Communities Look Like?

4. **A conversation guide**, with tips and a summary of the big picture issues. It is intended for you, to help you facilitate discussions about ideas found in the report and briefs.

All items listed above can be accessed here: informalscience.org/broadening-perspectives

How do I use what's here?

1. **Start by reading the *Broadening Perspectives* report** to jumpstart your thinking and inform the conversations you might want to have with your staff, colleagues, or professionals in your training programs.

2. **Get stakeholders on board** by sharing the summary with them.

3. **Organize a series of group conversations** to explore some ideas and ways to strengthen broadening participation understanding and efforts. Our recommendation is to organize a series of at least five discussions, each using one or two briefs that participants are asked to read in advance.

The briefs are introductory in nature, meant to be used with professionals who may be grappling with, or are enthusiastic about, how broadening participation may require them to rethink their normal practices. They are intended to do the following:

- Build on current research to define the challenge of broadening participation for an organization or program.

- Re-envision what equity in public engagement with STEM looks like and the role of organizations and individuals in advancing it.

- Identify potential areas for growth and development within teams, organizations, or practices.

4. **Use the conversation guide** to help facilitate each group conversation.