

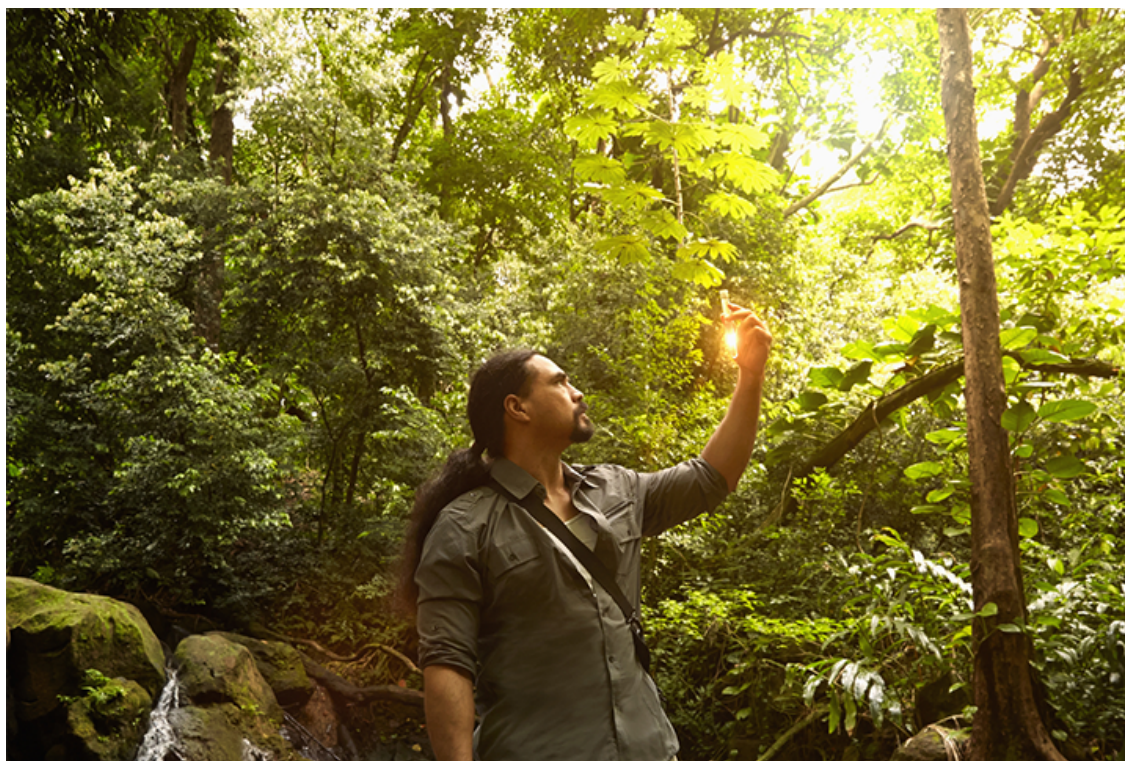
The latest from STEM Teaching Tools, a series of free, bite-sized PDFs for science educators.
Field Notes #10, October 2018

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Field Notes

Resources & Insights for Science Educators



Why it is crucial to make cultural diversity visible in STEM education

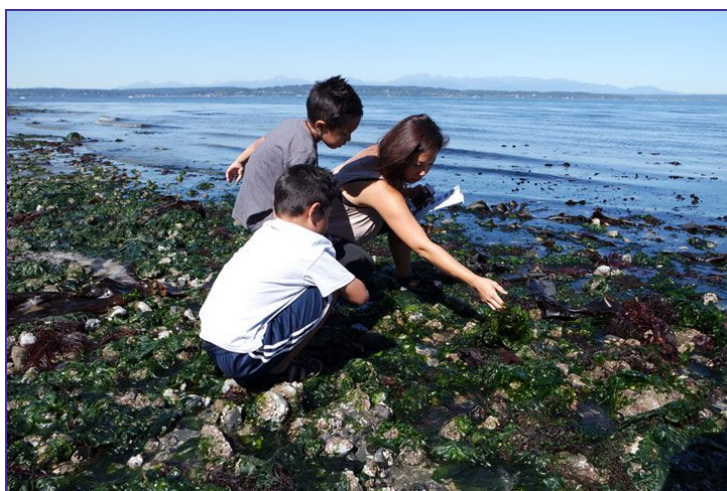
There are many important reasons to represent the broad cultural diversity of STEM endeavors—both historically and presently—in instruction. Science educators should collectively highlight in instruction how people engage in understanding and shaping the natural world in ways that relate to their histories and interests. This includes focusing on cultural STEM engagements that are locally meaningful to specific communities being served through education and should include meaningful pursuits students can engage in related to STEM.

Read STEM Teaching Tool #55

Other New Tools



Brief #54: How to build an equitable learning community in your science classroom
[\[Read\]](#)



PD Resource E: Selecting Anchoring Phenomena for Equitable 3D Teaching (2-day OER PD module)
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Help Share STEM Teaching Tools on Twitter

Please help us get the word out about our resources! Retweet [this tweet](#), originally posted by our editor, Philip Bell. When you do, you'll automatically be entered into a drawing for a full-color, hardcopy set of the entire STEM Teaching Tools collection. We're giving away 25 full sets!



What are STEM Teaching Tools?

STEM Teaching Tools are short briefs and OER PD modules designed to bring together ideas and resources to address common challenges as educators adopt the new vision for science education in the NRC Framework and resulting Next Generation Science Standards (NGSS). These tools are helping thousands of educators across the country align their teaching with best practices from both research and teaching.

STEM Teaching tools are:

- co-written by researchers and educators.
- easily downloadable as PDFs.
- updated regularly at stemteachingtools.org, with new briefs created in response to educator needs.



What Is The Issue?

The new vision for K-12 science education expects learners to engage deeply with science and engineering practices to develop and apply conceptual ideas. This strong connection between [practices, cross-cutting concepts, and core ideas in science and engineering](#) is different from previous science standards. This requires teachers to shift classroom instruction. [Carefully designing professional development \(PD\) opportunities](#) plays a large role in supporting educators' learning about this new vision and how it can look in their unique classrooms.

WHY IT MATTERS TO YOU

- Teachers should collaborate to analyze student work samples and video of their own teaching in ways that connect PD experiences with their classroom teaching.
- District staff & PD providers should provide sustained and responsive PD opportunities that focus on teachers' collaborative analysis of classroom instruction.
- School leaders should support schedules that allow for teachers to meet and discuss instructional practice in science.

BY CHRISTIE BARCHENGER & TANA PETERMAN | APRIL 2015

[STEMteachingtools.org/brief13](https://stemteachingtools.org/brief13)

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