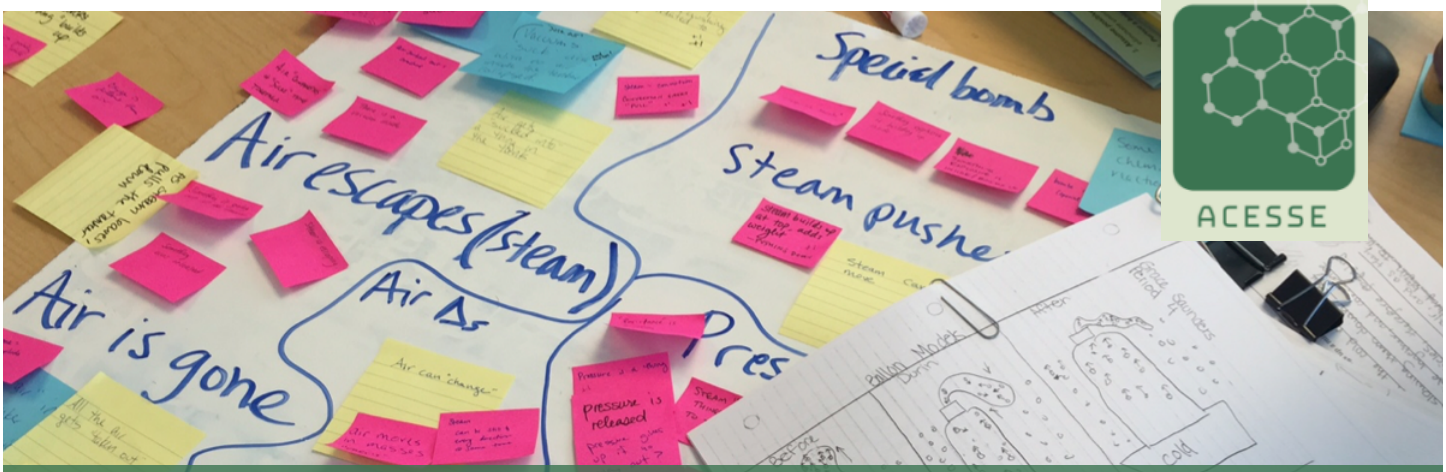

ACESSE Resource F: Seeing Facets, not Misconceptions: How to Build on the Range of Student Thinking in Instruction

Students bring a range of intellectual and cultural resources, which they have accumulated in their unique life experiences, into the classroom as they learn science. These resources can be considered different "facets" of student thinking. These resources may relate to their conceptual understanding of natural phenomena, their repertoires of practice when engaging in scientific activity, or their abilities to productively engage with school and classroom approaches to learning. Student's facets of thinking can be leveraged to help students as they refine their understanding of science phenomena.

This learning experience will help you:

- Analyze cognitive formative assessment responses to surface the range of student thinking about science topics and concepts
- Guide instruction based on that diversity of student ideas
- Design and use classroom formative assessment tasks to support equitable 3D instruction

This workshop helps educators develop an asset-based approach to engaging with the diversity of student thinking and introduces them to practical and powerful ways to guide instruction based on all of the intellectual resources of each student. Small groups of teachers analyze a set of student responses to a formative assessment, identify the range of facets of student thinking, and learn to develop assessment rubrics that support responsive instruction based on those patterns of reasoning. The group deeply explores connections to equitable dimensions of science instruction. Multiple examples of this approach are embedded in this resource to help educators working at different grade levels and across science subjects see how to engage in this sort of facet-based instruction. This resource is estimated to take about 300 minutes (~5 hours) depending on the choices of the facilitator in scenario selection.

STEMteachingtools.org/pd/SessionF

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