Eliciting and Leveraging Students’ Prior Knowledge, Personal Experiences, and Cultural Backgrounds

Overview
An important element of promoting learning and equity in the science classroom is to elicit and build upon students’ personal experiences, prior knowledge, and cultural and social backgrounds. This practice fosters more robust and durable conceptual understanding and higher engagement, helping students to:

- build a coherent understanding of science concepts so that they can feel empowered to be able to take these ideas and make sense of the world around them.
- feel that science learning is purposeful and useful.
- know that their personal experiences and expertise, and experiences and expertise from their families and communities, are valued in the classroom.
- embrace the idea that their personal experiences and expertise are assets to be used in their scientific investigations.
- feel confident in their identity as science learners and their ability to contribute in the science classroom.

Eliciting these connections from students helps teachers to:

- leverage students’ experiences and ideas as resources during teaching.
- formatively assess students’ understanding of concepts and familiarity with contexts.

Summary of the Eliciting and Leveraging Students’ Experiences and Ideas Routine:

1. **Elicit students’ experiences and ideas** at the beginning of a phenomenon-based unit.
   - Record student thinking on two charts, “Our experiences” and “What we think we know.”
   - Ask questions that elicit students’ prior knowledge, personal experiences, and cultural backgrounds.

2. Familiarize yourself with the build of ideas in a unit and be ready to leverage particular student experiences and ideas along the way.

3. **Leverage students’ experiences and ideas** at key moments during the unit. For example:
   - At the beginning of the chapter.
   - While students are gathering evidence from multiple sources.
   - During sensemaking opportunities so students can make connections to relevant experiences and build on ideas.