

Key Formative Assessment Take Away Messages

1. Misconceptions in science are tenacious, often formed outside of school, and may remain hidden unless opportunities in the classroom are specifically designed to surface students' commonly held ideas.
2. Assessment is not formative unless you use the information to plan or modify your instruction with the intent to support learning.
3. Formative assessment is purposeful. Probes and FACTs are always linked to a teaching and learning outcome. Collect formative assessment data with intention and act on it purposefully.
4. Formative assessment imbedded in instruction supports learning attainment of the NGSS, all 3 Dimensions.
5. The act of formative assessment can promote learning as well as provide information about learning. It supports metacognition, motivation, confidence, and active learning.
6. Formative assessment is used throughout an instructional cycle: before teaching- to elicit students' ideas, throughout an instructional unit- to monitor teaching and learning, and at the end- for reflection.
7. Formative assessment probes should NOT be graded. Their primary purpose is to uncover students' thinking and promote learning, without worrying whether an answer is right or wrong. However, they can be modified to use for summative assessment purposes.
8. Formative assessment works best in a classroom where there is a supportive learning environment. Formative assessment can contribute to changing the culture of the classroom from one where only the right answers matter to one where all students' ideas are valued and respected and students are motivated to work toward discovering the scientific explanation.
9. Formative assessment probes and FACTs can be used to build and support the use of oral language and norms of discourse in science. Use formative assessment to provide opportunities for students to share their thinking and Engage in Arguing from Evidence, Developing & Using Models and Constructing Explanations.
10. Formative assessment works best in a collaborative school culture where teachers share formative assessment data, and work together to refine their use of formative assessment.