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Integrating Data in the STEM classroom

For teachers to provide students with authentic learning, regularly integrating formal assessment into instructional planning is a must. Throughout the school year, teachers often collect some sort of data about their students. The collected data help teachers inform and influence how they teach, as well as where and what they need to review or reteach.

Using formative assessments, teachers can ensure that students understand and master the key basic skill and competencies they to succeed in learning (D.Dirksen). Formative assessment as mentioned in the article **Hitting the Reset Button,** can be as easy as simple observation. Teachers can gage when their students are not interested in a lesson by just looking at their facial expressions and body language. Teachers can redirect their focus by proposing questions that may lead to group discussions.

Assignments and learning activities are also valuable tools for formative assessment. Teachers can apply information from how well their students do in a assignment so they can change instructions. It also gives teachers an opportunity to give students feedback to improve in future assignments.

Other examples of data teachers can use in the classroom, include collaborative, pair-and- share activities which track student understanding. Students are paired with a partner and discuss what they learned. The discussion is more focused, and student's understanding of the lesson is clarified.

Quick writes, weekly summaries and journaling are writing assignments to check for student understanding. I particularly like the "Circle, Square, Triangle". I like the idea of proposing three metaphorical questions: 1. What's still going around your head? In other words, what do you still not quite understand? 2. What's squared away? What do you really understand? 3. And finally, what three things could you use in your life, work, or studies. These writing assignments allows teachers to assess where students are in their understanding, it can be a good tool to help formulate future instruction.