Meaningful Learning Experiences

One of the most important aspects of teaching is creating meaningful learning experiences. The content must be of value to the student and be something the student can identify with. I have heard that "teaching by telling" does not work, and I could not agree more. Regardless of how important I think it is, merely receiving information is not sufficient to bring about meaningful learning. Neither is telling them that, "you'll be tested on this".

To me, meaningful knowledge must apply in the real world. I believe teachers should choose techniques that heighten students' engagement. For example, in teaching balanced and unbalanced forces I chose to have the students design a bristle bot. For this lesson the students had to figure out how forces were acting on their bot and make design corrections based on their analysis. I have also used field plot surveys to teach a lesson on biodiversity. These cases allowed students to grapple with issues that they could likely encounter in the field. Not only should students be allowed a process, but these processes should build on previous knowledge so that effective scaffolding should take place.

Teachers should also use differentiated instruction and give students different options during class time. I have found that using individualized learning plans (ILPS) allow students the opportunity to select from a range of activities for evaluation. It is important for teachers to be constantly evaluating their students whether using formative or summative assessments. This provides a check for comprehension, understanding and misconceptions. When I have given the students a choice they are very engaged, having fun, and all of the class is talking about science!

To ensure a meaningful learning experience, teachers should also let the information be rehearsed in order to attain mastery. If the students can't retain it, they haven't learned it. Many times a student will try to cram information for a test and forget it a day later. This bad habit is reinforced by a teacher who does not revisit information. Ideally a lesson should incorporate information from other subjects and previous lessons in order to be more meaningful.