

## Philosophy Of Teaching

### **Introduction**

My biggest goal as a math teacher is to motivate students to develop their mathematical abilities and to see the relevance of mathematics in a society with ever-increasing emphases on science, technology, and engineering. My educational interests include reading and learning about how learners solve problems and make decisions, think analytically and rigorously, construct their own mathematical understanding, and truly appreciate the value of mathematics. I'm also great with kids and I enjoy watching the learning process unfold.

### **Principles Of Teaching And Learning**

Effective teachers target all of their students, across varying levels of learning difficulty, achievement, disability, language, ethnicity, and culture. When motivating all students, developing relationships, knowing students personally, and serving as a role model are important steps teachers should take in the educational community. Another major aspect of inclusive learning is the method of presenting the content. Effective teachers make the content relevant, applicable, and interesting to their students. Students need to learn through the use of hands-on manipulatives and technology, so that they can experience the content in multiple forms of representation. Students also need to be assessed in ways that they can demonstrate their full range of understanding and comprehension, not limited to paper-pencil examinations. Lastly, to highlight multiple connections within and among content areas, teachers need to make explicit the interconnectedness of the material they teach, in three dimensions: across the course outline, within other courses, and over the students' educational lifetime.

### **Equal Educational Opportunity**

Teachers should not target the socioeconomic status of their classrooms, but make the differences of social class less apparent. There will always be separation among race, social class, culture, gender, sexual orientation, etc. I believe a “post-racial” society is a utopia for which we should aim, however we must accept that it is an ideal point that we cannot realistically reach. We want students to view themselves as equal to one another. Teachers can help this process by catering to their individual students’ cognitive, social, and developmental needs, rather than boxing them into groups based on trends and stereotypes. A manifestation of this “boxing” is visible in the process of tracking, and tracked students are not equal, nor are they equally treated. Treating students *equally*, however, is not treating them *the same*, but rather giving them the same opportunity to succeed.

### **Intercultural Education**

Teachers spend time with their students every day and play a major role model in students’ lives. Teachers need to instill mannerisms and etiquette that is ‘acceptable’ in society, class, and culture. The mannerisms of non-American children’s background culture also play a major role in their transition to American culture. Teachers need to be aware and knowledgeable of their students’ cultural and linguistic backgrounds, as well as cultural idioms, body language, facial expressions, etc.

Teachers can inadvertently deculturalize their students by forcing them to conform to White mannerisms, idioms, behaviors, and language. To prevent disidentification of students from their cultures, teachers should preserve their students’ attitudes and beliefs, within reason, so that a culturally diverse classroom can be maintained. Teachers should make an effort to

understand their students and their backgrounds. Foremost, because developing a relationship with a student will help build mutual respect and kick start the learning process, but in addition, understanding a student's interests, activities, and home life makes it easy for the teacher to relate to the student. The most important component for an intercultural education is communication among students and between students and teachers.

### **Schooling Of Exceptional Learners**

Exceptional learners are both students with learning disabilities and gifted students. To cut to the point, I support the practice of inclusion, which is where exceptional learners are present in classrooms with their peers. In an inclusive classroom, like a intercultural classroom, students build off each other's learning and have many different past experiences and prior knowledge to offer. I believe teachers should practice differentiation strategies that includes all students, so that each student can learn at his or her own pace without being pushed or pulled by his or her classmates.

### **Socioeconomic Status**

Curriculum and proper language are defined by the majority class, and is viewed as what is "valuable" or "legitimate." Students may often reject the dominant knowledge due to their position in a certain class. Knowledge that is seen as "legitimate" may not be perceived by a student to belong to his or her class, therefore will unconsciously form a barrier between what he or she needs to know and what is being taught in the classroom. Teachers can counter this hinderance by providing real-world examples and applications related to content, especially in a math classroom.

## **Democracy And Education**

The intent of public schooling was to originally prepare members of a democratic American society, and though this intent is massively scaled today, it remains essentially the same. I oppose teachers teaching personal political beliefs in the classroom, however national and global values should be taught to support the American schooling intent. One of the most democratic things teachers can do in a classroom is to form an environment of mutual agreement and mutual respect around the classroom. Classroom management is an example. I plan to start the year by letting my students have a partial say in classroom rules, model their expected behavior, and reward accordingly.

## **Other Topics**

### **Problem Solving**

Students need to use and expand math to solve more complex problems. As the problems of students' lives become increasingly difficult, more advanced math is required to solve them. Solving a problem encompasses more than merely finding the answer to a question. Not only must the solution be unknown, but the method used to find the solution as well must be unknown. Teachers must present tasks that require complex thinking without the necessity of an algorithm, require students to monitor and regulate their own processes and actions, and require knowledge of relevant mathematical content as well as knowledge of problem-solving strategies. Posing problems with multiple methods and solutions will keep students engaged and their minds dynamically active, and in addition will force students to observe their own processes and methods.

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**Reasoning And Sense Making**

When attempting to develop and solve abstract models based on real-world problems, mathematical reasoning is a requirement. To foster students' reasoning and argumentation skills, teachers should ask students whether the statements they, the teachers, say are correct. As long as a student can provide an informal deduction of whether the offered statement is true or false, then it will make more sense in his or her mind.

Students' roles in the classroom need to be more active and need to be regularly engaged in discussion so that they can make and test more conjectures. When students are confident about their own reasoning skills, they are more likely to challenge arguments made in a resource, by a classmate, or even by a teacher, and thus enhance their critical and analytical thinking.

When students can provide reasoning to their methods, they will gain a better understanding and a bigger picture of the problem, and will become more experienced at providing explanations, a necessary component of argumentation.