Fuzzy Set Theory Activity Plan

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MATH 5010

Topics: Axiomatic Set Theory and Fuzzy Set Theory

Connection to Core Curriculum: CCSS.Math.Practice.MP7 "Look for and make use of Structure."

Overview: Students will come to appreciate the varying structures in mathematics, and also the dynamic nature mathematics. New fields are emerging which shape the way we look at mathematics, it is not a static thing. Students will be able to improve their ability to recognize patterns and characteristics when comparing two separate concepts.

Objectives:
A. Students will learn how to compare and contrast two ideas and their visual representation of them.
B. Students will demonstrate a willingness to learn about emerging fields of study in mathematics.

Materials needed: Computers for the applet and activity questions

Web Reference: http://5010.mathed.usu.edu/Fall2013/KBerrett/

Activity Plan:
After 10-15 minutes of direct instruction concerning the nature of fuzzy theory and the applications of it, students will be directed toward an applet designed to help students wrap their minds around what a "fuzzy" set is and how relations between fuzzy sets behave.

They will work in groups no larger than 3 students while they answer the questions given them on a sheet of paper. They will also be asked to write down questions they may have stemming from our discussion and the activity.

After 15-20 minutes, we will return to a full-class discussion. Students will be asked to share what insights they had as we go through the questions posed in the applet.

They will then get to ask questions, when I will focus on having other students answer the question or share their opinions.

Assessment: Students will turn in their responses from the assignment, which will be scored in accordance with the given objectives for the activity.

References: See Resources section of aforementioned website