

Seeing, feeling, and understanding: a unit to support sixth grade mathematics students in their development of proportional reasoning

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Emotional responses to visual imagery help us to make meaning of the world around us; when partnered with logic, emotion is theorized to lead to human thought and creativity (see Dewey 1958). In viewing feeling in this way, direct applications emerge in centering this perspective in learning in general, particularly within the mathematics classroom. This unit will approach the teaching of ratio in sixth grade mathematics with two essential questions to support student understanding:

- 1) How does the mathematical concept of proportionality influence our perceptions of imagery in our world?
- 2) How can imagery serve as a vehicle to represent solutions to problems of ratio and proportion in mathematics?

Through particular attention to visual representations and applications of ratio, students will be encouraged to communicate and think critically about these mathematical concepts and the ways they relate to the world around us. Students will leave the unit with an understanding of mathematics as both a language through which representations can aid in sense-making and a tool with which to understand visual media.