GK-12 Lesson Plan

Teacher: Steven MacDonald
Period: Class: Lawrence High School Statistics Class
Date(s): 10/16/2013

SETTING THE STAGE	
Essential Question	How can computer programs be used to simplify calculations?
Content Objective(s) (Student-friendly)	Continuation of lesson 1.
Connection to previous or future lessons	Students continue their work on the dice simulation.
Critical Thinking Questions	Is there only one approach to solving a particular programming problem?
Key Vocabulary	Variable, Matrix, mean, standard deviation, function.
Materials Needed/Safety	Computer, R Studio
ACTIVE INSTRUCTION	
• Launch (Engage)	A basic introduction to the programming concepts of variables and matrices, along with a review of mean and standard deviation.
• Investigation (Explore)	Students are asked to write code that will evaluate the mean and standard deviation of their simulation results, without resorting to simple function calls (i.e mean()).
TIME FOR REFLECTION	
• Summarization (Explain & Extend)	Students work to modify the code of their initial, prepackaged simulation to add important analytic elements.
Assessment (Evaluate)	The students were able to accomplish the assigned goals with some difficulty. The biggest challenge was relating the concept of a computer variable to an algebraic variable.
• Homework	None