



UNIT FOUR

RUBRIC



STUDENT NAME _____ SUBJECT _____

MP 4: Model with mathematics. Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

	4 - Advanced	3 – Competent	2 – Limited	1 - Emerging
Related Application	Student fluently and easily refers to prior knowledge of math concepts and applies it to the problem solving situation.	Student shows evidence of referring to prior knowledge of math concepts and applying them to the problem solving situation.	Student attempts to refer to prior knowledge with some accuracy.	Student cannot refer to prior knowledge with accuracy.
Week 1				
Week 2				
Week 3				
Uses Assumptions & Approximations	Student can identify the most important information and recognizes that it can be more efficient to utilize assumptions and approximations as a way to simplify complicated situations. Student is able to assess results and make revisions to improve the model.	Student can identify important information and understands the need for using assumptions and approximations to simplify complicated situations, and can do so most of the time. Student can assess results and hypothesize on how to revise the model.	Student can identify the most important information and, with supports, use assumptions and approximations to simplify complicated situations.	Student struggles to use approximations or assumptions to simplify situations.
Week 1				
Week 2				
Week 3				
Representation	Student can create mathematical models, such as equations, diagrams, or problem sets, to represent or decontextualize a real world situation. Further, student can contextualize a given mathematical model by explaining how it is representative of a real world situation.	Student can contextualize and decontextualize real world situations and mathematical models with moderate accuracy.	Student can contextualize and decontextualize real world situations and mathematical models with accuracy with moderate support.	Student can contextualize and decontextualize real world situations and mathematical models.
Week 1				
Week 2				
Week 3				

INSTRUCTIONAL NEXT STEPS: