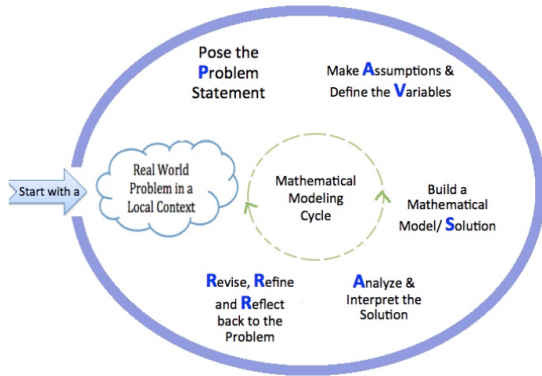


Planning for Math Modeling- Graphic Organizer

a) What's the problem you're posing? (What do you wonder about? What do you notice?)	b) What do we already know? What do we need to know? (What do we already know that can help us?) If I knew _____ then, I can figure out _____. (Make assumptions.)	c) Do the math! Solve! (What math can I use to solve the problem? Where's the math? (What concepts and skills will students draw from?) Build a <u>Math Model or General Rule</u>
d) Analyze & Interpret: Compare the solution to the real situation- Does it make sense? Is the solution creating a model that is... ☐ Descriptive: Using math to describe a situation ☐ Predictive: Using math to predict ☐ Optimizing: Finding "best" ☐ Rating and Ranking: Using math measures/weights to rank Others: _____ Can it be communicated to others, useable to others and generalizable?	e) Does the solution make sense? How can you Revise, Refine and Report your solution? (Think back to the problem statement. Does the solution work? What might you change?)	

Planning for Math Modeling- Graphic Organizer

a) Posing the Problem:	b) Identify assumptions/variables in situation that are essential:	c) Build a solution:
Real World Context: What relevant context would motivate learners?	 The diagram illustrates the Mathematical Modeling Cycle as a continuous loop within a large blue oval. It begins with a blue arrow labeled 'Start with a' pointing to a cloud labeled 'Real World Problem in a Local Context'. From the cloud, an arrow points to 'Pose the Problem Statement'. This leads to 'Make Assumptions & Define the Variables', which then leads to 'Build a Mathematical Model/Solution'. From there, an arrow points to 'Analyze & Interpret the Solution', which leads to 'Revise, Refine and Reflect back to the Problem'. This step then loops back to the 'Real World Problem in a Local Context' cloud. The central part of the cycle is labeled 'Mathematical Modeling Cycle'.	d) Analyze & Interpret: Is the solution creating a model that is... ☐ Descriptive: Using math to describe a situation ☐ Predictive: Using math to predict ☐ Optimizing: Finding “best” ☐ Rating and Ranking: Using math measures/weights to rank ☐ Others: _____ Can it be communicated to others, useable to others and generalizable?
Connection to Content: How did math help you make decisions in this MM task?	e) Revise, Refine and Reflect back to the problem: Compare the solution to the real situation- Does it make sense?	