



525 West 50th Street, Suite 370
New York, NY 10019

Phone: 212-757-5274
Fax: 212-757-5411

Kathy Fine, Assistant Principal
George Lock, Assistant Principal
Georges Mathieu, Assistant Principal



Dear Teachers:

To facilitate the sharing of best practice among math teachers, I (quickly) created the table on back which can help you to increase the Depth of Knowledge and move towards highly effective on the Danielson Rubric in Components 3b and 2b. It will also help push students to be college ready (>80) because it includes higher order thinking strategies. Please let me know your thoughts and what else to add to the table as it is in no way complete.

Sincerely,

George Lock
AP

Depth of Knowledge	Involves...	Examples from the MBHS Math Classroom
Level 1	<ul style="list-style-type: none"> -Recall -Rote response -Simple calculations -Following procedures 	<ul style="list-style-type: none"> -Stating the definition of mathematical terms -Stating the mathematical property of each step -Find the area -Check your work by... -Identify the diagonal -Apply a formula -Recognize the pattern -Read the graph -Plug in the value -Tending to precision and accuracy in calculations
Level 2	<ul style="list-style-type: none"> -Reasoning beyond rote response -Deciding how to approach a problem -Comparing and/or relating concepts to one another 	<ul style="list-style-type: none"> -Comparing different methods for solving problems -Apply a skill or concept -Classify... -Solve multi-step problem -Observe -Collect, organize, categorize, and display data -Create a table or graph -Extend a pattern -Visualize -Convert word problem to equation -Demonstrate probability skills
Level 3	<ul style="list-style-type: none"> -Providing evidence and support for reasoning and conclusions -Explaining and justifying answers 	<ul style="list-style-type: none"> -Finding different methods to solve the same problem -Support ideas with details and examples -Determine equations and solve a system -Apply a concept in other contexts -Make conjectures, hypotheses, and predictions -Explaining their reasoning for solving a problem -Discussing and defending answers -Draw conclusions -Show strategic thinking -Use math concepts to explain phenomena -Using graphs to interpolate or extrapolate -Write a mathematical rule
Level 4	<ul style="list-style-type: none"> -Demonstrating reasoning, planning, and developing connections within and beyond content area 	<ul style="list-style-type: none"> -Projects and groupwork activities -Deriving equations -Collect data over time and analyze results -Develop a rule for a complex pattern -Explain connections among and within mathematical units -Critique models -Relating math content to other content areas, such as science -Relating content to everyday lives of students -Developing models