Cedar Grove School District
502 Pompton Avenue
Cedar Grove, NJ 07009

September 21, 2018

Dear Parents/Guardians and Students:

Welcome to the 2018-2019 school year! On behalf of the Cedar Grove Mathematics and Science Departments, I would like to enthusiastically take the opportunity to share some information regarding our collective philosophy as well as student expectations in Cedar Grove's secondary math and science classrooms.

Over the last decade, we have witnessed several shifts in Math and Science Education in terms of standards, technology, and instruction. Cedar Grove has responded with the implementation of *Go Math!* and Inspire Science in K - 5, the Connected Math Program and Integrated Science in 6 - 8, and significant curricular changes in the entire K - 12 system in addition to a number of online assessment programs. Our teachers have also worked tirelessly to transition to true student-centered models and investigative approaches and practices set forth by the NJ Student Learning Standards in Mathematics and the Next Generation Science Standards (NGSS).

Our current primary goal is to develop independent, resourceful, confident, self-disciplined and tenacious young men and women who can take advantage of every experience presented to them in the classroom, understand their responsibilities, and take ownership over their individual learning processes. To reach this goal, we need to focus on both the learning environment and more importantly, student study habits.

In an effort to incorporate non-traditional structures, MMS and CGHS students are given multiple opportunities to display and verbalize their knowledge, make discoveries, apply research skills, model with manipulatives and graphical representations, learn from mistakes, and work collaboratively to draw original conclusions through experimentation. *Research shows that these types of constructivist approaches maximize comprehension and retention*. Aside from following standards-based curricula, our focus is to embrace the Math and Engineering Practices - a set of transcendental skills intended to support global comprehension of the content. The emphasis is on the "how" over "what" and empowers students to reflect on strategy and procedure. In addition to describing the process, recognizing patterns, identifying structure, and connecting topics, the most prominent purpose of these practices is to *inspire perseverance.*

A student sitting in a math or science classroom in Cedar Grove should expect to hear the phrases, *"I want you to try it first, ask your teammate, try it again, modify your approach, let's build off that, embrace the struggle!"* Students should expect to engage in problem-solving activities and work through alternate assignments and assessments that require them to synthesize and apply material over simple memorization, and above all, students should expect to work more independently than they have in the past.

As a department, we recognize that establishing a strong work ethic and effective study skills, as well as taking pride in one's work are essential to reaching our departmental goal as well. To further encourage students to be diligent with their studies, we have created a comprehensive list of suggested study habits specific to math and science. (These can be found on the next page) While each teacher will use his or her discretion in assigning and monitoring student work and grading, all teachers have the genuine desire to help students recognize their strengths and weaknesses for the purpose of growing academically and personally.
Cedar Grove Math and Science is ready to motivate the next generation of students!

Thank you for your attention and continued support of our students and teachers.

Sincerely,

Janine M. Barboza
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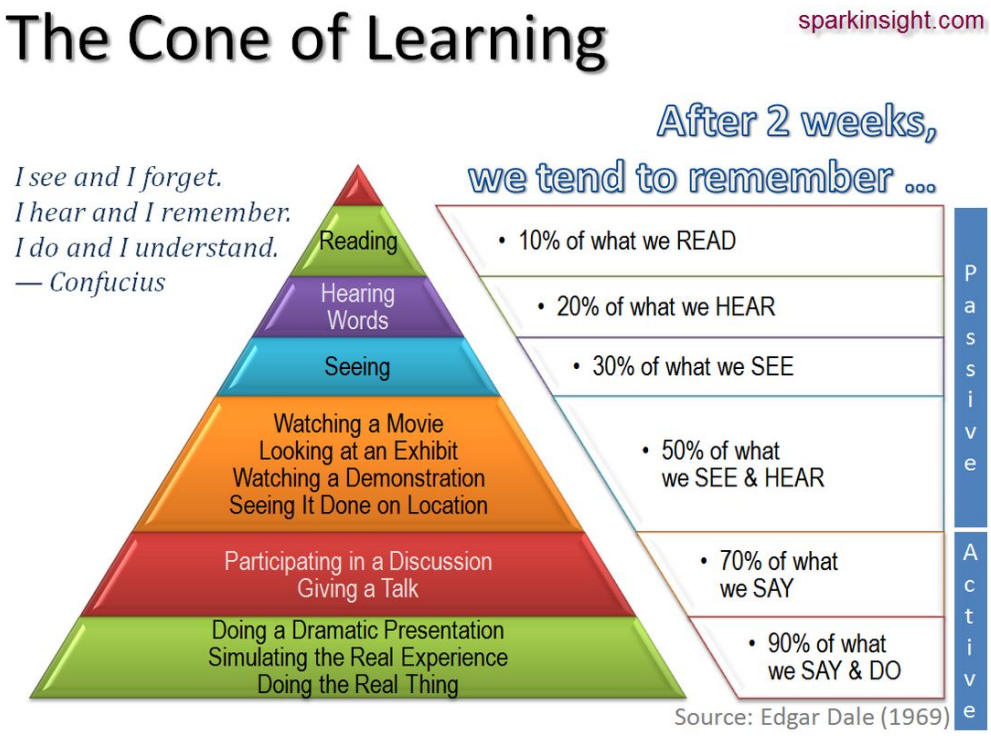
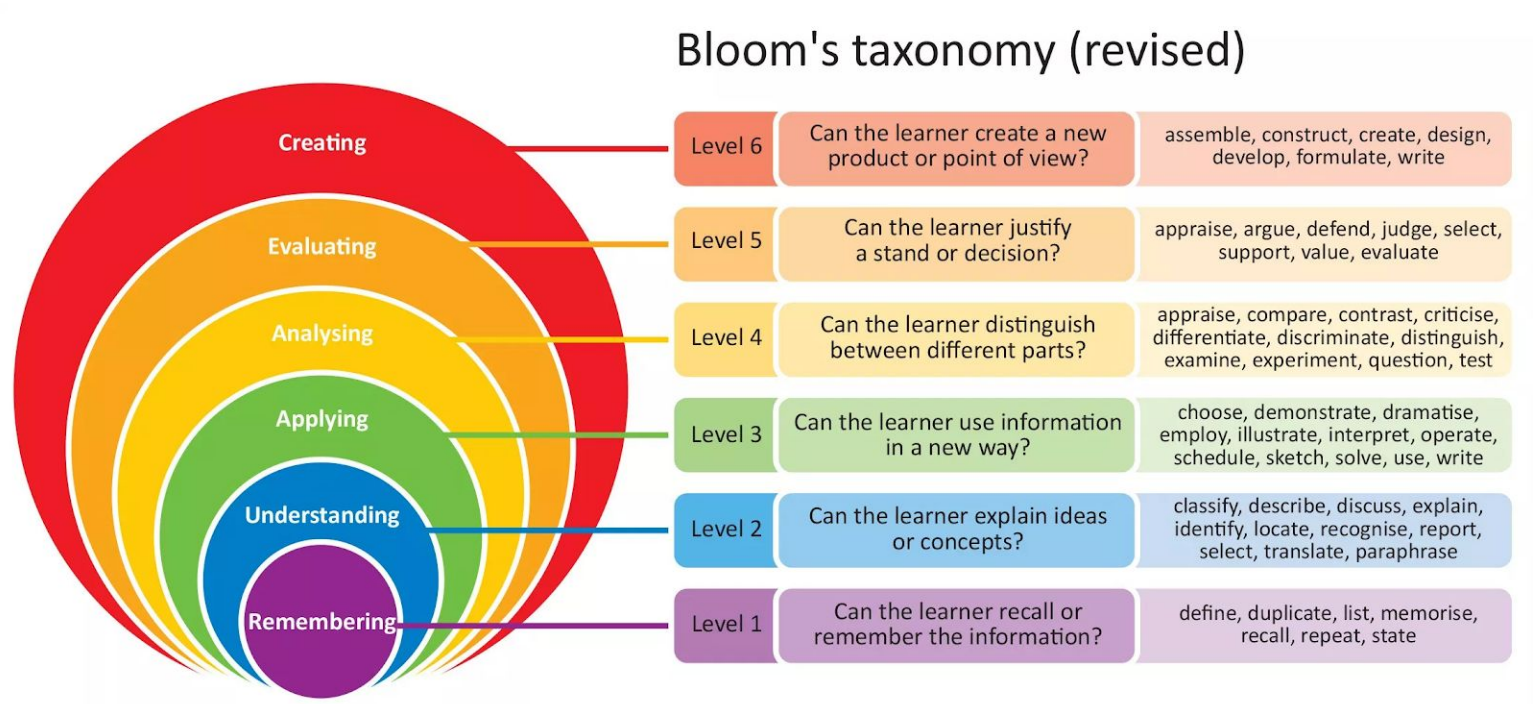
Information regarding student-centered classrooms, assessment, and research supporting learning approaches:

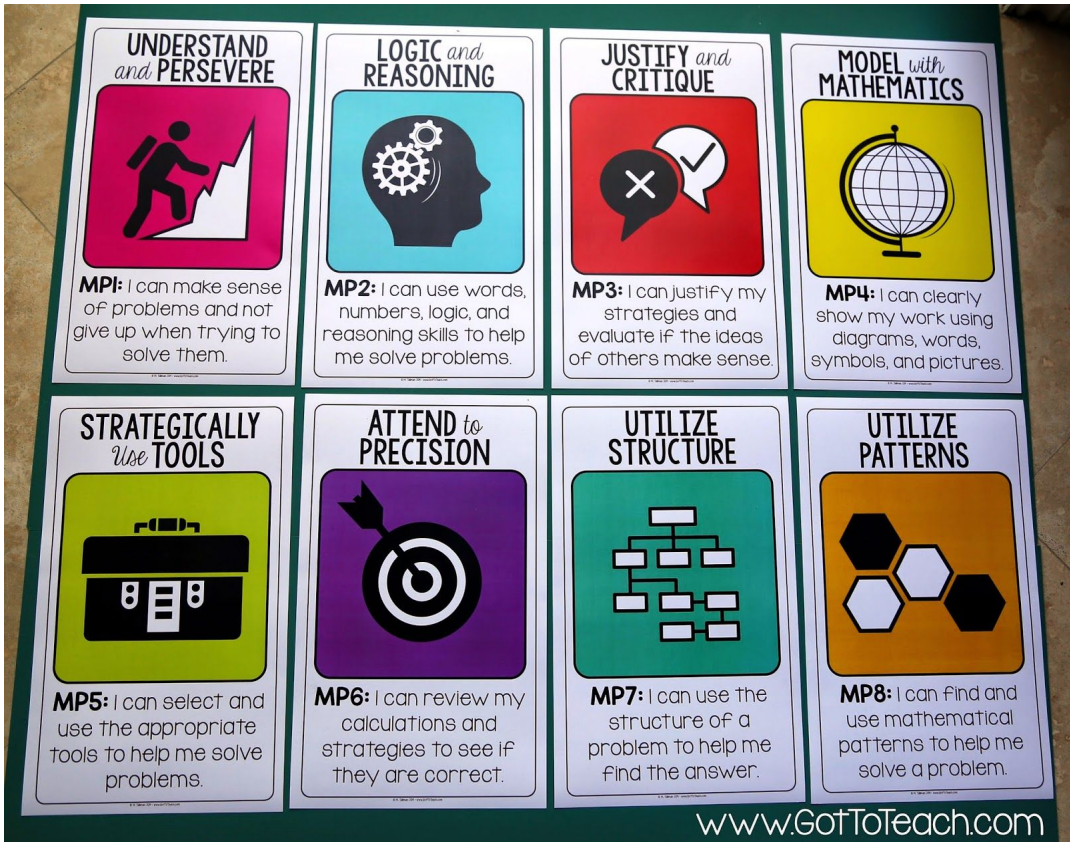
Dale's Cone of Learning



Bloom's Taxonomy - Striving to develop Level 5 & 6 Learners



Mathematical Practices: http://www.corestandards.org/Math/Practice/ (detailed)



Engineering Practices: https://ngss.nsta.org/PracticesFull.aspx

Work Ethic and Study Habits: Recommendations to become a proactive learner.

To maximize preparedness, comprehension, and application, consider the following approaches:

1) Be sure that your notes and homework are **dated and neatly** written.
2) Review and **RE-DO previous homework assignments.** Having a second notebook for class is helpful.
3) *Reread AND **REWRITE your notes**.* Teacher: "How did you study?" Student: I looked over my notes.We consistently ask students what "looking over your notes" actually means. Let's give you some guidance. If there is a section that has a great deal of vocabulary and/or theorems, we suggest REWRITING your notes by hand. More specifically, you could...
4) Create a thorough yet **concise study guide** by hand. Create sections, color-code, underline, highlight, etc. Imagine that the teacher allowed you to bring a 1-page sheet of paper as a "cheat sheet" to your test. What would you put on it? Review notes and all assignments, including in-class work to put this together.
5) *Do EXTRA problems!* For math, there are a slew of **additional resources** available to you that will provide more practice, particularly online platforms.
6) *Study with a buddy!* The way your classmate or friend explains something may be closer to your language than the teacher...so help each other! *Fun Fact: **EXPLAINING a concept correctly increases your understanding** and retention from 20% to 80% (https://www.mathnasium.com/explain-mathematical-thinking, https://www.livescience.com/34000-explaining-helps-understand.html)
7) ***See the teacher** for extra help!* Ask your teacher as early as possible for assistance. (CGHS National Honor Society tutors are also available..ask guidance! Support at MMS includes Math Strategies and Homework Alliance.) Waiting until the day before or day of an assessment will do very little to solidify your knowledge. While we encourage all students to participate in class, we understand that it may not always be comfortable. Your communication with the teacher outside of the classroom becomes that much more important. It is YOUR responsibility to relay your perceptions to the teacher and ask questions. In addition....
8) *Don't wait until the day before the quiz/test to study!* **Be proactive and disciplined.** Part of your homework every night is to review what you did in class that day. You need to give yourself time for certain ideas to sink in and waiting until the last minute to ask questions or study is not a good idea!
9) ***Keep everything!*** Hold on to every last packet until the end of the school year. "Old" papers act as a study guide for midterms and finals.
10) Take "active notes." This means that you are writing down the teacher's comments, explanations and points of discussion beyond what is written on the board or displayed on a screen. **Look, Listen, and Capture.**