



MAST @ FIU

Biscayne Bay Campus

SUMMER LEARNING 2020

I hope that you and your family are faring well now that school has ended for the 2019-2020 school year. It has truly been a tumultuous ending to the school year and we appreciate your perseverance during the last grading period and the engagement that was demonstrated by your child as we moved to remote/distant learning with the implementation of the Instructional Continuity Plan. This summer is unlike any season we have experienced recently as many of us remain within the confines of our home or local community. Traditionally, summer is the time students get some additional sleep, engage in some well-earned fun and prepare for future coursework in the fall. Rather than specific grade level or course assignments, our summer learning activities this year are designed to help students bridge gaps that may exist in their understanding of specific course content while bolstering skills that promote academic success.

Educational research tells us that many students experience a decrease in academic performance as they transition from one grade level to another and from one school structure to another. The variation in performance is first observed when students move from elementary school to middle school and then again when they move from middle school to high school. Unfortunately, the largest decrease in student performance is observed as students enter high school. Most students recover quickly because they have the requisite confidence and study skills to overcome the challenges of their new environment. Unfortunately, some students never adequately recover either because they lack the skills or self-confidence necessary to become successful again.

There are two behavioral explanations for this phenomenon and both were described by [Hermann Ebbinghaus](#) in the late 1800s. The first explanation is based on what is now known as the [Learning Curve](#) which describes how learning improves with experience. The adage, “practice makes perfect” is grounded on the relationship defined by this curve. The second explanation posited by Ebbinghaus is known as the [Forgetting Curve](#). This curve shows how information is lost over time when there is no attempt to retain it. The research associated with this relationship is compelling and suggest that we

forget 70 percent of what we have learned within 24 hours and 90 percent within a week. The saying, “use it or lose it” is based on this unfortunate reality.

The advent of blended schools, such as K-8 and 6-12 educational centers was seen as a mechanism to minimize the variation observed in student performance as students move from one school to another. Although there is insufficient data to fully authenticate the overall efficacy of the blended school model, the current research suggests they are somewhat effective in stabilizing student performance across grade levels. If one extrapolates the data associated with this phenomenon to the performance of students after they move from high school to college, it is not difficult to discern the reason for our existence as a blended university high school. Although the use of blended educational structures is seen as a remedy for a some of the variation observed in student performance when students enter high school, it doesn't fully explain why many students struggle in ninth grade. Students who find success early in high school demonstrate five essential and interrelated skills, which include reading, communication, mathematics, problem solving and organization, that empower their reasoning and ignite their motivation to learn. Let's explore them one at a time and discover why each is important to your child's future success.

- **Reading:** The amount and difficulty of reading material increases significantly as students enter high school and it increases again when students enroll in Advanced Placement or Dual Enrollment courses. Students who have weaknesses in the critical reading elements of phonics, phonemic awareness, vocabulary, fluency and comprehension struggle significantly when confronted by lengthy reading assignments. Educational research on this topic suggests that all the elements essential to reading improve with practice. Unfortunately, students who experience difficulty in reading often develop a dislike for reading which exacerbates the problem further. Fortunately, there is something you may do to help your child become a better reader. Ask your child to read this paragraph aloud. Count the number of times your child pauses or mispronounces a word while reading the text. Review the words that were mispronounced, discuss their meaning in context and then ask your child to reread the paragraph. You should see improvement immediately. Conduct this exercise daily and vary the reading material. As proficiency increases, ask your child to restate the information in his or her own words; this will improve comprehension. This exercise may seem elementary for a high school student, but it really works. There are great reading activities and materials available on the district's Summer Reading Program [website](#).

Communication: This skill is inextricably tied to reading. Good readers are typically good communicators because they are able to decode and translate information into oral or written language. Like reading, oral and written communication skills improve with practice and more so

with guided practice whereby a teacher or editor critiques what a person writes or speaks. As was the case with reading, this is something you may do to improve your child's communication skills. Ask your child to explain something he or she likes to do or has seen or read recently to you and the rest of your family. Better still, ask your child to write about it and then read it aloud at the dinner table. Ask questions after the recitation to elicit further conversation or a deeper explanation. [Journals](#) are a great writing tool because they are an excellent and productive way for a child to build an anthology while providing a mechanism for self-reflection and growth.

- **Mathematics:** It's truly unfortunate that after many years of elementary and middle school mathematics instruction, many students fail algebra I and geometry in high school. The reasons for this include insufficient prior knowledge, poor comprehension, lack of practice, difficulty paying attention, and math intimidation. Mathematics is built on scaffolds of previous knowledge. If one of the scaffolds is weak, the mathematical concepts that are built on that support collapse. When this happens, even previously successful math students find themselves at a loss to explain why when confronted with poor math grades. Some students choose to blame others or their circumstances rather than deal with the underlying defects that exist in their understanding of mathematics. Fortunately, there are excellent programs that help students remediate or reinforce their knowledge and understanding of essential Algebra I and Geometry concepts. Kahn Academy, which is available at no cost, is recommended by educators and used by students all over the world. The [site](#) contains courseware that is designed for all students and grade levels. It also has a great SAT prep course. Its courseware in [Arithmetic](#), [Algebra I](#), and [Geometry](#) is excellent and serves as a great resource for struggling and proficient math students alike. All students should take the Arithmetic course to refresh their basic math skills. Pay attention to the section on fractions as they are one of the key areas that many students struggle with in advanced math courses. Students entering Geometry should review arithmetic and Algebra I. Students entering Algebra II should review all three courses. Trust me; it will help your child perform better in math.
- **Problem-Solving:** This complex skill refers to our ability to solve problems in an effective and timely manner without any impediments. It requires advanced reading and decoding skills both of which often allude the best and brightest individuals. The ability to solve problems is rooted deeply in our genetic code. We would not have survived this long as a species if we could not adapt and solve problems. However, some of us are better at problem solving than others and this is because we don't share the same knowledge and experience in dealing with problems. Take some time to view [Building the Perfect Squirrel Proof Bird Feeder](#). It's a bit long; however, I believe

it illustrates many of the key elements in effective problem solving. Go ahead, watch it now; I'll wait for you.

And... your back. After watching that video, I know you must have a new appreciation for squirrels and their amazing problem-solving abilities. I also hope that you caught many of the behavioral, mathematics and physics references that were made by [Mark Rober](#) who just happens to be a rocket scientist. The problem-solving ability of these little mammals is based on some important and essential skills that we would do well to emulate: Squirrels are goal oriented-- almost to a fault. They are persistent; some may say even relentless in the pursuit of their goal to get to the walnuts. They learn by [trial and error](#), which is a technique used by scientists and engineers everywhere. They are [lateral thinkers](#) which allows them to be nimble learners. They are great observers and communicators. This makes it easier for other squirrels to learn and emulate what other squirrels have seen and experienced. Teamwork really does work for them. By the end of the video, all the squirrels had mastered the course. Pretty cool, uh?

Problem solving and critical thinking are skills that develop with education and experience. The more problems you encounter and solve, the better you become at solving problems. It really is just that simple. So, where to begin? Start small and work as a group. Think of [activities](#) that spark curiosity, imagination, critical thinking and conversation. Here's an easy one: recruit five participants. Using a rope, make a shape on the floor everyone can fit in. Reduce the space at five-minute intervals and figure out how to keep everyone inside the boundary as it shrinks. Good luck!

- **Time and Task Management:** Everybody wrestles with this skill and it's particularly evident when students move from middle school to high school and then into college. This [management](#) skill refers to the process of planning and organizing how much time you spend on specific tasks, projects or goals. It involves taking conscious control over how long you spend engaged in any given activity to become more effective and more productive. Students who can't plan well, prioritize important activities and meet deadlines become frustrated and disinterested. Both of which lead to poor performance and failure. Learning how to become a better time and task manager requires that you first understand how you spend your time. Create a daily activity log. Analyze the log to determine what priorities consumed the most time. Most of us find that we spend entirely too much time on things that don't contribute to our overall productivity. Teach your child to create a daily priority list that addresses the hardest things with the shortest deadline first. Educate and engage your child in applications, such as calendars, reminders and timers that are readily available on their phone. These will keep your child focused on what is important. And

finally, reward your child when he or she successfully complete a task on-time. We all need a well-deserved slap on the back or round of applause after a job is well-done.

We know that this has been a difficult time for all of us. We did not wish to overburden children with extensive work over the summer as we see this period as a critical time for rest, reflection and recuperation. I don't know what the next school year will look like operationally for teachers and students. Those details will be revealed as the school year draws near. But rest assured that we will do our very best to provide your child with a quality education regardless of the circumstances. In the meantime, it is my sincere hope that the activities and suggestions herein will serve to better prepare your child for the year ahead. I also invite you to explore our school [Book Shelf](#) where you will find many guides and resources to help you and your child better understand and acclimate to the high school environment. Please remember that we are you and your child's greatest fans and allies, please reach out to us anytime. Meanwhile, enjoy your summer respite and until next time, bye for now.

Sincerely,

Mathew J. Welker, Ed.D., Principal