



DAVID DAI (HE/HIM/HIS) WELCOME!



I'm glad you're here! The purpose of this class is to prepare you to be a successful mathematician. I'm looking forward to guiding you in your exploration and learning of mathematics this school year!
Be ready to do, think, and talk about math every day this year.
Please feel free to reach out to me any time.

Using recommendations from the National Council of Teachers of Mathematics (NCTM, 2014), we will focus on the following skills during the school year.

Eight Standards for Mathematical Practice

Make sense of problems and persevere in solving them. MP.1	Use appropriate tools strategically. MP.5
Reason abstractly and quantitatively. MP.2	Attend to precision. MP.6
Construct viable arguments and critique the reasoning of others. MP.3	Look for and make use of structure. MP.7
Model with mathematics. MP.4	Look for and express regularity in repeated reasoning. MP.8

Which of the math practices above are you most comfortable with? Which practice do you want to improve?

Policies and Procedures

All Mobile County Public School System and Barton Academy for Advanced World Studies attendance and behavior policies will be followed. Refer to student handbook with any questions or concerns. Students are expected to adhere to all established class norms and routines.

A mathematician you may not know about

The Persian mathematician Muhammad Al-Khwarizmi (850 – 780, محمد بن موسى الخوارزمي) lived during the golden age of the Muslim Abbasid regime in Baghdad. He worked at the “House of Wisdom”, which contained the first large collection of academic books since the destruction of the Library of Alexandria.



Contact Information

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Here at Barton Academy for Advanced World Studies, we support our students' learning experiences with project-based learning opportunities (illustrated).



What are you most excited about with project-based learning?

SUPPLIES

- Chromebook (charged)
- Binder (with graph paper and notebook paper)
- Writing Utensils (Pencils, Pens, Highlighters, Colored Pencils, Expo Markers)

Al-Khwarizmi has been called the “Father of algebra” – in fact, the word *algebra* comes from the Arabic title of his most important book: “The Compendious Book on Calculation by Completion and Balancing”. In it, he showed how to solve linear and quadratic equations, and for many centuries, it was the main mathematics textbook at European universities.

Al-Khwarizmi also worked in astronomy and geography, and the word “algorithm” is named after him.

Want to learn more about other mathematicians? Checkout <https://mathigon.org/timeline>

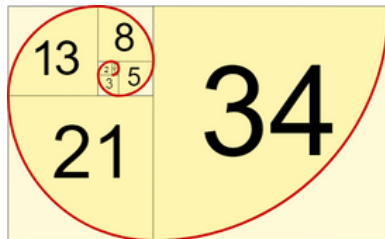
One of my favorite math patterns

is the Fibonacci Sequence:

0, 1, 1, 2, 3, 5, 8, 13, 21, 34, . . .

It can also be represented as a spiral (pictured).

Can you figure out the pattern?



What's your favorite pattern of numbers?

Can you illustrate it?

According to [LinkedIn](#), the top five skills that employers look for are **leadership, communication, problem-solving, work ethic, and teamwork**. We will develop each of these through our class structure:

- Most days we will be working in small groups on whiteboards around the room. After we debrief the task(s) as a class, time will be given for notes and “check your understanding” (CYU) questions.
- I will often ask students to explain their thinking or reasoning (verbally or written) to enhance their communications skills and to develop a deep conceptual understanding of the mathematics.
- In order to promote problem-solving skills and teamwork, I may not directly answer every student question. However, this does not mean students won't be supported. For instance, I will often provide a question or suggestion to help a group move forward or provide an extension for students that are ready for more.

Assignments, Assessments, Grading

- The focus of this class is how much you learn. For this reason, I will not be grading much of your daily work/practice. This will allow you to try things and make mistakes without fear that your grade will go down and provides time for you to really learn the material before an assessment.
- Types of assessments include observations of your work during class (written and verbal), conversations, projects, a portfolio, performance tasks, and quizzes/tests.
- Scoring rubrics will be used to score assessments and given to students prior to assessments. These will also be available on Schoology.
- If a student wants the opportunity to improve their grade on an assessment, the student must 1) meet with me to discuss their assessment 2) complete check your understanding assignment(s) to deepen and improve understanding 3) make corrections on their assessment 4) retake the assessment.
 - The student will earn the higher grade scored on between the assessments
 - **The student must complete this by my established deadline.** Failure to do so will forfeit the student's opportunity to retake the assessment.
- If a student is **absent and misses** an opportunity to complete an assessment, the student will be responsible for attending a tutoring session and schedule a time to complete the missed assessment.
- **Students are expected to login to Schoology to view and complete tasks/assignments for all days they are absent from class.**

Course Description (from Alabama Math Course of Study)

The Grade 8 Accelerated course has been carefully aligned and designed for middle school students who have completed the Grade 7 Accelerated course and show particular motivation and interest in mathematics. In Grade 8 Accelerated, there are four content areas: Number Systems and Operations; Algebra and Functions; Data Analysis, Statistics, and Probability; and Geometry and Measurement. The algebra focus is on quadratic relationships. Students who successfully complete this course will be prepared to enter Geometry with Data Analysis in Grade 9 and then accelerate directly into Algebra II with Statistics in Grade 10, thus providing them with an opportunity to take additional, specialized mathematics coursework, such as AP Calculus or AP Statistics, in Grades 11 and 12.

I reserve the right to make any changes or decisions in the best interest of the students that are not explicitly written on this syllabus.

Stay sharp with these daily math puzzles!

Mathler



Beast Academy "All Ten"



Please complete this Google Form to acknowledge confirmation and understanding of the syllabus.

