Math Enrichment is a course that is taken as a support for students in Algebra 1.

It is NOT just a class to “catch students up,” but to also enrich the students and expand their understanding of content through real-world applications, project based learning, and student discussions.

Our curriculum is truly prescriptive to fit the instructional needs of the students.

Math Enrichment fosters a positive environment to help build up students’ confidence and esteem in mathematics, as well as understand that it is ok to make mistakes as long as they learn from them.

Students receive direct instruction and guided practice each week to reinforce concepts.

We model multiple methods for solving so students can find the method that best suits their needs—not all students learn the same way!

Students are provided with graphic organizers to increase their problem solving skills.

Students who demonstrate content mastery early are enriched through extra challenges.
# The Parallels of Algebra 1 & Math Enrichment

<table>
<thead>
<tr>
<th>Day</th>
<th>Algebra 1</th>
<th>Math Enrichment</th>
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<tbody>
<tr>
<td><strong>Friday</strong></td>
<td>Chapter 7 Assessment</td>
<td>Chapter 8 Pre-Requisite Stations</td>
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<tr>
<td></td>
<td>(Anticipation guide, vocabulary, algebra skill set practice)</td>
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<tr>
<td><strong>Monday</strong></td>
<td>8.1 Lesson</td>
<td>Chapter 8 Pre-Assessment</td>
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<td>(We track all students progress each chapter)</td>
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<tr>
<td><strong>Tuesday</strong></td>
<td>8.2 Lesson</td>
<td>Chapter 8.1 Re-teaching &amp; Review</td>
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<td></td>
<td>(Strategies, Tips, Peer Teaching, Student Discussions)</td>
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<tr>
<td><strong>Wednesday</strong></td>
<td>8.3 Lesson</td>
<td>8.1-8.2 Spiral Review</td>
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<tr>
<td><strong>Thursday</strong></td>
<td>Review 8.1-8.3</td>
<td>8.1-8.3 Review for Assessments</td>
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<tr>
<td></td>
<td>(Problem Trail with QR Codes—BYOD)</td>
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<tr>
<td><strong>Friday</strong></td>
<td>8.1-8.3 Assessment</td>
<td>HOT Problem Assessment</td>
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<tr>
<td></td>
<td>(One higher order thinking question. Requires a written explanation, mathematical reasoning, and error analysis.)</td>
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<tr>
<td><strong>Monday</strong></td>
<td>8.4 Lesson</td>
<td>Results from Friday’s assessment and the student’s progress from the week will guide instructional planning for the following week. It is possible that our class would move on with Algebra 1, or stay behind to master the concepts.</td>
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A Glimpse Inside Math Enrichment

Project Example: Statistics Unit
*Parallel to the Algebra 1 Statistics Chapter*

This two week long project was modeled and adapted from a college level research and statistics course. The purpose of the project is to bring meaning to what the students learn in Algebra 1 during their unit on statistics by applying what they have learned in a highly engaging project.

Students learn how to collect quantitative data that is unbiased and reliable. The students work collaboratively to collect, organize, and interpret data on a research topic of their choice. The students then construct visual representations of data (learned in Algebra 1) to show various trends in the data. All students present their research project and trends to their peers. Past students have rated this project as top notch!

Technology & Teaching

In Math Enrichment, we use technology quite often to introduce algebraic concepts to students, or to practice what they have previously learned in Algebra class.

This year, we have utilized Khan Academy as a pre-teaching tool to allow students to gain baseline knowledge of the Algebra content at their own pace.

In addition, the students utilized the mobile lab to create “EdCamp” presentations (mini lessons) as a culminating activity to review for nine week’s exams.

Another great way we consistently use technology in the classroom is for students to gain immediate feedback on their work. We implement activities where students can check their own work using their own device or school provided iPads as a QR code scanner to check their solutions.

Reinforcement Activity Example:
Exponential Decay with Algebra 1

Have you ever heard people say, “Once you drive a car off of the lot, it loses its value?” - it’s true, and the students do the math to actually figure out the depreciation value! In Algebra 1, students learn about exponential decay. Then in Math Enrichment, we apply this concept of exponential decay to purchasing their dream car and owning it for a minimum of five years. The students “buy” their dream car and create a function to determine the rate of decay to see what their car will be worth in the future. The students then graph and compare and contrast their results with other students to determine which brands hold their value the most and why they think there is such a difference in car values.

Reinforcement Activity Example:
Exponential Growth with Algebra 1

As a continuation activity, the students investigate what happens when millionaires invest their money in different banks. The students use online resources as well as calling local banks to obtain interest rates. The students create a function, graph, and determine which bank will compound their interest annually to give them the biggest return in 5, 15 and 20 years!
How does English Enrichment Benefit Students?

- English Enrichment is a course that is taken as a support for students in English 1/2 (or those who have elected to move to 1A/2A).

- It is NOT just a class to “catch students up,” but also to enrich the students and expand their understanding of literacy skills that will benefit them in all classes and future exams (ex. ACT).

- The curriculum meets individual student needs, and we use a supplemental program called Reading Plus, which is cited in the What Works Clearinghouse. Reading Plus is used several times a week throughout the year. Students take an initial assessment to determine their “levels,” and then the program gives level-appropriate scanning, comprehension, and writing activities to improve fluency, vocabulary knowledge, and overall comprehension. Students are able to choose their reading topics, as well. Students set goals and record their own progress, conferencing with teachers as they go.

- Students also receive direct classroom instruction and guided practice each week to reinforce concepts in a variety of literacy-based areas. We teach academic vocabulary across the curriculum, reading strategies, writing strategies, etymology-based lessons, and testing strategies in addition to building a foundation for literacy enjoyment.

- A variety of instructional strategies are used, which make this class engaging and motivating for students. The goal is to develop literacy skills that will support student success throughout their core coursework. It is NOT another English course!
The Connection of English DE Instruction to Literacy Across the Core Curriculum

<table>
<thead>
<tr>
<th>Literacy Element</th>
<th>Supported Study</th>
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<tbody>
<tr>
<td><strong>Reading Strategies</strong></td>
<td>• English: Novels, short stories, memoirs, non-fiction</td>
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<td></td>
<td>• Social Studies: Source documents, textbook selections, articles</td>
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<tr>
<td></td>
<td>• Science: Textbook selections, articles, reports, charts/graphics</td>
</tr>
<tr>
<td><strong>Writing Strategies</strong></td>
<td>• English: Research papers, essays</td>
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<tr>
<td></td>
<td>• Social Studies: Cornell Notes, essays</td>
</tr>
<tr>
<td></td>
<td>• Science: Lab reports, research papers</td>
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<tr>
<td><strong>Vocabulary Strategies</strong></td>
<td>• Academic vocabulary in all courses</td>
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<td>• All assessments: in-class and standardized tests</td>
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<td></td>
<td>• Communication: written and verbal</td>
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<tr>
<td><strong>Testing Strategies</strong></td>
<td>• In-class assessments</td>
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<td>• Quarter and Final Exams</td>
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<td></td>
<td>• EPAS (EXPLORE, PLAN, ACT)</td>
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<td></td>
<td>• Upcoming PARCC</td>
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Notes:

- All students moved up at least one level over the course of the year.
- All students increased their fluency.
- All students increased their comprehension skills.
- Data is from the Reading Plus program.
Reading Plus is the only Common Core aligned reading intervention that prepares students to engage with complex text by developing the three key dimensions of successful reading: capacity, efficiency, and motivation. Developed in partnership with leading reading researchers, the personalized and dynamically adjusting program is proven to increase reading achievement for students in grades 3 and beyond.

Assessment of the Whole Student
- Reading Rate
- Visual Scanning
- Letter Recognition Span
- Extrinsic Motivation
- Self-Efficacy
- Interest
- Value
- Vocabulary Level
- Comprehension Level

Instruction for the Whole Student
- SeeReader
- Silent Reading Fluency & Comprehension
- ReadAround
- Vocabulary Development
- iBalance
- Visual Skill Development
- Reading - Writing Connection

How Students Read
Dynamic text presentations make reading easier and more efficient, while developing stamina and increasing rate and enjoyment.

Why Students Read
The program tracks student interests and uses this data to facilitate content area connections, broaden curiosity, and develop intrinsic motivation and knowledge.

What Students Can Read
Structured text-dependent comprehension and writing tasks develop academic vocabulary and foster increased capacity with progressively complex texts.
What the students say...

“As an eighth grader, I didn’t think it would benefit me. Now that I’m in the class, I realize that it has helped me more than I actually thought it would. I love Math Enrichment because if I didn’t understand the content in Algebra, I know I have a second class to help me understand it better. Plus, I like the different explanations my teacher provides me. I have really enjoyed the activities because it keeps me interested in the content.”
- S.S.

“This is NOT your typical math class. It is the complete opposite of what I thought it would be. Every day is different and you never know what kind of activity we will be working on. I like how Math Enrichment goes beyond our textbook and makes learning math fun!”
- K.M.

“Math enrichment is a math class that you benefit from by learning new methods and ways of thinking. We have learned how to work through math problems easier and how to think them through. It helps you by doing extra examples, projects, and activities. You are getting more help than other students without having to take time outside of school. I can honestly say this class is one of my favorite classes because we do something different every day. It is a more fun way of learning math.”
- J.W.

“Math enrichment is a vital source that is there to help students get extra practice and to help prepare them for Algebra. It really helps the way someone feels about math, it can increase your progress, it reveals your strengths and weaknesses, and it can relieve a lot of stress. There is always room for improvement but math enrichment helps to push you towards better standards. It helped me discover my strengths and weaknesses and it taught me better studying skills. In math enrichment you learn alternative methods that you may prefer.

This class helps to ensure and increase your confidence. I like how it pushes me to get better through Khan and other resources. Math enrichment is a great place for students!”
- J.P.

I know you’re probably not thinking “Yay two English classes!” but there are some good things about it. We do different types of reading that improve how fast you read and how well you understand it. So don’t stress it. You will have a great time and become a better reader.

– K.V.

English Enrichment may seem like an extra English class, but it helps you with your reading so your other classes get easier too. The Reading Plus program seemed like it might get boring at first because you do it two or three times a week, but I like the days we do it because when you level up, it feels good and sometimes the teacher lets you pick a prize.

- R.W.