

Math Night 2019

Farragut Middle School

Thank you for joining us.

Introductions.

**This presentation is organized
around three themes:**

- **The state standards and our curriculum.**
- **The progression of math classes from
Math 6 through the high school, and**
 - **acceleration.**

At the end, we'll pause for questions.

Math Department Goals

- Provide all students with a rich and meaningful experience
- Create problem solvers by teaching for reasoning and sense-making
- Produce mathematically competent and confident students

Where do standards come from?

Each state gets to create its own standards; even when the Common Core State Standards hit the nation in 2010, they were adopted separately by each state.

The next standards revision began in 2017 and is 'operational' next year in the middle school and the year after in the high school.

Districts -- including ours -- have to follow these standards.

“Standards” set the “what”

“Curriculum” encompasses the “how”

The curriculum is the actual set of lessons the student participates in throughout the year. It includes the teacher’s lesson plan, handouts, activities, etcetera.

The state even provides a model curriculum -- you’ll see some material from EngageNY, which was written by the state specifically to meet the state standards.

Students see some material from EngageNY, but also from other resources, such as textbooks, workbooks, online websites and more.

Teachers use curriculum to bring the mathematics to life.

Next theme: progressions

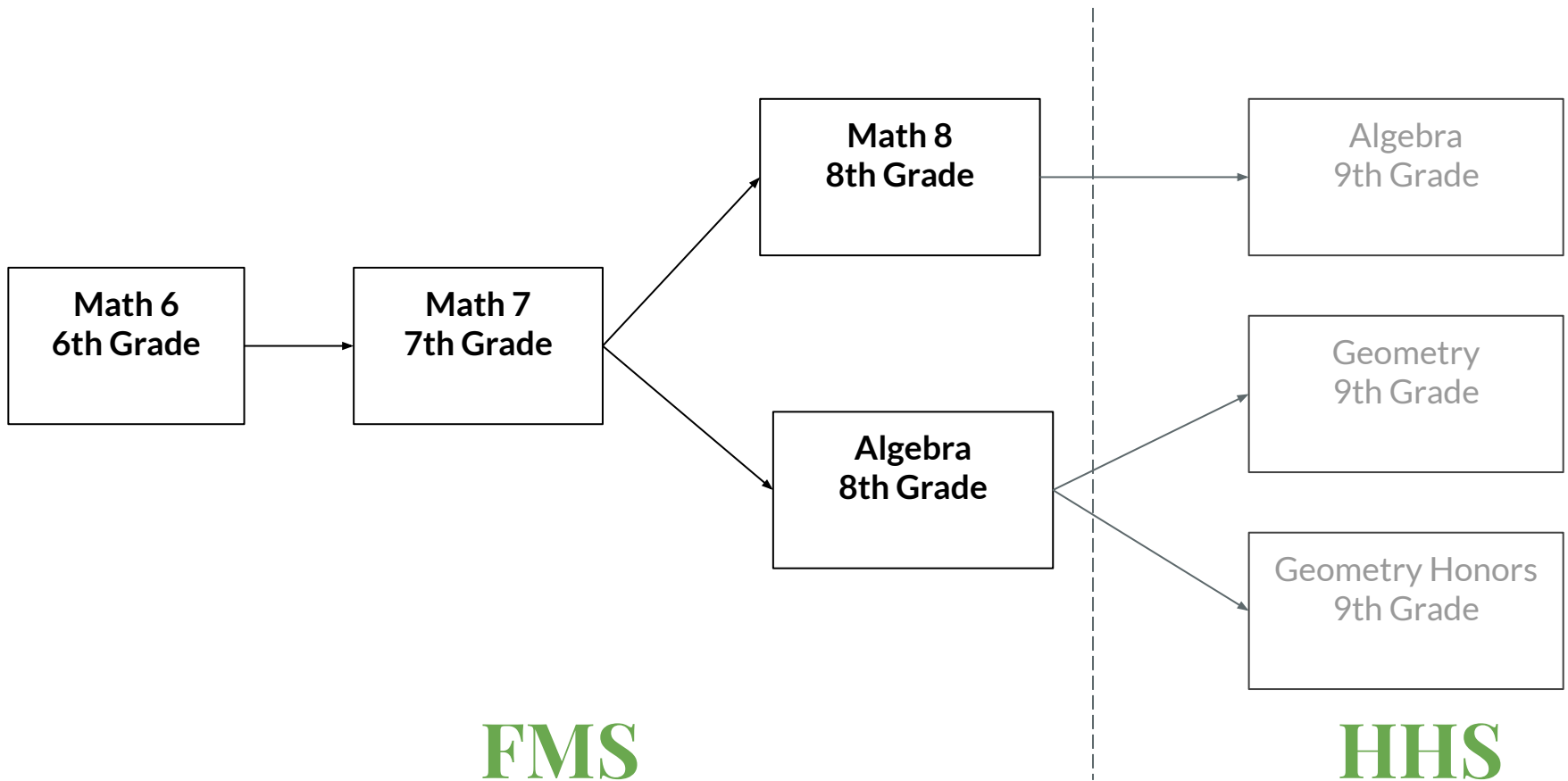
Progression Overview

As a district, we believe strongly in a **shared coursework experience** from Pre K - 7th Grade.

The math department starts to offer options after Math 7.

This trend continues in high school, where students pick from a spectrum of coursework from electives to APs.

Coursework Pathways

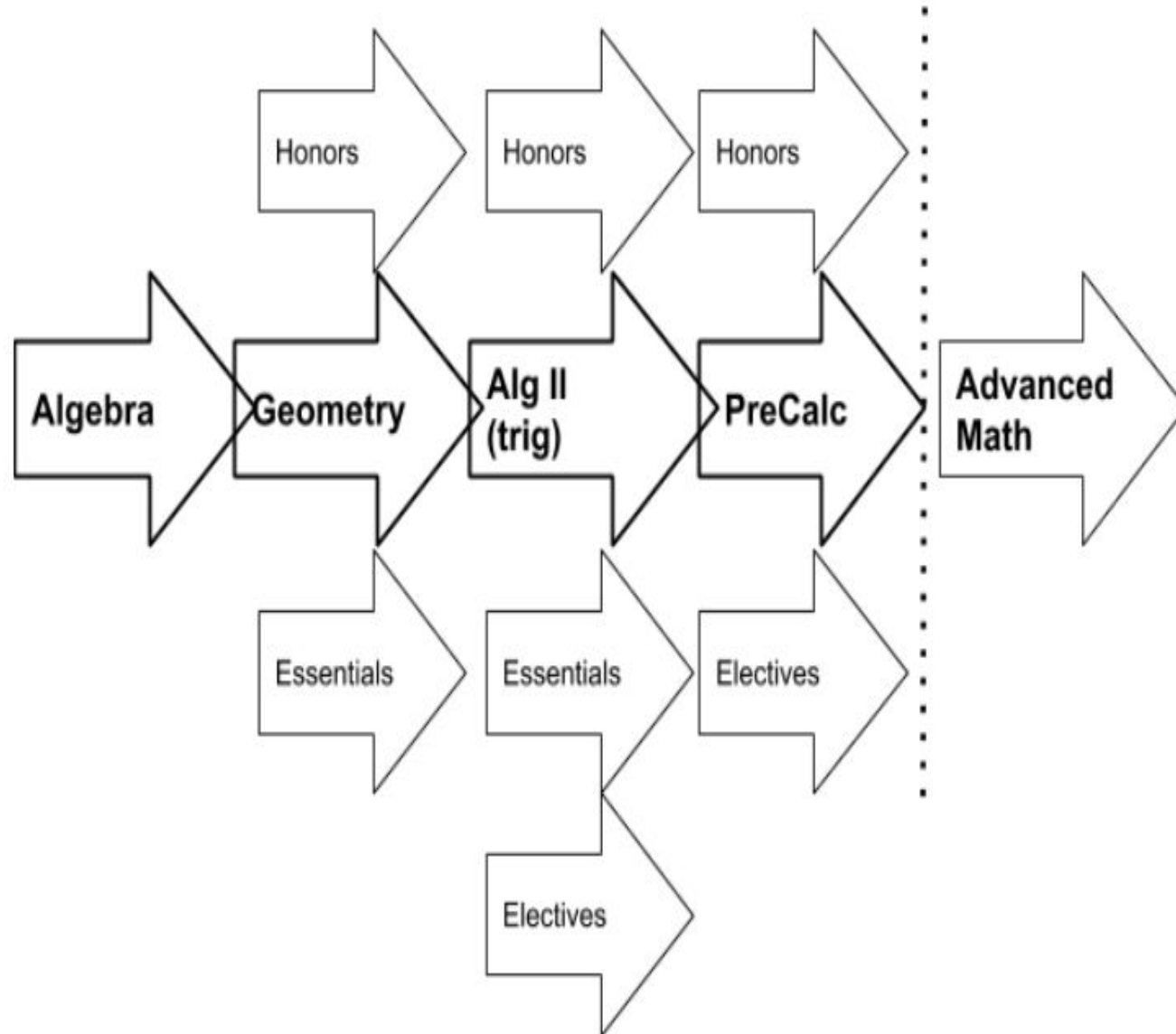


Coursework Pathways: High School

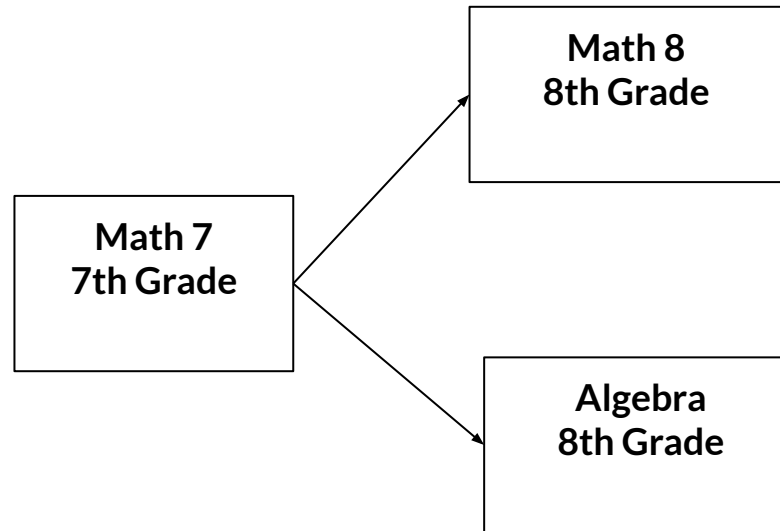
High School Graduation is based on maintaining sequences of classes and passing several key exams. In mathematics, this involves taking and passing **three** high school level mathematics classes and passing **one regents exam** in mathematics.

- Three high school level mathematics classes (which can include the middle school Algebra class).
- One regents exam in mathematics (for most students, that exam will be the Algebra exam).
- All other mathematics exams are local (no advanced regents diploma).

The high school math sequence (in general)



Coursework Pathways and our last theme: Acceleration



The Big Picture

Long term “mathematical health” is determined by taking Algebra at the **right time.**

A student's math course **does not reflect**
fixed mathematical ability or their
potential in upcoming grades.

Reasons We Love Math 8

Middle school is a time for students to get “messy” with mathematics. To explore, make connections, apply ideas to the “real world”, develop strategies, engage in project-based learning, and generally deepen the mathematical understanding that prepares students for abstraction and symbolism.

This kind of work takes time and sacrifices learning more topics, but is crucial for developing the intellectual maturity necessary for success in high school mathematics.

Reasons skipping Math 8 sometimes works

Taking Algebra in middle school requires skipping a year of mathematics. This only makes sense if the student had already mastered some of the material, is already established as an excellent student, and is likely to be able to catch up quickly as Algebra topics move into previously unseen territory.

In addition, kids become developmentally ready for the abstraction of algebra at different ages.

All these concerns go into our determination process.

**How is the placement decision
made for next year?**

Process for Math Placement

We have already begun the process of setting up for classes next year. For some students who know that they will continue with Math 8, no action is required. For students who would like to take Algebra, the decision is more involved.

From the February 2019 letter:

Placement in an accelerated class is not a perfect science. We use a number of criteria in making our decision. These include student grades in mathematics and ELA, any outside coursework or programs students participate in, teacher recommendations based on their classroom experience with the student, and data from several other sources. ...

We ask students who are interested in acceleration to sit for a local acceleration assessment. Questions on this assessment are drawn from both seventh and eighth material. That means that some of the questions will be on material that the student has not studied with us. This is deliberate, as we are looking for a sense of how comfortable students are with the material they intend on accelerating past.

Summary of evaluation data we use:

- Local exam, based on 7th and 8th grade material.
- Outside mathematics coursework.
- Academic scores based on Mathematics, Science, and ELA
- Teacher rubric for academic skills
- Counselor recommendation.

Thank you!

General Q & A

Contact info:

Questions about class?

Reach out to your child's math teacher.

Questions for me?

Dr. Greg Stephens

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Bigger questions?

Gail Kipper

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