

# Healthy Minds, Healthy Families

## Empowering Families for Scholar Success

How can I help my child...

Maintain physical activity?

Avoid vaping and other substances?

Deal with stress and anxiety?

Manage social media and screen time?

Make good food choices?



Thursday, December 11 | 6-7:30 pm



FEDERAL WAY  
PUBLIC SCHOOLS





# Building Math Confidence Together

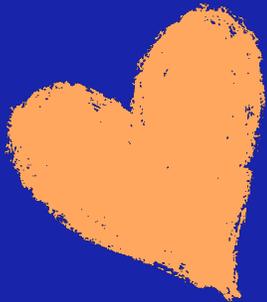
Secondary Math



**FEDERAL WAY  
PUBLIC SCHOOLS**

Each Scholar: A voice. A dream. A **BRIGHT** future.

**We're glad  
you're here!**



# Introductions and My Math Identity is ...

Kimberly Tarnowiecky

- Secondary Math Facilitator, 9-12 Math

Your **mathematical identity** encompasses your beliefs about your own mathematical abilities, your relationship with mathematics as a subject, and how you see yourself within mathematical communities.

Consider the experiences that have shaped your current relationship with mathematics, both positive and challenging moments that contributed to your mathematical self-perception.

*one*



THE EARLY YEARS

Building the Foundation

*two*



WHOLE CHILD

Thriving, Confident,  
Responsible Individuals

*three*



ACTIVE LEARNERS

Engaged, Empowered  
Critical Thinkers

*four*



CONTENT-AREA  
COMPETENCE

Mastery of All  
Subjects

*five*



PERSISTENCE TO GRADUATION

High School  
Graduation  
Through Successful  
Transitions

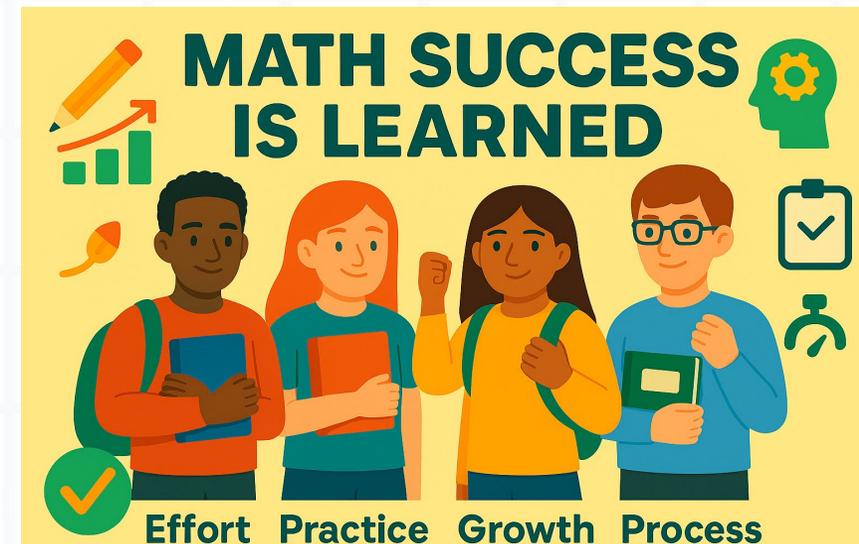
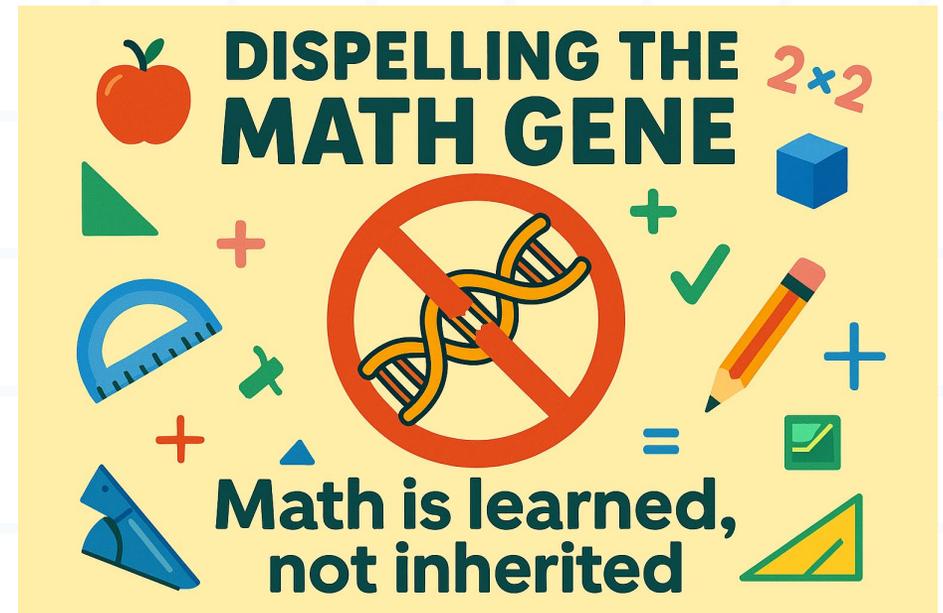


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# Math Identity

Mathematical ability **develops** through **practice, discussion, collaboration, curiosity, and persistence** rather than innate talent, it opens up possibilities for growth and improvement.

Research consistently shows that students who **believe** their mathematical abilities **can improve** through **effort and practice** actually perform better than those who believe ability is fixed.



# Building Confidence

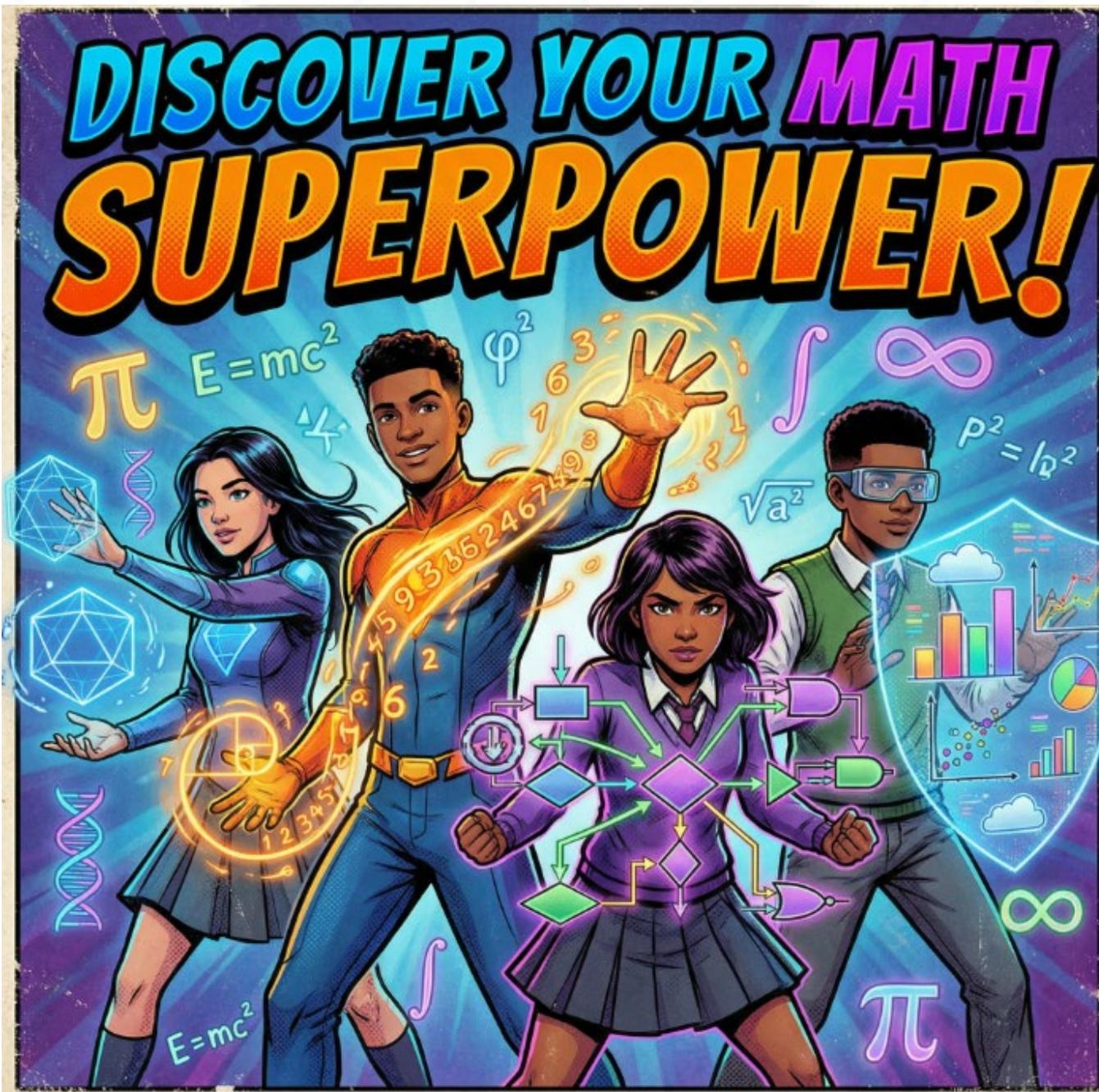


Identify where you feel most confident

Acknowledge areas where you continue to learn and grow

Mathematically capable and confident

Problem-Solving skills



# How to support

- **Share** your Math Identity
- **Share** how you continue to learn and grow
- **Share** problem solving skills you use
- **Share** when together doing math and problem solving

- **Encourage** students they can learn math through
  - Effort
  - Practice
  - Curiosity
  - Questions

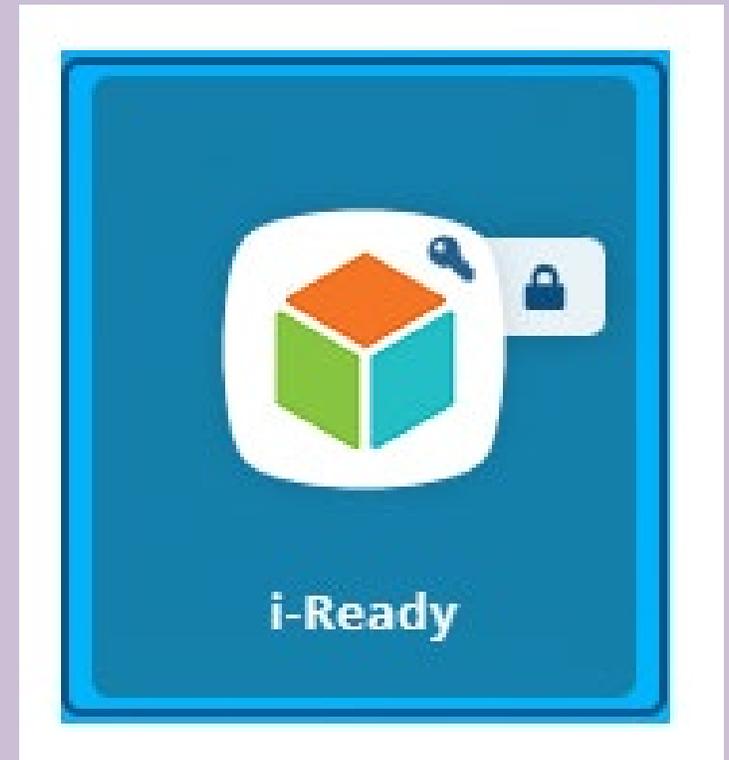
- **Supports** to help

**Encourage** might take time

# How to support Middle School

Ready Math Online resource

- MyPath



# How to support Algebra, Geometry, Algebra 2

## How to support your student as they learn about Quantities and Relationships

Mathematics is a connected set of ideas, and your student knows a lot. Encourage them to use the mathematics they already know when encountering new concepts in this topic.

Where are we?



In this MATHbook topic, students explore a variety of different functions. The intent is merely to introduce these new functions, providing an overview but not a deep understanding. The topic helps students recognize that function families have different key characteristics. Later in this course, they will formalize their understanding of the defining characteristics of each type of function.

Where have we been? ←

In previous grades, students defined a function and used linear functions to model the relationship between two quantities. They have written linear functions in slope-intercept form and can identify the slope and  $y$ -intercept in the equation. Students have also characterized graphs as functions using the terms *increasing*, *decreasing*, *constant*, *discrete*, *continuous*, *linear*, and *nonlinear*.

Where are we going? →

The study of functions is a primary focus of high school mathematics. This topic builds the foundation for future, more in-depth study by familiarizing students with the concept of a function. They will continue to use formal function notation throughout this course and in higher-level math courses.



Encourage your students to work through the sequence of MATHia assigned to them. These workspaces deepen their understanding and provide practice with the concepts of *Quantities and Relationships*.

### Understanding Quantities and Their Relationships

- Identifying Quantities

### Recognizing Functions and Function Families

- Interpreting Function Notation
- Identifying Domain and Range
- Identifying Key Characteristics of Graphs of Functions
- Introduction to Function Families

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ONLINE RESOURCES FOR FAMILIES  
[www.carnegielearning.com/home-connection](http://www.carnegielearning.com/home-connection)



MARK YOUR CALENDAR  
End of Topic Test:

## Talking Points

### Discuss With Your Student

Your student is learning about types of functions and function relationships. You can further support your student's learning by asking questions about the work they do in class or at home.

### Questions to Ask

- 1 *How does this problem look like something you did in class?*
- 2 *Can you show me the strategy you used to solve this problem? Do you know another way to solve it?*
- 3 *Does your answer make sense? How do you know?*
- 4 *Is there anything you don't understand? How can you use today's lesson to help?*



### KEY TERMS

#### increasing function

If a function increases across the entire domain, then the function is an increasing function.

#### decreasing function

If a function decreases across the entire domain, then the function is a decreasing function.

#### function family

A function family is a group of functions that all share some characteristics.

#### x-intercept

The  $x$ -intercept is the point where a graph crosses the  $x$ -axis.

#### y-intercept

The  $y$ -intercept is the point where a graph crosses the  $y$ -axis.

# How to support Alg, Geo, Alg 2

## Carnegie Learning Online resource

- Mathia
- Skills Practice Worksheet
- Mixed Practice
- Topic Summary with videos



### Topic Intro Resources

- Family Guide
- I-Can Statements

### Student Lessons

1. A Picture Is Worth a Thousand Words: Understanding Quantities and Their Relationships

- Student Lesson
- Assignment
- Google Slides
- Powerpoint

2. A Sort of Sorts: Analyzing and Sorting Graphs

- Student Lesson
- Assignment
- Google Slides
- Powerpoint

3. F of X: Recognizing Functions and Function Families

- Student Lesson
- Assignment
- Google Slides
- Powerpoint

4. Function Families for 200, Alex: Recognizing Functions by Characteristics

- Student Lesson
- Assignment
- Google Slides
- Powerpoint

### MATHia Software Workspaces

#### Getting Started

- Getting Started

#### Understanding Quantities and Their Relationships

- Identifying Quantities

#### Recognizing Functions and Function Families

- Interpreting Function Notation
- Identifying Domain and Range

- Identifying Key Characteristics of Graphs of Functions
- Introduction to Function Families

#### Practice

- Skills Practice Worksheet

#### Topic Review Tools

- Mixed Practice
- Topic Summary
- Lesson 1 Worked Example

- Lesson 2 Worked Example
- Lesson 3 Worked Example
- Lesson 4 Worked Example

# How to support Alg, Geo, Alg 2

Edia

- Calendar
- Practice
- IA Coaching
- Explanation with visuals
- Videos
- Pathway



# How to support High School

## IA Coaching

Solve the equation for  $a$ . Leave your answer as an exact fraction if necessary.

$$4a + 1 = 9a + 6$$



AI Coaching

1 message ^

To solve for  $a$ , remember that you want to get all terms with  $a$  on one side and all numbers on the other. What principle helps you move terms from one side of an equation to the other?

Student answer

1 of 1 points

$$a = -1$$



# How to support High School

## Explanation with visuals

### Explanation

The median is one way to measure the center of a data set by finding the middle data point.

To calculate the median, sort the data points from least to greatest and then pick the one in the middle. If there are an even number of data points, take the mean of the two numbers closest to the middle.

Here, sorting the data points yields  $\{2, 4, 9, 9, 11, 12\}$

Because there are an even number of data points, there are two numbers that are in the middle of the data set, 9 and 9. The median is the mean (or "average") of these two numbers.

$$\text{median} = \frac{9 + 9}{2} = 9$$

### Suggested video



via James Sousa

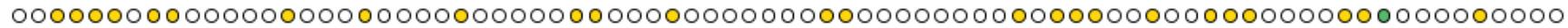


# How to support High School

- Pathway



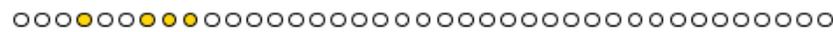
**Congruence**



**Similarity, Right Triangles, & Trigonometry**



**Circles**



**Expressing Geometric Properties with Equations**



**Geometric Measurement & Dimension**



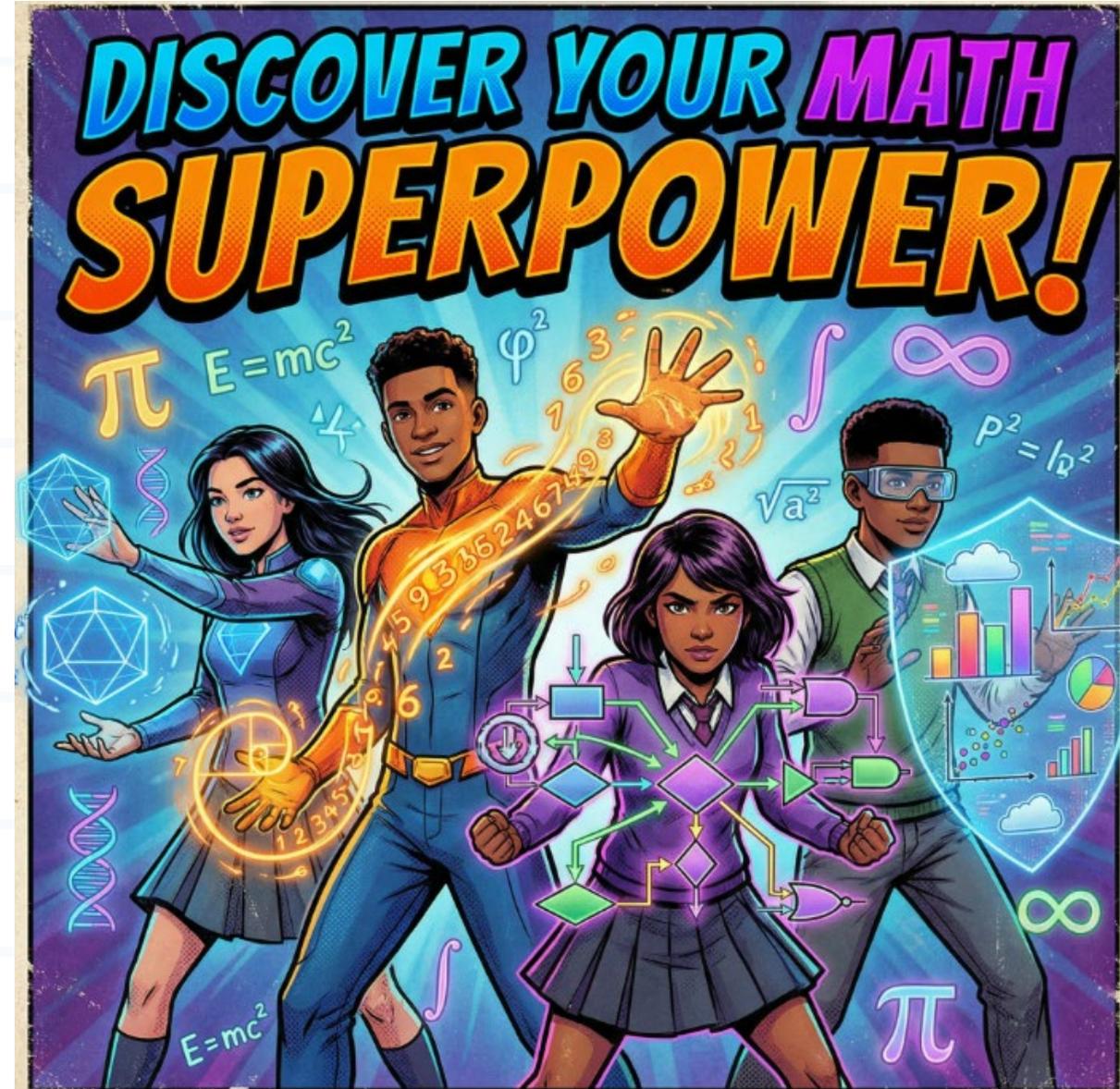
# Building Confidence

- Share
- Encourage
- Support
  - Family Guide
  - MATHia
  - Edia – IA Coach
  - Practice

# Building Confidence

## Celebrate Super Power!

- Effort
- Curiosity
- Growth
- Practice
- ...





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**Before You Go!**

*Please pose any questions*

**Kimberly Tarnowiecky**

Secondary Math Facilitator

## Next Steps:

### Feedback Survey:

Please help us improve by sharing your feedback about today's event through a 3-minute survey.

*Encuesta posterior al evento: !Ayúdenos a mejorar!*

پست-نظرسنجی : رویداد به ما کمک می کند بهبود یابیم!

Take the survey at [www.fwps.org/familyacademysurvey](http://www.fwps.org/familyacademysurvey)



### EP&O Renewal Levy:

- Learn more at [www.fwps.org/levy2026](http://www.fwps.org/levy2026)
- Register to vote, if needed
- Don't forget to vote on February 10, 2026

