

# Math Matters!

A widespread myth says some people are “math people” and some people are not. Many students, parents, and educators believe this myth, and it inhibits them every day in their math learning!

## What do the statistics show?

- Well over 50% of Americans have math anxiety.
- Math anxiety starts early (in students as young as 5), leading to math difficulties and avoidance that only get worse as children get older.
- Math anxiety affects the classes students select and the careers they pursue.
- 65% of Iowa’s grades 3-12 students met the ISASP proficiency benchmark in math (2021) and 44% of Iowa graduates met the ACT Math College Readiness Benchmark (2019)
- Iowa was one of 5 states showing a decrease in 8th grade NAEP scores between 2017 and 2019
- Engagement steadily decreases through school; only 33% of high school students report high levels of engagement in school (2018 Gallup Poll)

## How can we make a difference?

**Success Story:** “With the exception of a student who moved into the district this year, ALL 3rd graders are Proficient or Advanced in Math on ISASP!! I am so appreciative for the **Math Project** learning opportunities provided by our math consultant, the follow up and coaching of our instructional coach, and the work of the staff!” (GWAEA Elementary Principal)

## Personalized Supports:

**Classroom:** Modeling, coaching, co-teaching lessons, observing and providing feedback

**Team:** Grade level PLC team/math team/intervention and special education team support

**Leadership:** Support and facilitate learning with instructional leaders; co-plan and/or facilitate professional development; support district/building review of instructional resources; support implementation of MTSS components (Universal, intervention, Assessment and Data-Based Decision-Making)

## GWAEA Math Project:

Key content has been bundled into the Grant Wood Math Project which can include three years of sustained learning, coaching and modeling in the classroom, observations and classroom feedback.

Year 1 - Number Talks

Year 2 - Progressions of Standards

Year 3 - Five Practices for Orchestrating Productive Mathematics Discussion in Problem Solving Situations

## Other Learning Opportunities at GWAEA:

The Early Learning Series: The Intentional Teacher (Preschool Math, Literacy, and SEL)

PK-2 Early Mathematics

Contextual Learning: Integrating Math and CTE to Become Future Ready (AMPED on Algebra, Geometry in Construction)

Emergent and Conventional Math Strategies for Significant Disabilities and Complex Learners

Research indicates that understanding concepts, skills and problem solving for key math content at every grade span is linked to many predictors of success!

## Primary Grades (counting principles, addition, subtraction, place value)

Preschool numerical understanding, early math concepts & early grade growth in math



Most powerful predictors of later learning: predicts math and literacy knowledge 5 years later; math achievement at age 15, and may be linked to HS graduation

## Intermediate/Upper Grades (multiplication and division of whole numbers and fractions)

End-of-grade math scores in 5th grade

Knowledge of fractions & division



Predicts ACT in 11th grade

Predicts students knowledge of algebra and HS math up to 6 yrs later

## Middle School (ratios, proportional relationships, expressions and equations, rational numbers, linear equations and functions)

High 8th gr. Math achievement



Tends to predict Alg2 success

## High School (In order for students to be considered Future Ready, they need to learn Algebra content and problem-solving skills)

Algebra I

Alg2 completion



Often considered gate-keeper for post-secondary success

Predicts college and tech school completion

## GWAEA’s Recommended Key Content for Staff:

- Deep understanding & prioritization of standards
- Learning progressions within and across grades
- Engaging instructional strategies (such as *Number Talks* & *8 Effective Mathematics Teaching Practices*)

## REGISTRATION

[gwaea.org/learning](http://gwaea.org/learning)

## REGISTRATION INFORMATION

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