



In the Southbridge Public Schools, ALL students will experience a world class education, and will graduate as engaged citizens who demonstrate essential skills required for success in college and career.

We believe that all students deserve to be prepared for their chosen career pathway. Therefore, we will implement effective math instructional practices that engage students in rigorous learning through application of logical strategies that are relevant to real world experiences.

Elements of an Effective Math Lesson:

Every lesson reflects the shifts required by college- and career- ready math standards.

Mathematics instruction at Southbridge is grounded in the three shifts--focus, coherence, and rigor--required by college and career ready math standards. Daily lessons, from Illustrative Mathematics, are spent on students developing conceptual understanding, building procedural skill and fluency, and engaging in application. Instruction supports students in seeing the connections of math both within and across grades, supporting a coherent picture of mathematics from Kindergarten - 12th Grade.

Effective teaching of mathematics requires instructional practices that allow all students to engage deeply with the mathematics content--pushing students to make connections and think about the mathematics more explicitly than they would on their own.

- Learning tasks, provided in the Illustrative Math curriculum, are crafted to encourage logical thinking and ideally to allow for a number of strategies. Their open ended structure is a hallmark of an effective learning task.
- Instruction encourages logic and flexibility. The goal is to develop deep content knowledge in our students. Any lesson that teaches students a list of steps instead of lasting and transferable math understanding is a missed opportunity.
- Connections are built between strategies. They should help students move from more concrete or inefficient strategies to more sophisticated or efficient ones. Instructional practice encourages discussion, focused on students explaining their work.
- Misconceptions are planned for, addressed, and corrected.
- Mathematical tools and resources are used, inclusive of technology, to support students' learning.

Students engage in the struggle.

- We go beyond the I do - we do - you do approach to teaching mathematics. Specifically we believe that good math lessons require students to use what they know to struggle with and logically attack a new problem that is more challenging than anything they have seen before.



- Students must be pushed to articulate their process, even when that articulation is a struggle. It is insufficient for students to be able to get the right answer – they must also be able to explain how they got it and why that is correct.

All students are engaged throughout the lesson; they are engaged in the work, engaged in learning from others, and engaged in monitoring, articulating, and refining their own thinking.

- Engagement doesn't mean every hand is up but it does mean every student is tracking the conversation and able to contribute at any moment. Instructional routines provide a structure for each student to engage meaningfully in each lesson and attend to the expectations of grade level mathematics standards.