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Methods of Teaching Math EDG 565
Week 1 Assignment
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“The Common Core Standards for Mathematics define what students should understand and be able to do in their mathematics study.” (Common Core State Standards, n.d.). They were designed to support both mathematical understanding and procedural skills equally. While they were not designed to provide pedagogy for strategy or method, nor were they designed to reflect the diversity of need, ability, or individual learner, “they provide clear signposts along the way to the goal of college and career readiness for all students.” (Common Core State Standards, n.d.).

Three important shifts are designed for the student to become college and career ready—Focus, Coherence, and Rigor.

In Focus, the idea of less is more is somewhat applicable. Common core states it as “mile-wide, inch deep to significantly more narrow, and a deepening of the way time and energy are spent in math instruction in the classroom.” (*College- and Career-Ready Shifts in Mathematics*, 2014) A strong foundation is a focus versus a buffet of shallow concepts. The accomplishment of fluency and skills can then empower the student to problem-solving in and outside of the classroom. Critical fluency skills in grade 4, for example, focus on multi-digit multiplication and division. Yet, the deeper conceptual understanding is accomplished through the development of significant time invested in partial products en route to the multiplication algorithm. A deeper understanding of the multiplication algorithm occurs rather than the simple act of computation.

In Coherence, there is a quality and consistency of instruction that travels with the students across their grade levels. For example, in grade four, under the category *Number and Operations in Base Ten*, the student will use place value understanding and properties of operations to perform multi-digit arithmetic. In grade five, under the same category, the students will “perform operations with multi-digit whole numbers and with decimals to hundredths.” The standards are designed to build toward coherent progressions from grade to grade. The student does not have a stronger foundation each year, it has a deeper development of concept, theory, and problem solving ability while practicing the procedural skills toward mastery.

In Rigor, the same focus and coherence mentioned above will now be enhanced with a rigor that coordinates their skills procedurally and conceptually with intensity. The result is an application in which the student has the mental flexibility to solve problems with perseverance across many domains and experiences in the learning they encounter in and outside the classroom. “Students are given the opportunity to use math to make meaning of and access content.” (*College- and Career-Ready Shifts in Mathematics*, 2014). This rigor can be demonstrated in applying the area and perimeter formula for rectangles in the real world and in mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length by viewing the area formula as a multiplication equation with an unknown factor.” (Common Core State Standards, n.d.).

The exploration of the standards by the student as a first step to mastery, the clarification of the standards for the teacher, the parent, and the student to be speaking the same language, and a healthy and economic balance of understanding, procedural skills, and application builds a bridge to mathematical success.

References

(n.d.). Common Core State Standards |. Retrieved January 21, 2023, from

<https://learning.ccsso.org/common-core-state-standards-initiative>

College- and Career-Ready Shifts in Mathematics. (2014, January 13). Achievethecore.org.

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(Common Core State Standards, n.d.).