

McGraw-Hill My Math and Glencoe Math: A Solution for K–8 Schools

The transition from elementary grades to middle grades often marks a variety of development and intellectual changes. These changes are at the root of the change in topics and focus in the Common Core State Standards for Mathematics and English Language Arts. McGraw-Hill Education’s **McGraw-Hill My Math** and **Glencoe Math** programs provide a cohesive solution that addresses these shifts in ability and interests for K–6 and K–8 schools.

Students in sixth grade are in the midst of physical, socio-emotional, and intellectual changes as they enter adolescence. “Over the past 40 years there has been a change in the physiological make-up of young adolescents. Children are physically maturing more rapidly. Sixth graders today are experiencing hormonal and physical changes comparable to those of 7th graders forty years ago.” (DeJong and Craig, 2002) As students experience these changes, their outlook on school and the world around them changes. Because of these shifts, there are statistically significant differences in the study preferences of fifth and sixth graders. (Holt, Vore, Denny, Smith, & Capps, 2007) The **McGraw-Hill My Math** and **Glencoe Math** programs may look different, but this is, in part, to engage students as their interests and inclinations grow and transform. Both programs provide engaging content in digital and print forms, but the topics and visual appearances are modified to reflect student and teacher preferences.

These shifts are reflected in the mathematical progressions of the Common Core Standards as well. As students move from elementary grades to middle grades, the focus in the Common Core State Standards for Mathematics moves from an emphasis on operations and number sense to more complicated concepts related to algebraic thinking. See the table below for the order in which the mathematical domains are organized by the Common Core Standards for kindergarten through eighth grade.

K	1	2	3	4	5	6	7	8
GEOMETRY								
Number and Operations in Base Ten						The Number System		
Measurement and Data						Statistics and Probability		
Operations and Algebraic Thinking						Expressions and Equations		
Counting and Cardinality			Number and Operations Fractions			Ratios and Proportional Relationships		Functions

As the CCSS authors emphasize, the key concepts in third through fifth grades are related to multiplication and division of whole numbers and fractions, while in sixth grade, the focus shifts to ratios, proportional relationships, and early algebraic expressions and equations. This will lead to more complicated study of ratios and proportional relationships, as well as rational numbers in seventh grade. (CCSS, 2010) It is only when students have mastered an understanding of place value, operations, and fractions that students can begin to tackle topics such as ratios with a deeper understanding. (See Dickey, 2013 for more detail on the sequence in which mathematical expectations are built in the CCSS from elementary to high school grades.) Because of this shift in emphasis, McGraw-Hill Education chose to split their mathematics programs between fifth and sixth grade, though the programs were deliberately designed by the same team of authors and consultants to provide K-8 continuity.

There are many shared features between **McGraw-Hill My Math** and **Glencoe Math**. Both programs offer write-in, printed textbooks, and digital versions of the textbooks, games, videos, Foldables™, and teacher planning resources. Both programs are part of McGraw-Hill's ConnectEd online platform ensuring a consistent K–8 experience. While the graphics may vary, both programs share a commitment to including art and visual content that engages and attracts students in an age-appropriate manner. This consistency helps students adapt more readily to increasingly rigorous content. Additionally, students are prepared for more rigorous content by developing their study skills, including content in **Glencoe Math** teaching students how to use Cornell notes in their studies.

Beyond their similarities in features, **McGraw-Hill My Math** and **Glencoe Math** feature interconnected content. Their shared, coherent, focused curriculum allows students to effectively build on their mathematical skills from year-to-year. The skills introduced and built in **McGraw-Hill My Math** are the foundations for those studied in **Glencoe Math**. The shared author team was guided by the Common Core standards and Understanding by Design as they developed content that is built with the end goals of the programs in mind. Their work extends throughout both programs from the rigor of the curriculum to the lesson design. Both programs emphasize developing greater student understanding of mathematical concepts, and focus on students' proficiency in mathematical skills. The topical strands of mathematics are addressed in-depth throughout both programs while focusing the scope of each program to the skills essential for students of those ages. Additionally, the programs share a focus on the vocabulary of mathematics, real-world scenarios, and Essential Questions to guide students through the content.

References

Some of the citations listed were reviewed but not cited specifically in the White Paper.

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