Essential Content Framework

A Beginning-of-Year Success Plan for Educators

Go Math! Grade 8

As schools enter the 2020-2021 academic year, educators will be challenged with meeting students' needs for the current calendar year while addressing learning gaps produced as a result of COVID-19 related school closures.

Working with the International Center for Leadership in Education (ICLE), HMH has identified the highest priority standards for you to focus on. These priority standards are built from hundreds of projects with thousands of educators around the country, which consistently show that prioritizing standards results in learning gains for ALL students, particularly students who are behind, and regardless of whether they have experienced disrupted learning.

Using these priority standards, HMH has developed this HMH Essential Content Framework as a guidance document as educators use the *Go Math!* planning resources and tools to guide their instruction beginning in Fall 2020.

The enclosed HMH Essential Content Framework allows educators to focus on those standards most critical to a student's success in achieving grade level proficiency and above, as well as providing specific content from the prior grade that can be used for scaffolding and reteaching.

Use this Essential Content Framework in conjunction with your school or district's scope and sequence documentation to identify critical skills, on-grade lessons, and expected prior-year learning that supports these standards.

Determining Student Needs

Understand the Options

Get to know what skill strengths and challenges your students are bringing to the classroom at the beginning of the year.

- Consult data or feedback from the last academic year. Reach out to the previous grade's teachers to find out whether there are any tips that you should consider as you start the year.
- The *Assessment Resources* ancillary for Grade 8 includes a Placement Test that is correlated to Grade 7 standards and allows you to create an Individual Student Profile showing what students know at the start of the school year.
- As you begin each module in Grade 8, use the **Are You Ready?** quiz to diagnose students' preparedness for the module. The quiz focuses on prerequisite skills for the module, and students who need help with those skills can get it through the *Differentiated Instruction* ancillary, which includes Differentiated interventions.

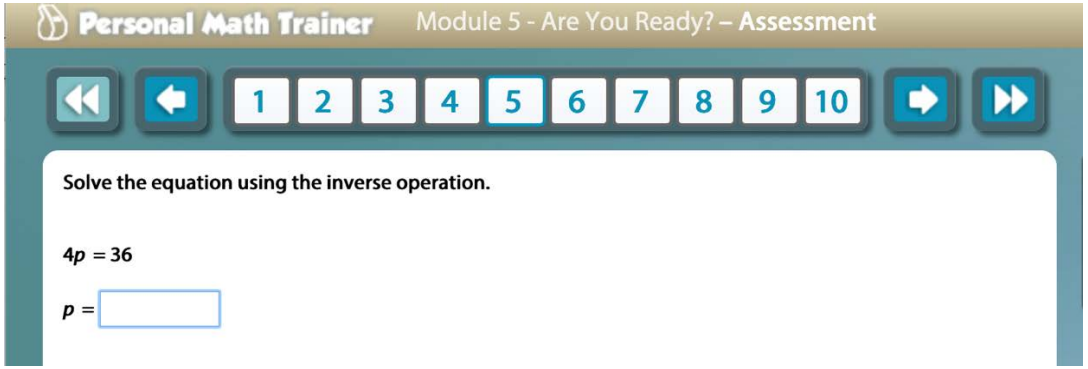
ARE YOU READY? *Diagnostic Assessment*

RtI Response to Intervention

Use to determine if students need intervention for the module's prerequisite skills.

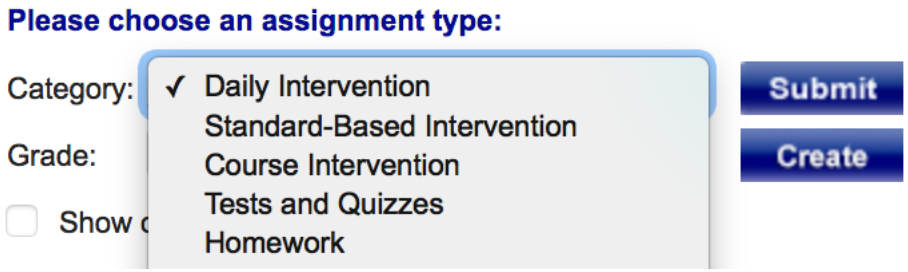
Skill	Missed More Than…	Intervene With *Skills Intervention* worksheets (available online)	For Enrichment *Differentiated Instruction* (available in print and online)
Compare Whole Numbers	1 question	**Skill 4** Compare Whole Numbers	**Module 1 Challenge** Extend-the-Math Lesson Activities in TE
Order Whole Numbers	1 question	**Skill 5** Order Whole Numbers	**Module 1 Challenge** Extend-the-Math Lesson Activities in TE
Locate Numbers on a Number Line	1 question	**Skill 61** Locate Numbers on a Number Line	**Module 1 Challenge** Extend-the-Math Lesson Activities in TE

- You can use the Personal Math Trainer on my.hrw.com to administer the **Are You Ready?** quizzes and other assessments.



- Throughout the course, you can use the Personal Math Trainer to give homework assignments that include learning aids such as feedback, worked-out examples, step-by-step interactive solutions, access to a PDF of the textbook, and Math on the Spot videos.

- Special types of homework assignments available with the Personal Math Trainer provide personalized intervention that is delivered either before or after the assignments.



- When students use the Personal Math Trainer, you can generate a variety of reports of student performance.

Please choose a Class and a Book:

Class: Select a Class...

Book: Select a Book...

Reports

Class Comprehensive Overview:

View results for cumulative information.

Class Progress Report:

View results for Tests and Quizzes, Homework and Teacher Created Assignments posted on Holt McDougal Online. Drill down from the Class Progress Report to see details for individual Students or individual assignments.

Quick Reports:

View a quick overview of class results for assignments and against standards progress. Drill down to see performance by a class on an individual assignment or by an individual student across multiple assignments.

Knewton Analytics Report

View Knewton analytics report for this class.

Daily Intervention:

View results for online Daily Intervention assignments based on textbook objectives. Drill down from the Class Intervention Report to see details for individual assignments or individual students.

Standards:

View test and quiz results correlated to state or national standards.

Course Intervention:

View results for online Intervention assignments based on textbook objectives. Drill down from the Class Intervention Report to see details for individual assignments or individual students.

Review Priority Skills and Standards
Organized in a way to supplement the *Go Math!* Planning and Pacing Guides, this Essential Content Framework is intended to provide instructional plans and access to interventions that will allow for students' learning gaps to be addressed throughout the school year.

- Identify the on grade-level lessons aligned with the HMH Priority Standards and, based on what you know about your class assessment reports, choose those prior-year lessons most appropriate for the majority of students in your class.
- Prior to beginning a module, use the on-grade lesson's **Show what you know**, **Lesson Quick Check**, and assessments to identify any learning gaps among the students, then use resources from the prior-year lessons online and in your teacher materials to address these learning gaps.
- Based on your findings, use the Differentiated Instruction, Prerequisite Skills activities, and RtI Intervention Options for each module to meet the students' needs.
- During a lesson, use the Formative Assessment options from each lesson to determine the student's current success with the lesson's learning objective.
- lesson's learning objective.

Using this Essential Content Framework
The Essential Content Framework that follows is for Grade 8 *Go Math!* and covers those HMH Priority Standards identified for Grade 8. Each HMH Priority Standard is followed by the lessons within the *Go Math!* modules that address that priority standard.

For each on-grade HMH Priority Standard, the prior learning lessons are also listed, allowing you to identify *Go Math!* resources you can use to prepare students for the on-grade level lessons.

Modules 9, 10, 13, and 15 of Grade 8 *Go Math!* do not cover an HMH Priority Standard. You should consider your own school's or district's scope and sequence to decide when to teach these modules.

Grade 8 Priority Standards and Prerequisite Learning Lessons

Grade-Level Priority Standard	Priority Standards Text	Current Grade 8 Lessons	Prior Learning Lessons
8.EE.2	Use square root and cube root symbols to represent solutions to equations of the form x^2 = p and x^3 = p, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that √2 is irrational.	1.1	Grade 6 Lessons 11.1, 11.2, 11.3, 11.4
8.EE.4	Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology	2.3, 2.4	Grade 7 Lessons 3.4, 3.5, 3.6
8.EE.5	Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.	3.2, 3.3	Grade 7 Lesson 4.3
8.EE.7b	Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.	7.1, 7.2, 7.3	Grade 6 Lessons 11.2, 11.3 Grade 7 Lessons 6.1, 6.3, 6.4

Grade-Level Priority Standard	Priority Standards Text	Current Grade 8 Lessons	Prior Learning Lessons
8.EE.8c	Solve real-world and mathematical problems leading to two linear equations in two variables. For example, given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.	8.1, 8.2, 8.3, 8.4	Grade 6 Lessons 11.1, 11.2, 11.3, 11.4 Grade 7 Lessons 6.3, 6.4
8.F.2	Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change.	6.3	Grade 7 Lessons 4.1, 4.2
8.F.4	Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.	4.2, 4.3, 5.1, 5.2, 6.1, 6.2, 6.3	Grade 6 Lessons 12.1, 12.2, 12.3, 12.4 Grade 7 Lessons 4.3, 5.1, 5.2, 5.3
8.F.5	Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.	6.4	Grade 8 Lesson 6.1

Grade-Level Priority Standard	Priority Standards Text	Current Grade 8 Lessons	Prior Learning Lessons
8.G.5	Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. For example, arrange three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of transversals why this is so.	11.1, 11.2, 11.3	Grade 7 Lesson 8.4 Grade 8 Lesson 10.3
8.G.8	Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.	12.3	Grade 8 Lesson 12.1
8.NS.2	Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions (e.g., π2). For example, by truncating the decimal expansion of √2, show that √2 is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.	1.1, 1.3	Grade 6 Lessons 3.1, 3.3
8.SP.1	Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.	5.3, 14.1, 14.2	Grade 6 Lesson 16.4 Grade 7 Lesson 10.1