HOUSTON COUNTY SCHOOLS
MATHEMATICS DEPARTMENT

AC 7TH GRADE MATHEMATICS 2020-2021

Houston County's system-wide initiatives center around building fully functional, intensely focused professional learning communities in our schools.
This initiative includes a focus on learning which clarifies and monitors essential learning.

Not all content in a given grade or course is emphasized equally in the standards, nor should it be. Some clusters require greater emphasis than others based on the depth of the ideas, the time that they take to master, and/or their importance to future mathematics or the demands of college and career readiness. More time in these areas may also be necessary for students to meet the demands of the Georgia Milestones assessments.

*To say that some standards have greater emphasis is **not** to say that anything in the standards can safely be neglected in instruction!* Neglecting material will leave gaps in student skill and understanding and may leave students unprepared for the challenges of a later grade. This new guide not only gives calendar pacing at the unit level, but also pacing at the standard level and one of three levels of content, listed below.

HOUSTON COUNTY
BOARD OF EDUCATION
HIGH-ACHIEVING STUDENTS
MATHEMATICS
DEPARTMENT
Science Technology Engineering Mathematics

PACING GUIDE & TEACHER PLANNER

Math teachers from every middle school in Houston County were invited to meet to identify "Essential Standards." Teachers considered the content expectations for future units within their grade, for future grades, on state assessments, and in other content areas to determine which standards were "Essential "Supporting," or "Additional." Their designations are color-coded within the list of standards as below and the included calendar shows approximate within-unit time allocations by standard or cluster.

µEssential ΣSupporting *Additional

On SharePoint, we amended course materials (including lesson plans, study guides, assessments, and POD's) to reflect the content of greatest emphasis for this math course because of their prioritization of standards.

This document shows where students and teachers should spend the large majority of their time in order to meet the expectations of the standards. It includes a standard-by-standard calendar for teachers to use to plan and allocate teaching/learning time appropriately.

What resources are available for me?

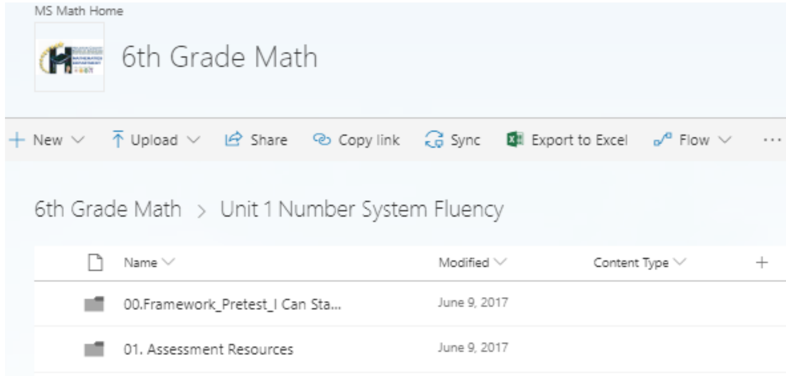
What's on your SharePoint Course page?	• Unit Plans • "I Can" Statements with Examples • Unit Assessments • Daily PODs • Lessons and Tasks • Assessment Banks *(instructions for ExamView banks after the calendars)* • Fluency Unit for RTI • Milestones Resources including Mock Assessments • HRW Teacher/Student Instructions • And much more
Online Textbook	https://my.hrw.com/ Generic login: username: houstoncountyteacher password: Houston1! Each teacher also has a personal account Username: full email address If you don't know your password, use reset password link
Student Weeblys	http://hcbemath.weebly.com/

How do I sync the mathematics material to my file library on my desktop?

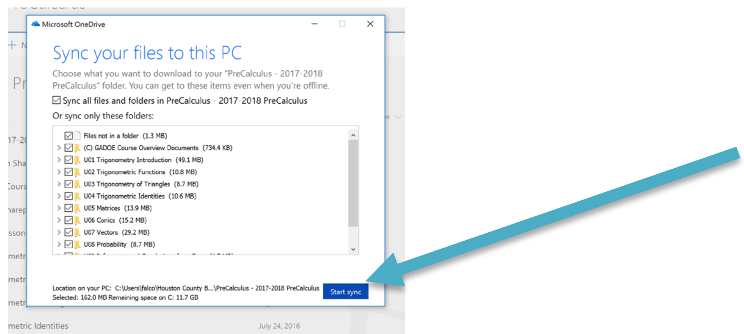
From Office 365, navigate to > SharePoint > Departments > Teaching & Learning > Math > Grade Band > Course Home.

1. Navigate to your course home on SharePoint and click the icon below.

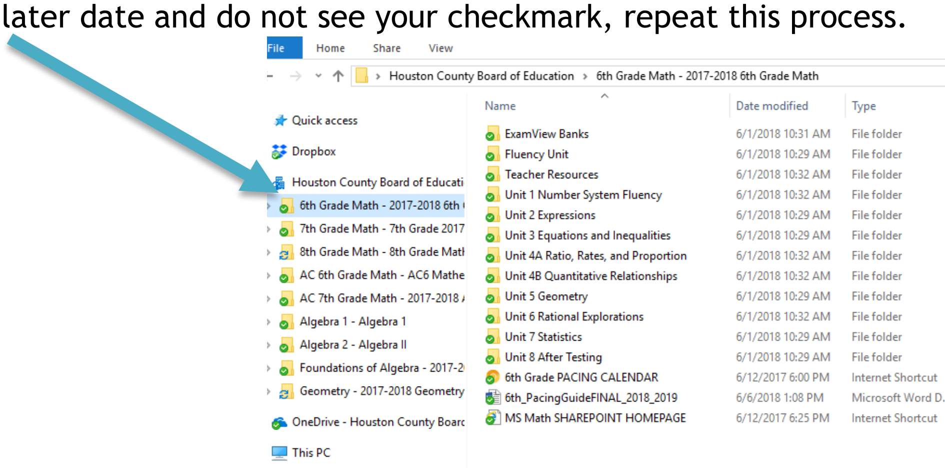
2. You are now in your course's document library. Click the Sync Button.



3. A window will open and all the folders in this library should be checked. Keep them checked and choose Start sync. ***Note, you may encounter two screens before this in which you choose ALLOW and then must SIGN IN with your HCBE email.



4. After a few seconds, you will get notified that the files are syncing to your Houston County BOE One Drive and the files will be located in your file library. These files work like Dropbox and are updated in real time as changes are made by Dr. Rape or Jennifer Farrow. BE SURE YOU SEE GREEN CHECK MARK. This means it is synced and your files are updated. If you open at a later date and do not see your checkmark, repeat this process.



NOTE*** These files are locked for editing and saving to these folders. You may open, edit, and save to your personal files in another file location.
NOTE**** ExamView Tests will NOT open directly from the Houston County Board of Education File Folders. To open, right-click copy and right-click save to a folder on your desktop or My Documents. Then, open the file from this location. A PDF of each test is available for you to preview

1st Semester

August 4 - December 18

September 7 (Labor Day Holiday); October 13-16 (Fall Holiday); November 11 (Veteran's Day); November 23-27 (Thanksgiving Holiday

AC7th Grade Georgia Standards of Excellence 2020-2021 Pacing Guide

ᴴEssential ᶳSupporting *Additional

<u>Unit 1</u>: Equations, Transformations, Congruence & Similarity (≈ 7 weeks)

Analyze and solve linear equations and pairs of simultaneous linear equations.

ᴴ**MGSE8.EE.7** Solve linear equations in one variable.

Σ**7a**. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form $x = a$, $a = a$, or $a = b$ results (where a and b are different numbers).

ᴴ**7b**. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.

***MGSE7.G.2** Explore various geometric shapes with given conditions. Focus on creating triangles from three measures of angles and/or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.

ᴴ**MGSE7.G.5** Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.

ᴴ**MGSE8.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 three angles appear to form a line, and give an argument in terms of transversals why this is so.*

ᴴ**MGSE8.G.1** Verify experimentally the congruence properties of rotations, reflections, and translations: lines are taken to lines and line segments to line segments of the same length; angles are taken to angles of the same measure; parallel lines are taken to parallel lines

ᴴ**MGSE8.G.2** Understand that a two-dimensional figure is **congruent** to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.

ᴴ**MGSE8.G.3** Describe the effect of dilations, translations, rotations and reflections on two-dimensional figures using coordinates. *Given a figure in the coordinate plane, determine the coordinates resulting from a translation, dilation, rotation, or reflection.*

ᴴ**MGSE8.G.4** Understand that a two-dimensional figure is **similar** to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.

1st Semester

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AC7th Grade Georgia Standards of Excellence 2020-2021 Pacing Guide

µEssential ΣSupporting *Additional

Monday	Tuesday	Wednesday	Thursday	Friday
Aug **3**	Aug **4**	Aug **5**	Aug **6**	Aug **7**
Pre-Planning	**Unit 1** Equations, Congruence, & Similarity	**Unit 1** Equations, Congruence, & Similarity	**Unit 1** Equations, Congruence, & Similarity	**Unit 1** Equations, Congruence, & Similarity
	8.EE.7a	**8.EE.7a**	**8.EE.7a**	**8.EE.7a**
Aug **10**	Aug **11**	Aug **12**	Aug **13**	Aug **14**
Unit 1 Equations, Congruence, & Similarity	**Unit 1** Equations, Congruence, & Similarity	**Unit 1** Equations, Congruence, & Similarity	**Unit 1** Equations, Congruence, & Similarity	**Unit 1** Equations, Congruence, & Similarity
8.EE.7b	**8.EE.7b**	**8.EE.7b**	**8.EE.7b**	**8.EE.7b**
Aug **17**	Aug **18**	Aug **19**	Aug **20**	Aug **21**
Unit 1 Equations, Congruence, & Similarity	**Unit 1** Equations, Congruence, & Similarity	**Unit 1** Equations, Congruence, & Similarity	**Unit 1** Equations, Congruence, & Similarity	**Unit 1** Equations, Congruence, & Similarity
7.G.2, 7.G.5, 8.G.5	**7.G.2, 7.G.5, 8.G.5**	**7.G.2, 7.G.5, 8.G.5**	**7.G.2, 7.G.5, 8.G.5**	**7.G.2, 7.G.5, 8.G.5**
Aug **24**	Aug **25**	Aug **26**	Aug **27**	Aug **28**
Unit 1 Equations, Congruence, & Similarity	**Unit 1** Equations, Congruence, & Similarity	**Unit 1** Equations, Congruence, & Similarity	**Unit 1** Equations, Congruence, & Similarity	**Unit 1** Equations, Congruence, & Similarity
7.G.2, 7.G.5, 8.G.5	**7.G.2, 7.G.5, 8.G.5**	**7.G.2, 7.G.5, 8.G.5**	**7.G.2, 7.G.5, 8.G.5**	**7.G.2, 7.G.5, 8.G.5**

1st Semester

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μEssential ΣSupporting *Additional

Aug 31	Sept 1	Sept 2	Sept 3	Sept 4
Unit 1 Equations, Congruence, & Similarity nit 1	**Unit 1** Equations, Congruence, & Similarity nit 1	**Unit 1** Equations, Congruence, & Similarity	**Unit 1** Equations, Congruence, & Similarity	**Unit 1** Equations, Congruence, & Similarity
8.G.1, 8.G.2,8.G.3, 8.G.4	8.G.1, 8.G.2,8.G.3, 8.G.4	8.G.1, 8.G.2,8.G.3, 8.G.4	8.G.1, 8.G.2,8.G.3, 8.G.4	8.G.1, 8.G.2,8.G.3, 8.G.4
Sept 7	**Sept 8**	**Sept 9**	**Sept 10**	**Sept 11**
Labor Day	**Unit 1** Equations, Congruence, & Similarity	**Unit 1** Equations, Congruence, & Similarity	**Unit 1** Equations, Congruence, & Similarity	**Unit 1** Equations, Congruence, & Similarity
	8.G.1, 8.G.2,8.G.3, 8.G.4	8.G.1, 8.G.2,8.G.3, 8.G.4	8.G.1, 8.G.2,8.G.3, 8.G.4	8.G.1, 8.G.2,8.G.3, 8.G.4
Sept 14	**Sept 15**	**Sept 16**	**Sept 17**	**Sept 18**
Unit 1 Equations, Congruence, & Similarity	**Unit 1** Equations, Congruence, & Similarity	**Unit 1** Equations, Congruence, & Similarity	**Unit 1** Equations, Congruence, & Similarity	**Unit 1 Test** Equations, Congruence, & Similarity
8.G.1, 8.G.2,8.G.3, 8.G.4	8.G.1, 8.G.2,8.G.3, 8.G.4	8.G.1, 8.G.2,8.G.3, 8.G.4	8.G.1, 8.G.2,8.G.3, 8.G.4	

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µEssential ΣSupporting *Additional

Unit 2: Exponents (≈ 3 weeks)

Work with radicals and integer exponents.

µMGSE8.EE.1 Know and apply the properties of integer exponents to generate equivalent numerical expressions. *For example,* $3^2 \times 3^{(-5)} = 3^{(-3)} = 1/3^3) = 1/27$.

ΣMGSE8.EE.3 Use numbers expressed in scientific notation to estimate very large or very small quantities, and to express how many times as much one is than the other. For example, estimate the population of the United States as 3 × 108 and the population of the world as 7 × 109, and determine that the world population is more than 20 times larger..

ΣMGSE8.EE.4 Add, subtract, multiply and divide numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Understand 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 (e.g. calculators).

Know that there are numbers that are not rational, and approximate them by rational numbers.

ΣMGSE8.NS.1. Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number.

ΣMGSE8.EE.2 ~~Use square root and cube root symbols to represent solutions to equations. Recognize that x2 = p (where p is a positive rational number and lxl < 25) has 2 solutions and x3 = p (where p is a negative or positive rational number and lxl < 10) has one solution.~~ Evaluate square roots of perfect squares < 625 and cube roots of perfect cubes > -1000 and < 1000 ***Evaluating****

ΣMGSE8.NS.2 Use rational approximation of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line, and estimate the value of expressions (e.g., estimate π^2 to the nearest tenth). For example, by truncating the decimal expansion of √2 (square root 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.

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µEssential ΣSupporting *Additional

Monday	Tuesday	Wednesday	Thursday	Friday
Sept **21**	Sept **22**	Sept **23**	Sept **24**	Sept **25**
Unit 2 Exponents	**Unit 2 Exponents**	**Unit 2 Exponents**	**Unit 2 Exponents**	**Unit 2 Exponents**
8.EE.1	**8.EE.1**	**8.EE.1**	**8.EE.1**	**8.EE. & 8.EE.4**
Sept **28**	Sept **29**	Sept **30**	Oct **1**	Oct **2**
Unit 2 Exponents	**Unit 2 Exponents**	**Unit 2 Exponents**	**Unit 2 Exponents**	**Unit 2 Exponents**
8.EE. & 8.EE.4	**8.EE. & 8.EE.4**	**8.EE. & 8.EE.4**	**8.NS.1 & 8.NS.2**	**8.NS.1 & 8.NS.2**
Oct **5**	Oct **6**	Oct **7**	Oct **8**	Oct **9**
Unit 2 Exponents	**Unit 2 Exponents**	**Unit 2 Exponents**	**Unit 2 TEST**	INSERVICE
8.NS.1 & 8.NS.2	**8.NS.1 & 8.NS.2**	**8.NS.1 & 8.NS.2**		
Oct **12**	Oct **13**	Oct **14**	Oct **15**	Oct **16**
Fall Break	Fall Break	Fall Break	Fall Break	Fall Break

Unit 3: Geometric Applications of Exponents (≈ 5 weeks)

Work with radicals and integer exponents.

Σ**MGSE8.EE.2** Use square root and cube root symbols to represent solutions to equations. Recognize that x2 = p (where p is a positive rational number and lxl < 25) has 2 solutions and x3 = p (where p is a negative or positive rational number and lxl < 10) has one solution. Evaluate square roots of perfect squares < 625 and cube roots of perfect cubes > -1000 and < 1000.

Understand and apply the Pythagorean Theorem.

Σ**MGSE8.G.6** Explain a proof of the Pythagorean Theorem and its converse.

µ**MGSE8.G.7** Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.

Σ**MGSE8.G.8** Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.

***MGSE7.G.4** Given the formulas for the area and circumference of a circle, use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.

***MGSE7.G.6** Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.

***MGSE7.G.3** Describe the two-dimensional figures (cross sections) that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms, right rectangular pyramids, cones, cylinders, and spheres.

***MGSE8.G.9** Apply the formulas for the volume of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.

1st Semester

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µEssential ΣSupporting *Additional

Monday	Tuesday	Wednesday	Thursday	Friday
Oct 19	Oct 20	Oct 21	Oct 22	Oct 23
Unit 3 Geometry	**Unit 3 Geometry**	**Unit 3 Geometry**	**Unit 3 Geometry**	**Unit 3 Geometry**
8.EE.2 (Solving square root and cube root equations)	**8.EE.2** (Solving square root and cube root equations)	**8.G.6, 8.G.7, 8.G.8**	**8.G.6, 8.G.7, 8.G.8**	**8.G.6, 8.G.7, 8.G.8**
Oct 26	Oct 27	Oct 28	Oct 29	Oct 30
Unit 3 Geometry	**Unit 3 Geometry**	**Unit 3 Geometry**	**Unit 3 Geometry**	**Unit 3 Geometry**
8.G.6, 8.G.7, 8.G.8	**8.G.9 & 7.G.4**	**8.G.9 & 7.G.4**	**8.G.9 & 7.G.4**	**8.G.9 & 7.G.4**
Nov 2	Nov 3	Nov 4	Nov 5	Nov 6
Unit 3 Geometry	**Unit 3 Geometry**	**Unit 3 Geometry**	**Unit 3 Geometry**	**Unit 3 Geometry**
8.G.9 & 7.G.4	**8.G.9 & 7.G.4**	**8.G.9 & 7.G.4**	**7.G.3**	**7.G.3**
Nov 9	Nov 10	Nov 11	Nov 12	Nov 13
Unit 3 Geometry	**Unit 3 Geometry**	**Veterans Day**	**Unit 3 Geometry**	**Unit 3 Geometry**
7.G.6 (Volume)	**7.G.6 (Volume)**		**7.G.6 (Volume)**	**7.G.6 (Volume)**
Nov 16	Nov 17	Nov 18	Nov 19	Nov 20
Unit 3 Geometry	**Unit 3 Geometry**	**Unit 3 Geometry**	**Unit 3 Review**	**Unit 3 Test**
7.G.6 (S.A. & Composite Area)	**7.G.6 (S.A. & Composite Area)**	**7.G.6 (S.A. & Composite Area)**		
Nov 23	Nov 24	Nov 25	Nov 26	Nov 27
Thanksgiving Break	Thanksgiving Break	Thanksgiving Break	Thanksgiving Break	Thanksgiving Break

Unit 4a: Inferences (≈ 3 weeks)

Use random sampling to draw inferences about a population.

Σ**MGSE7.SP.1** Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences. *Distinguish between a population parameter (numerical summary of the population) and a sample statistic (numerical summary of a sample).*

Σ**MGSE7.SP.2** Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. *Compare shape, measures of central tendency and variation from samples to those from a population (or a census). Observe that sample statistics vary less from one sample to the next as the sample size increases. We have more precision with our inference from a sample statistic to a population parameter with a larger sample size. Understand that random sampling tends to produce representative samples thus resulting in sample statistics that are more likely to approximate the population parameters.*

Draw informal comparative inferences about two populations.

***MGSE7.SP.3** Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the medians by expressing it as a multiple of the interquartile range.

***MGSE7.SP.4** Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. *Compare summary statistics (mean, median, mode, range, quartiles, and interquartile range) from one sample data distribution to another sample data distribution in describing center and variability of the data distributions for numerical data and make informal comparative statements.*

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µEssential ΣSupporting *Additional

Monday	Tuesday	Wednesday	Thursday	Friday
Nov **30**	Dec **1**	Dec **2**	Dec **3**	Dec **4**
Unit 4a	**Unit 4a**	**Unit 4a**	**Unit 4a**	**Unit 4a**
7.SP.1, 7.SP.2, 7.SP.3, & 7.SP.4	**7.SP.1, 7.SP.2, 7.SP.3, & 7.SP.4**	**7.SP.1, 7.SP.2, 7.SP.3, & 7.SP.4**	**7.SP.1, 7.SP.2, 7.SP.3, & 7.SP.4**	**7.SP.1, 7.SP.2, 7.SP.3, & 7.SP.4**
Dec **7**	Dec **8**	Dec **9**	Dec **10**	Dec **11**
Unit 4a	**Unit 4a**	**Unit 4a**	**Unit 4a**	**Unit 4a Test**
7.SP.1, 7.SP.2, 7.SP.3, & 7.SP.4	**7.SP.1, 7.SP.2, 7.SP.3, & 7.SP.4**	**7.SP.1, 7.SP.2, 7.SP.3, & 7.SP.4**	**7.SP.1, 7.SP.2, 7.SP.3, & 7.SP.4**	**7.SP.1, 7.SP.2, 7.SP.3, & 7.SP.4**
Dec **14**	Dec **15**	Dec **16**	Dec **17**	Dec **18**
Unit 1-4a Review	**Unit 1-4a Review**	Mid-Terms	Mid-Terms	Mid-Terms ½ Day

2nd Semester

January 5 – May 26

January 18 (MLK Holiday); February 15 (President's Day Holiday); February 16 (Student Holiday) March 29-April 2 (Spring Break)

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µEssential ΣSupporting *Additional

Unit 4b: Probability (≈ 3 weeks)

Investigate chance processes and develop, use, and evaluate probability models.

Σ**MGSE7.SP.5** Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around 1/2 indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.

Σ**MGSE7.SP.6** Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency. Predict the approximate relative frequency given the probability. *For example, when rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times.*

***MGSE7.SP.7** Develop a probability model and use it to find probabilities of events. Compare experimental and theoretical probabilities of events. If the probabilities are not close, explain possible sources of the discrepancy.

***7a**. Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events. *For example, if a student is selected at random from a class, find the probability that Jane will be selected and the probability that a girl will be selected.*

***7b**. Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. *For example, find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies?*

Σ**MGSE7.SP.8** Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.

Σ**8a**. Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.

Σ**8b**. Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., "rolling double sixes"), identify the outcomes in the sample space which compose the event.

Σ**8c**. Explain ways to set up a simulation and use the simulation to generate frequencies for compound events. For example, if 40% of donors have type A blood, create a simulation to predict the probability that it will take at least 4 donors to find one with type A blood?

2nd Semester

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µEssential ΣSupporting *Additional

Monday	Tuesday	Wednesday	Thursday	Friday
Jan 4	Jan 5	Jan 6	Jan 7	Jan 8
INSERVICE	Unit 4b Probability	Unit 4b Probability	Unit 4b Probability	Unit 4b Probability
	7.SP.5 & 7.SP.6	7.SP.5 & 7.SP.6	7.SP.5 & 7.SP.6	7.SP.5, 7.SP.6, & 7.SP.7
Jan 11	Jan 12	Jan 13	Jan 14	Jan 15
Unit 4b Probability	Unit 4b Probability	Unit 4b Probability	Unit 4b Probability	Unit 4b Probability
7.SP.7	7.SP.7	7.SP.8	7.SP.8	7.SP.8
Jan 18	Jan 19	Jan 20	Jan 21	Jan 22
MLK Holiday	Unit 4b Probability	Unit 4b Probability	Unit 4b Probability	Unit 4b Probability Test
	7.SP.8	7.SP.8	7.SP.8	

<u>Unit 5</u>: Functions (≈ 2 weeks)

Define, evaluate, and compare functions.

µ**MGSE8.F.1** Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.

µ**MGSE8.F.2** Compare/analyze properties of **<u>(one)</u>** ~~two~~ function(s) ~~each~~ represented in a different ways (algebraically, graphically, numerically in tables, or by verbal descriptions).

µ**MGSE8.F.3** ~~Interpret the equation *y = mx + b* as defining a linear function, whose graph is a straight line;~~ give examples of functions that are not linear. **** Compare linear (direct variation) versus non-linear functions**. For example, the function $A = s^2$ giving the area of a square as a function of its side length is not linear because its graph contains the points (1, 1), (2, 4) and (3, 9), which are not on a straight line.*

For example, the function $A = s^2$ giving the area of a square as a function of its side length is not linear because its graph contains the points (1, 1), (2, 4) and (3, 9), which are not on a straight line.

2nd Semester

January 5 - May 26

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μEssential ΣSupporting *Additional

Monday	Tuesday	Wednesday	Thursday	Friday
Jan **25**	Jan **26**	Jan **27**	Jan **28**	Feb **29**
Unit 5 Functions	**Unit 5 Functions**	**Unit 5 Functions**	**Unit 5 Functions**	**Unit 5 Functions**
8.F.1, 8.F.2, & 8.F.3	**8.F.1, 8.F.2, & 8.F.3**	**8.F.1, 8.F.2, & 8.F.3**	**8.F.1, 8.F.2, & 8.F.3**	**8.F.1, 8.F.2, & 8.F.3**
Feb **1**	Feb **2**	Feb **3**	Feb **4**	Feb **5**
Unit 5 Functions	**Unit 5 Functions**	**Unit 5 Functions**	**Unit 5 Functions**	**Unit 5 Functions Test**
8.F.1, 8.F.2, & 8.F.3	**8.F.1, 8.F.2, & 8.F.3**	**8.F.1, 8.F.2, & 8.F.3**	**8.F.1, 8.F.2, & 8.F.3**	

Unit 6: Linear Functions (≈ 5 weeks)

Understand the connections between proportional relationships, lines, and linear equations.

µ**MGSE8.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.*

µ**MGSE8.EE.6** Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at b.

µ**MGSE8.F.2** Compare properties of **two** functions each represented in a different ways (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.

µ**MGSE8.F.3** Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; ~~give examples of functions that are not linear. For example, the function A = s^2 giving the area of a square as a function of its side length is not linear because its graph contains the points (1, 1), (2, 4) and (3, 9), which are not on a straight line.~~

2nd Semester

January 5 - May 26

January 18 (MLK Holiday); February 15 (President's Day Holiday); February 16 (Student Holiday) March 29-April 2 (Spring Break)

AC7th Grade Georgia Standards of Excellence 2020-2021 Pacing Guide

µEssential ΣSupporting *Additional

Monday	Tuesday	Wednesday	Thursday	Friday
Feb 8	Feb 9	Feb 10	Feb 11	Feb 12
Unit 6 Linear Functions	**Unit 6 Linear Functions**	**Unit 6 Linear Functions**	**Unit 6 Linear Functions**	**Unit 6 Linear Functions**
8.EE.5	**8.EE.5**	**8.EE.5**	**8.EE.5**	**8.EE.5**
Feb 15	Feb 16	Feb 17	Feb 18	Feb 19
PRESIDENTS DAY	INSERVICE	**Unit 6 Linear Functions**	**Unit 6 Linear Functions**	**Unit 6 Linear Functions**
		8.EE.6 & 8.F.3	**8.EE.6 & 8.F.3**	**8.EE.6 & 8.F.3**
Feb 22	Feb 23	Feb 24	Feb 25	FEb 26
Unit 6 Unit 6 Linear Functions	**Unit 6 Linear Functions**	**Unit 6 Linear Functions**	**Unit 6 Linear Functions**	**Unit 6 Linear Functions**
8.EE.6 & 8.F.3	**8.EE.6 & 8.F.3**	**8.EE.6 & 8.F.3**	**8.EE.6 & 8.F.3**	**8.EE.6 & 8.F.3**
Mar 1	Mar 2	Mar 3	Mar 4	Mar 5
Unit 6 Linear Functions	**Unit 6 Linear Functions**	**Unit 6 Linear Functions**	**Unit 6 Linear Functions**	**Unit 6 Linear Functions**
8.EE.6 & 8.F.3	**8.EE.6 & 8.F.3**	**8.EE.6 & 8.F.3**	**8.EE.6 & 8.F.3**	**8.EE.6 & 8.F.3**
Mar 8	Mar 9	Mar 10	Mar 11	Mar 12
Unit 6 Linear Functions	**Unit 6 Linear Functions**	**Unit 6 Linear Functions**	**Unit 6 Linear Functions**	**Unit 6 Linear Functions**
8.EE.6 & 8.F.3	**8.EE.6 & 8.F.3**	**8.EE.6 & 8.F.3**	**8.EE.6 & 8.F.3**	**Test**

2nd Semester

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µEssential ΣSupporting *Additional

<u>Unit 7</u>: Linear Models & Tables (≈ 4 weeks)) *7th EOG During This Unit*

Use functions to model relationships between quantities.

µ**MGSE8.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.

µ**MGSE8.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.

Investigate patterns of association in bivariate data.

Σ**MGSE8.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.

Σ**MGSE8.SP.2** Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.

Σ**MGSE8.SP.3** Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. *For example, in a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.*

***MGSE8.SP.4** Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table.

a. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects.
b. Use relative frequencies calculated for rows or columns to describe possible association between the two variables. For example, collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?

2nd Semester

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µEssential ΣSupporting *Additional

Monday	Tuesday	Wednesday	Thursday	Friday
Mar **15**	Mar **16**	Mar **17**	Mar **18**	Mar **19**
Unit 7 Linear Models	**Unit 7 Linear Models**	**Unit 7 Linear Models**	**Unit 7 Linear Models**	**Unit 7 Linear Models**
8.SP.1 & 8.SP.4	**8.SP.1 & 8.SP.4**	**8.SP.1 & 8.SP.4**	**8.SP.1 & 8.SP.4**	**8.SP.1 & 8.SP.4**
Mar **22**	Mar **23**	Mar **24**	Mar **25**	Mar **26**
Unit 7 Linear Models	**Unit 7 Linear Models**	**Unit 7 Linear Models**	**Unit 7 Linear Models**	**Unit 7 Linear Models**
8.SP.2 & 8.SP.3	**8.SP.2 & 8.SP.3**	**8.SP.2 & 8.SP.3**	**8.SP.2 & 8.SP.3**	**8.SP.2 & 8.SP.3**
Mar **29**	Mar **30**	Ma **31**	Apr **1**	Apr **2**
SPRING BREAK	SPRING BREAK	SPRING BREAK	SPRING BREAK	SPRING BREAK
Apr **5**	Apr **6**	Apr **7**	Apr **8**	Apr **9**
Review	**Review**	**Review**	**Review**	**Review**

2nd Semester

January 5 - May 26

January 18 (MLK Holiday); February 15 (President's Day Holiday); February 16 (Student Holiday) March 29-April 2 (Spring Break)

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µEssential ΣSupporting *Additional

Apr 12	Apr 13	Apr 14	Apr 15	Apr 16
Apr 19	**Apr 20**	**Apr 21**	**Apr 22**	**Apr 23**
Unit 7 Linear Models	**Unit 7 Linear Models**	**Unit 7 Linear Models**	**Unit 7 Linear Models**	**Unit 7 Linear Models**
8.F.4	**8.F.4**	**8.F.4**	**8.F.4**	**8.F.4**
Apr 26	**Apr 27**	**Apr 28**	**Apr 29**	**Apr 30**
Unit 7 Linear Models	**Unit 7 Linear Models**	**Unit 7 Linear Models**	**Unit 7 Linear Models**	**Unit 7 Linear Models Test**
8.F.5	**8.F.5**	**8.F.5**	**8.F.5**	

*Note: There is pending legislation to require testing only during the last 25 days of school, so these testing windows could change. These dates are left blank for you to fill in later when you know the actual GMAS dates for Spring 2021.

2nd Semester
January 5 – May 26 ***January 18 (MLK Holiday); February 15 (President's Day Holiday); February 16 (Student Holiday) March 29-April 2 (Spring Break)***

AC7th Grade Georgia Standards of Excellence 2020-2021 Pacing Guide

µEssential ΣSupporting *Additional

HOUSTON COUNTY
BOARD OF EDUCATION
HIGH-ACHIEVING STUDENTS

MATHEMATICS
DEPARTMENT

Science Technology Engineering Mathematics

2nd Semester

January 5 – May 26

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µEssential ΣSupporting *Additional

<u>Unit 8</u>: Solving Systems of Linear Equations (≈ 3 weeks)

Analyze and solve linear equations and pairs of simultaneous linear equations.

µ**MGSE8.EE.8** Analyze and solve pairs of simultaneous linear equations (systems of linear equations)

µ**8a**. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.

µ**8b**. Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. *For example, 3x + 2y = 5 and 3x + 2y = 6 have no solution because 3x + 2y cannot simultaneously be 5 and 6.* Solve systems of equations graphically and algebraically, using technology as appropriate

µ**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.

2nd Semester

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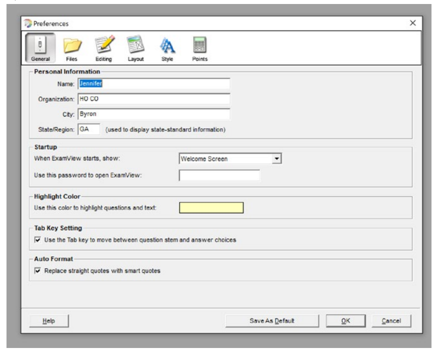
µEssential ΣSupporting *Additional

Monday	Tuesday	Wednesday	Thursday	Friday
May 3	May 4	May 5	May 6	May 7
Unit 8 **Systems of Equations**	**Unit 8** **Systems of Equations**	**Unit 8** **Systems of Equations**	**Unit 8** **Systems of Equations**	**Unit 8** **Systems of Equations**
8.EE.8	**8.EE.8**	**8.EE.8**	**8.EE.8**	**8.EE.8**
May 10	May 11	May 12	May 13	May 14
Unit 8 **Systems of Equations**	**Unit 8** **Systems of Equations**	**Unit 8** **Systems of Equations**	**Unit 8** **Systems of Equations**	**Unit 8** **Systems of Equations**
8.EE.8	**8.EE.8**	**8.EE.8**	**8.EE.8**	**8.EE.8**
May 17	May 18	May 19	May 20	May 21
Unit 8 **Systems of Equations**	**Unit 8 Test** **Systems of Equations**	**Unit 8 Test** **Systems of Equations**	**Unit 8 Test** **Systems of Equations**	**Unit 8 Test** **Systems of Equations**
May 24	May 25	May 26	May 27	May 28
Review	**Final Exam**	**Final Exam**		
		Last day of School		

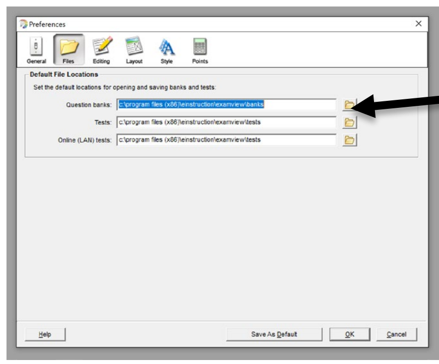
How to Make ExamView Banks Easily Accessible

Open ExamView Test Generator

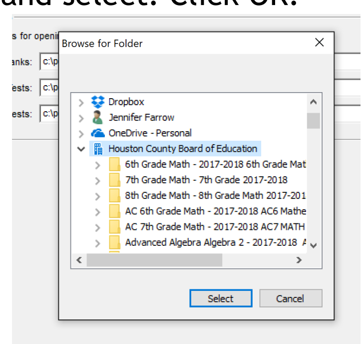
1. After closing the welcome menu, choose the EDIT tab. Select “Preferences”



2. In this window, choose “Files” and then the file folder icons next to Question banks.



3. Navigate to the location of the course materials on your computer -Houston County Board of Education Synced Files. Highlight and select. Click OK.



4. Now when you go to create a test and select questions, ExamView will default to this location. ExamView Banks are located in the ExamView folder and in each Unit’s Assessment folder.