Cycle 1
Aug. 22-Sept. 30, 2022
29 Days
# Class Periods
The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.

Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)
The student will:

The Mathematical Process Standards are integrated throughout the course in all activities and lessons. Teachers should refer to these standards for instructional strategies and depth of rigor. Specific process standards have been highlighted for each unit, but these process standards should not be the only process standards associated with the daily lessons.

**Mathematical Process Standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:

- MATH.7.1A Apply mathematics to problems arising in everyday life, society, and the workplace.
- MATH.7.1B Use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution.
- MATH.7.1C Select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems.
- MATH.7.1D Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.
- MATH.7.1E Create and use representations to organize, record, and communicate mathematical ideas.
- MATH.7.1F Analyze mathematical relationships to connect and communicate mathematical ideas.
- MATH.7.1G Display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.

| Unit 1: Circles and Ratios | 4 class periods (90-min. each) or 8 class periods (45-min. each) | Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:
- MATH.7.1B Use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution.
- MATH.7.1F Analyze mathematical relationships to connect and communicate mathematical ideas. |

**GLOBAL GRADUATE**

- State Process Standard
- Aligned to Upcoming State Readiness Standard
- State Readiness Standard
- State Supporting Standard

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<tr>
<th>Cycle 1</th>
<th>29 Days Aug. 22-Sept. 30, 2022</th>
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<th>Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit</td>
<td># Class Periods</td>
<td>The student will:</td>
<td>The student is expected to:</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Proportionality.</strong> The student applies mathematical process standards to represent and solve problems involving proportional relationships. The student is expected to:**</td>
<td><strong>MATH.7.4B</strong> Calculate unit rates from rates in mathematical and real-world problems.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Proportionality.</strong> The student applies mathematical process standards to use geometry to describe or solve problems involving proportional relationships. The student is expected to:**</td>
<td><strong>MATH.7.5B</strong> Describe ( \pi ) as the ratio of the circumference of a circle to its diameter.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Expressions, Equations, and Relationships.</strong> The student applies mathematical process standards to solve geometric problems. The student is expected to:**</td>
<td><strong>MATH.7.4C</strong> Determine the constant of proportionality ( k = \frac{y}{x} ) within mathematical and real-world problems.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>• MATH.7.8C</strong> Use models to determine the approximate formulas for the circumference and area of a circle and connect the models to the actual formulas.</td>
<td><strong>MATH.7.9B</strong> Determine the circumference and area of circles.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>• MATH.7.9C</strong> Determine the area of composite figures containing combinations of rectangles, squares, parallelograms, trapezoids, triangles, semicircles, and quarter circles.</td>
<td><strong>MATH.7.9C</strong> Determine the area of composite figures containing combinations of rectangles, squares, parallelograms, trapezoids, triangles, semicircles, and quarter circles.</td>
</tr>
<tr>
<td>Unit 2: Fractional Rates</td>
<td>3 class periods (90-min. each) or 6 class periods (45-min. each)</td>
<td><strong>Mathematical Process Standards.</strong> The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:**</td>
<td><strong>MATH.7.1A</strong> Apply mathematics to problems arising in everyday life, society, and the workplace.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>MATH.7.1F</strong> Analyze mathematical relationships to connect and communicate mathematical ideas.</td>
<td><strong>MATH.7.4B</strong> Calculate unit rates from rates in mathematical and real-world problems.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Proportionality.</strong> The student applies mathematical process standards to represent and solve problems involving proportional relationships. The student is expected to:**</td>
<td><strong>MATH.7.4C</strong> Determine the constant of proportionality ( k = \frac{y}{x} ) within mathematical and real-world problems.</td>
</tr>
</tbody>
</table>

The irrational number \( \pi \). They also apply the formulas to calculating the area of composite figures.

**Global Graduate**

- State Process Standard
- State Readiness Standard
- Aligned to Upcoming State Readiness Standard
- State Supporting Standard

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## Cycle 1

### 29 Days
Aug. 22-Sept. 30, 2022

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<th>Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)</th>
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<tbody>
<tr>
<td>Teacher Prep Day (no students) Aug. 15</td>
<td>Ⓞ MATH.7.4D Solve problems involving ratios, rates, and percents, including multi-step problems involving percent increase and percent decrease, and financial literacy problems.</td>
</tr>
<tr>
<td>Labor Day Sept. 5</td>
<td>Proportionality. The student applies mathematical process standards to use geometry to describe or solve problems involving proportional relationships. The student is expected to: Ⓟ MATH.7.4E Convert between measurement systems, including the use of proportions and the use of unit rates.</td>
</tr>
</tbody>
</table>

### Unit 3: Proportionality
Students represent constant rates of change in mathematical and real-world problems using multiple representation and determine constant of proportionality.

(continues in Cycle 2)

| 7 class periods (90-min. each) or 14 class periods (45-min. each) | Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to: Ⓞ MATH.7.1A Apply mathematics to problems arising in everyday life, society, and the workplace. Ⓟ MATH.7.1E Create and use representations to organize, record, and communicate mathematical ideas. Proportionality. The student applies mathematical process standards to represent and solve problems involving proportional relationships. The student is expected to: Ⓞ MATH.7.4A Represent constant rates of change in mathematical and real-world problems given pictorial, tabular, verbal, numeric, graphical, and algebraic representations, including \( d = rt \). Ⓟ MATH.7.4C Determine the constant of proportionality \( k = y/x \) within mathematical and real-world problems. Ⓞ MATH.7.4D Solve problems involving ratios, rates, and percents, including multi-step problems involving percent increase and percent decrease, and financial literacy problems. |
**Unit 3: Proportionality**
Students represent constant rates of change in mathematical and real-world problems using multiple representation and determine constant of proportionality.

<table>
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<tr>
<th># Class Periods</th>
<th>Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)</th>
</tr>
</thead>
</table>
| 7 (90-min. each) or 14 (45-min. each) | **Mathematical Process Standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:

- MATH.7.4A Represent constant rates of change in mathematical and real-world problems given pictorial, tabular, verbal, numeric, graphical, and algebraic representations, including \( d = rt \).
- MATH.7.4C Determine the constant of proportionality \((k = \frac{y}{x})\) within mathematical and real-world problems.
- MATH.7.4D Solve problems involving ratios, rates, and percents, including multi-step problems involving percent increase and percent decrease, and financial literacy problems.

**Proportionality.** The student applies mathematical process standards to represent and solve problems involving proportional relationships. The student is expected to:

- MATH.7.1A Apply mathematics to problems arising in everyday life, society, and the workplace.
- MATH.7.1E Create and use representations to organize, record, and communicate mathematical ideas.

**Unit 4: Applying Proportionality**
Students solve problems involving ratios, rates, and percents. They calculate and compare simple and compound interest earnings as well as calculate sales tax and income tax. They also solve real-world problems involving similarity.

<table>
<thead>
<tr>
<th># Class Periods</th>
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</table>
| 6 (90-min. each) or 12 (45-min. each) | **Mathematical Process Standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:

- MATH.7.4A Represent constant rates of change in mathematical and real-world problems given pictorial, tabular, verbal, numeric, graphical, and algebraic representations, including \( d = rt \).
- MATH.7.4C Determine the constant of proportionality \((k = \frac{y}{x})\) within mathematical and real-world problems.
- MATH.7.4D Solve problems involving ratios, rates, and percents, including multi-step problems involving percent increase and percent decrease, and financial literacy problems.

**Proportionality.** The student applies mathematical process standards to represent and solve problems involving proportional relationships. The student is expected to:

- MATH.7.1A Apply mathematics to problems arising in everyday life, society, and the workplace.
- MATH.7.1E Create and use representations to organize, record, and communicate mathematical ideas.

**Proportionality.** The student applies mathematical process standards to use geometry to describe or solve problems involving proportional relationships. The student is expected to:
<table>
<thead>
<tr>
<th>Cycle 2</th>
<th>23 Days</th>
<th>The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.</th>
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<tbody>
<tr>
<td>Unit</td>
<td>Oct. 3 - Nov. 4, 2022</td>
<td>Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:</td>
</tr>
</tbody>
</table>
| # Class Periods | |  © MATH.7.5A Generalize the critical attributes of similarity, including ratios within and between similar shapes.  
  © MATH.7.5C Solve mathematical and real-world problems involving similar shape and scale drawings. |
|          | | **Personal Financial Literacy.** The student applies mathematical process standards to develop an economic way of thinking and problem solving useful in one's life as a knowledgeable consumer and investor. The student is expected to: |
|          | |  © MATH.7.13A Calculate the sales tax for a given purchase and calculate income tax for earned wages.  
  © MATH.7.13E Calculate and compare simple interest and compound interest earnings.  
  © MATH.7.13F Analyze and compare monetary incentives, including sales, rebates, and coupons. |
<table>
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<th>Cycle 3</th>
<th>28 Days</th>
<th>The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.</th>
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</thead>
<tbody>
<tr>
<td>Unit</td>
<td>Nov. 7-Dec. 21, 2022 # Class Periods</td>
<td>Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs) The student will:</td>
</tr>
<tr>
<td><strong>Unit 5: Financial Literacy and Budgets</strong></td>
<td>4 class periods (90-min. each) or 8 class periods (45-min. each)</td>
<td><strong>Mathematical Process Standards.</strong> The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ MATH.7.1A Apply mathematics to problems arising in everyday life, society, and the workplace.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ MATH.7.1E Create and use representations to organize, record, and communicate mathematical ideas.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Proportionality.</strong> The student applies mathematical process standards to represent and solve problems involving proportional relationships. The student is expected to:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ MATH.7.4D Solve problems involving ratios, rates, and percents, including multi-step problems involving percent increase and percent decrease, and financial literacy problems.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Personal Financial Literacy.</strong> The student applies mathematical process standards to develop an economic way of thinking and problem solving useful in one's life as a knowledgeable consumer and investor. The student is expected to:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ MATH.7.13B Identify the components of a personal budget, including income, planned savings for college, retirement, and emergencies, taxes, and fixed and variable expenses, and calculate what percentage each category comprises of the total budget.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ MATH.7.13C Create and organize a financial assets and liabilities record and construct a net worth statement.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ MATH.7.13D Use a family budget estimator to determine the minimum household budget and average hourly wage needed for a family to meet its basic needs in the student’s city or another large city nearby.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ MATH.7.13E Calculate and compare simple interest and compound interest earnings.</td>
</tr>
</tbody>
</table>
## Cycle 3
### Nov. 7-Dec. 21, 2022

<table>
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<tr>
<th>Unit</th>
<th># Class Periods</th>
<th>Mathematical Process Standards</th>
<th>Numbers and Operations</th>
<th>Numbers and Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit 6: Operating with Rational Numbers</strong>&lt;br&gt;Students categorize and organize numbers in sets and subsets using visual representations. They also investigate and utilize various problem-solving processes to extend previous experiences involving numeric relationships involving addition, subtraction, multiplication, and division of rational numbers in a context of real-world situations.</td>
<td><strong>4 class periods</strong> (90-min. each) or <strong>8 class periods</strong> (45-min. each)&lt;br&gt;<strong>Thanksgiving Break</strong> Nov. 21-25&lt;br&gt;<strong>Winter Break (students)</strong> Dec. 22 - Jan. 6&lt;br&gt;<strong>Winter Break (teachers)</strong> Dec. 22 - Jan. 4</td>
<td>The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:&lt;br&gt;<strong>=Math 7.1B</strong> Use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution.&lt;br&gt;<strong>Math 7.1E</strong> Create and use representations to organize, record, and communicate mathematical ideas.</td>
<td>The student applies mathematical process standards to represent and use rational numbers in a variety of forms. The student is expected to:&lt;br&gt;<strong>Math 7.2A</strong> Extend previous knowledge of sets and subsets using a visual representation to describe relationships between sets of rational numbers.</td>
<td>The student applies mathematical process standards to add, subtract, multiply, and divide while solving problems and justifying solutions. The student is expected to:&lt;br&gt;<strong>Math 7.3A</strong> Add, subtract, multiply, and divide rational numbers fluently. <strong>Math 7.3B</strong> Apply and extend previous understandings of operations to solve problems using addition, subtraction, multiplication, and division of rational numbers.</td>
</tr>
<tr>
<td><strong>Unit 7: Algebraic Expressions</strong>&lt;br&gt;Students apply operations with rational numbers as they model and solve one-variable, two-step equations and inequalities.</td>
<td><strong>3 class periods</strong> (90-min. each) or <strong>6 class periods</strong> (45-min. each)</td>
<td>The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:&lt;br&gt;<strong>Math 7.1C</strong> Select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems.&lt;br&gt;<strong>Math 7.1D</strong> Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.</td>
<td>The student applies mathematical process standards to add, subtract, multiply, and divide while solving problems and justifying solutions. The student is expected to:&lt;br&gt;<strong>Math 7.3A</strong> Add, subtract, multiply, and divide rational numbers fluently.</td>
<td><strong>Math 7.3A</strong> Add, subtract, multiply, and divide rational numbers fluently. <strong>Math 7.3B</strong> Apply and extend previous understandings of operations to solve problems using addition, subtraction, multiplication, and division of rational numbers.</td>
</tr>
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### Cycle 3

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<th>Unit</th>
<th>28 Days Nov. 7-Dec. 21, 2022</th>
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</table>

**Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)**

The student will:

**Expressions, Equations, and Relationships.** The student applies mathematical process standards to use one-variable equations and inequalities to represent situations. The student is expected to:

- **MATH.7.10A** Write one-variable, two-step equations and inequalities to represent constraints or conditions within problems.

**Expressions, Equations, and Relationships.** The student applies mathematical process standards to solve one-variable equations and inequalities. The student is expected to:

- **MATH.7.11A** Model and solve one-variable, two-step equations and inequalities.
### Cycle 4

<table>
<thead>
<tr>
<th>Unit</th>
<th># Class Periods</th>
<th>Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)</th>
</tr>
</thead>
</table>
| **Unit 8: Two-Step Equations and Inequalities** | 4 class periods (90-min. each) or 8 class periods (45-min. each) | **Mathematical Process Standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:  
   - MATH.7.1C Select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems.  
   - MATH.7.1D Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.  

**Expressions, Equations, and Relationships.** The student applies mathematical process standards to use one-variable equations and inequalities to represent situations. The student is expected to:  
   - MATH.7.10A Write one-variable, two-step equations and inequalities to represent constraints or conditions within problems.  
   - MATH.7.10B Represent solutions for one-variables, two-step equations, and inequalities on number lines.  
   - MATH.7.10C Write a corresponding real-world problem given a one-variable, two-step equation or inequality.  

**Expressions, Equations, and Relationships.** The student applies mathematical process standards to solve one-variable equations and inequalities. The student is expected to:  
   - MATH.7.11A Model and solve one-variable, two-step equations and inequalities.  
   - MATH.7.11B Determine if the given value(s) make(s) one-variable, two-step equations and inequalities true. |
The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.

### Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)

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<tr>
<th>Unit 9: Multiple Representations of Equations</th>
<th># Class Periods</th>
<th>The student will:</th>
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</thead>
</table>
| Students communicate mathematical ideas, reasoning, and their implications using multiple representations. They also represent linear relationships using verbal descriptions, tables, graphs, and equations that simplify to the form $y = mx + b$. | 3 class periods (90-min. each) or 6 class periods (45-min. each) | Mathematical Process Standards. The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:  
② MATH.7.1C Select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems.  
② MATH.7.1D Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate. |
| **Winter Break (students)**  
Dec. 22 - Jan. 6 | **Proportionality.** The student applies mathematical process standards to represent and solve problems involving proportional relationships. The student is expected to:  
② MATH.7.4A Represent constant rates of change in mathematical and real-world problems given pictorial, tabular, verbal, numeric, graphical, and algebraic representations, including $d = rt$. |
| **Winter Break (teachers)**  
Dec. 22 - Jan. 4 | **Expressions, Equations, and Relationships.** The student applies mathematical process standards to represent linear relationships using multiple representations. The student is expected to:  
② MATH.7.7A Represent linear relationships using verbal descriptions, tables, graphs, and equations that simplify to the form $y = mx + b$. |
| MLK Jr. Day  
Jan. 16 | **Expressions, Equations, and Relationships.** The student applies mathematical process standards to use one-variable equations and inequalities to represent situations. The student is expected to:  
⑤ MATH.7.10A Write one-variable, two-step equations and inequalities to represent constraints or conditions within problems.  
⑤ MATH.7.10C Write a corresponding real-world problem given a one-variable, two-step equation or inequality. |
| **Teacher Prep Day**  
(no students)  
Jan. 5 | **Expressions, Equations, and Relationships.** The student applies mathematical process standards to solve one-variable equations and inequalities. The student is expected to:  
② MATH.7.11A Model and solve one-variable, two-step equations and inequalities. |
| **Teacher Service Day**  
(no students)  
Jan. 6 | **Teacher Service Day**  
(no students)  
Feb. 20 |
## Unit 10: Introduction to Probability

Students construct sample spaces for real-world events then determine the experimental and/or theoretical probability of those events.

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</tr>
</thead>
</table>
| Unit    | Jan. 9 - Feb. 24, 2023 | **Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)**  
**The student will:**  
**Mathematical Process Standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:  
- **MATH.7.1A** Apply mathematics to problems arising in everyday life, society, and the workplace.  
- **MATH.7.1E** Create and use representations to organize, record, and communicate mathematical ideas.  

**Proportionality.** The student applies mathematical process standards to use probability and statistics to describe or solve problems involving proportional relationships. The student is expected to:  
- **MATH.7.6B** Select and use different simulations to represent simple and compound events with and without technology.  
- **MATH.7.6C** Make predictions and determine solutions using experimental data for simple and compound events.  
- **MATH.7.6D** Make predictions and determine solutions using theoretical probability for simple and compound events.  
- **MATH.7.6E** Determine the probabilities of a simple event and its complement and describe the relationship between the two.  
- **MATH.7.6H** Solve problems using qualitative and quantitative predictions and comparisons from simple experiments.  
- **MATH.7.6I** Determine experimental and theoretical probabilities related to simple and compound events using data and sample spaces.
### Cycle 5
#### 28 Days
Feb. 27 - Apr. 14, 2023

The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.

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<th>Unit</th>
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<th>Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)</th>
</tr>
</thead>
</table>
| **Unit 11: Compound Probability**  | 5 class periods (90-min. each) or 10 class periods (45-min. each) | **Mathematical Process Standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:  
- ☀ MATH.7.1A Apply mathematics to problems arising in everyday life, society, and the workplace.  
- ☀ MATH.7.1E Create and use representations to organize, record, and communicate mathematical ideas.

**Proportionality.** The student applies mathematical process standards to use probability and statistics to describe or solve problems involving proportional relationships. The student is expected to:  
- ☀ MATH.7.6A Represent sample spaces for simple and compound events using lists and tree diagrams.  
- • MATH.7.6B Select and use different simulations to represent simple and compound events with and without technology.  
- ☀ MATH.7.6C Make predictions and determine solutions using experimental data for simple and compound events.  
- ☀ MATH.7.6D Make predictions and determine solutions using theoretical probability for simple and compound events.  
- ☀ MATH.7.6I Determine experimental and theoretical probabilities related to simple and compound events using data and sample spaces. |

| Unit 12: Drawing Inferences | 5 class periods (90-min. each) or 10 class periods (45-min. each) | **Mathematical Process Standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:  
- ☀ MATH.7.1A Apply mathematics to problems arising in everyday life, society, and the workplace.  
- ☀ MATH.7.1E Create and use representations to organize, record, and communicate mathematical ideas.  

**Proportionality.** The student applies mathematical process standards to use probability and statistics to describe or solve problems involving proportional relationships. The student is expected to:  
- • MATH.7.6B Select and use different simulations to represent simple and compound events with and without technology.  
- • MATH.7.6F Use data from a random sample to make inferences about a population. |

- Spring Break Mar. 13-17  
- Chávez-Huerta Day Mar. 31  
- Spring Holiday Apr. 7

**GLOBAL GRADUATE**
- State Process Standard  
- State Readiness Standard  
- Aligned to Upcoming State Readiness Standard  
- State Supporting Standard

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<tr>
<td># Class Periods</td>
<td>Feb. 27 - Apr. 14, 2023</td>
</tr>
</tbody>
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The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.

Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)

| © MATH.7.6G | Solve problems using data represented in bar graphs, dot plots, and circle graphs, including part-to-whole and part-to-part comparisons and equivalents. |
| Measurement and Data. The student applies mathematical process standards to use statistical representations to analyze data. The student is expected to: |
| © MATH.7.12A | Compare two groups of numeric data using comparative dot plots or box plots by comparing their shapes, centers, and spreads. |
| © MATH.7.12B | Use data from a random sample to make inferences about a population. |
| © MATH.7.12C | Compare two populations based on data in random samples from these populations, including informal comparative inferences about differences between the two populations. |

Unit 13: Area and Surface Area
Students write and solve equations using geometric concepts. They also solve problems involving composite figures.

(continues in Cycle 6)

| Unit 13: Area and Surface Area |
| 4 class periods (90-min. each) or 8 class periods (45-min. each) |

Expressions, Equations, and Relationships. The student applies mathematical process standards to solve geometric problems. The student is expected to:

© MATH.7.9C | Determine the area of composite figures containing combinations of rectangles, squares, parallelograms, trapezoids, triangles, semicircles, and quarter circles. |

Expressions, Equations, and Relationships. The student applies mathematical process standards to solve one-variable equations and inequalities. The student is expected to:

© MATH.7.11C | Write and solve equations using geometry concepts, including the sum of the angles in a triangle, and angle relationships. |
### Unit 13: Area and Surface Area

Students write and solve equations using geometric concepts. They also solve problems involving composite figures.

(continued from Cycle 5)

<table>
<thead>
<tr>
<th># Class Periods</th>
<th>The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.</th>
</tr>
</thead>
</table>
| 4 class periods (90-min. each) or 8 class periods (45-min. each) | **Expressions, Equations, and Relationships.** The student applies mathematical process standards to solve geometric problems. The student is expected to:  
**MATH.7.9C** Determine the area of composite figures containing combinations of rectangles, squares, parallelograms, trapezoids, triangles, semicircles, and quarter circles.  

**Expressions, Equations, and Relationships.** The student applies mathematical process standards to solve one-variable equations and inequalities. The student is expected to:  
**MATH.7.11C** Write and solve equations using geometry concepts, including the sum of the angles in a triangle, and angle relationships. |

### Unit 14: Three-Dimensional Figures

Students determine the relationship between prisms and pyramids and calculate the volume of those solids.

<table>
<thead>
<tr>
<th># Class Periods</th>
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</tr>
</thead>
</table>
| 5 class periods (90-min. each) or 10 class periods (45-min. each) | **Mathematical Process Standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding. The student is expected to:  
**MATH.7.1B** Use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution.  
**MATH.7.1G** Display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication.  

**Expressions, Equations, and Relationships.** The student applies mathematical process standards to develop geometric relationships with volume. The student is expected to:  
- **MATH.7.8A** Model the relationship between the volume of a rectangular prism and a rectangular pyramid having both congruent bases and heights and connect that relationship to the formulas.  
- **MATH.7.8B** Explain verbally and symbolically the relationship between the volume of a triangular prism and a triangular pyramid having both congruent bases and heights and connect that relationship to the formulas.  

**Expressions, Equations, and Relationships.** The student applies mathematical process standards to solve geometric problems.  
**MATH.7.9A** Solve problems involving the volume of rectangular prisms, triangular prisms, rectangular pyramids, and triangular pyramids. |

**Memorial Day** May 29  
**Teacher Prep Day** (no students) June 1
## Cycle 6
**31 Days**
**Apr. 17 - May 31, 2023**

<table>
<thead>
<tr>
<th>Unit</th>
<th>4 class periods (90-min. each) or 8 class periods (45-min. each)</th>
</tr>
</thead>
</table>

### Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)

- **MATH.7.9C** Determine the area of composite figures containing combinations of rectangles, squares, parallelograms, trapezoids, triangles, semicircles, and quarter circles.
- **MATH.7.9D** Solve problems involving the lateral and total surface area of a rectangular prism, rectangular pyramid, triangular prism, and triangular pyramid by determining the area of the shapes’ net.

### Mathematical Process Standards

- **MATH.7.1B** Use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution.
- **MATH.7.1D** Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.

### Numbers and Operations

- **MATH.7.3B** Apply and extend previous understandings of operations to solve problems using addition, subtraction, multiplication, and division while solving problems and justifying solutions.

### Proportionality

- **MATH.7.4A** Represent constant rates of change in mathematical and real-world problems given pictorial, tabular, verbal, numeric, graphical, and algebraic representations, including \( d = rt \).
- **MATH.7.4B** Calculate unit rates from rates in mathematical and real-world problems.
- **MATH.7.4D** Solve problems involving ratios, rates, and percents, including multi-step problems involving percent increase and percent decrease, and financial literacy problems.
<table>
<thead>
<tr>
<th>Cycle 6</th>
<th>31 Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit</td>
<td>Apr. 17 - May 31, 2023</td>
</tr>
<tr>
<td># Class Periods</td>
<td></td>
</tr>
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The recommended number of class periods is less than the number of days in the grading cycle to accommodate differentiated instruction, extended learning time, and assessment days. Complete instructional planning information and support are in the HISD Curriculum documents.

Texas Essential Knowledge and Skills/Student Expectations (TEKS/SEs)

The student will:

**Expressions, Equations, and Relationships.** The student applies mathematical process standards to solve geometric problems. The student is expected to:

- **MATH.7.9A** Solve problems involving the volume of rectangular prisms, triangular prisms, rectangular pyramids, and triangular pyramids.
- **MATH.7.9D** Solve problems involving the lateral and total surface area of a rectangular prism, rectangular pyramid, triangular prism, and triangular pyramid by determining the area of the shapes’ net.

**Expressions, Equations, and Relationships.** The student applies mathematical process standards to use one-variable equations and inequalities to represent situations. The student is expected to:

- **MATH.7.10A** Write one-variable, two-step equations and inequalities to represent constraints or conditions within problems.
- **MATH.7.10B** Represent solutions for one-variables, two-step equations, and inequalities on number lines.

**Expressions, Equations, and Relationships.** The student applies mathematical process standards to solve one-variable equations and inequalities. The student is expected to:

- **MATH.7.11A** Model and solve one-variable, two-step equations and inequalities.
- **MATH.7.11B** Determine if the given value(s) make(s) one-variable, two-step equations and inequalities true.

**Personal Financial Literacy.** The student applies mathematical process standards to develop an economic way of thinking and problem solving useful in one's life as a knowledgeable consumer and investor. The student is expected to:

- **MATH.7.13A** Calculate the sales tax for a given purchase and calculate income tax for earned wages.
- **MATH.7.13F** Analyze and compare monetary incentives, including sales, rebates, and coupons.