

# COMMON CORE Standards Plus<sup>®</sup>



# Mathematics

## GRADE 5

### Teacher Edition



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# Common Core Standards Plus® - Mathematics Grade 5

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# Common Core Standards Plus® - Mathematics Grade 5

## *What is Common Core Standards Plus?*

### Research Behind Standards Plus:

Common Core Standards Plus is produced by Learning Plus Associates, a Nonprofit Public Benefit Corporation dedicated to creating and providing solutions that increase student achievement and support teacher delivery of high-quality, effective instruction on a daily basis. The lessons are based upon the research of Effective Schools Correlates, Edward Deming's Total Quality Management (TQM), and models of effective instruction. A team of content and grade level experts wrote the Common Core Standards Plus lessons to meet the skills, concepts, depth, and rigor of the Common Core Standards.

### What is Standards Plus?

Standards Plus is a set of research-based, supplemental K-8 language arts and math materials written to the Common Core Standards. These explicit direct instruction lessons were designed to teach discrete elements of the Common Core Standards.

### Benefits:

- Ready-to-teach lessons and projects with very little teacher prep
- Grade level content vocabulary is taught within the context of the lessons.
- Increases student and teacher understanding of the standards
- A year's worth of daily lessons, performance lessons, and integrated projects ensure that all students have equal access to standards at every level of rigor (DOK 1-4)
- Prepares students for the state assessment

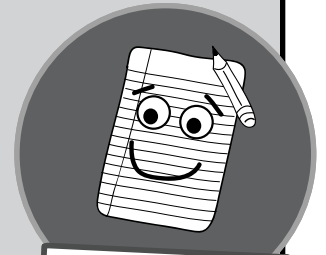
### Three Types of Lessons:

#### Daily Lessons and Weekly Assessments (Evaluations):

*(15-20 minutes daily)*

There are 34 weeks of daily lessons and assessments (evaluations) written directly to the standards.

**A week of instruction** is comprised of **four lessons** and a **corresponding assessment**. The daily lessons are written to DOK Levels 1 and 2.



**Daily Lessons & Weekly Assessments**

#### Performance Lessons:

*(3-5 days 30 minutes each day)*

After one or more weeks of daily lessons written to a particular standard or topic, you will find a Performance Lesson. Performance Lessons are written to DOK Level 3.

These lessons require that students apply what they have learned and use reasoning, planning, evidence, and a higher level of thinking than the daily lessons. Many standards are assessed at this level of rigor on state assessments.

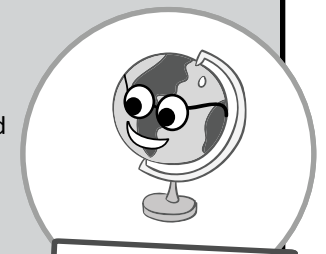


**Performance Lessons**

#### Integrated Projects:

*(Multiple class sessions over several days or weeks)*

Three Integrated Projects are located immediately after the supporting daily lessons, assessments, and performance lessons. Integrated Projects require that students plan, synthesize information, produce high-quality products, and present their findings. Integrated Projects are written to DOK level 4.



**Integrated Projects**

# Common Core Standards Plus® - Mathematics Grade 5

## *Delivering the Daily Lessons*



### Prepare to Teach/Plan Instruction

**Select the week of instruction you will be teaching.** View the sample pacing on pages 8-9 or create your own pacing to match the content and standards of Standards Plus lessons to classroom instruction, district pacing guides, or benchmark information.



A **week of instruction** is a set of four daily lessons and a weekly assessment.



### Preview the Week of Instruction (5 minutes)

Look at the teacher lesson plans for all four lessons paying particular attention to the standard(s), lesson objective, and introduction. Those three pieces of information will identify what students will learn and be able to do. Quickly scan the student page to gain an understanding of what students will be expected to do in independent practice. Repeat this process for the next three lessons and the assessment. This will give you a clear picture of how the week unfolds and will help you keep the daily lessons focused and concise.



### Prepare to Teach a Daily Lesson (5 minutes)

- Read the entire teacher lesson plan.
- Identify academic vocabulary.
- Determine your instructional focus, “What do I want students to know and do by the end of today’s lesson?”
- Consider any relevant prior knowledge connections you can share with students, so they can connect the new learning to previous learning.



### Teach a Daily Lesson (15-20 minutes)



1. **Project the student lesson**
2. **Read the standard(s)** aloud with students, highlighting the part of the standard being taught in today’s lesson.
3. **Read the Introduction** provided in the Teacher Edition or provide your own.
4. **Read the Instruction aloud to students.**  
Focus on new academic vocabulary, teaching the concept directly, and modeling the concept for students.
5. **Read the Guided Practice** and work through the examples together with students, sharing your thoughts aloud as you work through the item(s) step-by-step.
  - Monitor the class – If students are struggling, DO NOT MOVE onto Independent Practice, continue with Guided Practice.

6. **Read the Independent Practice and/or the Directions.**
  - Continue to monitor the class to catch common errors or misconceptions and correct immediately.
  - Differentiate instruction for struggling students by assigning fewer items.
  - Prompt and praise students for making attempts.
7. **Complete the Review**
  - Review answers when all students have completed Independent Practice or when your timeframe has expired.
  - Have students correct their mistakes or improve their answers.
8. **Read the Closure**
  - Read or paraphrase the closure or have students summarize the important concepts or skills learned in the lesson.

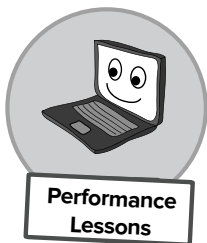
# Common Core Standards Plus® - Mathematics Grade 5

## *Delivering the Lessons*



### Weekly Formative Assessments (Evaluations)

- Formative assessments that include items that match the week's instruction.
- Use these assessments to identify students' understanding of the concept taught and identify students for intervention.



### Prepare to Teach a Performance Lesson

*Allocate 30 minutes a day for 3-5 days to complete a performance lesson.*

**Periodically**



### Preview the Entire Performance Lesson (5-10 Minutes)

- Read the teacher lesson plan (1-2 pages) and student pages
- Focus on the standards listed at the top of the teacher page, the Lesson Objective, and the Overview. This information will provide a broad overview of the performance lessons.

**NOTE:** Performance lessons are more complex and more difficult for students than the daily lessons. **Performance lessons must be taught, not assigned.** Each performance lesson **has a large guided practice section.** This is so that the teacher can model and guide students through each component of the lesson. These lessons teach students how to successfully complete a performance task.



### Prepare to Teach an Integrated Project

*Multiple class sessions over several days or weeks.*

**3 Times a Year**



### Preview the Entire Integrated Project (10-15 Minutes)

- Previewing the project will provide an overview of the standards and components of the project.
- This allows the teacher to gain an understanding of how several different standards can be taught and evaluated.

**NOTE:** Even if you are not planning to teach a Standards Plus Integrated Project, it is helpful to view the components of the project listed in the Teacher Edition. It provides a broad look at how to integrate many topics and standards. It is a good reminder for teachers to include standards and expectations often overlooked, whether it is planning and delivering an opinion speech, or using technology to produce and publish writing as well as to interact and collaborate with others. Each project component may take up to a week or two of instruction.

### Helpful Hint

To ensure all heavily-weighted standards are taught prior to state testing, you may need to teach a Performance Lesson and/or a component of an Integrated Project **in addition to** a week of Daily Lessons. **See PBL sample pacing on page 10-11 for an example.**

# Common Core Standards Plus® - Mathematics Grade 5

## Suggested Pacing



Standards Plus is supplemental and **does not** have to be taught in the printed order.

The pacing guide below provides instruction of the **most heavily-weighted standards in the 26 weeks prior to state testing.**

### Suggested Pacing Guide

WEEK	DOMAIN/TOPIC, LESSON (L), EVALUATIONS (E)	STANDARD(S)	TE PG#	DOK
1	Number & Operations in Base Ten L1-4, E1	5.NBT.1	30-39	<b>DOK 1-2</b>
2	Number & Operations in Base Ten L5-8, E2	5.NBT.2	40-49	<b>DOK 1-2</b>
<b>Performance Lesson 1 – Power of Ten</b>		5.NBT.1, 5.NBT.2	50	<b>DOK 3</b>
3	Number & Operations in Base Ten L9-12, E3	5.NBT.3, 5.NBT.3a	54-63	<b>DOK 1-2</b>
4	Number & Operations in Base Ten L13-16, E4	5.NBT.3b, 5.NBT.4	64-73	<b>DOK 1-2</b>
<b>Performance Lesson 2 – Working with Decimals</b>		5.NBT.3, 5.NBT.3a-b, 5.NBT.4	74	<b>DOK 3</b>
5	Number & Operations in Base Ten L17-20, E5	5.NBT.5	78-87	<b>DOK 1-2</b>
6	Number & Operations in Base Ten L21-24, E6	5.NBT.6	88-97	<b>DOK 1-2</b>
<b>Performance Lesson 3 – Multiplication &amp; Division</b>		5.NBT.5, 5.NBT.6	98	<b>DOK 3</b>
7	Number & Operations in Base Ten L25-28, E7	5.NBT.7	102-111	<b>DOK 1-2</b>
8	Number & Operations in Base Ten L29-32, E8	5.NBT.7	112-121	<b>DOK 1-2</b>
9	Number & Operations in Base Ten L33-36, E9	5.NBT.7	122-131	<b>DOK 1-2</b>
10	Number & Operations in Base Ten L37-40, E10	5.NBT.7	132-141	<b>DOK 1-2</b>
<b>Performance Lesson 4 – Operations with Decimals</b>		5.NBT.7	142	<b>DOK 3</b>
11	Number & Operations – Fractions L1-4, E1	5.NF.1, 5.NF.2	168-177	<b>DOK 1-2</b>
12	Number & Operations – Fractions L5-8, E2	5.NF.1, 5.NF.2	178-187	<b>DOK 1-2</b>
13	Number & Operations – Fractions L9-12, E3	5.NF.2	188-197	<b>DOK 1-2</b>
14	Number & Operations – Fractions L13-16, E4	5.NF.3	198-207	<b>DOK 1-2</b>
<b>Performance Lesson 5 – Add &amp; Subtract Fractions &amp; Mixed #s</b>		5.NF.1, 5.NF.2, 5.NF.3	208	<b>DOK 3</b>
15	Number & Operations – Fractions L17-20, E5	5.NF.4	212-221	<b>DOK 1-2</b>
16	Number & Operations – Fractions L21-24, E6	5.NF.4, 5.NF.4b	222-231	<b>DOK 1-2</b>
17	Number & Operations – Fractions L25-28, E7	5.NF.5, 5.NF.5a, 5.NF.5b	232-241	<b>DOK 1-2</b>
18	Number & Operations – Fractions L29-32, E8	5.NF.6	242-251	<b>DOK 1-2</b>
<b>Performance Lesson 6 – Multiplying Fractions</b>		5.NF.4, .4a, 5.NF.5, .5b, 5.NF.6	252-253	<b>DOK 3</b>
19	Number & Operations – Fractions L33-36, E9	5.NF.7, 5.NF.7a	258-267	<b>DOK 1-2</b>
20	Number & Operations – Fractions L37-40, E10	5.NF.7b	268-277	<b>DOK 1-2</b>
21	Number & Operations – Fractions L41-44, E11	5.NF.7c	278-287	<b>DOK 1-2</b>
<b>Performance Lesson 7 – Real-World Fraction Problems</b>		5.NF.7, 5.NF.7a-c	288	<b>DOK 3</b>
22	Measurement & Data L9-12, E3	5.MD.3, 5.MD.4	326-335	<b>DOK 1-2</b>
23	Measurement & Data L13-16, E4	5.MD.5, 5.MD.5a	336-345	<b>DOK 1-2</b>
24	Measurement & Data L17-20, E5	5.MD.5b	346-355	<b>DOK 1-2</b>
25	Measurement & Data L21-24, E6	5.MD.5c	356-365	<b>DOK 1-2</b>
<b>Performance Lesson 9 – All About Volume</b>		5.MD.3, 5.MD.4, 5.MD.5, .5a-c	366	<b>DOK 3</b>
26	Operations & Algebraic Thinking L1-4, E1	5.OA.1	392-401	<b>DOK 1-2</b>

### STATE TESTING BEGINS

→ Suggested pacing continues at the top of the next page.



Daily Lessons & Weekly Assessments

Each white row represents a week of instruction.

A week of instruction includes **four daily lessons (L)** and a **weekly formative assessment /evaluation (E)**.



Performance Lessons

Each shaded row represents a performance lesson.

Performance lessons may take up to three 30-minute sessions to complete.



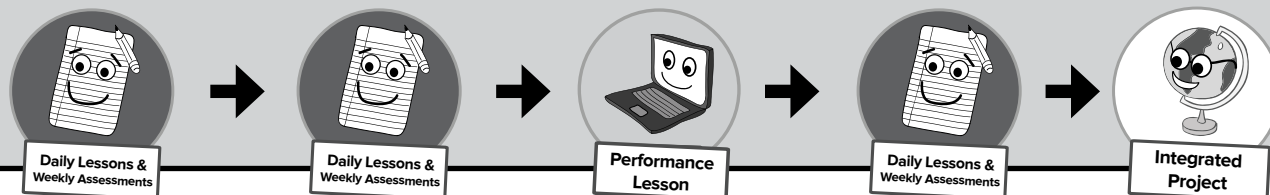
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## ***Suggested Pacing Continued***

### Suggested Pacing Guide Continued

↓ These lessons are scheduled to be taught after state testing begins or they may be taught as needed throughout the year to support instruction. ↓				
WEEK	DOMAIN/TOPIC, LESSON (L), EVALUATIONS (E)	STANDARD(S)	TE PG#	DOK
27	Operations & Algebraic Thinking L5-8, E2	5.OA.2	402-411	<b>DOK 1-2</b>
28	Operations & Algebraic Thinking L9-12, E3	5.OA.2	412-421	<b>DOK 1-2</b>
<b>Performance Lesson 10</b> – Expressions		5.OA.1, 5.OA.2	422-423	<b>DOK 3</b>
29	Operations & Algebraic Thinking L13-16, E4	5.OA.3	426-435	<b>DOK 1-2</b>
30	Operations & Algebraic Thinking L17-20, E5	5.OA.3	436-445	<b>DOK 1-2</b>
<b>Performance Lesson 11</b> – Patterns		5.OA.3	446	<b>DOK 3</b>
31	Measurement & Data L1-4, E1	5.MD.1	302-311	<b>DOK 1-2</b>
32	Measurement & Data L5-8, E2	5.MD.2	312-321	<b>DOK 1-2</b>
<b>Performance Lesson 8</b> – Measurement Units & Line Plots		5.MD.1, 5.MD.2	322	<b>DOK 3</b>
33	Geometry L1-4, E1	5.G.1, 5.G.2	456-465	<b>DOK 1-2</b>
<b>Performance Lesson 12</b> – Graph It!		5.G.1, 5.G.2	466	<b>DOK 3</b>
34	Geometry L5-8, E2	5.G.3, 5.G.4	470-479	<b>DOK 1-2</b>
<b>Performance Lesson 13</b> – Just Plane Hierarchy		5.G.3, 5.G.4	480	<b>DOK 3</b>

## ***Developing Your Own Standards Plus Pacing is Easy***



The Common Core Standards Plus lessons can be easily paced to match:

- Core publisher textbooks
- District or site pacing
- District benchmarks

#### Here's How:

The Lesson Index found on pages **12-19** lists the Domain, Lesson Focus, and Standard(s) taught in each lesson. Every week of instruction (four Daily Lessons & a Weekly Assessment), Performance Lesson, and an Integrated Project is included in the lesson index. Use the Strand, Lesson Focus, or Standard listed on the Lesson Index to match the Standards Plus content to your own textbooks, units, or pacing. Schedule the Daily Lessons that lead up to each Performance Lesson to ensure students can apply the skills and concepts taught in the Daily Lessons.

## Common Core Standards Plus® - Mathematics Grade 5

### ***Project-Based Learning Pacing***

#### **Pacing Explanation:**

Standards Plus materials are Common Core by design. They offer instruction at all four levels of Webb’s Depth of Knowledge (DOK 1-4), and they include three instructional components (Daily Lessons, Performance Lessons, and Integrated projects) that can be scheduled to support Project-Based Learning. Each grade level and subject may be organized into three distinct sets of instruction that include several weeks of Daily Lessons and Weekly Assessments (evaluations), multiple Performance Lessons, and an Integrated Project.

**If you are using Common Core Standards Plus to support Project-Based Learning, here’s an example of how you might schedule the instruction to fit your instructional day:**

Week	Monday	Tuesday	Wednesday	Thursday	Friday
6	<i>Number &amp; Operations in Base Ten Lesson 21</i>	<i>Number &amp; Operations in Base Ten Lesson 22</i>	<i>Number &amp; Operations in Base Ten Lesson 23</i>	<i>Number &amp; Operations in Base Ten Lesson 24</i>	<i>Number &amp; Operations in Base Ten Evaluation 6</i>
<i>Performance Lesson 3: Multiplication &amp; Division</i>					
<i>Project Component: Writing Problems and Their Answers</i>					



This is an example of a week of PBL instruction that includes instruction at **every level of rigor**. In this example, you teach the Daily Lessons, a Performance Lesson, and a component of an Integrated Project in one week.

# Common Core Standards Plus® - Mathematics Grade 5

## ***Project-Based Learning Pacing***


### 10-Week PBL Plan

WEEK	STRAND, LESSONS, EVALUATIONS (E)	INTEGRATED PROJECT COMPONENTS
1	Number and Operations in Base Ten 1-4, E1	Integrated Project #1 <i>Now Serving Breakfast</i>
2	No. & Operations in Base Ten 5-8, E2 / <i>*Performance Lesson 1</i>	
3	Number and Operations in Base Ten 9-12, E3	Choosing Items for the Menu
4	No. & Operations in Base Ten 13-16, E4 / <i>*Performance Lesson 2</i>	Determining Prices for the Items
5	Number and Operations in Base Ten 17-20, E5	Creating the Menu
6	No. & Operations in Base Ten 21-24, E6 / <i>*Performance Lesson 3</i>	Writing Problems and Their Answers
7	Number and Operations in Base Ten 25-28, E7	Writing
8	Number and Operations in Base Ten 29-32, E8	Finalizing the Menu and Problems
9	Number and Operations in Base Ten 33-36, E9	Challenging Another Student/Pair
10	No. & Operations in Base Ten 37-40, E10 / <i>*Performance Lesson 4</i>	Debriefing the Project



### 17-Week PBL Plan

11	Number and Operations – Fractions 1-4, E1	Integrated Project #2 <i>Recycled Home Design</i>
12	Number and Operations – Fractions 5-8, E2	
13	Number and Operations – Fractions 9-12, E3	Learning About the Building Materials
14	No. & Operations – Fractions 13-16, E4 / <i>*Performance Lesson 5</i>	
15	Number and Operations – Fractions 17-20, E5	Configuring the Design
16	Number and Operations – Fractions 21-24, E6	Layout of the Home
17	Number and Operations – Fractions 25-28, E7	Creating the Design
18	No. & Operations – Fractions 29-32, E8 / <i>*Performance Lesson 6</i>	Determine Square Footage of Rooms/Home
19	Number and Operations – Fractions 33-36, E9	Calculations
20	Number and Operations – Fractions 29-32, E10	Determine Cu. Capacity/Calculate Cooling
21	No. & Operations – Fractions 33-36, E11 / <i>*Performance Lesson 7</i>	Calculations
22	Measurement and Data 1-4, E1	Writing the Description
23	Measurement and Data 5-8, E2 / <i>*Performance Lesson 8</i>	Writing
24	Measurement and Data 9-12, E3	Writing
25	Measurement and Data 13-16, E4	Presenting the Project
26	Measurement and Data 17-20, E5	Rehearsal
27	Measurement and Data 21-24, E6 / <i>*Performance Lesson 9</i>	Oral Presentations



**Integrated Project**

Each project component may take up to two weeks of instruction.

### 7-Week PBL Plan

28	Operations and Algebraic Thinking 1-4, E1	Integrated Project #3 <i>What's in a Building?</i>
29	Operations and Algebraic Thinking 5-8, E2	
30	Operations & Alg. Thinking 9-12, E3 / <i>*Performance Lesson 10</i>	Choosing a Building For Study
31	Operations and Algebraic Thinking 13-16, E4	Determine Features to Analyze / Gather Info.
32	Operations & Alg. Thinking 17-20, E5 / <i>*Performance Lesson 11</i>	Use Num. Expressions to Describe Features
33	Geometry 1-4, E1 / <i>*Performance Lesson 12</i>	Use Num. Patterns to Represent Features
34	Geometry 5-8, E2 / <i>*Performance Lesson 13</i>	Graphing Features
		Oral Presentations

# Common Core Standards Plus® - Mathematics Grade 5

## Lesson Index

Domain	Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level	
Number and Operations in Base Ten (Number and Operations in Base Ten Standards 5.NBT.1-5.NBT.7)	1	Place Value Patterns	5.NBT.1: Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.	30	3	1-2	
	2	Place Value Patterns		32	4		
	3	Place Value Patterns		34	5		
	4	Place Value Patterns		36	6		
	E1	Evaluation - Place Value Patterns		38	7		
	5	Powers of Ten	5.NBT.2: Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.	40	9	1-2	
	6	Multiply by Powers of Ten		42	10		
	7	Divide by Powers of Ten		44	11		
	8	Multiply & Divide by Powers of Ten		46	12		
	E2	Evaluation - Powers of Ten		48	13		
	P1	<b>Performance Lesson – Number and Operations in Base Ten: <i>Power of Ten</i></b> (5.NBT.1, 5.NBT.2)			50	15-17	3
	9	Word Form of Decimals	5.NBT.3: Read, write, and compare decimals to thousandths. 5.NBT.3a: Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$ .	54	18	1-2	
	10	Expanded Form of Decimals		56	19		
	11	Standard Form of Decimals		58	20		
	12	Decimal Forms		60	21		
	E3	Evaluation - Decimal Forms		62	22		
	13	Compare Decimals	5.NBT.3b: Compare two decimals to thousandths based on meanings of the digits in each place, using $>$ , $=$ , and $<$ symbols to record the results of comparisons.	64	23	1-2	
	14	Compare Decimals		66	24		
	15	Round Decimals	5.NBT.4: Use place value understanding to round decimals to any place.	68	25		
	16	Round Decimals		70	26		
	E4	Evaluation – Compare, Round Decimals	5.NBT.3b, 5.NBT.4	72	27		
	P2	<b>Performance Lesson – Number and Operations in Base Ten: <i>Working with Decimals</i></b> (5.NBT.3, 5.NBT.3a, 5.NBT.3b, 5.NBT.4)			74	29-31	3
	17	Multiply Whole Numbers	5.NBT.5: Fluently multiply multi-digit whole numbers using the standard algorithm.	78	32	1-2	
	18	Multiply Whole Numbers		80	33		
	19	Multiply Whole Numbers		82	34		
	20	Multiply Whole Numbers		84	35		
	E5	Evaluation - Multiply Whole Numbers		86	36		
	21	Divide Whole Numbers	5.NBT.6: Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	88	37	1-2	
	22	Divide Whole Numbers		90	38		
	23	Divide Whole Numbers		92	39		
24	Divide Whole Numbers	94		40			
E6	Evaluation-Divide Whole Numbers	96		41			
P3	<b>Performance Lesson – Number and Operations in Base Ten: <i>Multiplication and Division</i></b> (5.NBT.5, 5.NBT.6)			98	43-44	3	

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Domain	Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level
<b>Number and Operations in Base Ten</b> (Number and Operations in Base Ten Standards 5.NBT.1-5.NBT.7)	25	Add Decimals	5.NBT.7: Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	102	45	1-2
	26	Add Decimals		104	46	
	27	Subtract Decimals		106	47	
	28	Subtract Decimals		108	48	
	E7	Evaluation - Add and Subtract Decimals		110	49	
	29	Multiply Decimals	5.NBT.7: Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	112	51	1-2
	30	Multiply Decimals		114	52	
	31	Multiply Decimals		116	53	
	32	Multiply Decimals		118	54	
	E8	Evaluation - Multiply Decimals		120	55	
	33	Multiply Decimals	5.NBT.7: Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	122	57	1-2
	34	Multiply Decimals		124	58	
	35	Divide Whole Numbers by $1/10^{\text{th}}$		126	59	
	36	Divide Whole Numbers by $1/100^{\text{th}}$		128	60	
	E9	Evaluation-Multiply and Divide Decimals		130	61	
	37	Divide a Decimal by a Whole Number	5.NBT.7: Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	132	63	1-2
	38	Divide a Decimal by a Whole Number		134	64	
	39	Divide a Whole Number by a Decimal		136	65	
	40	Divide Decimals to Hundredths		138	66	
	E10	Evaluation - Division with Decimals		140	67	
P4	<b>Performance Lesson</b> – Number and Operations in Base Ten: <i>Operations with Decimals</i> (5.NBT.7)			142	69-71	3
<b>Integrated Project #1: Now Serving Breakfast</b> (5.NBT.1, 5.NBT.2, 5.NBT.3, 5.NBT.3a, 5.NBT.3b, 5.NBT.4, 5.NBT.5, 5.NBT.6, 5.NBT.7)				149-152	72-74	4
<b>Prerequisite Common Core Standards Plus Domain:</b> <i>Number and Operations in Base Ten</i>						
<b>Product:</b> A breakfast menu with items and prices, and ten challenge problems based on the menu.						
<b>Overview:</b> In this project the students will work individually or in pairs to create a breakfast menu with multiple items and their individual prices. They will write ten challenge problems based on the menu that show an understanding of the standards taught in the <i>Number and Operations in Base Ten</i> Domain. They will present the menu and problems to another student or pair to solve the problems that have been written. Since this is a learning activity, all components will be completed in class.						

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Domain	Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level
<b>Number and Operations Fractions</b> (Number and Operations – Fractions Standards 5.NF.1-5.NF.7c)	1	Add Fractions	5.NF.1: Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators.	168	75	1-2
	2	Add Fractions in Context	5.NF.2: see below	170	76	
	3	Add Mixed Numbers	5.NF.1	172	77	
	4	Add Mixed Numbers in Context	5.NF.2	174	78	
	E1	Evaluation – Add Fractions and Mixed Numbers	5.NF.1, 5.NF.2	176	79	
	5	Subtract Fractions	5.NF.1	178	81	1-2
	6	Subtract Fractions in Context	5.NF.2	180	82	
	7	Subtract Mixed Numbers	5.NF.1	182	83	
	8	Subtract Mixed Numbers in Context	5.NF.2	184	84	
	E2	Evaluation – Subtract Fractions and Mixed Numbers	5.NF.1, 5.NF.2	186	85	
	9	Add/Estimate Fraction Problems	5.NF.2: Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.	188	87	1-2
	10	Add/Estimate Fraction Problems		190	88	
	11	Subtract/Estimate Fraction Problems		192	89	
	12	Subtract/Estimate Fraction Problems		194	90	
	E3	Evaluation – Solving Fraction Problems		196	91	
	13	Interpret Fractions as Division	5.NF.3: Interpret a fraction as division of the numerator by the denominator ( $a/b = a \div b$ ). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem.	198	93	1-2
	14	Interpret Fractions as Division		200	94	
	15	Solve Problems with Fractions		202	95	
	16	Solve Problems with Mixed Numbers		204	96	
	E4	Evaluation – Solving Fraction Problems		206	97	
P5	<b>Performance Lesson – Number and Operations – Fractions: Add &amp; Subtract Fractions and Mixed Numbers (5.NF.1, 5.NF.2, 5.NF.3)</b>			208	99-101	3
17	Multiply Fractions	5.NF.4: Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction. 5.NF.4a: Interpret the product $(a/b) \times q$ as $a$ parts of a partition of $q$ into $b$ equal parts; equivalently, as the result of a sequence of operations $a \times q \div b$ .	212	102	1-2	
18	Multiply Fractions		214	103		
19	Multiply Fractions		216	104		
20	Multiply Fractions		218	105		
E5	Evaluation - Multiply Fractions		220	106		

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Domain	Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level	
<b>Number and Operations Fractions</b> (Number and Operations – Fractions Standards 5.NF.1-5.NF.7c)	21	Multiply Fractions	5.NF.4, <b>5.NF.4b</b> : Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.	222	107	1-2	
	22	Multiply Fractions to Find Area		224	108		
	23	Multiply Fractions to Find Area		226	109		
	24	Multiply Fractions to Find Area		228	110		
	E6	Evaluation-Multiply Fractions to Find Area		230	111		
	25	Interpret Multiplication as Scaling	5.NF.5: Interpret multiplication as scaling (resizing), by: <b>5.NF.5a</b> : Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.	232	113	1-2	
	26	Interpret Multiplication as Scaling		234	114		
	27	Interpret Multiplication as Scaling	5.NF.5, <b>5.NF.5b</b> : Explain why multiplying a given number by a fraction greater than 1 results in a product greater than the given number; explain why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relate the principle of fraction equivalence $a/b = (n \times a)/(n \times b)$ to the effect of multiplying $a/b$ by 1.	236	115		
	28	Interpret Multiplication as Scaling		238	116		
	E7	Evaluation-Interpret Multiplication as Scaling	5.NF.5, 5.NF.5a, 5.NF.5b	240	117		
	29	Fraction Multiplication Problems	<b>5.NF.6</b> : Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.	242	119	1-2	
	30	Fraction Multiplication Problems		244	120		
	31	Fraction Multiplication Problems		246	121		
	32	Fraction Multiplication Problems		248	122		
	E8	Evaluation-Fraction Multiplication Problems		250	123		
	P6	<b>Performance Lesson – Number and Operations – Fractions: <i>Multiplying Fractions</i></b> (5.NF.4, 5.NF.4a, 5.NF.5, 5.NF.5b, , 5.NF.6)			252-253	125-128	3
	33	Divide a Fraction by a Whole Number	<b>5.NF.7</b> : Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. <b>5.NF.7a</b> : Interpret division of a unit fraction by a non-zero whole number, and compute such quotients.	258	129	1-2	
	34	Divide a Fraction by a Whole Number		260	130		
	35	Divide a Fraction by a Whole Number		262	131		
	36	Divide a Fraction by a Whole Number		264	132		
	E9	Evaluation-Divide a Fraction by a Whole Number		266	133		
	37	Divide a Whole Number by a Fraction	<b>5.NF.7b</b> : Interpret division of a whole number by a unit fraction, and compute such quotients.	268	135	1-2	
	38	Divide a Whole Number by a Fraction		270	136		
	39	Divide a Whole Number by a Fraction		272	137		
	40	Divide a Whole Number by a Fraction		274	138		
	E10	Evaluation-Divide a Whole Number by a Fraction		276	139		
	41	Solve Real World Fraction Problems	<b>5.NF.7c</b> : Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem.	278	141	1-2	
	42	Solve Real World Fraction Problems		280	142		
43	Solve Real World Fraction Problems	282		143			
44	Solve Real World Fraction Problems	284		144			
E11	Evaluation-Real World Fraction Problems	286		145			
P7	<b>Performance Lesson – Number and Operations – Fractions: <i>Real World Fraction Problems</i></b> (5.NF.7, 5.NF.7a, 5.NF.7b, 5.NF.7c)			288	147-149	3	

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## Lesson Index

Domain	Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level	
Measurement and Data (Measurement and Data Standards 5.MD.1-5.MD.5c)	1	Converting Metric Units	5.MD.1: Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.	302	150	1-2	
	2	Converting Metric Units		304	151		
	3	Converting Customary Units		306	152		
	4	Converting Customary Units		308	153		
	E1	Evaluation - Converting Measures within the Same System		310	154		
	5	Fractional Data Sets	5.MD.2: Make a line plot to display a data set of measurements in fractions of a unit ( $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{1}{8}$ ). Use operations on fractions for this grade to solve problems involving information presented in line plots.	312	155	1-2	
	6	Fractional Data Sets		314	156		
	7	Fractional Data Sets		316	157		
	8	Fractional Data Sets		318	158		
	E2	Evaluation - Solving Problems with Fractional Data Sets		320	159		
	P8	<b>Performance Lesson – Measurement and Data: <i>Measurement Units &amp; Line Plots</i> (5.MD.1, 5.MD.2)</b>			322	161-163	3
	9	Measure with Cubic Units	5.MD.3: Recognize volume as an attribute of solid figures and understand concepts of volume measurement.	326	164	1-2	
	10	Measure with Cubic Units		328	165		
	11	Measure with Cubic Units	5.MD.4: Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.	330	166		
	12	Measure with Cubic Units		332	167		
	E3	Evaluation - Measure with Cubic Units		5.MD.3, 5.MD.4	334		168
	13	Find Volume by Multiplying Edge Lengths	5.MD.5: Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. 5.MD.5a: Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.	336	169	1-2	
	14	Find Volume by Multiplying Edge Lengths		338	170		
	15	Find Volume by Multiplying Edge Lengths		340	171		
	16	Find Volume by Multiplying Edge Lengths		342	172		
E4	Evaluation-Find Volume by Multiplying Edge Lengths	344		173			
17	Apply the Formulas for Volume	5.MD.5b: Apply the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole number edge lengths in the context of solving real world and mathematical problems.	346	175	1-2		
18	Apply the Formulas for Volume		348	176			
19	Apply Volume Formulas to Solve Problems		350	177			
20	Apply Volume Formulas to Solve Problems		352	178			
E5	Evaluation-Apply Volume Formulas to Solve Problems		354	179			



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Domain	Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level
<b>Measurement and Data</b> (Measurement and Data Standards 5.MD.1-5.MD.5c)	<b>21</b>	Volume of Non-overlapping Right Rectangular Prisms	5.MD.5c: Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.	<b>356</b>	<b>181</b>	<b>1-2</b>
	<b>22</b>	Volume of Non-overlapping Right Rectangular Prisms		<b>358</b>	<b>182</b>	
	<b>23</b>	Solving Volume Problems by Decomposing Prisms		<b>360</b>	<b>183</b>	
	<b>24</b>	Solving Volume Problems by Decomposing Prisms		<b>362</b>	<b>184</b>	
	<b>E6</b>	Evaluation - Solving Volume Problems		<b>364</b>	<b>185</b>	
	<b>P9</b>	<b>Performance Lesson – Measurement and Data: <i>All About Volume</i></b> (5.MD.3, 5.MD.4, 5.MD.5, 5.MD.5a, 5.MD.5b, 5.MD.5c)		<b>366</b>	<b>187-189</b>	<b>3</b>
<b>Integrated Project #2: <i>Recycled Home Design</i></b> (5.NF.1, 5.NF.2, 5.NF.3, 5.NF.4, 5.NF.4a, 5.NF.4b, 5.NF.5, 5.NF.5a, 5.NF.5b, 5.NF.6, 5.NF.7, 5.NF.7a, 5.NF.7b, 5.NF.7c, 5.MD.1, 5.MD.3, 5.MD.4, 5.MD.5, 5.MD.5a, 5.MD.5b, 5.MD.5c)				<b>373-378</b>	<b>191-194</b>	<b>4</b>
<p><b>Prerequisite Common Core Standards Plus Domains:</b>  <i>Number and Operations – Fractions and Measurement and Data</i></p> <p><b>Project Objective:</b> The students will apply what they have learned in the <i>Number and Operations – Fractions</i> and <i>Measurement and Data</i> Domains to design a home made from recycled cargo containers and determine the size of air conditioner needed based on the cubic capacity of the home they design.</p> <p><b>Overview:</b> In this project, the students will design a house made exclusively of recycled cargo containers. They will draw the house design, provide the square footage of the home, and use the cubic capacity of the home to determine the air conditioner size needed to cool the home. They will write a description of the home, including rooms and amenities found in the home. They will present their designs to the class. Since this is a learning activity, all components will be completed in class.</p>						

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Domain	Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level	
Operations and Algebraic Thinking (Operations and Algebraic Thinking Standards 5.OA.1-5.OA.3)	1	Evaluating Expressions	5.OA.1: Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.	392	195	1-2	
	2	Evaluating Expressions		394	196		
	3	Evaluating Expressions		396	197		
	4	Evaluating Expressions		398	198		
	E1	Evaluation-Evaluating Expressions		400	199		
	5	Writing Numerical Expressions	5.OA.2: Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. <i>For example, express the calculation "add 8 and 7, then multiply by 2" as <math>2 \times (8 + 7)</math>. Recognize that <math>3 \times (18932 + 921)</math> is three times as large as <math>18932 + 921</math>, without having to calculate the indicated sum or product.</i>	402	201	1-2	
	6	Writing Numerical Expressions		404	202		
	7	Writing Numerical Expressions		406	203		
	8	Writing Numerical Expressions		408	204		
	E2	Evaluation-Writing Numerical Expressions		410	205		
	9	Interpret Numerical Expressions	5.OA.2: Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. <i>For example, express the calculation "add 8 and 7, then multiply by 2" as <math>2 \times (8 + 7)</math>. Recognize that <math>3 \times (18932 + 921)</math> is three times as large as <math>18932 + 921</math>, without having to calculate the indicated sum or product.</i>	412	207	1-2	
	10	Interpret Numerical Expressions		414	208		
	11	Interpret Numerical Expressions		416	209		
	12	Interpret Numerical Expressions		418	210		
	E3	Evaluation-Interpret Numerical Expressions		420	211		
	P10	Performance Lesson – Operations and Algebraic Thinking: <i>Expressions (5.OA.1, 5.OA.2)</i>			422-423	213-214	3
	13	Generating Arithmetic Patterns	5.OA.3: Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. <i>For example, given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.</i>	426	215	1-2	
	14	Pattern Relationships		428	216		
	15	Pattern Relationships		430	217		
	16	Pattern Relationships		432	218		
	E4	Evaluation-Pattern Relationships		434	219		
17	Pattern Relationships	5.OA.3: Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane.	436	221	1-2		
18	Pattern Relationships		438	222			
19	Graphing Patterns		440	223			
20	Graphing Patterns		442	224			
E5	Evaluation-Pattern Relationships		444	225			
P11	Performance Lesson – Operations and Algebraic Thinking: <i>Patterns (5.OA.3)</i>			446	227-228	3	

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Domain	Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level	
<b>Geometry</b> (Geometry Standards 5.G.1-5.G.4)	<b>1</b>	Plotting Points on a Coordinate Grid	5.G.1: Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate).	<b>456</b>	<b>229</b>	<b>1-2</b>	
	<b>2</b>	Plotting Points on a Coordinate Grid		<b>458</b>	<b>230</b>		
	<b>3</b>	Graphing and Interpreting Points	5.G.2: Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.	<b>460</b>	<b>231</b>		
	<b>4</b>	Graphing and Interpreting Points		<b>462</b>	<b>232</b>		
	<b>E1</b>	Evaluation-Understanding and Interpreting Coordinate Systems	5.G.1, 5.G.2	<b>464</b>	<b>233</b>		
	<b>P12</b>	<b>Performance Lesson – Geometry: <i>Graph It! (5.G.1, 5.G.2)</i></b>			<b>466</b>	<b>235-236</b>	<b>3</b>
	<b>5</b>	Understanding Attributes of Triangles	5.G.3: Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. <i>For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.</i>	<b>470</b>	<b>237</b>	<b>1-2</b>	
	<b>6</b>	Creating a Hierarchy of Triangles	5.G.4: Classify two-dimensional figures in a hierarchy based on properties.	<b>472</b>	<b>238</b>		
	<b>7</b>	Understanding Attributes of Quadrilaterals	5.G.3	<b>474</b>	<b>239</b>		
	<b>8</b>	Creating a Hierarchy of Quadrilaterals	5.G.4	<b>476</b>	<b>240</b>		
	<b>E2</b>	Evaluation-Two Dimensional Shapes – Classifying and Hierarchy	5.G.3, 5.G.4	<b>478</b>	<b>241</b>		
	<b>P13</b>	<b>Performance Lesson – Geometry: <i>Just Plane Hierarchy (5.G.3, 5.G.4)</i></b>			<b>480</b>	<b>243-244</b>	<b>3</b>
	<b>Integrated Project #3: <i>What’s in a Building?</i> (5.OA.1, 5.OA.2, 5.OA.3, 5.G.1, 5.G.2, 5.G.3, 5.G.4)</b>				<b>485-489</b>	<b>245-247</b>	<b>4</b>
<p><b>Prerequisite Common Core Standards Plus Domains:</b>  <i>Operations and Algebraic Thinking and Geometry</i></p> <p><b>Product:</b> A mathematical analysis of the types of figures, their attributes, and relative numbers and patterns of the figures within an assigned building.</p> <p><b>Overview:</b> In this project the students will learn about a famous building. They will study the geometric composition of the building, including windows, doors, towers, columns, base, overall shape, and/or unique features to provide a mathematical description of the building. They will explain the shapes, patterns, and attributes of the features unique to the building. They will include numerical expressions, numerical patterns, and graphs to represent the geometrical figures included in the building. They will orally present what they have learned. You may choose to have students work individually or in pairs. Since this is a learning activity, all components will be completed in class.</p>							