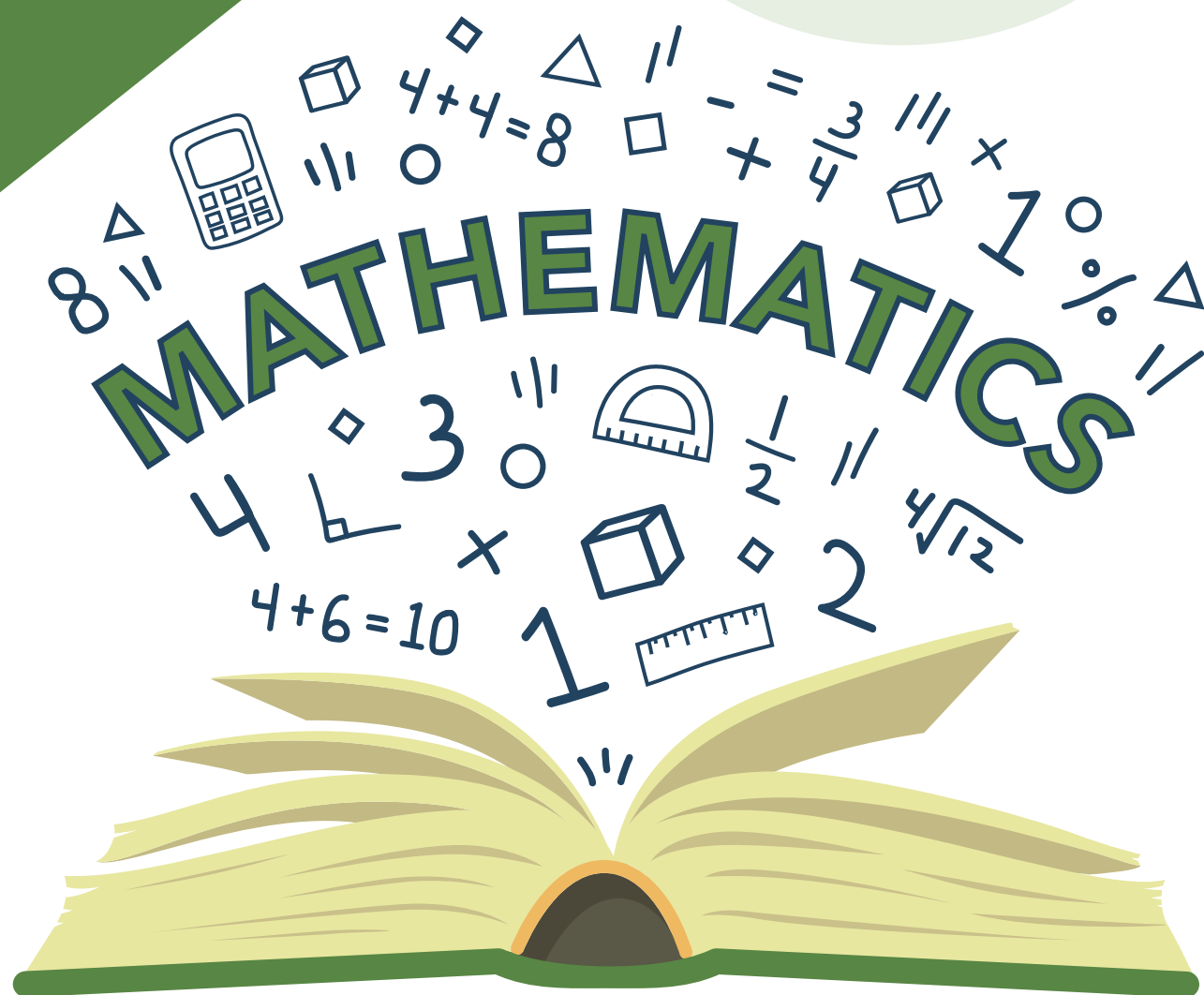


Grade 5

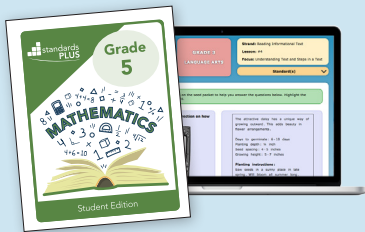


Program Overview and Sample Lessons



Teachers are the most important factor in student learning.

That's why every Standards Plus Lesson is directly taught by a teacher.



Standards Plus materials include:

- A printed Teacher Edition
- A printed Student Edition
- Online access to the Standards Plus Digital Platform
- An Intervention Program – Printable Tier 2 & 3 Intervention Lessons

Standards Plus Works in Any Setting:



In-Class

and



Distance Learning

- Teachers directly teach lessons to the students in-class **or** in a virtual setting.
- Students complete the lessons in their printed student edition **or** respond in the Standards Plus Digital Platform.

How Standards Plus Increases Student Achievement



TEACHERS are the most important factor in student learning.



DIRECT INSTRUCTION lessons are proven to foster the most significant gains in student achievement.



DISCRETE LEARNING TARGETS provide easily understood instruction that allow students to retain information.



MULTIPLE EXPOSURES TO EACH STANDARD/SKILL

Skills are presented in four to eight lessons, providing students multiple opportunities to practice and retain information.



IMMEDIATE FEEDBACK after every lesson provides the most powerful single modification that enhances student achievement.



FORMATIVE ASSESSMENTS are proven to be highly effective in providing information that leads to increased student achievement.



IMMEDIATE INTERVENTION

Provides scaffolded instruction to assist students in mastering the standards.



BUILT ON RESEARCH AND BACKED BY EVIDENCE

All Standards Plus lessons are designed according to educational research and meet ESSA evidence-based guidelines.

Standards Plus Includes

Grade Level Lessons and Assessments

136 Lessons and 34 Assessments (DOK 1-2)

Students learn essential grade level skills with targeted 15-20 minute lessons. Brief formative assessments are provided to monitor student progress.



Tier 2 & Tier 3 Intervention Lessons

100+ Lessons (DOK 1-2)

These lessons scaffold instruction and teach prerequisite skills necessary to master the grade level standards. These lessons are for students that need more support and are available to print in the Standards Plus Digital Platform.



Performance Lessons

12+ Lessons (DOK 3)

Performance Lessons require students to apply the skills they have learned and use reasoning, planning and a higher level of thinking.

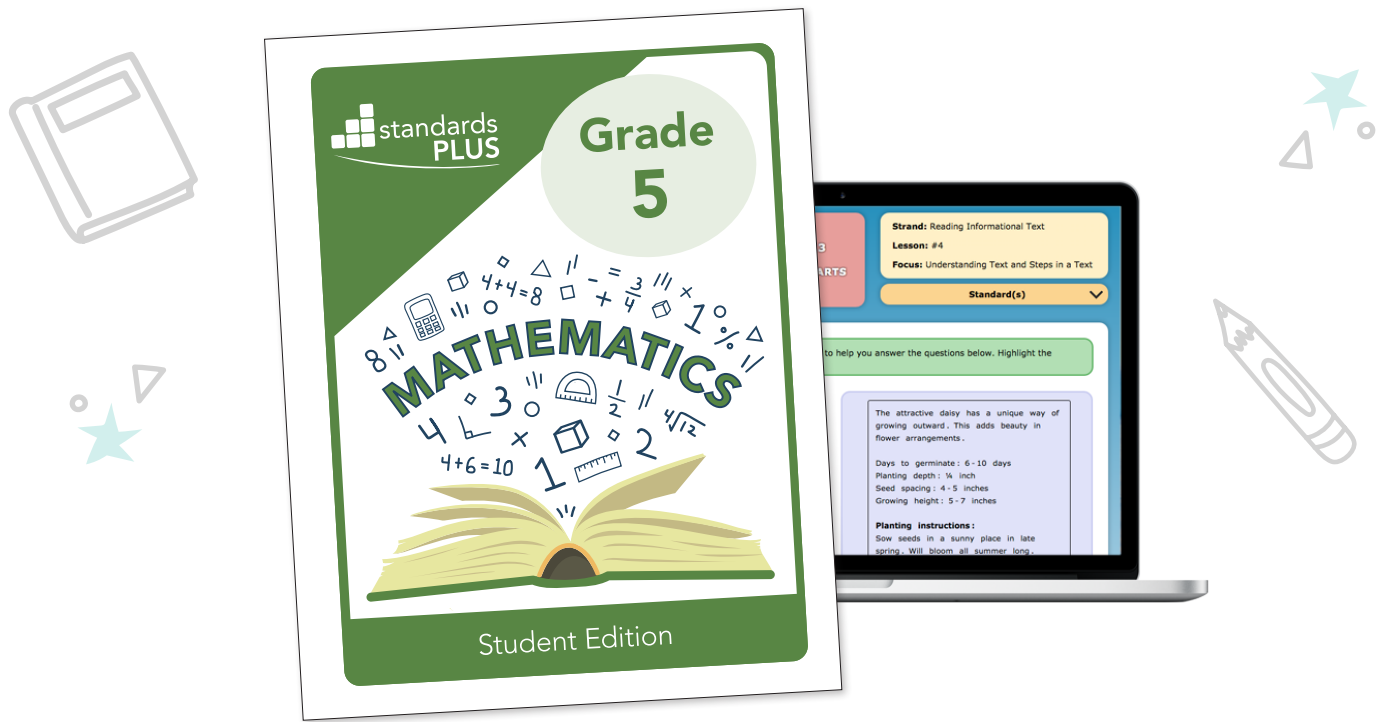


Integrated Projects

3 Projects (DOK 4)

Integrated projects incorporate standards from multiple topics and require that students plan, synthesize information, and produce present high quality products. These are long-term projects that will be completed during multiple class sessions.

Teach a Grade Level Concept with Four Concise Lessons



Standards Plus lessons are grouped in sets that teach a grade-level concept.

TEACH

Lesson
1

TEACH

Lesson
2

TEACH

Lesson
3

TEACH

Lesson
4

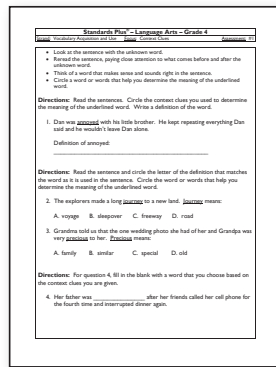
ASSESS

Assessment
1

A Standards Plus **lesson set** includes 4 lessons and 1 assessment.

Assessments

Use the assessments to identify students' understanding of the concepts taught in the lesson set and identify students for Standards Plus Intervention.



Print Assessment



Digital Assessment

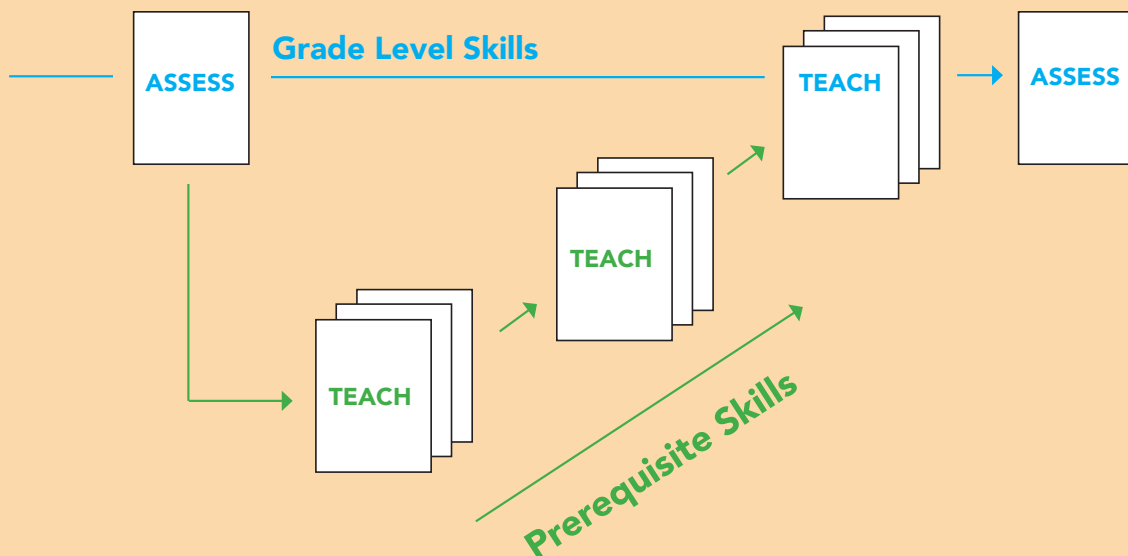
Assessments can be completed in the student edition or online in the Standards Plus Digital Platform.

When students take the assessment online, the platform will create groups of students that scored below 60% and recommend tier 2 & tier 3 intervention lessons.

Tier 2 & Tier 3 Intervention

These lessons are for students that need more support and are available to print in the Standards Plus Digital Platform.

How the Intervention Lessons Work



Our scaffolded intervention lessons teach the prerequisite skills necessary to master to grade-level standards.

Performance Lessons (DOK 3)

These lessons require students to apply what they have learned using reasoning, planning, and knowledge gained from the prior lessons.

Many standards are assessed at this level of rigor on state assessments.

Student Page 1 of 2

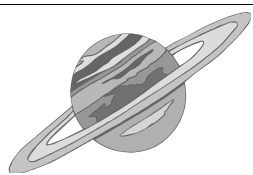
Standards Plus® – Language Arts – Grade 4
Reading: Informational Text Performance Lesson 2 – Analyzing Informational Text

Worlds Apart



Earth

Diameter: 7,926 miles
Distance From Sun: 92,955,820 miles
Order from Sun: Third planet from Sun
Size: Fifth largest planet
Known Satellites: 1
Ring System: None
Length of Orbit: 365 days, 6 hours (1 Earth year)
Distance of Orbit: 584,000,000 miles
Length of Day: 23 hours, 56 minutes
Surface Temperature: -126°F to 136°F
Atmosphere: Nitrogen and Oxygen
Habitable: Yes



Saturn

Diameter: 74,898 miles
Distance From Sun: 885,904,700 miles
Order from Sun: Sixth planet from Sun
Size: Second largest planet
Known Satellites: 60
Ring System: Composed of rocks, dust, and ice
Length of Orbit: 10,759 days (29.46 Earth years)
Distance of Orbit: 5,421,000,000 miles
Length of Day: 10 hours, 39 minutes
Surface Temperature: -288°F
Atmosphere: Hydrogen and Helium
Habitable: No

8

Standards Plus® is not licensed for duplication. **Copying is illegal.**
© 2020, 2013 Learning Plus Associates

Student Page 2 of 2

Standards Plus® – Language Arts – Grade 4
Reading: Informational Text Performance Lesson 2 – Analyzing Informational Text

Informational Text Reading

- Read “*Worlds Apart*” with a partner.
 - First skim (quickly read the text);
 - Next focus on any headings or subheadings;
 - Finally, notice any bold-faced terms in the text.
- Underline or highlight any words or phrases you do not understand.
- Use a dictionary, encyclopedia, or the Internet to discover the **meanings** of unknown words or phrases.
- Write notes on the meanings of the unknown words or phrases.
- Finally with a partner, reread the text.
 - Underline key details.
 - Identify any areas of the text that you still do not understand.
 - Discuss any areas that still need clarification with another group.

Directions: Answer the following questions with a partner.

1. How did the author organize the information on the two planets?

2. Do you think that is the best way to organize the information? Why or why not?

3. What does the author want you to understand about the two planets?

Standards Plus® is not licensed for duplication. **Copying is illegal.**
© 2020, 2013 Learning Plus Associates

8

Integrated Projects (DOK 4)

Integrated Projects incorporate standards from many topics and are completed during multiple class sessions.



**Integrated Projects
require students to:**

Plan

Synthesize information

Produce high-quality
products

Present their findings

**The Integrated Projects must be taught,
not assigned, and completed in class.**



- Integrated projects teach students how to complete high-level projects.
- Each project requires students to adapt their knowledge to real-world situations.
- Integrated projects provide opportunities to demonstrate a deep understanding of the knowledge and skills students have learned in prior lessons.



EL Support



Standards Plus materials are designed to meet the needs of English Learners by:

- Explicitly targeting the standards
- Emphasizing academic vocabulary
- Accelerating language development
- Providing immediate feedback to students
- Improving student confidence

Explore our EL Support Portal to view additional resources that provide a greater level of support for English Learners.

Visit the EL Support Portal at
www.standardsplus.org/el-support



Standards Plus Mathematics Grade 5

Lesson Index

The lesson index lists the standard, focus, and DOK level for every Standards Plus lesson.

Lessons that address the high impact standards are highlighted. These lessons are included and can also be purchased separately in our High Impact Standards Program.



Standards Plus® - Mathematics Grade 5

Lesson Index

Number and Operations in Base Ten

Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level
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.	32	3	1-2
2	Place Value Patterns		34	4	
3	Place Value Patterns		36	5	
4	Place Value Patterns		38	6	
A1	Assessment - Place Value Patterns		40	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.	42	9	1-2
6	Multiply by Powers of Ten		44	10	
7	Divide by Powers of Ten		46	11	
8	Multiply & Divide by Powers of Ten		48	12	
A2	Assessment - Powers of Ten		50	13	
Number and Operations in Base Ten Performance Lesson 1 – Power of Ten			52	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., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$.	56	18	1-2
10	Expanded Form of Decimals		58	19	
11	Standard Form of Decimals		60	20	
12	Decimal Forms		62	21	
A3	Assessment - Decimal Forms		64	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.	66	23	1-2
14	Compare Decimals		68	24	
15	Round Decimals	5.NBT.4: Use place value understanding to round decimals to any place.	70	25	
16	Round Decimals		72	26	
A4	Assessment – Compare, Round Decimals	5.NBT.3b, 5.NBT.4	74	27	
Number and Operations in Base Ten Performance Lesson 2 – Working with Decimals			76	29-31	3

Standards Plus® - Mathematics Grade 5

Lesson Index

Number and Operations in Base Ten

Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level	
17	Multiply Whole Numbers	5.NBT.5: Fluently multiply multi-digit whole numbers using the standard algorithm.	80	32	1-2	High Impact Standards
18	Multiply Whole Numbers		82	33		
19	Multiply Whole Numbers		84	34		
20	Multiply Whole Numbers		86	35		
A5	Assessment - Multiply Whole Numbers		88	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.	90	37	1-2	
22	Divide Whole Numbers		92	38		
23	Divide Whole Numbers		94	39		
24	Divide Whole Numbers		96	40		
A6	Assessment-Divide Whole Numbers		98	41		
Number and Operations in Base Ten Performance Lesson 3 – Multiplication and Division			100	43-44	3	
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.	104	45	1-2	
26	Add Decimals		106	46		
27	Subtract Decimals		108	47		
28	Subtract Decimals		110	48		
A7	Assessment - Add and Subtract Decimals		112	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.	114	51	1-2	High Impact Standards
30	Multiply Decimals		116	52		
31	Multiply Decimals		118	53		
32	Multiply Decimals		120	54		
A8	Assessment - Multiply Decimals		122	55		

Standards Plus® - Mathematics Grade 5

Lesson Index

Number and Operations in Base Ten

Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level
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.	124	57	1-2
34	Multiply Decimals		126	58	
35	Divide Whole Numbers by 1/10th		128	59	
36	Divide Whole Numbers by 1/100th		130	60	
A9	Assessment-Multiply and Divide Decimals		132	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.	134	63	1-2
38	Divide a Decimal by a Whole Number		136	64	
39	Divide a Whole Number by a Decimal		138	65	
40	Divide Decimals to Hundredths		140	66	
A10	Assessment - Division with Decimals		142	67	
Number and Operations in Base Ten Performance Lesson 4 – Operations with Decimals			144	69-71	3

High Impact Standards

Integrated Project 1: Now Serving Breakfast

Overview: 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 Number and Operations in Base Ten Domain.

Product: A breakfast menu with items and prices, and ten challenge problems based on the menu.

Integrates the following standards:
Number and Operations in Base Ten

Student Edition Pages: 72-74 **Teacher Edition Pages:** 149-157
DOK Level 4

Standards Plus® - Mathematics Grade 5

Lesson Index

Number and Operations Fractions

Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level	
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.	166	75	1-2	High Impact Standards
2	Add Fractions in Context	5.NF.2: see below	168	76		
3	Add Mixed Numbers	5.NF.1	170	77		
4	Add Mixed Numbers in Context	5.NF.2	172	78		
A1	Assessment – Add Fractions and Mixed Numbers	5.NF.1, 5.NF.2	174	79		
5	Subtract Fractions	5.NF.1	176	81	1-2	
6	Subtract Fractions in Context	5.NF.2	178	82		
7	Subtract Mixed Numbers	5.NF.1	180	83		
8	Subtract Mixed Numbers in Context	5.NF.2	182	84		
A2	Assessment – Subtract Fractions and Mixed Numbers	5.NF.1, 5.NF.2	184	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.	186	87	1-2	
10	Add/Estimate Fraction Problems		188	88		
11	Subtract/Estimate Fraction Problems		190	89		
12	Subtract/Estimate Fraction Problems		192	90		
A3	Assessment – Solving Fraction Problems		194	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.	196	93	1-2	High Impact Standards
14	Interpret Fractions as Division		198	94		
15	Solve Problems with Fractions		200	95		
16	Solve Problems with Mixed Numbers		202	96		
A4	Assessment – Solving Fraction Problems		204	97		
Number and Operations Fractions Performance Lesson 1 – Add & Subtract Fractions and Mixed Numbers			206	99-101	3	

Standards Plus® - Mathematics Grade 5

Lesson Index

Number and Operations Fractions

Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level	
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 $a \times q \div b$.	210	102	1-2	High Impact Standards
18	Multiply Fractions		212	103		
19	Multiply Fractions		214	104		
20	Multiply Fractions		216	105		
A5	Assessment - Multiply Fractions		218	106		
21	Multiply Fractions	5.NF.4, 5.NF.4b: 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.	220	107	1-2	
22	Multiply Fractions to Find Area		222	108		
23	Multiply Fractions to Find Area		224	109		
24	Multiply Fractions to Find Area		226	110		
A6	Assessment-Multiply Fractions to Find Area		228	111		
25	Interpret Multiplication as Scaling	5.NF.5: Interpret multiplication as scaling (resizing), by: 5.NF.5a: 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.	230	113	1-2	High Impact Standards
26	Interpret Multiplication as Scaling		232	114		
27	Interpret Multiplication as Scaling	5.NF.5, 5.NF.5b: 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.	234	115		
28	Interpret Multiplication as Scaling		236	116		
A7	Assessment-Interpret Multiplication as Scaling	5.NF.5, 5.NF.5a, 5.NF.5b	238	117		
29	Fraction Multiplication Problems	5.NF.6: Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.	240	119	1-2	High Impact Standards
30	Fraction Multiplication Problems		242	120		
31	Fraction Multiplication Problems		244	121		
32	Fraction Multiplication Problems		246	122		
A8	Assessment-Fraction Multiplication Problems		248	123		

Standards Plus® - Mathematics Grade 5

Lesson Index

Number and Operations Fractions

Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level		
Number and Operations Fractions Performance Lesson 2 – <i>Multiplying Fractions</i>			250-251	125-128	3		
33	Divide a Fraction by a Whole Number	5.NF.7: Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. 5.NF.7a: Interpret division of a unit fraction by a non-zero whole number, and compute such quotients.	256	129	1-2	High Impact Standards	
34	Divide a Fraction by a Whole Number		258	130			
35	Divide a Fraction by a Whole Number		260	131			
36	Divide a Fraction by a Whole Number		262	132			
A9	Assessment-Divide a Fraction by a Whole Number		264	133			
37	Divide a Whole Number by a Fraction	5.NF.7b: Interpret division of a whole number by a unit fraction, and compute such quotients.	266	135	1-2		
38	Divide a Whole Number by a Fraction		268	136			
39	Divide a Whole Number by a Fraction		270	137			
40	Divide a Whole Number by a Fraction		272	138			
A10	Assessment-Divide a Whole Number by a Fraction		274	139			
41	Solve Real World Fraction Problems	5.NF.7c: 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.	276	141	1-2		
42	Solve Real World Fraction Problems		278	142			
43	Solve Real World Fraction Problems		280	143			
44	Solve Real World Fraction Problems		282	144			
A11	Assessment-Real World Fraction Problems		284	145			
Number and Operations Fractions Performance Lesson 3 – <i>Real World Fraction Problems</i>			286	147-149	3		

Standards Plus® - Mathematics Grade 5

Lesson Index

Measurement and Data

Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level
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.	296	150	1-2
2	Converting Metric Units		298	151	
3	Converting Customary Units		300	152	
4	Converting Customary Units		302	153	
A1	Assessment - Converting Measures within the Same System		304	154	
5	Fractional Data Sets	5.MD.2: Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Use operations on fractions for this grade to solve problems involving information presented in line plots.	306	155	1-2
6	Fractional Data Sets		308	156	
7	Fractional Data Sets		310	157	
8	Fractional Data Sets		312	158	
A2	Assessment - Solving Problems with Fractional Data Sets		314	159	
Measurement and Data Performance Lesson 1 – Measurement Units & Line Plots			316	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.	320	164	1-2
10	Measure with Cubic Units		322	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.	324	166	
12	Measure with Cubic Units		326	167	
A3	Assessment - Measure with Cubic Units	5.MD.3, 5.MD.4	328	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.	330	169	1-2
14	Find Volume by Multiplying Edge Lengths		332	170	
15	Find Volume by Multiplying Edge Lengths		334	171	
16	Find Volume by Multiplying Edge Lengths		336	172	
A4	Assessment-Find Volume by Multiplying Edge Lengths		338	173	

High Impact Standards

Standards Plus® - Mathematics Grade 5

Lesson Index

Measurement and Data

Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level
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.	340	175	1-2
18	Apply the Formulas for Volume		342	176	
19	Apply Volume Formulas to Solve Problems		344	177	
20	Apply Volume Formulas to Solve Problems		346	178	
A5	Assessment-Apply Volume Formulas to Solve Problems		348	179	
21	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.	350	181	1-2
22	Volume of Non-overlapping Right Rectangular Prisms		352	182	
23	Solving Volume Problems by Decomposing Prisms		354	183	
24	Solving Volume Problems by Decomposing Prisms		356	184	
A6	Assessment - Solving Volume Problems		358	185	
Measurement and Data Performance Lesson 2 – All About Volume			360	187-189	3

Integrated Project 2: *Recycled Home Design*

Overview: 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.

Product: A design for a home made from recycled cargo containers.

Integrates the following standards:

Number and Operations in Base Ten and Operations and Algebraic Thinking

Student Edition Pages: 191-194 **Teacher Edition Pages:** 365-376

DOK Level 4

Standards Plus® - Mathematics Grade 5

Lesson Index

Operations and Algebraic Thinking

Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level
1	Evaluating Expressions	5.OA.1: Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.	384	195	1-2
2	Evaluating Expressions		386	196	
3	Evaluating Expressions		388	197	
4	Evaluating Expressions		390	198	
A1	Assessment-Evaluating Expressions		392	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 $2 \times (8 + 7)$. Recognize that $3 \times (18932 + 921)$ is three times as large as $18932 + 921$, without having to calculate the indicated sum or product.</i>	394	201	1-2
6	Writing Numerical Expressions		396	202	
7	Writing Numerical Expressions		398	203	
8	Writing Numerical Expressions		400	204	
A2	Assessment-Writing Numerical Expressions		402	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 $2 \times (8 + 7)$. Recognize that $3 \times (18932 + 921)$ is three times as large as $18932 + 921$, without having to calculate the indicated sum or product.</i>	404	207	1-2
10	Interpret Numerical Expressions		406	208	
11	Interpret Numerical Expressions		408	209	
12	Interpret Numerical Expressions		410	210	
A3	Assessment-Interpret Numerical Expressions		412	211	
Operations and Algebraic Thinking Performance Lesson 1 – Expressions			414-415	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>	418	215	1-2
14	Pattern Relationships		420	216	
15	Pattern Relationships		422	217	
16	Pattern Relationships		424	218	
A4	Assessment-Pattern Relationships		426	219	

Standards Plus® - Mathematics Grade 5

Lesson Index

Operations and Algebraic Thinking

Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level
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.	428	221	1-2
18	Pattern Relationships		430	222	
19	Graphing Patterns		432	223	
20	Graphing Patterns		434	224	
A5	Assessment-Pattern Relationships		436	225	
Operations and Algebraic Thinking Performance Lesson 2 – Patterns			438	227-228	3

Standards Plus® - Mathematics Grade 5

Lesson Index

Geometry

Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level
1	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).	444	229	1-2
2	Plotting Points on a Coordinate Grid		446	230	
3	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.	448	231	
4	Graphing and Interpreting Points		450	232	
A1	Assessment-Understanding and Interpreting Coordinate Systems	5.G.1, 5.G.2	452	233	
Geometry Performance Lesson 1 – Graph It!			454	235-236	3
5	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>	458	237	1-2
6	Creating a Hierarchy of Triangles	5.G.4: Classify two-dimensional figures in a hierarchy based on properties.	460	238	
7	Understanding Attributes of Quadrilaterals	5.G.3	462	239	
8	Creating a Hierarchy of Quadrilaterals	5.G.4	464	240	
A2	Assessment-Two Dimensional Shapes – Classifying and Hierarchy	5.G.3, 5.G.4	466	241	
Geometry Performance Lesson 2 – Just Plane Hierarchy			468	243-244	3

Standards Plus® - Mathematics Grade 5

Lesson Index

Integrated Project 3: ***What's in a Building?***

Overview: 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.

Product: A mathematical analysis of the types of figures, their attributes, and relative numbers and patterns of the figures within an assigned building.

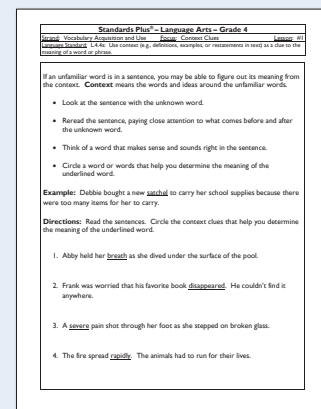
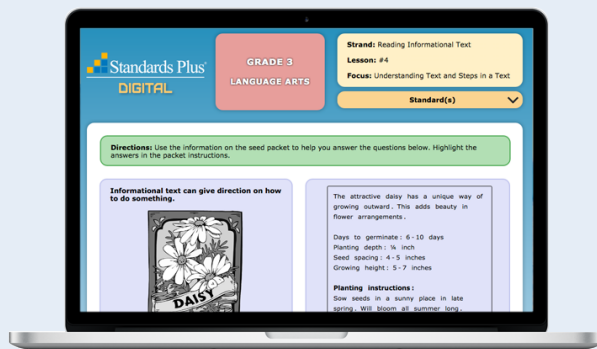
Integrates the following standards:
Operations and Algebraic Thinking and Geometry

Student Edition Pages: 245-247

Teacher Edition Pages: 471-480

DOK Level 4

All grade level lessons and assessments are provided in digital and print format.



For demonstration purposes, most sample lessons are displayed in the print version.

Sample Lessons

Number and Operations in Base Ten

Lesson	Focus	Standard(s)
17	Multiply Whole Numbers	5.NBT.5: Fluently multiply multi-digit whole numbers using the standard algorithm.
18	Multiply Whole Numbers	
19	Multiply Whole Numbers	
20	Multiply Whole Numbers	
A5	Assessment - Multiply Whole Numbers	

Sample Teacher Lesson Plan

Teacher Lesson Plan

Standards Plus® – Mathematics – Grade 5		
Domain: Number and Operations in Base Ten	Focus: Multiply Whole Numbers	Lesson: #17
Standard: 5.NBT.5: Fluently multiply multi-digit whole numbers using the standard algorithm.		

Lesson Objective: The students will multiply three-digit whole numbers by two-digit whole numbers.

Introduction: “Today we will review how to multiply a three-digit whole number by a two-digit multiplier. Remember that the numbers in a multiplication problem are called factors and the answer is called the product.”

Instruction: “When we multiply a number by a two-digit multiplier we start by lining the numbers up with the larger number on top. Then we multiply each digit in the top factor by each digit in the multiplier. We regroup as necessary. Multiplying this way is a simplified method of regrouping in expanded form. In Example A, we could multiply 627 by 5 and 627 by 40 and combine: $(5 \times 627) + (40 \times 627) = 28,215$. Learning vertical multiplication eliminates many steps and takes less time.”

Guided Practice: “Let’s use our step-by-step process to work Example A. After lining up the numbers and drawing a line, we start by multiplying the top factor by the ones place in the multiplier (5) and write that product below the line. Then we multiply by the tens place number (4). Because we are now multiplying by tens, we place a zero in the ones place of the next line before writing out the product. Of course, we regroup as necessary by *carrying*. Finally, we draw another line and add the totals of the two partial products to get the answer.”

Independent Practice: “Complete problems 1-3 independently. Remember to write the numbers with the greater factor on top, so the ones digits are lined up. Begin by multiplying the ones place first and then move to the left. Remember to place a zero in the ones place of the answer column when you move to the tens place digit in the multiplier.”

Review: Review problems 1-3 with students. Discuss the reasoning for each solution.

Closure: “Today we reviewed how to multiply a three-digit number by a two-digit multiplier. Please turn to your partner and tell them the steps we used today for multiplying whole numbers.”

Answers:

1. 23,738
2. 18,810
3. 13,736

Standards Plus® High Impact Standards is not licensed for duplication. **Copying is illegal.**
© 2020, 2013 Learning Plus Associates

Each lesson
includes
a step by
step lesson
plan.

Sample Student Lesson

Student Page

Standards Plus® – Mathematics – Grade 5

Domain: Number and Operations in Base Ten Focus: Multiply Whole Numbers Lesson: #17

Standard: 5.NBT.5: Fluently multiply multi-digit whole numbers using the standard algorithm.

Step 1: Line up the numbers with the larger number on top. Draw a line.

Step 2: Multiply by the ones digit in the multiplier. Write that as the first product under the line.

Step 3: Put a zero in the ones place on the next line because we are going to multiply by the ten's digit of the bottom number.

Step 4: Multiply the top number by the tens place number of the multiplier and write the answer in front of the zero. Be sure to line up the numbers vertically.

Step 5: Add all of the partial products together to get the total.

Example:

A. $627 \times 45 =$

$$\begin{array}{r} 627 \\ \times 45 \\ \hline \end{array}$$

B. $346 \times 27 =$ _____

Directions: Multiply to find each product.

1. $913 \times 26 =$ _____

2. $38 \times 495 =$ _____

3. $808 \times 17 =$ _____

Each lesson
also has
an easy to
follow
student
page.

Sample Digital Teacher Lesson Plan

(3rd Grade Math Sample)

Digital versions of every lesson and assessment are included.



Instruction

"We have learned that when we have groups of objects and we want to determine the total number of objects, we can *multiply*. We *multiply* by adding the same number over and over again. Look at Example 1. Maria has 4 boxes of limes. Each box has 4 limes in it. To find out the total number of limes Maria has, we add $4 + 4 + 4 + 4$. We can also write this 4×4 . The product is 16 limes. *Multiplication* lets us add more quickly and efficiently."

Guided Practice

"Let's look at some problems involving groups of objects. Listen as I read the problem for Example 2. *Juan has three groups of glass marbles. Each group has five marbles. What is Juan's total number of glass marbles?* Now we will draw the problem to show each group of marbles. As I draw each group of marbles, you draw each group on your sheet. We will record the number of marbles in each group on the lines to show repeated addition of the number of objects in each group. The first group has 5 marbles so we will write a 5 in the blank. (Continue recording the number 5 in each blank: $5 + 5 + 5 = 3 \times 5 = 15$. Next we will show that the two *factors*, or numbers, are multiplied. We will use an \times to show it is multiplication in the blank."

Each section of the digital lesson plan is expandable.

Sample Digital Student Lesson

(3rd Grade Math Sample)

Standards Plus[®]
DIGITAL

GRADE 3
MATHEMATICS

Domain: Operations & Algebraic Thinking
Lesson: #2
Focus: Products of Whole Numbers

Standard(s) ▼

Directions: Read each problem below. Draw a picture of the objects in groups. Record the repeated-addition sentence, the multiplication symbol, and the total number of objects on the line to complete each number sentence. Make sure you write the product on the last line.

Example 2:

Juan has three groups of glass marbles. Each group has five marbles. What is Juan's total number of glass marbles? Finish the picture by putting the marbles in the circles.

5 + 5 + 5 = 3 × 5 = 15
product

Mimics the functionality of online state test items

Students respond online in the digital lessons. In this example students draw marbles to show repeated addition and type below.

Sample Teacher Lesson Plan

Teacher Lesson Plan

Standards Plus® – Mathematics – Grade 5		
Domain: Number and Operations in Base Ten	Focus: Multiply Whole Numbers	Lesson: #19
Standard: 5.NBT.5: Fluently multiply multi-digit whole numbers using the standard algorithm.		

Lesson Objective: The students will multiply multi-digit whole numbers by three-digit whole numbers.

Introduction: “Today we will review how to multiply a multi-digit whole number by a three-digit multiplier.”

Instruction: “When we multiply a number by a three-digit number, we start by lining the numbers up with the larger number on top. Then we multiply each digit in the top factor by each digit in the multiplier. We regroup as necessary. Multiplying this way is a simplified method of regrouping in expanded form. In the Example, we could multiply 8,504 by 6, by 10 and by 300 and combine: $(6 \times 8,504) + (10 \times 8,504) + (300 \times 8,504) = 2,687,264$. Learning vertical multiplication eliminates many steps and takes less time.”

Guided Practice: “Let’s use our step-by-step process to work the example. We start by lining up the numbers and drawing a line. Next we multiply by the ones place in the multiplier (6) and write that below the line. Then we multiply by the tens place number (1). Because we are now multiplying by tens, we place a zero in the ones place of the next line before writing out the product. We do the same with the hundreds (3). This time we add two zeros because we are multiplying by hundreds and write the product of 3 times 8,504 on the third line. Of course, we regroup as necessary by *carrying*. Finally, we draw another line and add the totals of the three partial products to get the answer.”

Independent Practice: “Complete problems 1-2 independently. Remember to write the numbers with the greater factor on top, so the ones digits are lined up. Begin by multiplying the ones place first and then move to the left. Remember to regroup if needed and to use zero placeholders in the answer column as you move to the left in the multiplier.”

Review: Review problems 1-2 with students. Discuss the reasoning for each solution.

Closure: “Today we reviewed how to multiply a multi-digit number by a three-digit multiplier. Please turn to your partner and tell them what you do when the product of two digits is greater than nine.”

Answers:

1. 1,498,940
2. 784,763

Standards Plus® High Impact Standards is not licensed for duplication. **Copying is illegal.**
© 2020, 2013 Learning Plus Associates

Each lesson plan includes the following direct instruction components:

Introduction

Instruction

Guided Practice

Independent Practice

Review

Closure

Sample Student Lesson

Student Page

Standards Plus® – Mathematics – Grade 5

Domain: Number and Operations in Base Ten Focus: Multiply Whole Numbers Lesson: #19
Standard: 5.NBT.5: Fluently multiply multi-digit whole numbers using the standard algorithm.

Each student page includes examples for Guided Practice...

- Step 1: Line up the numbers with the larger number on top. Draw a line.
Step 2: Multiply by the ones digit in the bottom number. Write that as the first product under the line.
Step 3: Put a zero in the ones place on the next line because we are going to multiply by the tens digit of the multiplier.
Step 4: Multiply the top number by the tens place number of the multiplier and write the answer before the zero. Be sure to line up the numbers vertically.
Step 5: Place a zero in the ones and tens place on the next line because we are now going to multiply by the hundreds place.
Step 6: Multiply the top number by the hundreds place digit in the multiplier. Since this is the last operation, draw another line.
Step 7: Add all of the partial products together to get the total.

Line up $\left\{ \begin{array}{r} 8,504 \\ 316 \end{array} \right.$ ← multiplier
 $\left. \begin{array}{r} \dots\dots 4 \\ \dots\dots 0 \\ \dots\dots 0 \\ \dots\dots 4 \end{array} \right\}$ ← multiplied by ones place
 Draw lines $\left. \begin{array}{r} \dots\dots 0 \\ \dots\dots 0 \\ \dots\dots 4 \end{array} \right\}$ ← multiplied by tens place
 $\left. \begin{array}{r} \dots\dots 0 \\ \dots\dots 4 \end{array} \right\}$ ← multiplied by hundreds place
 $\left. \begin{array}{r} \dots\dots 4 \end{array} \right\}$ ← Total by adding

We add zeros, as place holders, because we are multiplying by a factor of ten and hundred.

Example: $8,504 \times 316 =$ _____

...and items to be completed in Independent Practice.

Directions: Multiply to find each product.

1. $503 \times 2,980 =$ _____ 2. $497 \times 1,579 =$ _____

Sample Teacher Lesson Plan

Teacher Lesson Plan

Standards Plus® – Mathematics – Grade 5		
Domain: Number and Operations in Base Ten	Focus: Multiply Whole Numbers	Lesson: #20
Standard: 5.NBT.5: Fluently multiply multi-digit whole numbers using the standard algorithm.		

Lesson Objective: The students will multiply multi-digit whole numbers by multi-digit whole numbers.

Introduction: “Today we will review how to multiply a multi-digit whole number by a multi-digit multiplier.”

Instruction: “When we multiply a number by a multi-digit multiplier, we start by lining the numbers up with the larger number on top. Then we multiply each digit in the top factor by each digit in the multiplier. We regroup as necessary. Multiplying this way is a simplified method of regrouping in expanded form. In the example, we could multiply 4,173 by 3, by 60, by 200, and by 1000 and combine: $(3 \times 4,173) + (60 \times 4,173) + (200 \times 4,173) + (1000 \times 4,173) = 5,270,499$. Learning vertical multiplication eliminates many steps and takes less time.”

Guided Practice: “Let’s use our step-by-step process to work the example. After lining up the numbers and drawing a line, we start by multiplying the top factor by the ones place in the multiplier (3) and write that below the line. Then we multiply by the tens place number (6). Because we are now multiplying by tens, we place a zero in the ones place of the next line before writing out the product. We do the same with the hundreds (2). This time we add two zeros because we are multiplying by hundreds. Next we add three zeros because we are now multiplying by thousands and write the product of 1 times 4,173 on the fourth line. Of course, we regroup as necessary by *carrying*. Finally, we draw another line and add the totals of the four partial products to get the answer.”

Independent Practice: “Complete problems 1-2 independently. Remember to write the numbers with the greater factors on top, so the ones digits are lined up. Begin by multiplying the ones place first and then move to the left. Remember to regroup if needed and use zero placeholders in the answer column as you move to the left in the multiplier. Remember to put commas in your answer.”

Review: Review problems 1-2 with students. Discuss the reasoning for each solution.

Closure: “Today we reviewed how to multiply a multi-digit number by a four-digit multiplier. Please turn to your partner restate the steps in the process for multiplying multi-digit whole numbers.”

Answers:

1. 13,709,520
2. 21,412,506

Each lesson
plan
includes
an answer
key

Sample Student Lesson

Student Page

Standards Plus® – Mathematics – Grade 5

Domain: Number and Operations in Base Ten Focus: Multiply Whole Numbers Lesson: #20
Standard: 5.NBT.5: Fluently multiply multi-digit whole numbers using the standard algorithm.

- Step 1: Line up the numbers with the larger number on top. Draw a line.
Step 2: Multiply by the ones digit in the bottom number. Write that as the first product under the line.
Step 3: Put a zero in the ones place on the next line because we are going to multiply by the tens digit of the bottom number.
Step 4: Multiply the top number by the tens place number of the bottom number and write the answer before the zero. Be sure to line up the numbers vertically.
Step 5: Place a zero in the ones and tens place on the next line because now we are going to multiply by the hundreds place.
Step 6: Multiply the top number by the hundreds place digit in the bottom factor.
Step 7: Place a zero in the ones, tens, and hundreds place on the next line because we are going to multiply by the thousands place.
Step 8: Multiply the top number by the thousands place digit in the bottom factor. Since this is the last operation, draw another line.
Step 9: Add all of the partial products together to get the total.

Example: $4,173 \times 1,263 =$ _____

Directions: Multiply to find each product.

1. $2,640 \times 5,193 =$ _____ 2. $3,154 \times 6,789 =$ _____

After
students
complete
Independent
Practice,
review
each item
to check for
understanding.

Standards Plus® High Impact Standards is not licensed for duplication. **Copying is illegal.**
© 2020, 2013 Learning Plus Associates

Sample Assessment - Teacher Page

Teacher Lesson Plan

Standards Plus® – Mathematics – Grade 5	
Domain: Number and Operations in Base Ten	Focus: Multiply Whole Numbers
Assessment: #5	

This assessment may be used in the following ways:

- As a formative assessment of the students' progress.
- As an additional opportunity to reinforce the vocabulary, concepts, and knowledge presented in the previous 4 lessons.

Standard: 5.NBT.5 Fluently multiply multi-digit whole numbers using the standard algorithm.

Procedure: Read the directions aloud and ensure that students understand how to respond to each item.

- If you are using this as a formative assessment, have the students complete the evaluation independently.
- If you are using this to reinforce the week's instruction, determine the items that will be completed as guided practice, and those that will be completed as independent practice.

Additional Tips:

- All Standards Plus assessments are available in an **interactive digital format** in the Standards Plus Digital Platform.
- When the assessments are administered and scored digitally, the platform automatically creates intervention groups and recommends **additional printable intervention lessons**.
- You can also access the printable intervention lessons from the home screen in the digital platform.

Review: Review the correct answers with students as soon as they are finished.

Answers:

1. (5.NBT.5) 247,690
2. (5.NBT.5) 561,660
3. (5.NBT.5) 432,662

Sample Assessment - Student Page

Student Page

Standards Plus® – Mathematics – Grade 5	
Domain: Number and Operations in Base Ten	Focus: Multiply Whole Numbers
Assessment: #5	

Directions: Find each product for questions 1-3. Show your work.

1. $34 \times 7,285$

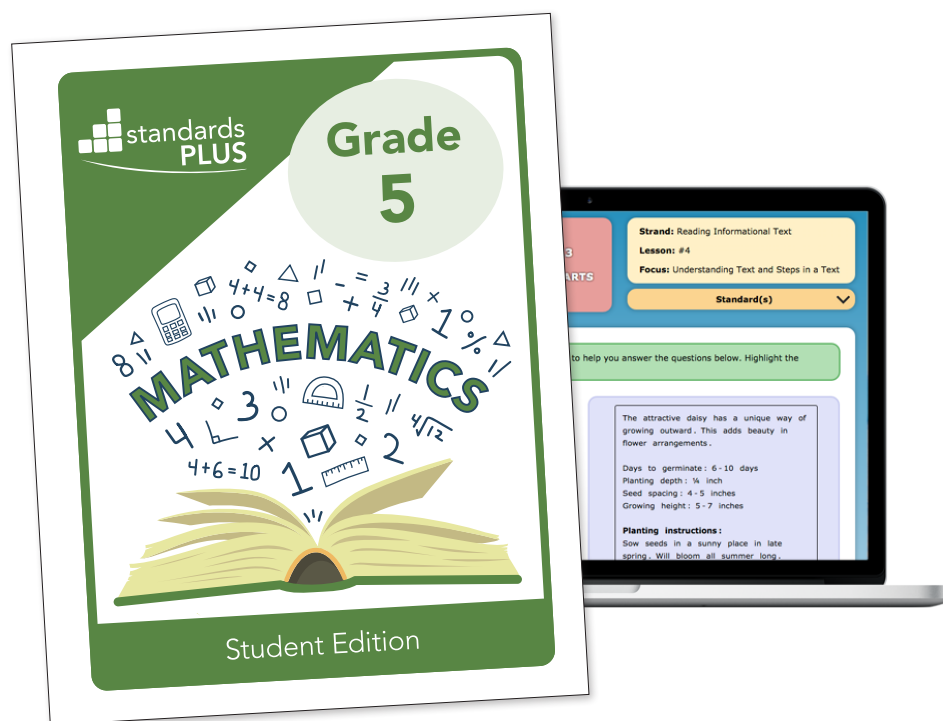
2. 690×814

3. $227 \times 1,906$

Standards Plus® High Impact Standards is not licensed for duplication. **Copying is illegal.**
© 2020, 2013 Learning Plus Associates



All Standards Plus purchases include live online teacher training to ensure a successful implementation.



Learn More
Email office@standardsplus.org
Call 1-877-505-9152