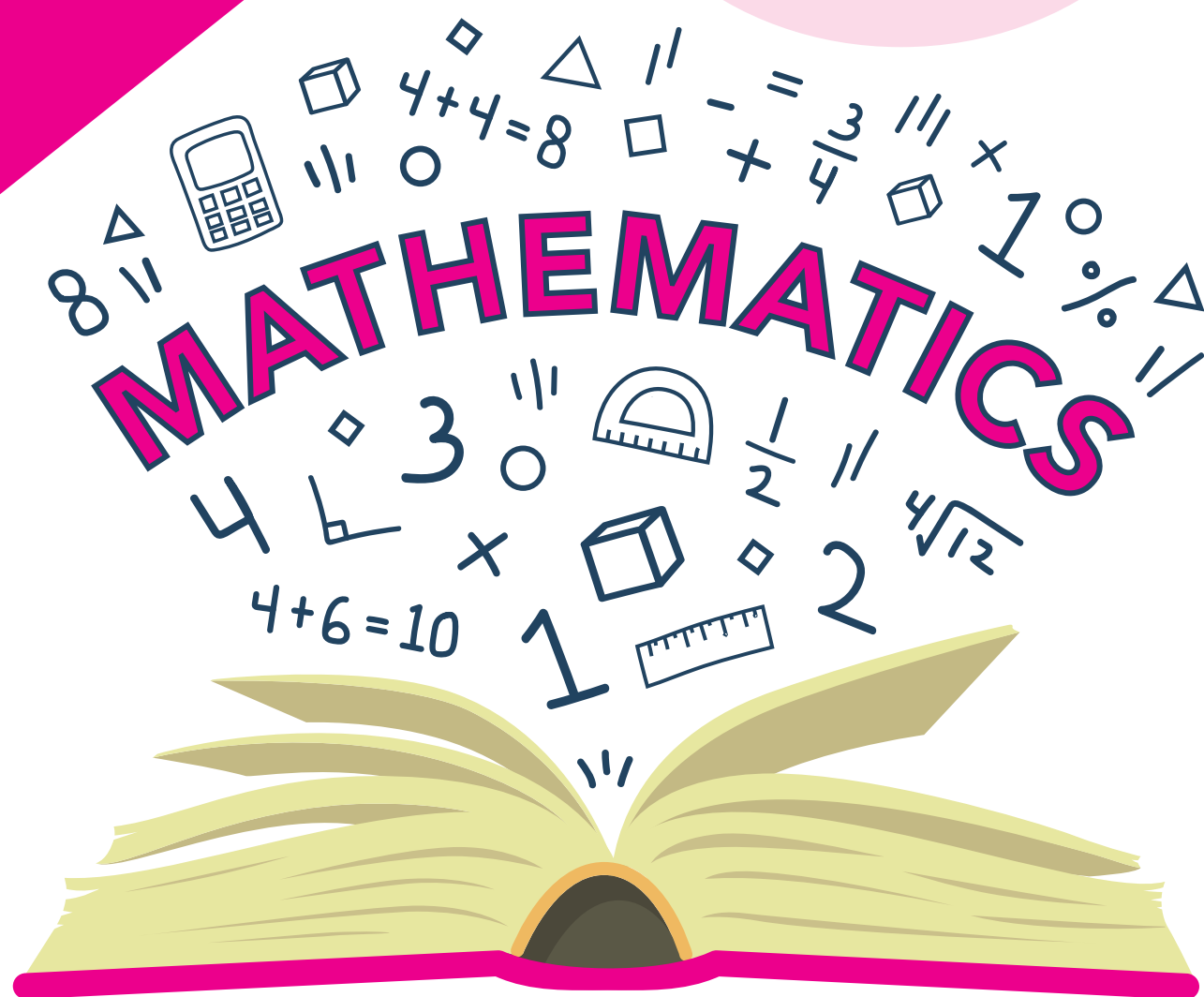




Grade  
3

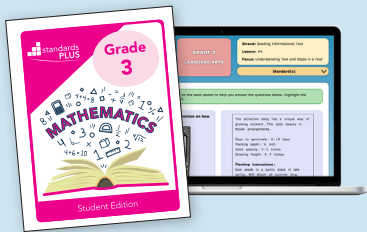


Program Overview and Sample Lessons



**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.

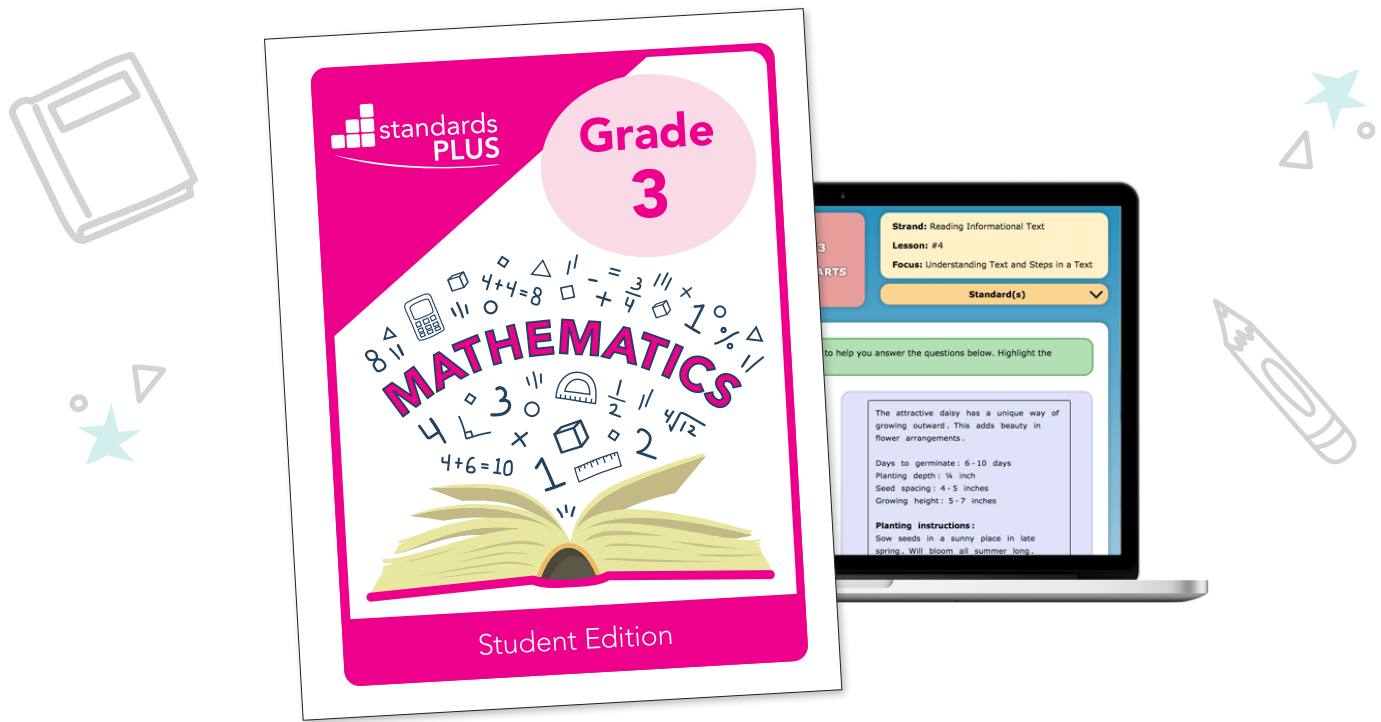


## Integrated Projects

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

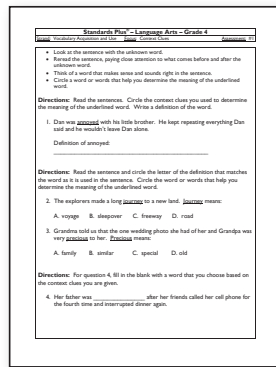
**ASSESS**

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

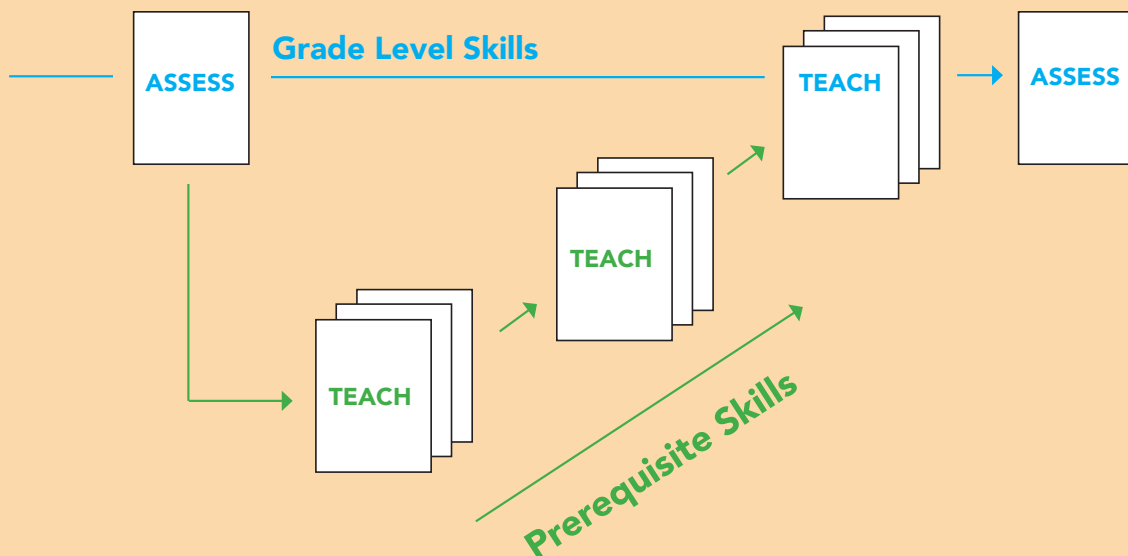
*Assessments can be completed in the student edition or online in the Standards Plus Digital Platform.*

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

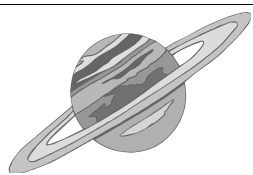
Standards Plus® – Language Arts – Grade 4  
Reading: Informational Text Performance Lesson 2 – Analyzing Informational Text

## 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

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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?

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

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

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# 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](http://www.standardsplus.org/el-support)**



# Standards Plus Mathematics Grade 3

## 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 3

## Lesson Index

### Number and Operations in Base Ten

Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level
1	Rounding to the Nearest 10	3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100.	32	3	1-2
2	Rounding to the Nearest 10		34	4	
3	Rounding to the Nearest 100		36	5	
4	Rounding to the Nearest 100		38	6	
A1	Assessment - Rounding to the Nearest 10 or 100		40	7	
5	Rounding to the Nearest 10	3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100.	42	9	1-2
6	Rounding to the Nearest 100		44	10	
7	Rounding to the Nearest 10 or 100		46	11	
8	Rounding to the Nearest 10 or 100		48	12	
A2	Assessment - Rounding to the Nearest 10 and 100		50	13	
Number and Operations in Base Ten Performance Lesson 1 – Round it Off			52	15-17	3
9	Addition Strategies	3.NBT.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	56	19	1-2
10	Addition Strategies		58	20	
11	Addition Strategies		60	21	
12	Addition Strategies		62	22	
A3	Assessment - Addition Strategies		64	23	
13	Subtraction Strategies	3.NBT.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	66	25	1-2
14	Subtraction Strategies		68	26	
15	Subtraction Strategies		70	27	
16	Subtraction Strategies		72	28	
A4	Assessment - Subtraction Strategies		74	29	

# Standards Plus® - Mathematics Grade 3

## Lesson Index

### Number and Operations in Base Ten

Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level
17	Addition Properties	3.NBT.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	76	31	1-2
18	Addition Properties		78	32	
19	Addition Properties		80	33	
20	Addition Properties		82	34	
A5	Assessment - Addition Properties		84	35	
Number and Operations in Base Ten Performance Lesson 2 – Addition & Subtraction Strategies			86	37-40	3
21	Multiply One-digit Numbers by Multiples of 10	3.NBT.3: Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., $9 \times 80$ , $5 \times 60$ ) using strategies based on place value and properties of operations.	92	41	1-2
22	Multiply One-digit Numbers by Multiples of 10		94	42	
23	Multiply One-digit Numbers by Multiples of 10		96	43	
24	Multiply One-digit Numbers by Multiples of 10		98	44	
A6	Assessment - Multiply One-digit Numbers by Multiples of 10		100	45	

# Standards Plus® - Mathematics Grade 3

## Lesson Index

### Operations and Algebraic Thinking

Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level
1	Products of Whole Numbers	3.OA.1 Interpret products of whole numbers, e.g., interpret $5 \times 7$ as the total number of objects in 5 groups of 7 objects each. <i>For example, describe a context in which a total number of objects can be expressed as <math>5 \times 7</math>.</i>	108	47	1-2
2	Products of Whole Numbers		110	48	
3	Products of Whole Numbers		112	49	
4	Products of Whole Numbers		114	50	
A1	Assessment - Products of Whole Numbers		116	51	
5	Quotients of Whole Numbers	3.OA.2 Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. <i>For example, describe a context in which a number of shares or a number of groups can be expressed as <math>56 \div 8</math>.</i>	118	53	1-2
6	Quotients of Whole Numbers		120	54	
7	Quotients of Whole Numbers		122	55	
8	Quotients of Whole Numbers		124	56	
A2	Assessment - Quotients of Whole Numbers		126	57	
9	Representing Word Problems	3.OA.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	128	59	1-2
10	Representing Word Problems		130	60	
11	Representing Word Problems		132	61	
12	Representing Word Problems		134	62	
A3	Assessment - Representing Word Problems		136	63	
13	Relating Three Whole Numbers	3.OA.4: Determine the unknown whole number in a multiplication or division equation relating three whole numbers. <i>For example, determine the unknown number that makes the equation true in each of the equations <math>8 \times ? = 48</math>, <math>5 = \square \div 3</math>, <math>6 \times 6 = ?</math>.</i>	138	65	1-2
14	Relating Three Whole Numbers		140	66	
15	Relating Three Whole Numbers		142	67	
16	Relating Three Whole Numbers		144	68	
A4	Assessment - Relating Three Whole Numbers		146	69	
Operations and Algebraic Thinking Performance Lesson 1 – Products & Quotients			148-149	71-74	3

High Impact Standards

# Standards Plus® - Mathematics Grade 3

## Lesson Index

### Operations and Algebraic Thinking

Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level
17	Properties of Multiplication	3.OA.5: Apply properties of operations as strategies to multiply and divide.2 <i>Examples: If <math>6 \times 4 = 24</math> is known, then <math>4 \times 6 = 24</math> is also known. (Commutative property of multiplication.) <math>3 \times 5 \times 2</math> can be found by <math>3 \times 5 = 15</math>, then <math>15 \times 2 = 30</math>, or by <math>5 \times 2 = 10</math>, then <math>3 \times 10 = 30</math>. (Associative property of multiplication.) Knowing that <math>8 \times 5 = 40</math> and <math>8 \times 2 = 16</math>, one can find <math>8 \times 7</math> as <math>8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56</math>. (Distributive property.)</i>	154	75	1-2
18	Properties of Multiplication		156	76	
19	Properties of Multiplication		158	77	
20	Properties of Multiplication		160	78	
A5	Assessment - Properties of Multiplication		162	79	
21	Inverse Operations	3.OA.6 Understand division as an unknown-factor problem. <i>For example, find <math>32 \div 8</math> by finding the number that makes 32 when multiplied by 8.</i>	164	81	1-2
22	Inverse Operations		166	82	
23	Inverse Operations		168	83	
24	Inverse Operations		170	84	
A6	Assessment - Inverse Operations		172	85	
25	Strategies for Multiplication Facts	3.OA.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$ , one knows $40 \div 5 = 8$ ) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.	174	87	1-2
26	Strategies for Multiplication Facts		176	88	
27	Strategies for Multiplication Facts		178	89	
28	Strategies for Multiplication Facts		180	90	
A7	Assessment - Strategies for Multiplication Facts		182	91	
29	Strategies for Multiplication Facts	3.OA.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$ , one knows $40 \div 5 = 8$ ) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.	184	93	1-2
30	Strategies for Multiplication Facts		186	94	
31	Strategies for Multiplication Facts		188	95	
32	Strategies for Multiplication Facts		190	96	
A8	Assessment - Strategies for Multiplication Facts		192	97	
Operations and Algebraic Thinking Performance Lesson 2 – Properties & Strategies			194-195	99-102	3

# Standards Plus® - Mathematics Grade 3

## Lesson Index

### Operations and Algebraic Thinking

Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level	High Impact Standards
33	Solve Two-step Problems	3.OA.8: Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	200	103	1-2	
34	Solve Two-step Problems		202	104		
35	Solve Two-step Problems		204	105		
36	Solve Two-step Problems		206	106		
A9	Assessment - Solve Two-step Problems		208	107		
37	Identify & Explain Arithmetic Patterns	3.OA.9: Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. <i>For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.</i>	210	109	1-2	
38	Identify & Explain Arithmetic Patterns		212	110		
39	Identify & Explain Arithmetic Patterns		214	111		
40	Identify & Explain Arithmetic Patterns		216	112		
A10	Assessment - Identify & Explain Arithmetic Patterns		218	113		
Operations and Algebraic Thinking Performance Lesson 3 – Equations & Patterns			220	115-116	3	

### Integrated Project 1: What's the Problem?

**Overview:** In this project, the students will each be assigned a single set of multiplication facts. They will analyze the factors, ways to solve the problems, and ways to model solutions. They will provide a written report of their findings.

**Product:** A written report based on a set of multiplication facts that includes information about each of the factors in the problems and how to solve the problems.

#### Integrates the following standards:

Number and Operations in Base Ten and Operations and Algebraic Thinking

**Student Edition Pages:** 117-118 **Teacher Edition Pages:** 223-231

**DOK Level 4**



# Standards Plus® - Mathematics Grade 3

## Lesson Index

### Measurement and Data

Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level	
1	Time Telling	3.MD.1: Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.	240	119	1-2	High Impact Standards
2	Elapsed Time		242	120		
3	Elapsed Time Using a Number Line		244	121		
4	Elapsed Time Using a Number Line		246	122		
A1	Assessment - Telling Time		248	123		
5	Liquid Volume – Liters and Milliliters	3.MD.2: Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).6 Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.7	250	125	1-2	
6	Liquid Volume – Liters and Milliliters		252	126		
7	Mass – Grams and Kilograms		254	127		
8	Mass – Grams and Kilograms		256	128		
A2	Assessment - Problems Involving Mass & Liquid Volume		258	129		
9	Drawing Picture Graphs	3.MD.3: Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. <i>For example, draw a bar graph in which each square in the bar graph might represent 5 pets.</i>	260	131	1-2	
10	Drawing Picture Graphs		262	132		
11	Drawing Bar Graphs		264	133		
12	Drawing Bar Graphs		266	134		
A3	Assessment - Scaled Bar and Picture Graphs		268	135		
13	Measuring to the Nearest Half & Quarter Inch	3.MD.4: Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.	270	137	1-2	
14	Measuring to the Nearest Half & Quarter Inch		272	138		
15	Representing Measurement Data on a Line Plot		274	139		
16	Representing Measurement Data on a Line Plot		276	140		
A4	Assessment - Linear Measurement and Line Plots		278	141		
Measurement and Data Performance Lesson 1 – Gathering & Displaying Measures			280-281	143-147	3	

# Standards Plus® - Mathematics Grade 3

## Lesson Index

### Measurement and Data

Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level
17	Understanding Area – Square Units	3.MD.5: Recognize area as an attribute of plane figures and understand concepts of area measurement. 3.MD.5a: A square with side length 1 unit, called “a unit square,” is said to have “one square unit” of area, and can be used to measure area. 3.MD.5b: A plane figure which can be covered without gaps or overlaps by $n$ unit squares is said to have an area of $n$ square units.	288	149	1-2
18	Understanding Area – Square Units		290	150	
19	Understanding Area – Square Units		292	151	
20	Understanding Area – Square Units		294	152	
A5	Assessment - Understanding Area – Square Units		296	153	
21	Understanding Area – Square Units	3.MD.6: Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).	298	155	1-2
22	Understanding Area – Square Feet		300	156	
23	Understanding Area – Square Centimeters		302	157	
24	Understanding Area – Square Meters		304	158	
A6	Assessment - Understanding Area – Different Unit Measures		306	159	
25	Relate Area – Multiplying Side Lengths	3.MD.7: Relate area to the operations of multiplication and addition. 3.MD.7a: Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.	308	161	1-2
26	Relate Area – Multiplying Side Lengths		310	162	
27	Relate Area – Multiplying Side Lengths		312	163	
28	Relate Area – Multiplying Side Lengths		314	164	
A7	Assessment - Relate Area – Multiply Side Lengths		316	165	
Measurement and Data Performance Lesson 2 – All About Area			318-319	167-169	3
29	Relate Area – Solve Real World Problems	3.MD.7: Relate area to the operations of multiplication and addition. 3.MD.7b: Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.	324	171	1-2
30	Relate Area – Solve Real World Problems		326	172	
31	Relate Area – Solve Real World Problems		328	173	
32	Relate Area – Solve Real World Problems		330	174	
A8	Assessment - Relate Area – Solve Real World Problems		332	175	

High Impact Standards

# Standards Plus® - Mathematics Grade 3

## Lesson Index

### Measurement and Data

Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level
33	Relate Area – Distributive Property	3.MD.7: Relate area to the operations of multiplication and addition. 3.MD.7c: Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths $a$ and $b + c$ is the sum of $a \times b$ and $a \times c$ . Use area models to represent the distributive property in mathematical reasoning.	334	177	1-2
34	Relate Area – Distributive Property		336	178	
35	Relate Area – Distributive Property		338	179	
36	Relate Area – Distributive Property		340	180	
A9	Assessment - Relate Area – Distributive Property		342	181	
37	Decomposing Rectilinear Figures	3.MD.7: Relate area to the operations of multiplication and addition. 3.MD.7d: Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.	344	183	1-2
38	Decomposing Rectilinear Figures		346	184	
39	Decomposing Rectilinear Figures		348	185	
40	Decomposing Rectilinear Figures		350	186	
A10	Assessment - Decomposing Rectilinear Figures		352	187	
Measurement and Data Performance Lesson 3 – Area Problem Solving			354	189-191	3
41	Perimeter of Polygons	3.MD.8: Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.	358	193	1-2
42	Perimeter of Polygons – Finding Missing Side Lengths		360	194	
43	Rectangles – Same Perimeter vs. Different Area		362	195	
44	Rectangles – Same Perimeter vs. Different Area		364	196	
A11	Assessment - Perimeter and Area Connections		366	197	
Measurement and Data Performance Lesson 4 – Around the Perimeter			368	199-202	3

# Standards Plus® - Mathematics Grade 3

## Lesson Index

### Integrated Project 2: *Box It Up!*

**Overview:** In this project, the students will use an actual box to collect data on the dimensions, perimeter, and area. They will create a poster that displays the data they gather. Each student will present his/her poster orally.

**Product:** A poster and oral presentation that provides information about the dimensions, perimeter, and area of a box

**Integrates the following standards:**

Operations Within 20 – OA – Part 2,  
Addition & Subtraction – NBT – Part 2, and Equations – OA – Part 3

**Student Edition Pages: 203-205**

**Teacher Edition Pages: 373-382**

**DOK Level 4**

# Standards Plus® - Mathematics Grade 3

## Lesson Index

### Number and Operations – Fractions

Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level
1	Understand Fractions as Part of a Whole	3.NF.1: Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into $b$ equal parts; understand a fraction $a/b$ as the quantity formed by $a$ parts of size $1/b$ .	390	207	1-2
2	Understand Fractions as Part of a Whole		392	208	
3	Understand Fractions as Part of a Whole		394	209	
4	Understand Fractions as Part of a Whole		396	210	
A1	Assessment - Understand Fractions as Part of a Whole		398	211	
5	Fractions on a Number Line	3.NF.2a: Represent a fraction $1/b$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into $b$ equal parts. Recognize that each part has size $1/b$ and that the endpoint of the part based at 0 locates the number $1/b$ on the number line.	400	213	1-2
6	Fractions on a Number Line		402	214	
7	Fractions on a Number Line	3.NF.2b: Represent a fraction $a/b$ on a number line diagram by marking off a lengths $1/b$ from 0. Recognize that the resulting interval has size $a/b$ and that its endpoint locates the number $a/b$ on the number line.	404	215	
8	Fractions on a Number Line		406	216	
A2	Assessment - Fractions on a Number Line	3.NF.2a, 3.NF.2b	408	217	
Number and Operations – Fractions Performance Lesson 1 – Modeling Fractions			410-411	219-221	3
9	Understand Equivalent Fractions	3.NF.3a: Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.	416	223	1-2
10	Understand Equivalent Fractions		418	224	
11	Equivalent Fractions & Whole Numbers	3.NF.3c: Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form $3 = 3/1$ ; recognize that $6/1 = 6$ ; locate $4/4$ and 1 at the same point of a number line diagram.	420	225	
12	Equivalent Fractions & Whole Numbers		422	226	
A3	Assessment - Equivalent Fractions & Whole Numbers	3.NF.3a, 3.NF.3c	424	227	
13	Simple Equivalent Fractions	3.NF.3b Recognize and generate simple equivalent fractions, e.g., $1/2 = 2/4$ , $4/6 = 2/3$ . Explain why the fractions are equivalent, e.g., by using a visual fraction model.	426	229	1-2
14	Simple Equivalent Fractions		428	230	
15	Simple Equivalent Fractions		430	231	
16	Simple Equivalent Fractions		432	232	
A4	Assessment - Simple Equivalent Fractions		434	233	

High Impact Standards

# Standards Plus® - Mathematics Grade 3

## Lesson Index

### Number and Operations – Fractions

Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level
17	Comparing Fractions	3.NF.3d Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols $>$ , $=$ , or $<$ , and justify the conclusions, e.g., by using a visual fraction model.	436	235	1-2
18	Comparing Fractions		438	236	
19	Comparing Fractions		440	237	
20	Comparing Fractions		442	238	
A5	Assessment - Comparing Fractions		444	239	
Number and Operations – Fractions Performance Lesson 2 – <i>Is It Equivalent?</i>			446-447	241-242	3

### Geometry

Lesson	Focus	Standard(s)	TE Page	St. Ed. Page	DOK Level
1	Recognizing & Categorizing Shapes	3.G.1 Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.	454	243	1-2
2	Recognizing & Categorizing Shapes		456	244	
3	Recognizing & Categorizing Shapes		458	245	
4	Recognizing & Categorizing Shapes		460	246	
A1	Assessment - Recognizing & Categorizing Shapes		462	247	
5	Partition Shapes and Express Area as a Unit Fraction	3.G.2: Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. <i>For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.</i>	464	249	1-2
6	Partition Shapes and Express Area as a Unit Fraction		466	250	
7	Partition Shapes and Express Area as a Unit Fraction		468	251	
8	Partition Shapes and Express Area as a Unit Fraction		470	252	
A2	Assessment - Partition Shapes and Express Area as a Unit Fraction		472	253	
Geometry Performance Lesson – Shapes, Attributes, and Area			474	255-257	3

# Standards Plus® - Mathematics Grade 3

## Lesson Index

### Integrated Project 3: *Planning a Patio*

**Overview:** In this project, the students will design a patio that is composed of hexagonal, rhomboid, trapezoidal, square, and triangular pavers. The hexagonal paver represents a whole, and the other four shapes represent  $\frac{1}{2}$ ,  $\frac{1}{4}$ , and  $\frac{1}{8}$  respectively. Each student will present his/her patio design orally.

**Product:** A patio design and oral presentation based on fractional units, area, and shapes.

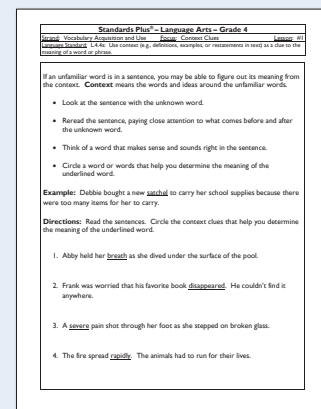
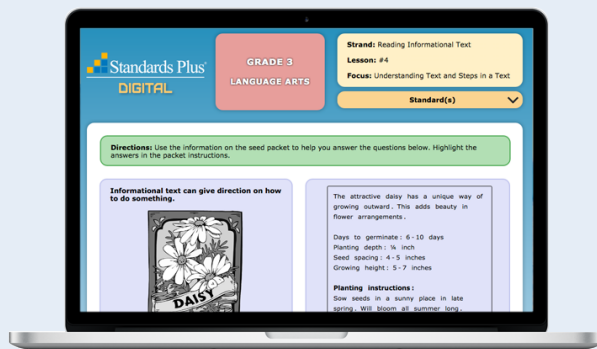
**Integrates the following standards:**  
Number and Operations – Fractions and Geometry

**Student Edition Pages:** 254-256

**Teacher Edition Pages:** 479-488

**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

## Operations and Algebraic Thinking

Lesson	Focus	Standard(s)
1	Products of Whole Numbers	3.OA.1 Interpret products of whole numbers, e.g., interpret $5 \times 7$ as the total number of objects in 5 groups of 7 objects each. <i>For example, describe a context in which a total number of objects can be expressed as <math>5 \times 7</math>.</i>
2	Products of Whole Numbers	
3	Products of Whole Numbers	
4	Products of Whole Numbers	
A1	Assessment - Products of Whole Numbers	

# Sample Teacher Lesson Plan

## Teacher Lesson Plan

Standards Plus® – Mathematics – Grade 3		
Domain: Operations & Algebraic Thinking	Focus: Products of Whole Numbers	Lesson: #1
Standard: 3.OA.1 Interpret products of whole numbers, e.g., interpret $5 \times 7$ as the total number of objects in 5 groups of 7 objects each.		

**Lesson Objective:** The students will interpret products of whole numbers by determining the number of grouped objects that create a set and recording the repeated addition sentence that explains the problem.

**Introduction:** “Today we will learn about *multiplication* and understand how a total number of objects can be determined by combining a specific number of groups with the same number of objects in each group.”

**Instruction:** “Sometimes we have groups of objects and we need to determine the overall total quickly. When we have groups of objects, and we need to determine their total, we can use *multiplication* to help us. *Multiplication* is repeated addition. We simply add each group of objects over and over until we have added all of the groups. Look at Example A. We have 5 packages of cookies with 7 cookies in each package. To find the total, we would add the number 7 five times and find there are 35 cookies altogether in the five packages.”

**Guided Practice:** “Listen as I read the problem for Example B. *Mark has four groups of comic books. He has three comic books in each group. How many comic books does he have in his collection?* Now look at the picture of the comic books. As I record the number of comic books in each group, you record the same number on your sheet. The first group has 3 comic books, so we will write a 3 in the blank to show the repeated addition sentence. (Continue recording the number 3 in each blank  $3 + 3 + 3 + 3 = 4 \times 3 = 12$ ). Now let’s record the product, or total number, of comic books in Mark’s collection, 12, on the blank.”

**Independent Practice:** “Now you will complete the problems independently. Read each problem. Draw a picture of the groups of objects. Record the repeated-addition sentence and the total number of objects on the line to complete each number sentence.”

**Review:** Discuss problems with the students. Allow students to share their drawings for each problem.

**Closure:** “Today we learned about *multiplication* and how a total number of objects can be determined by combining a specific number of groups with the same number of objects in each group.”

**Answers:**

1. Student draws three groups of two cupcakes per group;  
 $2 + 2 + 2 = 3 \times 2 = 6$
2. Student draws four groups of four golf balls per group;  
 $4 + 4 + 4 + 4 = 4 \times 4 = 16$

Each lesson  
includes  
a step by  
step lesson  
plan.

# Sample Student Lesson

Student Page

## Standards Plus® – Mathematics – Grade 3

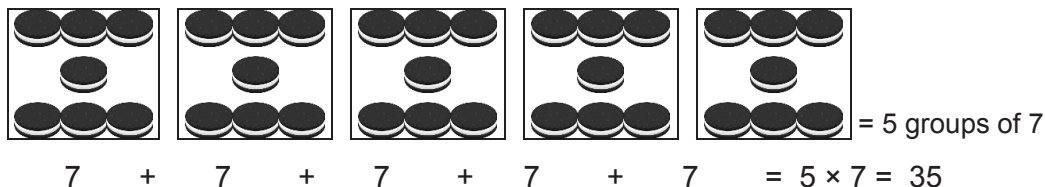
Domain: Operations & Algebraic Thinking

Focus: Products of Whole Numbers

Lesson: #1

Standard: 3.OA.1 Interpret products of whole numbers, e.g., interpret  $5 \times 7$  as the total number of objects in 5 groups of 7 objects each.

### Example A:



### Example B:

Mark has four groups of comic books. He has three comic books in each group. How many comic books does he have in his collection?



$$\underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} = 4 \times 3 = \underline{\quad}$$

**Directions:** Read each problem below. Draw a picture of the objects and the groups. Record the repeated-addition sentence and the total number of objects on the line to complete each number sentence.

- Vicki bought three packages of cupcakes. Each package had two cupcakes in it. How many cupcakes did Vicki buy?

$$\underline{\quad} + \underline{\quad} + \underline{\quad} = 3 \times 2 = \underline{\quad}$$

- Russ bought four boxes of golf balls to practice his swing. Each package had four golf balls in it. How many golf balls did Russ have to practice his swing?

$$\underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} = 4 \times 4 = \underline{\quad}$$

Each lesson  
also has  
an easy to  
follow  
student  
page.

# Sample Digital Teacher Lesson Plan

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  $4 \times 4$ . 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

**Standards Plus<sup>®</sup>**  
**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 3		
Domain: Operations & Algebraic Thinking	Focus: Products of Whole Numbers	Lesson: #3
Standard: 3.OA.1 Interpret products of whole numbers, e.g., interpret $5 \times 7$ as the total number of objects in 5 groups of 7 objects each.		

**Lesson Objective:** The students will interpret products of whole numbers by determining the number of grouped objects that create a set and recording the multiplication sentence to illustrate the problem.

**Introduction:** “Today we will continue to learn about *multiplication* and how to write the appropriate number sentence to explain a multiplication situation.”

**Instruction:** “Multiplication allows us to think of things in *groups* of objects. Thinking of objects in groups with a number of objects in each group allows us to *multiply* by adding the same number over and over again *repeatedly*. *Factors* are the numbers being multiplied and the *product* is the total number of objects. The *first factor* tells us the number of groups or sets of objects. The *second factor* tells us the number of objects in each group, or set. By understanding the order of the *factors* we can better understand the meaning of each multiplication sentence.” Review the terms as presented at the top of the student page.

**Guided Practice:** “Look at Example A on your student page. Read along as I read the problem aloud. *Juan has five groups of glass marbles. Each group has seven marbles. What is Juan’s total number of glass marbles?* Now circle the number of groups of marbles Juan had. You should have circled *five groups*. Then circle the words that tell you the number of marbles in each group. You should have circled seven marbles. Next we will record the factors. As I record the number of groups of marbles, 5, and the number of marbles in each group, 7, you will record them on your sheet. Remember, the first factor, 5, shows the number of groups and the second factor, 7, shows the number of marbles in each group. Finally, we will multiply 5 times 7 to find the product, 35. Write the product, 35, after the equal sign in the equation.” Repeat the process for Example B,  $7 \times 6 = 42$ .

**Independent Practice:** “Now you will complete the problems independently. Read each problem below. Record the multiplication sentence for each problem, numbers of groups, numbers in each group, and the product.”

**Review:** Discuss answers to problems with the students. “What do we call the total or answer to a multiplication problem?”

**Closure:** “Today we continued learning about *multiplication* and how to write the appropriate number sentence to explain a multiplication situation.”

**Answers:**

$10 \times 6 = 60$
$2 \times 6 = 12$
$4 \times 10 = 40$

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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 3

Domain: Operations & Algebraic Thinking

Focus: Products of Whole Numbers

Lesson: #3

Standard: 3.OA.1 Interpret products of whole numbers, e.g., interpret  $5 \times 7$  as the total number of objects in 5 groups of 7 objects each.

**Factors:** the numbers being multiplied. (Number of groups, number in each group)

**Product:** the total number of objects. (Answer)

Factor	×	Factor	=	Product
Number of Groups		Number of Objects in Each Group		Total Number of Objects

**Example A:** Juan has five groups of glass marbles. Each group has seven marbles. What is Juan's total number of glass marbles?

	×		=	
Number of Groups (Factor)		Number of Objects in Each Group (Factor)		Total (Product)

**Example B:** Jason has seven groups of different types of rocks in his collection. Each group has six of the same type of rock. What is the total number of rocks in Jason's collection?

	×		=	
Number of Groups (Factor)		Number of Objects in Each Group (Factor)		Total (Product)

**Directions:** Read each problem below. Record the multiplication sentence for each problem, numbers of groups, numbers in each group, and the product. Circle the words that tell you the factors for each problem.

- Each package of hot dog buns at the store has six hot dog buns. There are ten packages of hot dog buns on the shelf. What is the total number of hot dog buns at the store?

	×		=	
Number of Groups		Number of Objects in Each group		Total (Product)

- Mike has two packs of orange soda. Each pack of orange soda has six cans. What is the total number of soda cans Mike has altogether?

	×		=	
				Total (Product)

- Each box of cookies has ten cookies per box. Melissa bought four boxes of cookies for her party. How many cookies does Melissa have for her party?

	×		=	
				Total (Product)

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Each student page includes examples for Guided Practice...

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



# Sample Teacher Lesson Plan

## Teacher Lesson Plan

Standards Plus® – Mathematics – Grade 3		
Domain: Operations & Algebraic Thinking	Focus: Products of Whole Numbers	Lesson: #4
Standard: 3.OA.1 Interpret products of whole numbers, e.g., interpret $5 \times 7$ as the total number of objects in 5 groups of 7 objects each.		

**Lesson Objective:** The students will interpret products of whole numbers by creating a word problem for a given number sentence and illustrating the number of grouped objects that create a set.

**Introduction:** “Today we will continue learning about *multiplication* and how to describe a multiplication situation using words and numbers.”

**Instruction:** “Multiplication allows us to think of things in *groups* of objects rather than individual objects when we *compute*. Look at the top of your page. We know that *factors* refer to the numbers being *multiplied*, and *product* refers to the *total* number of objects in all of the groups. We also know that the order of the factors in a multiplication sentence allows us to understand the meaning of the situation. Remember that the *first factor* tells us the number of groups of objects. The *second factor* tells us the number of objects in each group. By understanding the order of the *factors*, we can describe situations and write specific multiplication sentences. For example, if we have the multiplication sentence  $4 \times 2$ , we can describe a situation with 4 groups of objects and 2 objects in each group to find the total of 8 objects. Ralph had 4 bags of cookies-groups-and each bag held 2 cookies. How many cookies did Ralph have?”

**Guided Practice:** “Let’s describe the number sentence shown in the example:  $7 \times 3$ . This number sentence means there are seven groups of objects and there are three objects in each group. I will follow these steps as I write my problem:

- Step 1: Write a sentence about the number of groups.
- Step 2: Write a sentence about the number of objects in each group.
- Step 3: Write the product.
- Step 4: Draw a picture to show the meaning of the problem.

For example, Step 1: There are 7 bags of candy bars in the cupboard. Step 2: Each bag of candy has 3 candy bars. Step 3: How many candy bars are in the cupboard? Now that I have written my number sentence for the problem, I will draw a picture to show the problem. Draw your own picture to show the meaning of the problem and describe the problem in words. Complete the number sentence and write the product.”

**Independent Practice:** “Now you will complete Problems 1 and 2 independently. Describe each multiplication sentence using words and pictures, and write the product.”

**Review:** Answers will vary but should represent the factors shown. Allow all students to share their problems with a partner and select students to share their problems with the class.

**Closure:** “Today we continued learning about *multiplication* and how to describe a multiplication situation using words and numbers.”

**Answers:**

1. Five groups of an object. Two objects in each group. The product = 10.
2. Three groups of objects. Nine objects in each group. The product = 27.

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Each lesson  
plan  
includes  
an answer  
key



# Sample Student Lesson

Student Page

## Standards Plus® – Mathematics – Grade 3

Domain: Operations & Algebraic Thinking

Focus: Products of Whole Numbers

Lesson: #4

Standard: 3.OA.1 Interpret products of whole numbers, e.g., interpret  $5 \times 7$  as the total number of objects in 5 groups of 7 objects each.

<b>First Factor</b>	$\times$	<b>Second Factor</b>	$=$	<b>Product</b>
Number of Groups		Number of Objects in Each Group		Total Number of Objects

$$4 \times 2$$



Ralph had four bags of cookies in the cupboard. Each bag held two cookies. How many cookies did Ralph have?

### Example:

- Write a sentence about the number of groups.
- Write a sentence about the number of objects in each group.
- Write the product.
- Draw a picture to show the meaning of the problem.

<u>7</u>	$\times$	<u>3</u>	$=$	<u>        </u>
Number of Groups		Number of Objects in Each Group		Product

**Directions:** Describe each multiplication sentence using words and pictures. Write the product.

1.

<u>5</u>	$\times$	<u>2</u>	$=$	<u>        </u>
Number of Groups		Number of Objects in Each Group		Product

2.

<u>3</u>	$\times$	<u>9</u>	$=$	<u>        </u>
Number of Groups		Number of Objects in Each Group		Product

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

# Sample Assessment - Teacher Page

## Teacher Lesson Plan

Standards Plus® – Mathematics – Grade 3	
Domain: Operations and Algebraic Thinking	Focus: Products of Whole Numbers
Assessment: #1	

### 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:** 3.OAT.1 Interpret products of whole numbers, e.g., interpret  $5 \times 7$  as the total number of objects in 5 groups of 7 objects each. *For example, describe a context in which a total number of objects can be expressed as  $5 \times 7$ .*

**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 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:

For Items 1 through 4, students write the following responses:

1. (3.OAT.1) Students draw five groups/boxes of four tennis balls per box/group:  $4 + 4 + 4 + 4 + 4 = 5 \times 4 = 20$ .
2. (3.OAT.1) Students draw six groups/packs of four mini cakes per pack/group:  $6 \times 4 = 24$ .
3. (3.OAT.1) Students draw three groups/packs of six sodas per pack/group:  $3 \times 6 = 18$ .
4. (3.OAT.1) While student answers will vary, the response situation should describe  $4 \times 2 = 8$ .

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# Sample Assessment - Student Page

Student Page

## Standards Plus® – Mathematics – Grade 3

Domain: Operations and Algebraic Thinking

Focus: Products of Whole Numbers

Assessment: #1

**Factors:** The numbers being multiplied.

**Product:** The total number of objects.

**Directions:** Read each problem. Draw a picture of the problem, complete each number sentence, and determine the product. Record your answers on the appropriate blanks.

1. Russ bought five boxes of tennis balls to practice his game. Each box had four tennis balls in it. How many tennis balls did Russ have for practice?

$$\underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} = 5 \times 4 = \underline{\quad}$$

2. Marie has six packs of mini-cakes. Each pack has four cakes in it. How many mini-cakes does Marie have altogether?

$\underline{\quad}$	$\times$	$\underline{\quad}$	$=$	$\underline{\quad}$
Number of Groups		Number of Objects in Each Group		Total

3. Mike has three packs of soda. Each pack has six cans. What is the total number of soda cans altogether?

$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

4. Describe the multiplication sentence using words and pictures. Write the product.

$$4 \times 2 = \underline{\quad}$$

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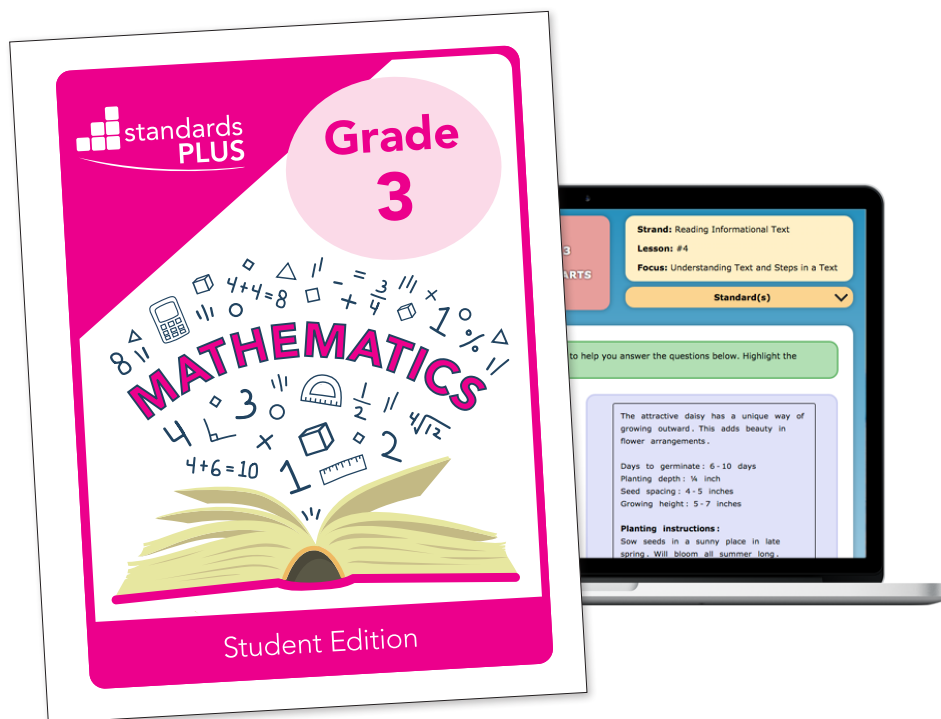
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