

Grade
6



The Key Elements to Mathematics Success

Teacher's Edition

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Table of Contents

Lessons

Teacher Note: When student pairs are using manipulatives to model concepts, they will need to use both partner books. Many times students need the concrete model to answer questions or bridge to the pictorial model on the following page.

	Lesson	Pages	Manipulatives	Word Wall Words	Foldable
1	SOLVE - S and O	Teacher Pages T1 – T19 Student Pages S1 – S7	Paper for foldable (3 sheets – different colors) Stapler “S” and “O” Posters Index cards (“N” and “U”)	S – Study the Problem O – Organizer the Facts	SOLVE Foldable
2	SOLVE - L	Teacher Pages T20 – T39 Student Pages S8 – S18	Foldable from Lesson 1 Index cards (operations words) “L” poster	L – Line up a Plan addition, subtraction, multiplication, division, equals, together, add, plus, and, incline, increase, deposit, sum, total, rises, grows, above, take away, difference, decline, minus, withdraw, write a check, subtract, fewer, decrease, left over, “How many?” “How much more?” below, all together, times, product, each, of, groups, items, per, double, triple, multiplied, quotient, per equal groups, cut into, divvy, split, is, same, balanced, equivalent, divide, is equal to	
3	SOLVE - V and E	Teacher Pages T40 – T59 Student Pages S19 – S29	Foldable from Lesson 1 “V” and “E” posters	V – Verify Your Plan with Action E – Examine Your Results	
Ratios and Proportional Relationships					
4	Ratios and Unit Rates	Teacher Pages T60 – T83 Student Pages S30 – S39 Activity Page T877 Scavenger Hunt	Two-color counters (12 per student pair) Toothpicks (9 per student pair)	ratio, quantity, compare, relationship, unit rate	
5	Ratios and Tables	Teacher Pages T84 – T107 Student Pages S40 – S50 Activity Pages T878 – T881 Scavenger Hunt	Two-color counters (8 per student pair) Toothpicks (4 per student pair)	ratio, unit rate, coordinate plane, x-axis, y-axis, scale, ordered pair, variable	

Table of Contents

Lessons

6	Unit Rate Problems	Teacher Pages T108 – T127	Index cards (5 per student pair) Toothpicks (5 per student pair) Two-color counters (10 per student pair) Painter’s tape (4 small pieces per student pair)	ratio, tape diagram, constant rate, unit pricing, unit rate, variable	
		Student Pages S51 – S60			
		Activity Page T882 Chain Reaction			
7	Percent as a Rate per 100	Teacher Pages T128 – T146	Centimeter cubes (70 per student pair) Colored pencils	ratio, percent, $\frac{\text{part}}{\text{whole}} = \frac{\%}{100}$	
		Student Pages S61 – S69			
		Activity Page T883 Chain Reaction			
8	Converting Measurement with Ratios	Teacher Pages T147 – T178	Calculators (optional)	ratios, identity property of multiplication, conversion factor, convert	
		Student Pages S70 – S84			
		Activity Page T884 Chain Reaction			
The Number System					
9	Concept of Fractions	Teacher Pages T179 – T203	Fraction Strips for all three kits Scissors Overhead fraction strips 1 resealable plastic bag per student to hold fraction kits	numerator, denominator, fraction, one-half, one-fourth, one-eighth, thirds, sixths, ninths, twelfths, fifths, tenths, equivalent, legal trade	
		Student Pages S85 – S93			
		Activity Pages T885 – T886 I Have, Who Has			
10	Greatest Common Factor and Least Common Multiple	Teacher Pages T204 – T226	Centimeter cubes (10 red, 10 blue per student pair) Colored pencils (red and blue pencils for each student pair)	greatest common factor, least common multiple, factor, multiple, divisible, distributive property	
		Student Pages S94 – S104			
		Activity Page T887 Chain Reaction			
11	Divide Fractions	Teacher Pages T227 – T252	Fraction kit	quotient, dividend, divisor, fraction, numerator, denominator, model, reciprocal, improper fraction	
		Student Pages S105 – S118			
		Activity Page T888 Scavenger Hunt			

Table of Contents

Lessons

12	Divide Multi-Digit Numbers	Teacher Pages T253 – T275 Student Pages S119 – S133 Activity Page T889 Scavenger Hunt		quotient, dividend, divisor, remainder	
13	Add and Subtract with Decimals	Teacher Pages T276 – T300 Student Pages S134 – S148 Activity Page T890 Mystery Square	1 sheet of colored paper for decimal foldable	decimals, addend, minuend, subtrahend, place holder, place value, tenths, hundredths, thousandths, difference, sum	Foldable with Decimals
14	Multiply with Decimals	Teacher Pages T301 – T326 Student Pages S149 – S163 Activity Page T891 Mystery Square	Colored pencils – (1 red, 1 blue per student pair) Calculators Foldable from Lesson 13	factor, product, decimal point, groups, items, array	
15	Divide with Decimals	Teacher Pages T327 – T350 Student Pages S164 – S177 Activity Page T892 Scavenger Hunt	Colored pencils (1 per student) Calculators Foldable from Lesson 13	dividend, divisor, quotient, decimal point	
16	Representing Rational Numbers	Teacher Pages T351 – T374 Student Pages S178 – S189 Activity Page T893 Scavenger Hunt	Colored pencils String Algebra tiles	positive rational numbers, negative numbers, integers, opposite, elevation, above sea level, below sea level, credit, debit, above zero, below zero, horizontal number line, vertical number line.	
17	Comparing, Ordering and Absolute Value of Rational Numbers	Teacher Pages T375 – T400 Student Pages S190 – S203 Activity Page T894 Chain Reaction	Algebra tiles	inequality, less than (<), greater than (>), number line, profit, loss, absolute value	

Table of Contents

Lessons

18	Plotting Points in the Coordinate Plane and on the Number Line	Teacher Pages T401 – T427 Student Pages S204 – S217 Activity Pages T895 – T898 Chain Reaction	Marker Tape Colored pencils (4 different colors) Number cards (Two Sets 1 – 10)	number line, rational numbers, horizontal number line, vertical number line, integer, reflection, coordinate plane, ordered pair, quadrant, x-coordinate, y-coordinate	
19	Solving Problems in the Coordinate Plane	Teacher Pages T428 – T451 Student Pages S218 – S232 Activity Pages T899 – T902 Scavenger Hunt		quadrants, coordinate plane, absolute value, x-coordinates, y-coordinates	
Expressions and Equations					
20	Write and Evaluate Numerical Expressions with Order of Operations	Teacher Pages T452 – T478 Student Pages S233 – S249 Activity Page T903 Chain Reaction	Copy Master T469 (1 per student pair) Colored paper (1 sheet per student)	evaluate, numerical expressions, exponents, GEMDAS, verbal expressions, grouping symbols, brackets, braces, parentheses, base, power, cubed, fraction bar, expression, PEMDAS	Foldable on Writing and Evaluating Expressions
21	Write and Evaluate Algebraic Expressions with Order of Operations	Teacher Pages T479 – T504 Student Pages S247 – S259 Activity Page T904 Chain Reaction	Algebra tiles Copy Master T495 (1 per student pair) Foldable from Lesson 20 Overhead algebra tiles	variable, equation, algebraic expression, numerical expression, coefficient, constant, term, verbal expression	
22	Properties of Operations and Equivalent Expressions	Teacher Pages T505 – T530 Student Pages S260 – S272 Activity Page T905 Scavenger Hunt	Algebra tiles Overhead algebra tiles Copy Master T525	expressions, distributive property, associative property, commutative property, equivalent expressions, variable, greatest common factor, factoring, multiples, counterexample	
23	One Step Equations – Add and Subtract	Teacher Pages T531 – T555 Student Pages S273 – S287 Activity Page T906 Chain Reaction	Algebra unit tiles (6 yellow unit tiles per student pair) Cups Overhead algebra tiles	variable, equation, balance the equation, isolate the variable, inverse operation	

Table of Contents

Lessons

24	One Step Equations – Multiply and Divide	Teacher Pages T556 – T579	Algebra unit tiles (30 yellow unit tiles per student pair) Cups Overhead algebra tiles	variable, equation, isolate the variable, balance the equation	
		Student Pages S288 – S302			
		Activity Page T907 Scavenger Hunt			
25	Introduction to Inequalities	Teacher Pages T580 – T606	Centimeter cubes (2 per student pair) Copy Master T602	inequality, inverse operation(s), isolate the variable, less than, greater than, less than or equal to, greater than or equal to, inequality symbols ($<$, $>$, \leq , \geq), solution, number line	
		Student Pages S303 – S315			
		Activity Page T908 Mystery Square			
26	Represent and Analyze Quantitative Relationships	Teacher Pages T607 – T631	Algebra unit tiles (8 yellow tiles per student pair) Three inch squares of paper or cardstock (4 per student pair) Colored pencils (1 set per student pair)	variable, equation, dependent variable, independent variable, constant, discrete data, continuous data	
		Student Pages S316 – S328			
		Activity Pages T909 – T912 Scavenger Hunt			
Geometry					
27	Polygons in the Coordinate Plane	Teacher Pages T632 – T655		quadrants, coordinate plane, absolute value, x-coordinate, y-coordinate, area, perimeter	
		Student Pages S329 – S342			
		Activity Pages T913 – T916 Chain Reaction			
28	Area	Teacher Pages T656 – T682	Ruler Scissors Gridded index cards (1 per student) Colored pencils Colored paper for foldable (1 sheet per student) Copy Master T678	rectangle, right triangle, area, height, base, perpendicular, congruent, irregular shapes, composite, compose, decompose, trapezoid, parallel, right angles	Geometry Foldable
		Student Pages S343 – S356			
		Activity Pages T917 – T920 Scavenger Hunt			
29	Volume	Teacher Pages T683 – T705	Centimeter cubes (50 cubes per pair) Foldable from Lesson 28	volume, rectangular prism, fractional edge lengths	
		Student Pages S357 – S369			
		Activity Page T921 Chain Reaction			

Table of Contents

Lessons

30	Surface Area	Teacher Pages T706 – T728	Centimeter cubes (24 per student pair) Copy Master T719 Foldable from Lesson 28	surface area, rectangular prism, cube, face, net, two-dimensional	
		Student Pages S370 – S381			
		Activity Page T922 Chain Reaction			
Statistics and Probability					
31	Measures of Center and Variation with Dot Plots	Teacher Pages T729 – T753	Beans (24 per student pair) Calculators (optional)	mean, median, title, graph, data, scale, dot plot, data set, cluster, gap, outlier, measure of center, peak, equally distributed	
		Student Pages S382 – S394			
		Activity Pages T923 – T926 Scavenger Hunt			
32	Box Plots and Measures of Variation	Teacher Pages T754 – T783	Beans (21 per student pair) Calculators (optional) Sticky notes (1 per pair cut into 6 parts so that each piece will stick to paper) Scissors (1 per student pair) Ruler (1 per student pair)	box plot, Quartile 1, Quartile 3, interquartile range (IQR), median, maximum, minimum, clusters, peaks, gaps, mean, scale, dot plot, data value	
		Student Pages S395 – S408			
		Activity Pages T927 – T930 Chain Reaction			
33	Histograms	Teacher Pages T784 – T801	Colored pencils Ruler (1 per student pair)	dot plot, histogram, scale, data, intervals, frequency table, range	
		Student Pages S409 – S419			
		Activity Pages T931 – T934 Scavenger Hunt			
34	Dot Plots and Measure of Variation with Mean Absolute Deviation	Teacher Pages T802 – T826	Calculators	mean, measure of center, median, IQR (interquartile range), measure of variation, data set, deviation from the mean, absolute value, absolute deviation, MAD (mean absolute deviation)	
		Student Pages S420 – S432			
		Activity Page T935 Chain Reaction			
35	Summarizing Numerical Data	Teacher Pages T827 – T866	Calculators	statistical question, histogram, MAD(mean absolute deviation), median, mean, clusters, statistics, data set, variability, variety, peak, box plot, dot plot, gaps, minimum value, maximum value, IQR (interquartile range), range, quartile, intervals, distribution	
		Student Pages S433 – S453			
		Activity Pages T936 – T939 Scavenger Hunt			

The Key Elements to Mathematics Success Description of Teacher's Guide

Essential Questions are presented at the beginning of each lesson to provide the framework for the lesson and guide the learning process. The Essential Questions are used not only at the beginning of the lesson, but are also an important part of the lesson closure. Each Essential Question ties into a SOLVE problem which is used as an introduction and closure tool in each lesson.

Each lesson concept is bracketed with the SOLVE problem solving method. Along with the Essential Question, the "S" step of SOLVE is introduced at the beginning of the lesson. This helps to guide the learning of the student as they progress through the lesson. At the end of the lesson, the SOLVE problem introduced at the beginning of the lesson is revisited. The student completes the additional steps of SOLVE, applying the lesson concept in a problem solving situation.

T84

LESSON 5: Ratios and Tables

Mathematics Success – Grade 6

[OBJECTIVE]

The student will use ratio and rate reasoning to solve real-world and mathematical problems by using tables to compare ratios and plot the pairs of values on the coordinate plane.

[PREREQUISITE SKILLS]

concepts of ratio and ratio language, equivalent fractions, plotting points on a coordinate plane

[MATERIALS]

Student pages **S40 – S50**
Two-color counters. (8 per student pair)
Toothpicks (4 per student pair)

[ESSENTIAL QUESTIONS]

1. How can I use a table to model ratios?
2. How can I compare ratios using two tables?
3. How can plotting ratios on a coordinate plane make comparing ratios easier?

[WORDS FOR WORD WALL]

ratio, unit rate, coordinate plane, x-axis, y-axis, coordinate pair, variable

[GROUPING]

Cooperative Pairs (CP), Whole Group (WG), Individual (I)
*For Cooperative Pairs (CP) activities, assign the roles of Partner A and Partner B to students. This allows each student to be responsible for designated tasks within the lesson.

[LEVELS OF TEACHER SUPPORT]

Modeling (M), Guided Practice (GP), Independent Practice (IP)

[MULTIPLE REPRESENTATIONS]

SOLVE, Graph, Verbal Description, Graphic Organizer, Pictorial Representation, Concrete Representation

[WARM-UP] (IP, I, WG) S40 (Answers are on T94.)

- Have students turn to S40 in their books to begin the Warm-Up. Students will work with unit rates. Monitor students to see if any of them need help during the Warm-Up. Have students complete the problems and then review the answers as a class. {Verbal Description}

Each lesson begins with a warm up activity which connects previously learned skills and concepts to the current topic. The warm-up sets the stage for new concepts being introduced in each lesson.

Multiple representations of the concept are incorporated in each lesson. These representations include concrete, pictorial, algebraic formula, verbal descriptions, graphs, graphic organizers and SOLVE – a problem solving paradigm. The multiple representations provide students with different learning styles and abilities the opportunity to acquire and apply knowledge of the lesson concept.

Mathematics Success – Grade 6

LESSON 5: Ratios and Tables

T85

[HOMEWORK]

Take time to go over the homework from the previous night.

[LESSON] [2 Days (1 day = 80 minutes) – M, GP, IP, WG, CP]

SOLVE Problem

(WG, GP) S41 (Answers on T95.)

Have students turn to S41 in their books. The first problem is a SOLVE problem. You are only going to complete the S step with students at this point. Tell students that during the lesson they will learn how to use tables to compare ratios and plot the pairs of values on the coordinate plane. They will use this knowledge to complete this SOLVE problem at the end of the lesson. {SOLVE, Verbal Description, Graphic Organizer}

Ratios and Tables – Concrete

(CP, WG, M, GP) S41 (Answers on T95.)

M, WG, CP, GP:

Distribute 8 two-color counters and 4 toothpicks to partners. Make sure students know their designation as Partner A or Partner B. {Verbal Description, Concrete Representation}

MODELING

Ratios and Tables – Concrete

Step 1: Student pairs will be using counters and toothpicks to explore ratios.

- Partner A, place 2 counters on the workspace.
- Partner B, place 1 toothpick below the counters.
- With your partner, determine the **ratio** of counters to toothpicks. (2:1)

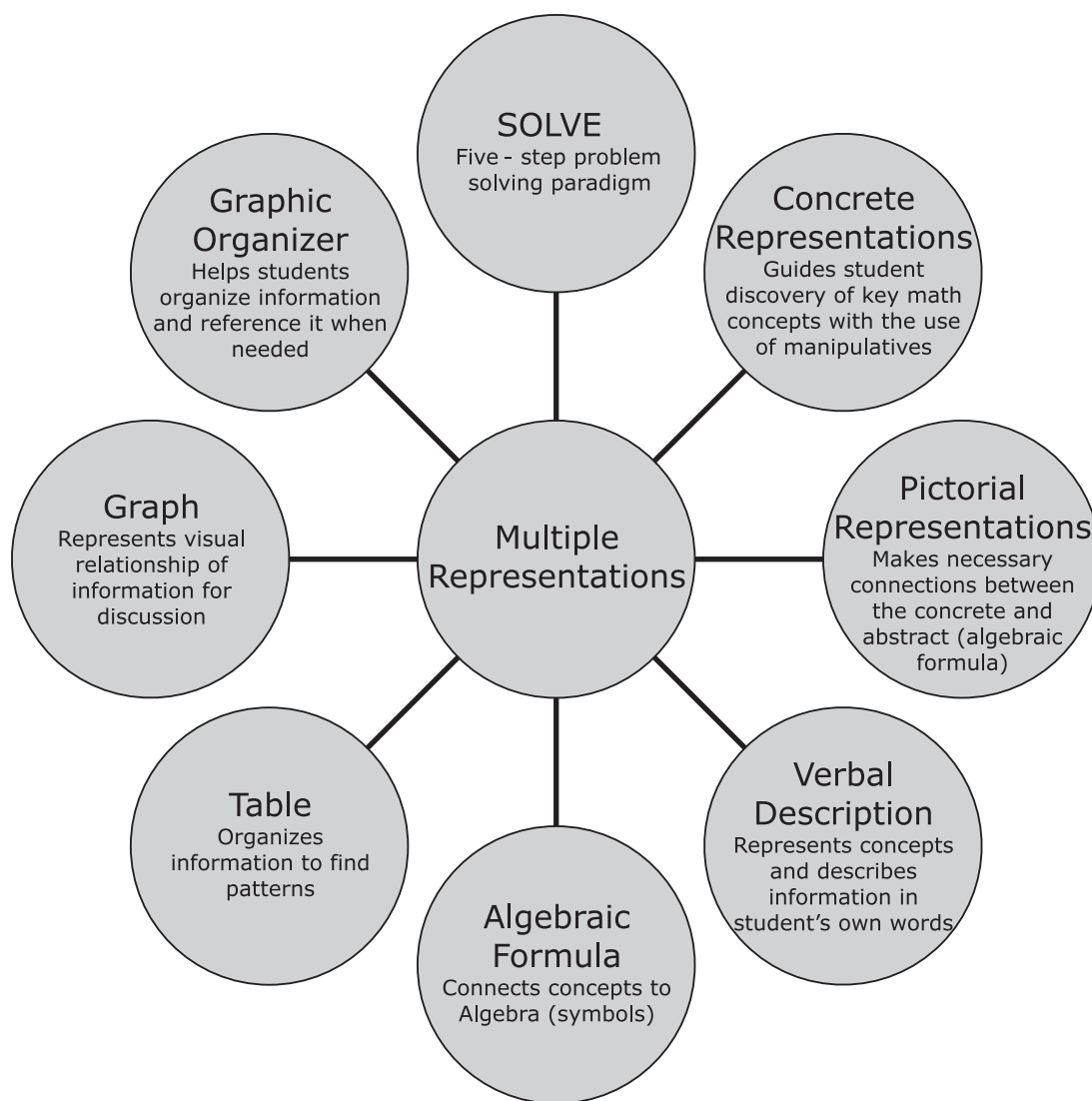


Step 2: Partner B, place 2 more counters on the workspace beside the first set.

- Partner A, place another toothpick under the new set of counters.
- If the set now contains 4 counters and 2 toothpicks, what is the ratio of the new set? (4:2)



Each lesson contains "modeling boxes" which contain step by step instructions on how to model each concept. Modeling steps are provided for concrete, pictorial and procedural steps of the lesson.



SOLVE

SOLVE is a 5-step problem-solving paradigm taught in the first three lessons of *The Key Elements to Mathematics Success* and throughout the program. SOLVE is an acronym which gives students step-by-step strategies for finding the solutions to word problems. The ultimate goal of teaching SOLVE is to provide students with a problem-solving strategy that can be applied to any concept they will encounter in mathematics. The steps are as follows:

Study the Problem

Underline the question.

This problem is asking me to find _____.

Organize the Facts

Identify the facts.

Eliminate the unnecessary facts.

List the necessary facts.

Line up a Plan

Write in words what your plan of action will be.

Choose an operation or operations.

Verify Your Plan with Action

Estimate your answer.

Carry out your plan.

Examine Your Results

Does your answer make sense? (Compare your answer to the question.)

Is your answer reasonable? (Compare your answer to the estimate.)

Is your answer accurate? (Check your work.)

Write your answer in a complete sentence.

Cooperative Pairs

Working in cooperative pairs is a vital part of *The Key Elements to Mathematics Success*. Cooperative learning allows students at various performance levels to work together, using a variety of learning activities, to improve their understanding. Communication about the learning process is an essential element of working in cooperative pairs. This dialogue enhances student learning and creates a sense of responsibility on the part of the students. Cooperative learning can be a catalyst in creating an atmosphere of achievement and a sense of accomplishment on the part of the students when the task is successfully completed.

Levels of Teacher Support

The lessons are carefully designed with opportunities for modeling, guided practice, and independent practice.

Modeling:

Each lesson contains “modeling boxes” which list step by step instructions on how to model each concept. Modeling steps are provided for concrete, pictorial, and procedural steps of the lesson.

Guided Practice:

Detailed instructions about how to structure guided practice are given in each lesson. Guided practice is led and closely monitored by the teacher. Students may work individually or in pairs during the guided practice.

Independent Practice:

Independent practice is provided through practice problems and homework in each lesson. Independent practice is structured to take place in the lesson following modeling and guided practice sections. Teachers can use the independent practice as a tool for informal formative assessment.

Word Problem Closure

At the end of the lesson, the SOLVE problem introduced at the beginning of the lesson is revisited. The student completes the additional steps of SOLVE, applying the lesson concept in a problem-solving situation.

Closure

Closure is a crucial part of every lesson and provides the teacher an opportunity to evaluate if the lesson objectives have been met. Teachers use the essential questions to reinforce the concept from the lesson, help organize the learning, and bring the lesson to its conclusion. A brief discussion of the essential questions will allow the teacher to informally assess student understanding of the material.

Homework

Homework is provided at the end of each lesson to give students ample opportunity to practice the lesson concept.

Quizzes

The lesson quizzes consist of 10 multiple-choice questions. These 10 questions cover the material taught in the lesson. The quizzes can also be used as homework, class work, review for a test, or as warm-ups.

Review Activities

Review activities are provided for many lessons. There are a variety of engaging activities including scavenger hunts and chain reactions. The activities are designed to provide multiple practice opportunities for the students in puzzle and game formats. The review activities incorporate the essential elements of cooperative learning and communication about the concepts.

The Key Elements to Mathematics Success – English Language Learner (ELL)

- **SOLVE** – A step-by-step procedure to attack word problems, dissecting the English language by identifying key words needed to solve the problem, and mapping out a plan with pictures and phrases to ultimately arrive at a well thought out answer. Steps can be written in students' native language while they are still becoming familiar with the process of SOLVE and gradually transitioning to English only. The steps of SOLVE have been modified slightly for use with ELL students. The modified steps provide additional support and involve verbal communication about the process, which is a vital link for the ELL student.

S - Underline the question. TPIAMTF (this problem is asking me to find) – **THE** _____. The students cannot just restate the question if they are made to start a sentence with *the*.

O - Circle the necessary facts. When writing out the necessary facts, be as brief as possible and teach the students abbreviations right away (\$, #, lb, cm, pkg. etc.).

L - Choose an operation and discuss a plan out loud. – +, •, ÷

$$\frac{\text{number of nuts}}{\text{total}} + \frac{\text{number of bolts}}{\text{total}} = \frac{\text{total}}{\text{total}} \cdot \frac{\text{number of boxes}}{\text{total}} = \text{answer}$$

V - Estimate the answer out loud. Then use the set-up created in the L step to carry out the plan.

E - Choose your answer.

- **Cooperative Pairs** – Working, questioning, and communicating with others regarding mathematics at all stages of learning. Activities are completed in an interactive setting, encouraging language and mathematical development. This includes the pairing of ELL students who speak the same language(s) with others who may be at varying stages of their English language development.
- **Modeling with Manipulatives** – Students participate in activities leading to the discovery of on-grade-level mathematical concepts. Through this process, they develop mathematical understanding while exploring ways of expressing their discoveries in English. Manipulative use is consistent throughout the program. The appearance of each manipulative, its meaning, as well as the language used to describe the actions of these manipulatives remain the same throughout.
- **Word Walls** – Updated through the use of KEMS lessons, new math vocabulary words (and their meaning/pictorial representation) are added for every new concept as it is discovered. The Word Wall is an interactive tool for all learners and provides an additional language resource for ELL students. Additionally an Operation Word Wall is created by each class and used for solving word problems throughout the year. As an added resource, words can be written in both English and the native language of the learner. Pictures/descriptions are also encouraged next to words wherever appropriate.
- **Video Clips of Each Lesson** – Available for use in class at www.KEMSmath.com, the video clips can help overcome the significant classroom language barriers ELL students face. These video clips, though in English, show key vocabulary words as a way of familiarizing students with appropriate vocabulary used to build a concept.

SOLVE Rubric

Solve	Considerations
<p>S Underline the question(s). (1 pt) Answered the question “What is the problem asking me to find?” (2 pt)</p> <p>Total of 3 points</p>	
<p>O All math facts are identified. (2 pts) Unnecessary facts are eliminated. (2 pts) Necessary facts are listed. (1 pt)</p> <p>Total of 5 points</p>	All facts get 2 points. Majority of facts get 1 point.
<p>L No numbers used. (1 pt) Written as a phrase or sentence. (2 pts) Explained in a logical, sequential order. (2 pts) Use of correct operation(s). (2 pts)</p> <p>Total of 7 points</p>	Logical, sequential order would include correct order of operations.
<p>V Make estimation. (2 pts) Number sentence matches plan from L. (2 pts) Computation is correct. (2 pts)</p> <p>Total of 6 points</p>	
<p>E Sentence matches S. (1 pt) Estimate was reasonable for the answer. (1 pt) Answer is correct. (1 pt) Written in a complete sentence. (1 pt)</p> <p>Total of 4 points</p>	Credit is given for writing the answer in a complete sentence, even if it is not the correct answer.

PROBLEM - SOLVING STORY FRAME

Characters _____

Setting _____

Action _____

Fact # 1 _____

Fact # 2 _____

Other Facts _____

Outcome (Main Question)

The Problem:

Problem Writing Rubric

		Points
Characters	1 point: Has a character 2 points: Has characters and uses them in problem	_____
Scene	1 point: Has a general scene 2 points: Has a scene in which the action takes place	_____
Action (Facts)	1 point: Has basic needed facts (min 2) 2 points: Includes more than 2 facts 3 points: Also includes unnecessary facts	_____
Outcome (Question)	1 point: Has very simple question 2 points: Has more complex 1 step question 3 points: Has a multi-step question	_____
Total (max 10)		_____

Problem Writing Rubric

		Points
Characters	1 point: Has a character 2 points: Has characters and uses them in problem	_____
Scene	1 point: Has a general scene 2 points: Has a scene in which the action takes place	_____
Action (Facts)	1 point: Has basic needed facts (min 2) 2 points: Includes more than 2 facts 3 points: Also includes unnecessary facts	_____
Outcome (Question)	1 point: Has very simple question 2 points: Has more complex 1 step question 3 points: Has a multi-step question	_____
Total (max 10)		_____

Planning for your Key Elements to Mathematics Success Class

Materials Needed: materials needed for both the teacher and the students including items from the manipulative kit, activities to prepare for pairs on cardstock, and/or pages to copy for class

Objective: (from teacher lesson notes)

Essential Questions: (from teacher lesson notes)

Words For Word Wall: (from teacher lesson notes)

Agenda: Consider the following when planning each component of the lesson.

Activity	Time Frame	Notes/Details
Environment	N/A	<ul style="list-style-type: none"> • Groupings used today - seating arrangements needed? • Word Wall updates for this lesson? • Agenda, Objective & Essential Questions posted? • Needed technology set up?
Warm-up	_____ minutes	<ul style="list-style-type: none"> • What are some great questions to ask during the warm-up? • How does this warm-up relate to the lesson?
Lesson	_____ minutes	<ul style="list-style-type: none"> • What is the goal for today's lesson? • What materials are needed? • Is there an activity from the activities section of my TE that I will use to support this lesson? • How does the flow of this lesson encourage student discovery of the concept being covered? What questions need to be asked to guide the discovery of today's concept? • How does this lesson fit in with my district pacing guide? • How will this concept be enhanced with the traditional textbook? • How will I instruct partners to work? • Pages being covered today... • Complete SOLVE Problem ASK: What is the question asking me to find? (beginning of class) <ul style="list-style-type: none"> What are my facts? What is my plan? What operation is needed? Estimate an answer. Work out the answer. Check over work, choose answer. • What graphic organizer/foldable will be made/referenced? • <u>If time permits...</u> <ul style="list-style-type: none"> • Will this section be used today? • If so, how? • How will I use the quiz for this lesson?
Closure	_____ minutes	<ul style="list-style-type: none"> • Essential Questions • Homework assigned

Notes:

Planning for your Key Elements to Mathematics Success Class

Materials Needed:

Objective:
Essential Questions:
Words For Word Wall:
Agenda:

Activity	Time Frame	Notes/Details
Environment	N/A	
Warm-up	_____ minutes	
Lesson	_____ minutes	
Closure	_____ minutes	

Notes: