

 PRINCETON <small>INDEPENDENT SCHOOL DISTRICT</small>		Campus: Harper/Lacy/Smith/Godwin/Lowe	
Author(s): Eaton, Elsbury, Warren, Stovall, Venters, Garlington		Date Created / Revised: July 30, 2020	
Six Weeks Period: 2nd		Grade Level & Course: 5 th grade math	
Timeline: 5 days		Unit Title: Number Theory	Week 1
Stated Objectives: TEK # and SE	<p style="text-align: center;">Problem Solving</p> <p>5.1A apply mathematics to problems arising in everyday life, society, and the workplace; 5.1B use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution; 5.1D communicate mathematical ideas, reasoning, including symbols, diagrams, graphs, and language as appropriate. 5.3(B) multiply with fluency a three-digit number by a two-digit number using the standard algorithm 5.3(C) solve with proficiency for quotients of up to a four-digit dividend by a two-digit divisor using strategies and the standard algorithm 5.3(K) add and subtract positive rational numbers fluently 5.4(B) represent and solve multi-step problems involving the four operations with whole numbers using equations with a letter standing for the unknown quantity 5.4(F) simplify numerical expressions that do not involve exponents, including up to two levels of grouping</p> <p style="text-align: center;">Skills</p> <p>5.4C Generate a numerical pattern when given a rule in the form $y=ax$ or $y=x+a$ and then graph 5.4D Recognize the difference between additive and multiplicative numerical patterns given in a table or graph</p> <p style="text-align: center;">Review</p> <p>5.2B Compare and order two decimals to the thousandths and represent comparisons using the symbols 5.2A represent the value of the digit in decimals through the thousandths using expanded notation and numerals. $<$, $>$ =</p> <p style="text-align: center;">Concept</p> <p>5.4A Identify prime and composite numbers ELPS http://www.teksresourcesystem.net/module/standards/Tools/Browse?StandardId=118094</p>		
See Instructional Focus Document (IFD) for TEK Specificity			
Key Understandings	Students will be able to distinguish between a prime and composite number. The student will be able to use the order of operations to simplify any mathematical expression.		
Misconceptions	Some students may simplify an expression or solve an equation from left to right rather than using the order of operations or grouping symbols to simplify. Some students may simplify an expression or solve an equation by performing all like operations first rather than using the grouping symbols to simplify.		

	<p>Some students may think the equal sign means “solve this” or “the answer is” rather than understanding that the equal sign represents a quantitative and balanced relationship. Some students may think that the equal sign can only be placed at the end of an equation rather than thinking it can be placed at the beginning or end as long as the equation is balanced (e.g., $7 + 3 + 5 = n$ and $n = 7 + 3 + 5$).</p> <p>Some students may think that the number 1 is prime rather than understanding that 1 is neither prime nor composite.</p> <p>Some students may think that all prime numbers are odd numbers and all composite numbers are even numbers rather than thinking of the number of factors involved.</p>	
<p>Key Vocabulary</p>	<p>Composite number – a whole number with more than two factors Counting (natural) numbers – the set of positive numbers that begins at one and increases by increments of one each time $\{1, 2, 3, \dots, n\}$ Dividend – the number that is being divided Divisor– the number the dividend is being divided by Equation – a mathematical statement composed of algebraic and/or numeric expressions set equal to each other Expression – a mathematical phrase, with no equal sign or comparison symbol, that may contain a number(s), an unknown(s), and/or an operator(s) Factor – a number multiplied by another number to find a product Grouping symbols – symbols to show a group of terms and/or expressions within a mathematical expression Order of operations – the rules of which calculations are performed first when simplifying an expression Prime number – a whole number greater than 1 with exactly two factors, 1 and the number itself Product – the total when two or more factors are multiplied Quotient – the size or measure of each group or the number of groups when the dividend is divided by the divisor Whole numbers – the set of counting (natural) numbers and zero $\{0, 1, 2, 3, \dots, n\}$</p>	
<p>Suggested Day 5E Model</p>	<p>Instructional Procedures (Engage, Explore, Explain, Extend/Elaborate, Evaluate)</p>	<p>Materials, Resources, Notes</p>
<p>Day 1- Engage/ Explore</p>	<p>Problem solving: Warm-Up (2 problem solving problems) Skills- discuss and understand additive patterns and functions tables Review-1review decimals Activity 1-introduction to number theory</p>	<p>From Sharon Wells Curriculum</p> <ul style="list-style-type: none"> ● Problems solving 1A 1B decimals ● Skills 2,3 ● Review 1 pgs. 1,2,3 ● Activity factor practice
<p>Day 2 – Explain/ Extend</p>	<p>Problem solving: Warm-Up (2 problem solving problems) Skills- discuss and understand additive patterns and functions tables Review 2-rounding, estimation, addition and subtraction</p>	<p>From Sharon Wells Curriculum</p> <ul style="list-style-type: none"> ● Problems solving 2A 2B decimals ● Skills 2 1-4

	Activity 2-common factors and greatest common factor	<ul style="list-style-type: none"> ● Review 2 ● Activity 2 number theory
Day 3 - Extend	<p>Problem solving: Warm-Up (2 problem solving problems)</p> <p>Skills- discuss and understand multiplicative patterns and functions tables</p> <p>Review 3-decimal number concepts practice</p> <p>Activity 3-prime and composite numbers</p>	<p>From Sharon Wells Curriculum</p> <ul style="list-style-type: none"> ● Problems solving 3A 3B decimals ● Skills 3 A-F ● Review 3 ● Activity 3A and 3B
Day 4 -Extend	<p>Problem solving: Warm-Up (2 problem solving problems)</p> <p>Skills- discuss and understand multiplicative patterns and functions tables</p> <p>Review 4-decimals/fractions practice</p> <p>Activity 4-number theory</p>	<ul style="list-style-type: none"> ● Problems solving 4A 4B decimals ● Skills 4 1-5 ● Review 4 ● Activity 4A, 4B
Day 5-Evaluation	<p>Go over Week 1 Test Taking Skills as a class.</p> <p>Students will complete Week 1 Assessment.</p>	<p>From Sharon Wells</p> <ul style="list-style-type: none"> ● Week 1 assessment

Accommodations for Special Populations

Accommodations for instruction will be provided as stated on each student's (IEP) Individual Education Plan for special education, 504, at risk, and ESL/Bilingual.