

The Asian International School Curriculum Mapping

Grade: 6 (Starter)

Subject: Mathematics

School Year: 2018-2019

Month	# of Days	Core Standard	Strand	Content	Skills	Activities	Assessments
Aug.	4	6.1 7.1	Numbers and Number Systems	<p>Chapter 1: Natural Numbers</p> <p>Unit 1: Sets and Set Notation</p> <ul style="list-style-type: none"> • Definitions <ul style="list-style-type: none"> ○ Set and set notations ○ Unit set ○ Finite and infinite sets ○ Order of sets ○ Union of sets ○ Intersection of sets ○ Complement of a set ○ Empty set ○ Subset 	<ul style="list-style-type: none"> • Understand the concept of sets • Understand and explain the meaning of unit and empty set, finite and infinite set • Perform basic set operations (Union, intersection, complement) • Calculate the order of sets • Identify and create subsets • Calculate the number of subsets of a finite set 	<ul style="list-style-type: none"> • Group Work • Mini-Research Projects • Computer Projects • Worksheets 	<ul style="list-style-type: none"> • Group Presentations • Individual Presentations • Worksheets

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Aug. - Sept.	3	5.2	Numbers and Number Systems	<p>Chapter 1: Natural Numbers</p> <p>Unit 2: The Natural Numbers</p> <ul style="list-style-type: none"> • Define <ul style="list-style-type: none"> ○ Even ○ Odd ○ Multiples • Addition and Multiplication of natural numbers • Subtraction and Division of natural numbers • Consecutive even numbers • Consecutive odd numbers 	<ul style="list-style-type: none"> • Perform operations without calculator • Understand and perform long division • Understand and use correct proper notations for division and multiplication <ul style="list-style-type: none"> ○ $a \cdot b$ or ab for multiplication ○ $\frac{a}{b}$ for division • Understand the concept and basic properties of even and odd numbers • Perform basic operations on consecutive numbers 	<ul style="list-style-type: none"> • Group Work • Mini-Research Projects • Computer Projects • Worksheets 	<ul style="list-style-type: none"> • Group Presentations • Individual Presentations • Worksheets

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Sept.	3	5.1	Numbers and Number Systems	Chapter 1: Natural Numbers Unit 3: Powers of Natural Numbers <ul style="list-style-type: none"> • Definition of powers(exponents) of natural numbers • Basic operations • Exponential growth problems 	<ul style="list-style-type: none"> • Simplify a^n to a natural number • Perform basic operations <ul style="list-style-type: none"> ○ $a^m \cdot a^n = a^{m+n}$ ○ $\frac{a^m}{a^n} = a^{m-n}$ ○ $(a^m)^n = a^{mn}$ • Understand the concept of exponential growth 	<ul style="list-style-type: none"> • Group Work • Mini-Research Projects • Computer Projects • Worksheets 	<ul style="list-style-type: none"> • Group Presentations • Individual Presentations • Worksheets
Sept. - Oct.	3	5.2	Numbers and Number Systems	Chapter 1: Natural Numbers Unit 4: Order of Operations <ul style="list-style-type: none"> • Brackets • Exponents • Multiplication or • Division • Addition or • Subtraction 	<ul style="list-style-type: none"> • Calculate the value of an expression without calculator • Identify operations at each step 	<ul style="list-style-type: none"> • Group Work • Mini-Research Projects • Computer Projects • Worksheets 	<ul style="list-style-type: none"> • Group Presentations • Individual Presentations • Worksheets

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Oct.	2		Numbers and Number Systems	Chapter 1: Natural Numbers Comprehensive Project <ul style="list-style-type: none"> Comprehensive group project intended to demonstrate the students comprehensive understanding and functional knowledge of the material from Chapter 1. 	<ul style="list-style-type: none"> Students will demonstrate their functional knowledge of the material from Chapter 1. 	<ul style="list-style-type: none"> Comprehensive Group Project Preferred for the students to do the project outside of class and present their results to the class. 	<ul style="list-style-type: none"> Presentation of the Group Project to the class.
	2		Numbers and Number Systems	Review for Midterm Exam	Chapter 1: Natural Numbers <ul style="list-style-type: none"> Unit 1: Sets and Set Notation Unit2: The Natural Numbers Unit 3: Powers of Natural Numbers Unit 4: Order of Operations 		
MIDTERM EXAM							

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Oct. - Nov.	3	5.2	Numbers and Number Systems	<p>Chapter 2: Integers</p> <p>Introduction to integers</p> <ul style="list-style-type: none"> • Addition of integers of the same sign • Addition of integers of the different sign • Subtraction of integers • Multiply integers of the same sign • Multiply integers of different signs • Divide integers of the same sign • Divide integers of different signs 	<ul style="list-style-type: none"> • Identify the rules in adding integers • Perform addition of integers without calculator • Perform subtraction of integers without calculator • Identify the rules in multiplying integers • Perform multiplication of integers without calculator • Perform division of integers without calculator 	<ul style="list-style-type: none"> • Group Work • Mini-Research Projects • Computer Projects • Worksheets 	<ul style="list-style-type: none"> • Group Presentations • Individual Presentations • Worksheets

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Nov.	3	5.1	Numbers and Number Systems	<p>Chapter 2: Integers</p> <p>Unit 2: Properties of Integers</p> <ul style="list-style-type: none"> • Commutative <ul style="list-style-type: none"> ○ $a + b = b + a$ ○ $a \cdot b = b \cdot a$ • Associative <ul style="list-style-type: none"> ○ $a + (b + c) = (a + b) + c$ ○ $a (b \cdot c) = (a \cdot b) c$ • Distributive <ul style="list-style-type: none"> ○ $a(b + c) = ab + ac$ • Additive Inverse <ul style="list-style-type: none"> ○ $a + (-a) = 0$ • Identity <ul style="list-style-type: none"> ○ $a + 0 = 0 + a = a$ ○ $a \cdot 1 = 1 \cdot a = a$ 	<ul style="list-style-type: none"> • Identify the property used in a given equation • Calculate an equation using the properties • Apply the properties of integers to some expressions 	<ul style="list-style-type: none"> • Group Work • Mini-Research Projects • Computer Projects • Worksheets 	<ul style="list-style-type: none"> • Group Presentations • Individual Presentations • Worksheets

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	3	5.2	Numbers and Number Systems	<p>Chapter 2: Integers</p> <p>Unit 3: Divisibility</p> <ul style="list-style-type: none"> • a is divisible by b if $\frac{a}{b}$ gives a remainder of zero • Evenly divisible properties • Divisibility rules for 2, 5 and 10 • divisibility rule for 3 and 9 • divisibility rule for 7 • divisibility rule for 6 	<ul style="list-style-type: none"> • Use of English notations • Without calculator <ul style="list-style-type: none"> ○ Identify when a sum is divisible by a given number ○ Identify when a number is divisible by 2, 5 and 10 ○ Identify when a number is divisible by 3 and 9 ○ Identify when a number is divisible by 7 ○ Identify when a number is divisible by 6 	<ul style="list-style-type: none"> • Group Work • Mini-Research Projects • Computer Projects • Worksheets 	<ul style="list-style-type: none"> • Group Presentations • Individual Presentations • Worksheets

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Nov. - Dec.	3	5.1	Numbers and Number Systems	<p>Chapter 2: Integers</p> <p>Unit 4: Primes and Composites</p> <ul style="list-style-type: none"> • Factorization • Definition of Prime Numbers (1 is not prime) • Definition of Composite numbers • Prime decomposition 	<ul style="list-style-type: none"> • Write a number into two factors • Identify if a given number is prime or composite • Identify 1 is neither prime nor composite • Find the prime numbers in a given range of number • Factor a number into prime numbers 	<ul style="list-style-type: none"> • Group Work • Mini-Research Projects • Computer Projects • Worksheets 	<ul style="list-style-type: none"> • Group Presentations • Individual Presentations • Worksheets
Dec.	2		Numbers and Number Systems	<p>Chapter 2: Integers</p> <p>Comprehensive Project</p> <p>Comprehensive group project intended to demonstrate the students comprehensive understanding and functional knowledge of the material from Chapter 2.</p>	<ul style="list-style-type: none"> • Students will demonstrate their functional knowledge of the material from Chapter 2. 	<ul style="list-style-type: none"> • Comprehensive Group Project • Preferred for the students to do the project outside of class and present their results to the class. 	<ul style="list-style-type: none"> • Presentation of the Group Project to the class.

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	2		Numbers and Number Systems	Review for Final Exam	Chapter 2: Integers <ul style="list-style-type: none"> Unit 1: Introduction to Integers Unit 2: Properties of Integers Unit 3: Divisibility Unit 4: Primes and Composites 		
FINAL EXAM							
Jan.	2	5.1	Numbers and Number Systems	Chapter 3: Fractions Unit 1: Introduction <ul style="list-style-type: none"> Definitions <ul style="list-style-type: none"> Numerator Denominator $\frac{a}{b}$ where a and b are integers, $b \neq 0$ 	<ul style="list-style-type: none"> Define numerator and denominator of a fraction Represent fraction algebraically and geometrically 	<ul style="list-style-type: none"> Group Work Mini-Research Projects Computer Projects Worksheets 	<ul style="list-style-type: none"> Group Presentations Individual Presentations Worksheets

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	3	5.2	Numbers and Number Systems	<p>Chapter 3: Fractions</p> <p>Unit 2: Properties of Fractions</p> <ul style="list-style-type: none"> • Equivalent fractions • Basic properties <ul style="list-style-type: none"> ○ $\frac{-1}{2} = \frac{2}{-4}$ (- can be in numerator or denominator) ○ $\frac{1}{2} \left(\frac{3}{3} \right) = \frac{3}{6}$ ○ $\frac{a}{b} = \frac{\frac{a}{n}}{\frac{b}{n}}$ or $\frac{a}{b} = \frac{a/n}{b/n}$ • Simplify fractions • Compare fractions 	<ul style="list-style-type: none"> • Determine when two fractions are equivalent • Given a fraction, find other equivalent fractions • Reduce fractions to their simplest form • Convert fractions to common denominator • Compare fractions using $>, <, =$ • Arrange fractions in ascending or descending order 	<ul style="list-style-type: none"> • Group Work • Mini-Research Projects • Computer Projects • Worksheets 	<ul style="list-style-type: none"> • Group Presentations • Individual Presentations • Worksheets

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Jan. - Feb.	4	5.2	Numbers and Number Systems	<p>Chapter 3: Fractions</p> <p>Unit 3: Add and Subtract Fractions</p> <ul style="list-style-type: none"> • Add fractions with the same denominators • Add fractions with different denominators • Subtract fractions with the same denominators • Subtract fractions with different denominators • Commutative, Associative, zero property of fractions 	<ul style="list-style-type: none"> • Identify common denominator of the given fractions • Add fractions with the same denominators • Add fractions with different denominators • Subtract fractions with the same denominators • Subtract fractions with different denominators • Apply commutative, associative, and zero property in fractions 	<ul style="list-style-type: none"> • Group Work • Mini-Research Projects • Computer Projects • Worksheets 	<ul style="list-style-type: none"> • Group Presentations • Individual Presentations • Worksheets

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Feb.	3	5.2	Numbers and Number Systems	<p>Chapter 3: Fractions</p> <p>Unit 4: Multiply and Divide Fractions</p> <ul style="list-style-type: none"> • Multiply fractions • Commutative, Associative, distributive and identity property of fractions • Divide fractions <ul style="list-style-type: none"> ○ $\frac{a}{b} \times \frac{c}{d} = \frac{a}{b} \left(\frac{c}{d} \right)$ ○ $\frac{a}{b} \times \frac{c}{c} = \frac{ac}{b}$ ○ $\frac{a}{c} = \frac{a}{bc}$ 	<ul style="list-style-type: none"> • Multiply fractions without using calculator • Apply commutative, associative, and zero property of multiplication in fractions • Divide fractions using basic rules 	<ul style="list-style-type: none"> • Group Work • Mini-Research Projects • Computer Projects • Worksheets 	<ul style="list-style-type: none"> • Group Presentations • Individual Presentations • Worksheets
	2		Numbers and Number Systems	<p>Chapter 3: Fractions</p> <p>Comprehensive Project</p> <p>Comprehensive group project intended to demonstrate the students comprehensive understanding and functional knowledge of the material from Chapter 3.</p>	<ul style="list-style-type: none"> • Students will demonstrate their functional knowledge of the material from Chapter 3. 	<ul style="list-style-type: none"> • Comprehensive Group Project • Preferred for the students to do the project outside of class and present their results to the class. 	<ul style="list-style-type: none"> • Presentation of the Group Project to the class.

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Mar.	2		Numbers and Number Systems	Review for Midterm Exam	Chapter 3: Fractions <ul style="list-style-type: none"> • Unit 1: Introduction 		
MIDTERM EXAM							

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Mar.	2	8.1 8.4	Geometry	<p>Chapter 4: Lines and Angles</p> <p>Unit 1: Points, Lines, and line segments</p> <ul style="list-style-type: none"> • Terminologies <ul style="list-style-type: none"> ○ Point ○ Line • Collinear and non-collinear • Lines passing through two points • Rays, line segments and its notations • Length of a line segment • Point between two other points • Midpoint of a line segment 	<ul style="list-style-type: none"> • Define point, line, collinear, and non-collinear points • Identify and name points • Determine when points are collinear • Construct a line passing through two points • Name rays and line segments • Measure the length of line segment using measuring tools • Identify which point lies between other two points • Calculate the midpoint of a line segment 	<ul style="list-style-type: none"> • Group Work • Mini-Research Projects • Computer Projects • Worksheets 	<ul style="list-style-type: none"> • Group Presentations • Individual Presentations • Worksheets

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Mar. - Apr.	3	8.1	Geometry	<p>Chapter 4: Lines and Angles</p> <p>Unit 2: Angles and Angle Notations</p> <ul style="list-style-type: none"> • Half-plane • Ray lies between two rays • Angles <ul style="list-style-type: none"> ○ Naming angles ○ Acute, right, obtuse, straight and reflex angle ○ Measuring Angles 	<ul style="list-style-type: none"> • Name a half-plane • Give examples of half-planes • Construct a ray between two other rays • Name angles (θ) • Identify acute, right, obtuse straight and reflex angles • Measure angles with a protractor 	<ul style="list-style-type: none"> • Group Work • Mini-Research Projects • Computer Projects • Worksheets 	<ul style="list-style-type: none"> • Group Presentations • Individual Presentations • Worksheets

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Apr.	3	8.2 8.4	Geometry	Chapter 4: Lines and Angles Unit 3: Constructing angles <ul style="list-style-type: none"> • Adjacent angles • Complementary angles • Supplementary angles • Linear pair (both adjacent and supplementary angles) • Draw angle with a given measure • Bisect an angle with a <ul style="list-style-type: none"> ○ Protractor ○ Compass 	<ul style="list-style-type: none"> • Identify adjacent, complementary and supplementary angles • Name adjacent, complementary and supplementary angles • Construct an angle given a degree measure • Construct the bisector of a given angle using a protractor and compass 	<ul style="list-style-type: none"> • Group Work • Mini-Research Projects • Computer Projects • Worksheets 	<ul style="list-style-type: none"> • Group Presentations • Individual Presentations • Worksheets
	2		Geometry	Chapter 4: Lines and Angles Comprehensive Project Comprehensive group project intended to demonstrate the students comprehensive understanding and functional knowledge of the material from Chapter 4.	<ul style="list-style-type: none"> • Students will demonstrate their functional knowledge of the material from Chapter 4. 	<ul style="list-style-type: none"> • Comprehensive Group Project • Preferred for the students to do the project outside of class and present their results to the class. 	<ul style="list-style-type: none"> • Presentation of the Group Project to the class.

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	2		Geometry	Review for Final Exam	Chapter 4: Lines and Angles <ul style="list-style-type: none"> • Unit 1: Points, Lines, and line segments • Unit 2: Angles and Angle Notations • Unit 3: Constructing angles 		
FINAL EXAM							