Common Core Standards Curriculum Map - Mathematics/Math Skills
QUARTER 1-2

Unit 1: ***Probability***

Common Core Standards and Content to Be Learned	***Essential Questions***	***Instructional Strategies***	***Assessment*** Formative Assessments (FA) Interim Assessments (IA) Summative Assessments (SA)
CCSS Standards for this unit: CCSS.MATH.CONTENT.7.SP.C.8 Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation. CCSS.MATH.CONTENT.7.SP.C.8.A Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs. CCSS.MATH.CONTENT.7.SP.C.8.B Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. CCSS.MATH.CONTENT.7.SP.C.8.C	***Essential Question(s):*** ♦ How are probabilities of independent events compared to their joint probability? ♦ How does conditional probability apply to real--life events? ♦ How are two--way frequency tables used to model real--life data?	• Guided Notes • Group Work • Manipulatives (tactile and web-based) • Exploratory learning • Graphic Organizers • Edit and Assess • Peardeck • Deltamath • Desmos • Geogebra • Carousel Activities • Edulastic • Quizizz • Kahoot • Edpuzzle • Blooket • CK-12 • Illustrative Math • Project based learning • Center-based learning	***Assessment Task(s):*** ♦ Common Tasks ♦ Pre-Assessments ♦ Tests ♦ Class Discussion ♦ Web Based Assessments ***Rubric(s) for Assessment:*** ♦ See attached rubrics

Design and use a simulation to generate frequencies for compound events. **Content to be learned:** ***Content Topics:*** ♦ Probability Language ♦ Converting Percents/DecimalsFractions ♦ Simple Probability ♦ Probability with and/or ♦ Interpret 2 way tables ♦ Percents 2 way tables ♦ Probability from a 2 way table ♦ Conditional Probability from table ♦ Probability from Verbal Description ***Lesson Objective(s):*** • explain the concept of probability • calculate the probability of simple events • calculate the probability of compound events • calculate the probability of			

complementary events • analyze a two way frequency table to calculate probability			

Resources:
Instructional Resources and Equipment:

- **Computers**
- **Rulers**
- **Calculators**
- **Assessment Booklets**
- **Web based performance assessments**

Common Core Standards Curriculum Map - Mathematics/Math Skills
QUARTER 1-2

Unit 2: ***Algebra***

Common Core Standards and Content to Be Learned	***Essential Questions***	***Instructional Strategies***	***Assessment*** Formative Assessments (FA) Interim Assessments (IA) Summative Assessments (SA)
CCSS Standards for this unit: ***A-SSE.1,2 - Interpret the structure of expressions*** ***A-SSE.3a,b,c - Write expressions in equivalent forms to solve problems*** ***A-APR.1 – Perform Arithmetic operations on polynomials*** ***A-APR.3 – Understand the relationship between zeros and factors of polynomials*** ***A – CED.1,2,3,4 – Create equations that describe numbers or relationships*** ***A – REI.1- Understanding solving equations as a process of reasoning and explain the reasoning*** ***A-REI.3,4a,b - Solve equations and inequalities in one variable*** ***A-REI.5,6 – Solve systems of equations*** ***A – REI.10,11,12 – Represent and solve equations***	***Essential Question(s):*** ♦ ***What are the possible number of solutions to an equation and to an inequality?*** ♦ ***How are variables used to create meaning in algebraic expressions and equations?*** ♦ ***How can you use linear equations and inequalities to model a real-world situation?***	• Guided Notes • Group Work • Manipulatives (tactile and web-based) • Exploratory learning • Graphic Organizers • Edit and Assess • Peardeck • Deltamath • Desmos • Geogebra • Carousel Activities • Edulastic • Quizizz • Kahoot • Edpuzzle • Blooket • CK-12 • Illustrative Math • Project based learning • Center-based learning	***Assessment Task(s):*** ♦ Common Tasks ♦ Pre-Assessments ♦ Tests ♦ Class Discussion ♦ Web Based Assessments ***Rubric(s) for Assessment:*** ♦ See attached rubrics

and inequalities graphically **Content to be learned:** ***Content Topics:*** ♦ ***Simplification of Algebraic Expressions*** ♦ ***Substitution of Algebraic Expressions*** ♦ ***Graphing Equations using multiple methods*** ♦ ***Positive/Negative Exponents*** ♦ ***Properties of Exponents*** ♦ ***Solving systems of equations and inequalities*** ♦ ***Solving Multi-Step Equations*** ♦ ***Patterns*** ♦ ***Counting Techniques*** ***Lesson Objective(s):*** ♦ ***Identify, solve, graph, and analyze functions*** ♦ ***Simplify expressions*** ♦ ***Evaluate expressions*** ♦ ***Translate problem situations into algebraic expressions***			

♦ *Solve problems involving algebraic reasoning* ♦ *Translate problem situations into equations* ♦ *Analyze the behavior of linear and nonlinear functions* •			

Resources:
Instructional Resources and Equipment:

- **Computers**
- **Rulers**
- **Calculators**
- **Assessment Booklets**
- **Web based performance assessments**

Common Core Standards Curriculum Map - Math Skills
QUARTER 3

Unit 3: *Functions*

Common Core Standards and Content to Be Learned	*Essential Questions*	*Instructional Strategies*	***Assessment*** Formative Assessments (FA) Interim Assessments (IA) Summative Assessments (SA)
CCSS Standards for this unit: ***F – IF.1,2,3 – Understand the concept of a function and use function notation*** ***F – IF.4,5,6 – Interpret functions that arise in Applications in terms of the context*** ***F – IF.7a,b,c, IF.8a, 9 - Analyze functions using different Representations*** ***F –BF.1a,b - Build a function that models a relationship between two quantiies*** ***F – BF.3 – Build new functions from existing Functions*** ***F- LE.1,2,3 – Construct and compare linear, quadratic, and exponential models and solve problems*** ***F – LE.5 - Interpret expressions for functions in terms of the situation they model*** **Content to be learned:** ***Content Topics:***	***Essential Question(s):*** • ***How do you determine the domain and the range of a function and in what situations could there be restrictions on the domain and range?*** • ***What are the key features of a function and how could you use them to sketch a graph of the function?*** • ***In what situations would it be appropriate to use a linear model verses an exponential model?***	• Guided Notes • Group Work • Manipulatives (tactile and web-based) • Exploratory learning • Graphic Organizers • Edit and Assess • Peardeck • Deltamath • Desmos • Geogebra • Carousel Activities • Edulastic • Quizizz • Kahoot • Edpuzzle • Blooket • CK-12 • Illustrative Math • Project based learning • Center-based learning	***Assessment Task(s):*** ♦ Common Tasks ♦ Pre-Assessments ♦ Tests ♦ Class Discussion ♦ Web Based Assessments ***Rubric(s) for Assessment:*** ♦ See attached rubrics

♦ *Simplification of Algebraic Expressions* ♦ *Graphing Equations using multiple methods* ♦ *Positive/Negative Exponents* ♦ *Properties of Exponents* ***Lesson Objective(s):*** ♦ ***Understand the concept of a function and use function notation*** ♦ ***Interpret functions that arise in applications in terms of context*** ♦ ***Analyze functions using different representations***			

Resources:

Instructional Resources and Equipment:

- **Compasses**
- **Computers**
- **Rulers**
- **Calculators**
- **Assessment Booklets**
- **Web based performance assessments**

Unit 4: *Geometry*

Common Core Standards and Content to Be Learned	***Essential Questions***	***Instructional Strategies***	***Assessment*** Formative Assessments (FA) Interim Assessments (IA) Summative Assessments (SA)
CCSS Standards for this unit: **G-CO 1, 2, 3, 4, 5** **Experiment with transformations in the plane** **G-CO 6, 7, 8** **Understand congruence in terms of rigid motions** **G-SRT 1, 2, 3** **Understand similarity in terms of similarity transformations** **G-GMD 1, 2, 3** **Explain volume formulas and use them to solve problems** **G-GMD 4** **Visualize relationships between two-dimensional and three-dimensional objects** **G-MG 1, 2, 3** **Apply geometric concepts in modeling situations** **Content to be learned:** ***Content Topics:*** ♦ ***Perimeter*** ♦ ***Area*** ♦ ***Properties*** ♦ ***Circumference***	***Essential Question(s):*** · ***Using a mathematical model, can one utilize and apply basic geometry and measurement properties to draw logical conclusions.*** · ***How can one draw a logical conclusion using basic geometry and measurement properties?*** · ***How does the use of the language of geometry help you to understand more complex geometric ideas?***	• Guided Notes • Group Work • Manipulatives (tactile and web-based) • Exploratory learning • Graphic Organizers • Edit and Assess • Peardeck • Deltamath • Desmos • Geogebra • Carousel Activities • Edulastic • Quizizz • Kahoot • Edpuzzle • Blooket • CK-12 • Illustrative Math • Project based learning • Center-based learning	***Assessment Task(s):*** ♦ Common Tasks ♦ Pre-Assessments ♦ Tests ♦ Class Discussion ♦ Web Based Assessments ***Rubric(s) for Assessment:*** ♦ See attached rubrics

♦ *Lateral Area* ♦ *Surface Area* ♦ *Volume* ♦ *Isosceles* ♦ *Equilateral* ♦ *Right* ♦ *Pythagorean Theorem* ♦ *Similarity* ♦ *Transformations* ♦ *Parallel Lines* ♦ *Perpendicular lines* *Lesson Objective(s):* ♦ *Experiment with transformations in the plane* ♦ *Understand congruence in terms of rigid motions* ♦ *Understand similarity in terms of similarity transformations* ♦ *Explain volume formulas and use them to solve problems* ♦ *Visualize relationships between two-dimensional and three-dimensional objects* ♦ *Apply geometric*			

concepts in modeling situations			

Resources:
Instructional Resources and Equipment:

- **Computers**
- **Rulers**
- **Calculators**
- **Assessment Booklets**
- **Web based performance assessments**