Spring Board Algebra 2 Textbook to Curriculum Map Alignment for CC Algebra 2 Algebra 2 – UNIT 1 Model and Beasen with Equations and Empressions

Model and Reason with Equations and Expressions

Critical Area: Students use reasoning to analyze equations/ inequalities and develop strategies for solving them. Through reasoning students develop fluency writing, interpreting, analyzing and translating between various forms of linear equations and inequalities. By exploring a question about the world around them (mathematical modeling) and attempting to answer the question students expand the scope of algebraic operations to solve a wide variety of linear and quadratic real world problems. Students explain why the x-coordinates of the points where the graphs y = f(x) and y = g(x) intersects and explore cases involving polynomial, rational, absolute value, exponential, and logarithmic functions.

CLUSTER	COMMON CORE STATE STANDARDS	Spring Board MATH	OTHER RESOURCES
(m)Create equations that describe numbers or relationships.	Algebra – Creating Equations A-CED.1. Create equations and inequalities in one variable including ones with absolute value and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions. CA ★	1-1: One Variable Equations 1-2: Two-Variable Equations 1-3: Absolute Value Equations and Inequalities 24-1: Exponential Equations 24-2: Solving Equations by Using Logarithms 24-3: Logarithmic Equations 24-4: Exponential and Logarithmic Inequalities	 Buying a Car: A-CED.1 Basketball: A-CED.1 & A-REI.2 How Much Folate: A-CED.2 Dimes and Quarters: A-CED.2 & A-CED.3 Growing Coffee: A-CED.3 Bernado and Sylvia Play a Game: A-CED.3 Clea on an Escalator: A-CED.2 Equations and Formulas: A-CED.4
	A-CED.2. Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales. ★ A-CED.3. Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or non-viable options in a modeling context.	2-1: Graphing Two-Variable Equations 2-2: Graphing Systems of Inequalities 3-1: Solving Systems of Two Equations in Two Variables 3-2: Solving Systems of three Equations in Three Variables 3-3: Matrix Operations 3-4: Solving Matrix Equations	Mars Task: Optimization Problems: Boomerangs

	A-CED.4. Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. ★	10-1: Parabolas and Quadratic Equations 10-2:Writing a Quadratic Function Given Three Points 10-3: Quadratic Regression	ent for Go rigestu 2
(m)Understand solving equations as a process of reasoning and explain the reasoning.	Algebra – Reasoning with Equations and Inequalities A-REI.2. Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.	25-1: Square Root Functions 25-2: Solving Square Root Equations 25-3: Cube Root Functions 25-4: Solving Cube Root Equations 30-1: Solving Rational Equations 30-2: Solving Rational Inequalities	Radical Equations: A-REI.2 Mars Task: Building and Solving Equations 2 Solving Linear Equations in Two Variables Sorting Equations and Identities Building and Solving Complex Equations
(m)Solve equations and inequalities in one variable.	A-REI.3.1. Solve one-variable equations and inequalities involving absolute value, graphing the solutions and interpreting them in context. CA		Mars Task: Representing Inequalities Graphically
(m)Represent and solve equations and inequalities graphically.	A-REI.11. Explain why the <i>x</i> -coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions. \star	13-1: Solving a System Graphically 13-2: Solving a System Algebraically 26-1: Square Root Functions and Regressions 26-2: Square Root and Quadratic Functions 26-3: Cube Root and Cubic Functions	• Illustrative Mathematics Growth Rate: Given growth charts for the heights of girls and boys, students will use slope to approximate rates of change in the height of boys and girls at different ages. Students will use these approximations to plot graphs of the rate of change of height vs. age for boys and girls. Introduction to Polynomials - College Fund: A-REI.11

Spring Board Algebra 2 Textbook to Curriculum Map Alignment for CC Algebra 2 Algebra 2 – UNIT 2

Structure in Expressions and Arithmetic with Polynomials

Critical Area: Students connect the polynomial operations with the background knowledge of the algorithms found in multi-digit integer operations. Students realize that the operations on rational expressions (the arithmetic of rational expressions) are governed by the same rules as the arithmetic of rational numbers. Students analyze the structure in expressions and write them in equivalent forms. By modeling students expand the scope of algebraic operations to solve a wide variety of polynomial equations and real world problems. Students identify zeros of polynomials, including complex zeros of quadratic polynomials, and make connections between zeros of polynomials and solutions of polynomial equations. The role of factoring, as both an aid to the algebra and to the graphing of polynomials, is explored.

CLUSTER	COMMON CORE STATE STANDARDS	Spring Board MATH	OTHER RESOURCES
	Algebra – Seeing Structure in Expressions		Mathematics Assessment Project
(m)Interpret the	A-SSE.1. Interpret expressions that represent a quantity in	7-1: Analyzing a Quadratic	Generating Polynomials from Patterns
structure of	terms of its context. ★	Function	Comparing Investments
expressions.	a. Interpret parts of an expression, such as terms,	7-2: Factoring Quadratic	Solving Linear Equations in Two
	factors, and coefficients. ★	Expressions	<u>Variables</u>
	b. Interpret complicated expressions by viewing one or	7-3: Solving Quadratic	Interpreting Algebraic Expressions
	more of their parts as a single entity. For example,	Equations by Factoring	Illustrative Mathematics
	interpret $P(1+r)^n$ as the product of P and a factor not	7-4: More Uses for Factors	• <u>Animal Populations: A-SSE.1, 2</u>
	depending on P. ★	14-1: Polynomials	• Sum of Even and Odd: A-SSE.2
		14-2: Some Attributes of	
(m)Write		Polynomial Functions	• Seeing Dots: A-SSE.1, 2
expressions in		14-3: Even and Odd Functions	Zeroes and factorization of a non-
equivalent forms		27-1: Formulating and	
to solve problems.	A-SSE.2. Use the structure of an expression to identify	Graphing a Rational Function	polynomial function: A-SSE.2
	ways to rewrite it.	27-2: Formulating and	• <u>Trina's Triangles: A-SSE.4</u>
		Graphing More Rational	
	A-SSE.4. Derive the formula for the sum of a finite	Functions	
	geometric series (when the common ratio is not 1), and	27-3: Identifying Asymptotes	Illuminations: NCTM
	use the formula to solve problems. For example, calculate		Light it Up!
	mortgage payments. ★	17-1:Algebraic Methods	
		17-2: The Fundamental	
		Theorem of Algebra	
		19-1: Arithmetic Sequences	
		19-2: Arithmetic Series	
		19-3: Sigma Notation	
		20-1: Geometric Sequences	

	Spring Doard Algebra 2 Textbook to Cur	20-2: Geometric Series	6 ***
		20-3: Convergence of Series	
(m)Perform arithmetic operations on polynomials.	Algebra – Arithmetic with Polynomials and Rational Expressions A-APR.1. Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.	15-1:Adding and Subtracting Polynomials 15-2: Multiplying Polynomials 15-3: Dividing Polynomials	Illuminations NCTM Polynomial Puzzler Overhead
Understand the relationship between zeros and factors of polynomials.	A-APR.2. Know and apply the Remainder Theorem: For a polynomial $p(x)$ and a number a , the remainder on division by $x - a$ is $p(a)$, so $p(a) = 0$ if and only if $(x - a)$ is a factor of $p(x)$. A-APR.3. Identify zeros of polynomials when suitable factorizations are available, and use the zeros to construct a rough graph of the function defined by the polynomial.	18-1: Graphing Polynomial Functions 18-2: Finding the Roots of a Polynomial Function 18-3: Comparing Polynomial Functions	Zeroes and factorization of a quadratic polynomial I: A-APR.2 Zeroes and factorization of a quadratic polynomial II: A-APR.2
Use polynomial identities to solve problems.	A-APR.4. Prove polynomial identities and use them to describe numerical relationships. For example, the polynomial identity $(x^2 + y^2)^2 = (x^2 - y^2)^2 + (2xy)^2$ can be used to generate Pythagorean triples.	33-1: The Pythagorean Identity 33-2: Other Trigonometric Identities	
	A-APR.5. Know and apply the Binomial Theorem for the expansion of $(x + y)^n$ in powers of x and y for a positive integer n , where x and y are any numbers, with coefficients determined for example by Pascal's Triangle.(+)	16-1: Introduction to Pascal's Triangle 16-2: Applying the Binomial Theorem	
Rewrite rational expressions.	A-APR.6. Rewrite simple rational expressions in different forms; write $a(x)/b(x)$ in the form $q(x) + r(x)/b(x)$, where $a(x)$, $b(x)$, $q(x)$, and $r(x)$ are polynomials with the degree of $r(x)$ less than the degree of $b(x)$, using inspection, long division, or, for the more complicated examples, a computer algebra system. (+) A-APR.7. Understand that rational expressions form a system analogous to the rational numbers, closed under	15-1:Adding and Subtracting Polynomials 15-2: Multiplying Polynomials 15-3: Dividing Polynomials 29-1: Multiplying and Dividing Rational Expressions 29-2: Adding and Subtracting Rational Expressions	

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a	addition, subtraction, multiplication, and division by a	29-3: Finding Horizontal and	
n	nonzero rational expression; add, subtract, multiply, and	Vertical Asymptotes	
d	divide rational expressions.	29-4: Graphing Rational	
		Functions	

Spring Board Algebra 2 Textbook to Curriculum Map Alignment for CC Algebra 2 Algebra 2 – UNIT 3 FUNCTIONS

Critical Area: Instructional time should focus on relating arithmetic of rational expressions to arithmetic of rational numbers. Students identify zeros of polynomials, including complex zeros of quadratic polynomials, and make connections between zeros of polynomials and solutions of polynomial equations. Students will expand understandings of functions and graphing to include trigonometric functions. Building on their previous work with functions and on their work with trigonometric ratios and circles in the Geometry course, students now use the coordinate plane to extend trigonometry to model periodic phenomena. Students synthesize and generalize what they have learned about a variety of function families. They extend their work with exponential functions to include solving exponential equations with logarithms. They explore the effects of transformations on graphs of diverse functions, including functions arising in an application, in order to abstract the general principle that transformations on a graph always have the same effect regardless of the type of the underlying function.

CLUSTER	COMMON CORE STATE STANDARDS	Spring Board MATH	OTHER RESOURCES
(m) Interpreting functions	Functions – Interpreting Functions		Illustrative Mathematics
that arise in applications	F-IF.4 . For a function that models a relationship	28-1: Inverse Variation and	Running Time: F-IF.7c
in terms of the context	between two quantities, interpret key features of	Combined Variation	Graphs of Power Functions: F-IF.7c
	graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal	28-2: Transformations of the	Exponentials and Logarithms II
	description of the relationship. Key features	Parent Rational Function	
	include: intercepts; intervals where the function is		
	increasing, decreasing, positive, or negative;		
	relative maximums and minimums; symmetries;		
	end behavior; and periodicity. ★		Mathematics Assessment Program
	F-IF.5 Relate the domain of a function to its graph	21-1: Exploring Exponential	<u>Interpreting Functions 1</u>
	and, where applicable, to the quantitative	Patterns	Sorting Functions
	relationship it describes. *	21-2: Exponential Functions	Skeleton Tower
	F-IF.6 Calculate and interpret the average rate of change of a function (presented symbolically or as	21-3: Properties of Logarithms	Best Buy Tickets
	a table) over a specified interval. Estimate the rate	21-4: More Properties of	
	of change from a graph. ★	Logarithms	Mathematics Vision Project
		22-1: Exponential Data	Polynomial Functions
		22-2: The Common Logarithm	
(m) Analyze Functions		Function	
Using Different		22-3: Properties of Logarithms	
Representations		22-4: More Properties of	
		Logarithms	
		27-1: Formulating and Graphing a	
		Rational Function	
		27-2: Formulating and Graphing	

	x 5 5	More Rational Functions 27-3: Identifying Asymptotes	
	F-IF.7 Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. * b. Graph square root, cube root, and piecewise-defined functions, including step functions and absolute value functions. * c. Graph polynomial functions, identifying zeros when suitable factorizations are available, and showing end behavior. * e. Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude. *	4-1: Introduction to Piecewise-Defined Functions 4-2: Step Functions and Absolute Value Functions 4-3: Transforming the Absolute Value Parent Function 34-1: Periodic Functions 34-2: The Sine Function 34-3: The Cosine Function 34-5: Translating Trigonometric Functions	
	F-IF.8 Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function. F-IF.9 Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions).	11-1: Translations of Parabolas 11-2: Shrinking, Stretching, and Reflecting Parabolas 11-3: Vertex Form	
(m) Build a function that	Functions – Building Functions	5-1: Operations with Functions	Inside Mathematics
models a relationship	F-BF.1 Write a function that describes a relationship between two quantities.★	5-2: Function Composition	Measuring Mammals- F-BF.4
between two quantities	b. Combine standard function types using	5-3: More Function Composition 23-1: Logarithms in Other Bases	Illustrative Mathematics Exponentials and Logarithms I: F-BF.4
	arithmetic operations. For example, build a function that models the temperature of a cooling	23-2: Properties of Logarithms	
	body by adding a constant function to a decaying	and the Change of Base Formula	
	exponential, and relate these functions to the	23-3: Graphs of Logarithmic Functions	
	model.★	runcuons	Mars Task:
(s) Build new functions	F-BF.3 Identify the effect on the graph of replacing	4-1: Introduction to Piecewise-	Table Tiles

from existing functions	f(x) by $f(x) + k$, $kf(x)$, $f(kx)$, and $f(x + k)$ for specific	Defined Functions	Representing Polynomials Graphically
	values of k (both positive and negative); find the	4-2: Step Functions and Absolute	representing resymmetric
	value of k given the graphs. Experiment with cases	Value Functions	
	and illustrate an explanation of the effects on the	4-3: Transforming the Absolute	
	graph using technology. <i>Include recognizing even</i>	Value Parent Function	
	and odd functions from their graphs and algebraic	11-1: Translations of Parabolas	
	expressions for them.	11-2: Shrinking, Stretching, and	
	·	Reflecting Parabolas	Mathematics Vision Project:
		11-3: Vertex Form	Functions and Their Inverses
			Logarithmic Functions
	F-BF.4 Find inverse functions.	12-1: Key Features of Quadratic	<u> </u>
	a. Solve an equation of the form $f(x) = c$ for a	Functions	
	simple function f that has an inverse and write an	12-2: More Key Features of	
	expression for the inverse. For example, $f(x) = 2x^3$	Quadratic Functions	
	or $f(x) = (x + 1)/(x - 1)$ for $x \ne 1$	12-3: Graphing Quadratic	
		Functions	
		12-4: The Discriminant	
		12-5: Graphing Quadratic	
		Inequalities	
		6-1: Finding Inverse Functions	
		6-2: Graphs of Inverse Functions	
(s) Construct and	Functions - Linear, Quadratic, and Exponential		Illustrative Mathematics
compare linear,	Models	21-1: Exploring Exponential	Bacteria Populations: F-LE.4
quadratic, and	F-LE.4 For exponential models, express as a	Patterns	Illuminations:
exponential models and	logarithm the solution to $ab^{ct} = d$ where a , c , and d	21-2: Exponential Functions	Logarithms Demystified
solve problems	are numbers and the base <i>b</i> is 2, 10, or <i>e</i> ; evaluate	21-3: Properties of Logarithms	
	the logarithm using technology. *[Logarithms as solutions for exponentials.]	21-4: More Properties of	Mars Task
	4.1 Prove simple laws of logarithms. CA *	Logarithms	Representing Polynomials Graphically
	4.2 Use the definition of logarithms to translate	22-1: Exponential Data	Having Kittens
	between logarithms in any base. CA ⋆	22-2: The Common Logarithm	Representing Functions of Everyday
		Function	<u>Situations</u>
		22-3: Properties of Logarithms	
		22-4: More Properties of	
		Logarithms	
(s) Perform arithmetic	Number and Quantity – Complex Number		Illustrative Mathematics
operations with complex	System	8-1: The Imaginary Unit, i	Complex number patterns: N-CN.1
numbers			

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	N-CN.1 .Know there is a complex number i such	8-2: Operations with Complex	Powers of a complex number: N-CN.2		
	that $i^2 = -1$, and every complex number has the	Numbers	Completing the square: N-CN.7; A-REI.4		
	form $a + bi$ with a and b real.	8-3: Factoring with Complex			
	N-CN.2 . Use the relation $i^2 = -1$ and the	Numbers			
	commutative, associative, and distributive		Mars Task		
	properties to add, subtract, and multiply complex		Evaluating Statements about Radicals		
(s) Use complex numbers	numbers.				
in polynomial identities	N-CN.7 Solve quadratic equations with real				
and equations. [Polynomials	coefficients that have complex solutions.				
with real coefficients.]	N-CN.8 (+) Extend polynomial identities to the				
	complex numbers. For example, rewrite $x^2 + 4$ as (x				
	+2i)(x-2i).				
	N-CN.9 (+) Know the Fundamental Theorem of	9-1: Completing the Square and			
	Algebra; show that it is true for quadratic	Taking Square Roots			
	polynomials.	9-2: The Quadratic Formula			
		9-3: Solutions of Quadratic			
		Equations			
		17-1:Algebraic Methods			
		17-2: The Fundamental Theorem			
		of Algebra			

Spring Board Algebra 2 Textbook to Curriculum Map Alignment for CC Algebra 2 Algebra 2 – UNIT 4 Geometry and Trigonometry

Critical Area: Students use algebraic manipulation, including completing the square, as a tool for geometric understanding to determine if the equation represents a circle or a parabola. They graph shapes and relate the graphs to the behavior of the functions with the transformation on the variable (e.g. the graph of y=f(x+2)). Students expand on their understanding of the trigonometric functions first developed in Geometry to explore the graphs of trigonometric functions with attention to the connection between the unit circle representation of the trigonometric functions and their properties, use trigonometric functions to model periodic phenomena. Students use Pythagorean identity to find the trig function outputs given the angle and understand that interpretation of sine and cosine yield the Pythagorean Identity.

CLUSTER	COMMON CORE STATE STANDARDS	Spring Board MATH	OTHER RESOURCES
Translate	Geometry – Expressing Geometry		Illustrative Mathematics Resources:
between the	Properties with Equations		Explaining the equation for a circle: G-GPE.3
geometric	G-GPE.3.1. Given a quadratic equation of	10-1: Parabolas and Quadratic Equations	Miscellaneous Sources
description and	the form $ax^2 + by^2 + cx + dy + e = 0$, use the		Gravel Roads and Sinusoidal Patterns:
the equation	method for completing the square to put the		
for a conic	equation into standard form; identify		Mathematics Vision Project:
section	whether the graph of the equation is a circle,		<u>Circles and other Conics</u>
	ellipse, parabola, or hyperbola, and graph		
	the equation. [In Algebra II, this standard		
	addresses circles and parabolas only.] CA		
Extend the	Functions – Trigonometric Functions		Illustrative Mathematics Resources
domain of the	F-TF.1. Understand radian measure of an	31-1: Radian Measure	Trig Functions and the Unit Circle: F-TF.2
trigonometric	angle as the length of the arc on the unit	31-2: Applying Radian Measure	NCTM Illuminations
functions using	circle subtended by the angle.		Graphs from the Unit Circle: F-TF.1, 2
the unit circle	F-TF.2. Explain how the unit circle in the	32-1: Placing the Unit Circle on the	As the Wheel Turns
	coordinate plane enables the extension of	Coordinate Plane	
	trigonometric functions to all real numbers,	32-2: Special Right Triangles and the	
	interpreted as radian measures of angles	Unit Circle	Mathematics Vision Project
	traversed counterclockwise around the unit		<u>Trigonometric Functions</u>
	circle.		Modeling with Functions
	F-TF.2.1. Graph all 6 basic trigonometric		
	functions.		
Model periodic	F-TF.5. Choose trigonometric functions to	35-1: Modeling Periodic Phenomena	Illustrative Mathematics Resources
phenomena	model periodic phenomena with specified		Foxes and Rabbits Intro
with	amplitude, frequency, and midline. ★		• Foxes and Rabbits 2
trigonometric			• Foxes and Rabbits 3: F-TF.5
functions			- 10/100 und 100/010 3.1 11.5

			Dan Meyer Scrambler Mars Task
Prove and apply trigonometric identities	F-TF.8. Prove the Pythagorean identity $\sin^2(\theta) + \cos^2(\theta) = 1$ and use it to find $\sin(\theta)$, $\cos(\theta)$, or $\tan(\theta)$ given $\sin(\theta)$, $\cos(\theta)$, or $\tan(\theta)$ and the quadrant.	33-1: The Pythagorean Identity 33-2: Other Trigonometric Identities	Representing Trigonometric Functions

Spring Board Algebra 2 Textbook to Curriculum Map Alignment for CC Algebra 2 Algebra 2 – UNIT 5 Statistics and Probability

Critical Area:

Students analyze data to make sound statistical decisions based on probability models. By investigating examples of simulations of experiments and observing outcomes of the data, students gain an understanding of what it means for a model to fit a particular data set. Students develop a statistical question in the form of a hypothesis (supposition) about a population parameter, choose a probability model for collecting data relevant to that parameter, collect data, and compare the results seen in the data with what is expected under the hypothesis. Students build on their understanding of data distributions to help see how the normal distribution uses area to make estimates of frequencies (which can be expressed as probabilities). In addition, they can learn through examples the empirical rule, that for a normally distributed data set, 68% of the data lies within one standard deviation of the mean, and that 95% are within two standard deviations of the mean.

CLUSTER	COMMON CORE STATE STANDARDS	Spring Board MATH	OTHER RESOURCES
	Statistics and Probability – Interpreting Categorical and Quantitative Data		Illustrative Mathematics: http://www.illustrativemathematics.org/standards/hs
(s)Summarize, represent, and interpret data on a single count or measurement data.	S.ID.4. Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve	36-2: Characteristics of the Normal Distribution	SAT Score: S.ID.4 Do You Fit In This Car?: S.ID.4 Should We Send Out a Certificate?: S.ID.4 Mars Task Representing Data with Frequency Graphs Representing Data with Box Plots
Understand and evaluate random processes underlying statistical experiments.	Statistics and Probability – Making Inferences and Justifying Conclusions S.IC.1. Understand statistics as a process for making inferences to be made about population parameters based on a random sample from that population. S.IC.2. Decide if a specified model is consistent with results from a given data-generating process, e.g., using simulation. For example, a model says a spinning coin falls heads up with probability 0.5. Would a result of 5 tails in a row cause you to question the model?	36-1: Shapes of Distributions 36-2: Characteristics of the Normal Distribution 36-3: z-Scores and Probabilities 36-4: Modeling with the Normal Distribution 38-1: Devising Simulations 38-2: Confirming Data with Simulations	Illustrative Mathematics: http://www.illustrativemathematics.org/standards/hs School Advisory Panel: S-IC.1 Musical Preferences: S-IC.1, S-ID.5 Mathematics Vision Project Statistics Georgia Standards Advanced Algebra Unit 1: Inferences and Conclusions from Data

Make inferences	S.IC.3. Recognize the purposes of and	37-1: Surveys	Illustrative Mathematics:
and justify	differences among sample surveys, experiments,	37-2: Experiments	http://www.illustrativemathematics.org/standards/hs
conclusions from	and observational studies; explain how	37-3: Observational Studies	Strict Parents: S-IC.1, 3
sample surveys	randomization relates to each.		Musical Preferences: S-IC.1, S-ID.5
experiments, and	S.IC.4. Use data from a sample survey to	39-1: Introduction to Margin	
observational	estimate a population mean or proportion;	of Error	
studies.	develop a margin of error through the use of	39-2: Computing Margin of	Mars Task
	simulation models for random sampling.	Error	Interpreting Data: Muddying the Waters
	S.IC.5. Use data from a randomized experiment	40-1: Random Chance	Devising a Measure: Correlation
	to compare two treatments; use simulations to	40-2: Testing Statistical	
	decide if differences between parameters are	Significance	
	significant.		
	S.IC.6. Evaluate reports based on data.		
Use probability to	Statistics and Probability – Using Probability		
evaluate outcomes	to Make Decisions		
of decisions.	S.MD.6. (+) Use probabilities to make fair	Activity 36- Pg. 573	
	decisions (e.g., drawing by lots, using a random		
	number generator).		
	S.MD.7. (+) Analyze decisions and strategies		Inside Mathematics:
	using probability concepts (e.g., product testing,		Fair Games
	medical testing, pulling a hockey goalie at the		
	end of a game).		