

**MVS Course Alignment Document**

**ALGEBRA 2 MMC**

\*Delineates Recommended Content

**STRAND 1: QUANTITATIVE LITERACY AND LOGIC**

<b>L1 Reasoning About Numbers, Systems, And Quantitative Literacy</b>				
<b>L1.2</b>	<b>Representations and Relationships</b>	<b>Unit</b>	<b>Lesson</b>	<b>Resources</b>
	<b>L1.2.1</b> Use mathematical symbols (e.g., interval notation, set notation, summation notation) to represent quantitative relationships and situations.	5, 7	5.1, 5.2, 5.3, 5.4, 7.1, 7.2, 7.3, 7.6, 7.7, 9.5	<b>United Streaming:</b> Sigma Notation, Using Tables With Sigma Notation; Holt E-text and on-line resources
	<b>*L1.2.5</b> Read and interpret representations from various technological sources, such as contour or isobar diagrams.	6, 7, 8, 9, 10	6.2, 7.5, 8.4, 9.5, 10.2, 10.3, 10.4	<b>TI Graphing Calculator Activity:</b> Confidence Intervals, Equations of Circles, Constructing Box Plots, Histograms, Standard Deviation, Calculating z-scores
<b>L1.3</b>	<b>Counting and Probabilistic Reasoning</b>	<b>Unit</b>	<b>Lesson</b>	<b>Resources</b>
	<b>L1.3.1</b> L1.3.1 Describe, explain, and apply various counting techniques (e.g., finding the number of different 4-letter passwords; permutations; and combinations); relate combinations to Pascal's triangle; know when to use each technique.	7	7.1, 7.2, 7.3, 7.4	<b>Annenburg Video:</b> Permutations and Combinations; <b>Gizmo:</b> Permutations, Permutations and Combinations; Holt e-text and on-line resources; <b>United Streaming:</b> Combinations, Pascal's Triangle and Combinations, Pascal's Triangle - Triangular and Square Numbers, Permutations with Restrictions
	<b>L1.3.2</b> Define and interpret commonly used expressions of probability (e.g., chances of an event, likelihood, odds).	7	7.5	<b>Holt e-text and on-line resources;</b> <b>United Streaming:</b> What are the chances?
	<b>L1.3.3</b> Recognize and explain common probability misconceptions such as "hot streaks" and "being due."	7	7.5	Holt e-text and on-line resources; <b>United Streaming:</b> Making Predictions
<b>L2 Calculation, Algorithms, And Estimation</b>				
<b>L2.1</b>	<b>Calculation Using Real and Complex Numbers</b>	<b>Unit</b>	<b>Lesson</b>	<b>Resources</b>
	<b>L2.1.6</b> Recognize when exact answers aren't always possible or practical; use appropriate algorithms to approximate solutions to equations (e.g., to approximate square roots).	2, 4	2.6, 4.6	<b>Holt e-text and on-line resources:</b> video - Converting between Degrees and Radians; <b>United Streaming:</b> Roots Review
	<b>*L2.1.7</b> Understand the mathematical bases for the differences among voting procedures.	7	7.8	<b>Gizmo:</b> Polling City, Polling Neighborhood; <b>United Streaming:</b> Presidential Election; Web resources: <a href="http://www.presidentpolls2008.com/polls/index.php">http://www.presidentpolls2008.com/polls/index.php</a> , <a href="http://www.electoral-vote.com/evp2007/Info/polling-faq.html">http://www.electoral-vote.com/evp2007/Info/polling-faq.html</a> , <a href="http://www.election-polls.com/">http://www.election-polls.com/</a> , <a href="http://www.realclearpolitics.com/epolls/2008/president/national.html">http://www.realclearpolitics.com/epolls/2008/president/national.html</a>
<b>L2.2</b>	<b>Sequences and Iteration</b>	<b>Unit</b>	<b>Lesson</b>	<b>Resources</b>
	<b>L2.2.1</b> Find the nth term in arithmetic, geometric, or other simple sequences.	5	5.1, 5.2, 5.3, 5.4	<b>Gizmo:</b> Arithmetic Sequences, Geometric Sequences; Holt E-text and on-line resources
	<b>L2.2.2</b> Compute sums of finite arithmetic and geometric sequences.	5	5.1, 5.2, 5.3, 5.4	<b>United Streaming:</b> Sigma Notation, Using Tables With Sigma Notation; Holt E-text and on-line resources
	<b>L2.2.3</b> Use iterative processes in such examples as computing compound interest or applying approximation procedures.	5	5.1, 5.2, 5.3, 5.4	<b>Gizmo:</b> Simple and Compound Interest; Holt e-text and Video Resources
	<b>L2.2.4</b> Compute sums of infinite geometric sequences.	5	5.1, 5.2, 5.3, 5.4	<b>United Streaming:</b> Sigma Notation; Holt e-text and on-line resources
<b>L3 Measurement And Precision</b>				
<b>L3.2</b>	<b>Understanding Error</b>	<b>Unit</b>	<b>Lesson</b>	<b>Resources</b>
	<b>L3.2.1</b> Determine what degree of accuracy is reasonable for measurements in a given situation; express accuracy through use of significant digits, error tolerance, or percent of error; describe how errors in measurements are magnified by computation; recognize accumulated error in applied situations.	2	2.6	<b>Gizmo:</b> Functions Involving Square Roots; <b>TI Graphing Calculator Activity:</b> Confidence Intervals, Standard Deviation
	<b>L3.2.2</b> Describe and explain round-off error, rounding, and truncating.	5	5.2	<b>United Streaming:</b> Sigma (Summation) Notation
	<b>L3.2.3</b> Know the meaning of and interpret statistical significance, margin of error, and confidence level.	10	10.4, 10.5	<b>Annenburg Video:</b> Confidence Intervals, Significance Tests; <b>Statistics In Action</b> e-text and on-line resources; <b>TI Graphing Calculator Activity:</b> Confidence Intervals; <b>United Streaming:</b> Interval Estimators

<b>STRAND 2: ALGEBRA AND FUNCTIONS</b>				
<b>A1 Expressions, Equations, And Inequalities</b>				
<b>A1.1</b>	<b>Construction, Interpretation, and Manipulation of Expressions (linear, quadratic, polynomial, rational, power, exponential, logarithmic, and trigonometric)</b>	<b>Unit</b>	<b>Lesson</b>	<b>Resources</b>
	<b>A1.1.4</b> Add, subtract, multiply, and simplify polynomials and rational expressions (e.g., multiply $(x - 1)(1 - x^2 + 3)$ ; simplify ) $\frac{9x - x^3}{x + 3}$	1, 2	1.2, 1.4, 1.5, 2.2, 2.3	<b>Gizmo:</b> Addition of Polynomials - Activity A, Dividing Exponential Expressions, Dividing Polynomials using Synthetic Expressions, Factoring Quadratics, Factoring Special Products; <b>Holt e-text</b> and on-line resources; <b>United Streaming:</b> Add and Subtract Rational Expressions, Multiplying Polynomials, Synthetic Division, Dividing Polynomials Using Long division
	<b>A1.1.5</b> Divide a polynomial by a monomial.	1	1.4	<b>Holt e-text and on-line resources;</b> <b>United Streaming:</b> Dividing Polynomials Using Synthetic Division, Dividing Polynomials Using Long Division, Factoring with Synthetic Division
	<b>*A1.1.7</b> w $\sin^2 \theta + \cos^2 \theta = 1, \tan \theta = \frac{\sin \theta}{\cos \theta} \text{ and } \tan^2 \theta + 1 = \sec^2 \theta$	4	4.5	<b>Holt e-text and on-line resources;</b> <b>Gizmo:</b> Simplifying Trigonometric Expressions; <b>United Streaming:</b> Proving Trigonometric Identities
<b>A1.2</b>	<b>Solutions of Equations and Inequalities (linear, exponential, logarithmic, quadratic, power, polynomial, rational, and trigonometric)</b>	<b>Unit</b>	<b>Lesson</b>	<b>Resources</b>
	<b>A1.2.5</b> Solve polynomial equations and equations involving rational expressions (e.g. solve $-2x(x^2 + 4x + 3) = 0$ ; solve $x - \frac{1}{x + 6} = 3$ ), and justify steps in the solution.	2	2.5, 2.6	<b>Gizmo:</b> Functions Involving Square Roots, Radical Functions; <b>United Streaming:</b> Solving Rational Functions; <b>Holt e-text</b> and on-line resources
	<b>A1.2.7</b> Solve exponential and logarithmic equations (e.g., $3(2^x) = 24$ ), $2 \ln(x + 1) = 4$ ), and justify steps in the solution.	3	3.2, 3.3	<b>Gizmo:</b> Exponential Functions, Exponential Growth and Decay; <b>Holt e-text</b> and on-line resources;
	<b>A1.2.9</b> Know common formulas (e.g., slope, distance between two points, quadratic formula, compound interest, distance = rate • time), and apply appropriately in contextual situations.	3, 6	3.4, 6.2	<b>Holt on-line video:</b> Using the Distance Formula; <b>United Streaming:</b> Compound Interest
	<b>A1.2.10</b> Use special values of the inverse trigonometric functions to solve trigonometric equations over specific intervals (e.g., $2 \sin x - 1 = 0$ for $0 \leq x \leq 2\pi$ ).	4	4.3, 4.8	<b>Holt e-text</b> and on-line resources; <b>United Streaming:</b> Solving Trigonometric Equations
<b>A2 Functions</b>				
<b>A2.2</b>	<b>Operations and Transformations</b>	<b>Unit</b>	<b>Lesson</b>	<b>Resources</b>
	<b>*A2.2.4</b> If a function has an inverse, find the expression(s) for the inverse.	3	3.5	<b>Holt e-text</b> and on-line resources; <b>United Streaming:</b> Inverse Functions
	<b>*A2.2.5</b> Write an expression for the composition of one function with another; recognize component functions when a function is a composition of other functions.	3	3.1	<b>Holt e-text</b> and on-line resources
	<b>*A2.2.6</b> Know and interpret the function notation for inverses and verify that two functions are inverses using composition.	3	3.1, 3.5	<b>Holt e-text</b> and on-line resources
<b>A2.3</b>	<b>Families of Functions (linear, quadratic, polynomial, rational, power, exponential, logarithmic, and trigonometric)</b>	<b>Unit</b>	<b>Lesson</b>	<b>Resources</b>
	<b>A2.3.3</b> Write the general symbolic forms that characterize each family of functions. (e.g., $f(x) = A_0 a^x$ ; $f(x) = A \sin Bx$ )	1, 2, 3, 4	1.1, 2.1, 3.2, 3.3, 4.1	<b>Gizmo:</b> Logarithmic Functions, Exponential Functions; <b>Holt e-text</b> and on-line resources; <b>United Streaming:</b> Polynomials, Basic Terminology of Polynomials, Classifying Polynomials, Rational Expressions - Defined
<b>A2.5</b>	<b>Exponential and Logarithmic Functions</b>	<b>Unit</b>	<b>Lesson</b>	<b>Resources</b>
	<b>A2.5.2</b> Interpret the symbolic forms and recognize the graphs of exponential and logarithmic functions (e.g., $f(x) = 10^x$ , $f(x) = \log x$ , $f(x) = e^x$ , $f(x) = \ln x$ ); recognize the logarithmic function as the inverse of the exponential function.	3	3.2, 3.3, 3.4, 3.5	<b>Holt e-text</b> and on-line resources; <b>United Streaming:</b> Inverses of Logarithms

<b>A2.5.3</b>	Apply properties of exponential and logarithmic functions (e.g., $a^{x+y} = a^x a^y$ ; $\log(ab) = \log a + \log b$ ).	3	3.2, 3.3, 3.4, 3.5	Holt e-text and on-line resources; <b>United Streaming</b> : Laws of Logarithms
---------------	--	---	--------------------	---

<b>A2.9</b>	<b>Rational Functions</b>	<b>Unit</b>	<b>Lesson</b>	<b>Resources</b>
<b>A2.9.1</b>	Write the symbolic form and sketch the graph of simple rational functions.	2	2.1, 2.4	Gizmo: General Form of a Rational Function; <b>United Streaming</b> : Rational Expressions - Defined; <b>Holt e-text</b> and on-line resources
<b>A2.9.2</b>	Analyze graphs of simple rational functions (e.g., $f(x) = \frac{2x+1}{x-1}$ ; $g(x) = \frac{x}{x^2-4}$ ) and understand the relationship between the zeros of the numerator and denominator and the function's intercepts, asymptotes, and domain.	2	2.4	Gizmo: Rational Functions, General Form of a Rational Function; <b>Holt e-text</b> and on-line resources; <b>United Streaming</b> : Graphing Rational Functions - Intro, Identify Asymptotes, Domain, and Range of Rational Functions

<b>A2.10</b>	<b>Trigonometric Functions</b>	<b>Unit</b>	<b>Lesson</b>	<b>Resources</b>
<b>A2.10.1</b>	Use the unit circle to define sine and cosine; approximate values of sine and cosine (e.g., sin 3, or cos 0.5); use sine and cosine to define the remaining trigonometric functions; explain why the trigonometric functions are periodic.	4	4.7	Gizmo: The Unit Circle; <b>Holt e-text</b> and on-line resources; <b>United Streaming</b> : The Unit Circle
<b>A2.10.2</b>	Use the relationship between degree and radian measures to solve problems.	4	4.6	Gizmo: Sine Function, Cosine Function, Tangent Function; <b>Holt e-text</b> and on-line resources; <b>United Streaming</b> : Degrees and Radians, Converting Between Degrees and Radians
<b>A2.10.3</b>	Use the unit circle to determine the exact values of sine and cosine, for integer multiples of $\frac{\pi}{6}$ and $\frac{\pi}{4}$ .	4	4.7	Gizmo: The Unit Circle; <b>Holt e-text</b> and on-line resources; <b>United Streaming</b> : The Unit Circle
<b>A2.10.4</b>	Graph the sine and cosine functions; analyze graphs by noting domain, range, period, amplitude, and location of maxima and minima and asymptotes.	4	4.4	Holt e-text and on-line resources; <b>United Streaming</b> : Properties of Trigonometric Graphs
<b>A2.10.5</b>	Graph transformations of basic trigonometric functions (involving changes in period, amplitude, phase, and midline) and understand the relationship between constants in the formula and the transformed graph.	4	4.4	Gizmo: Translating and Scaling Sine and Cosine Functions - Activity A; <b>United Streaming</b> : Transformation of Trigonometric Functions

<b>A3 Mathematical Modeling</b>				
<b>A3.1</b>	<b>Models of Real-world Situations Using Families of Functions</b> <i>Example: An initial population of 300 people grows at 2% per year. What will the population be in 10 years?</i>	<b>Unit</b>	<b>Lesson</b>	<b>Resources</b>
<b>A3.1.1</b>	Identify the family of function best suited for modeling a given real-world situation (e.g., quadratic functions for motion of an object under the force of gravity; exponential functions for compound interest. In the example above, recognize that the appropriate general function is exponential ( $P=P_0 a^t$ ).	2, 3, 4, 6	2.5, 3.3, 3.4, 4.5, 4.8, 6.2	Holt e-text and on-line resources; <b>United Streaming</b> : A Camera Lens, Where do we use Logarithms
<b>A3.1.2</b>	Adapt the general symbolic form of a function to one that fits the specifications of a given situation by using the information to replace arbitrary constants with numbers. In the example above, substitute the given values $P_0 = 300$ and $a = 1.02$ to obtain $P = 300(1.02)^t$ .	2, 3, 4, 6	2.5, 3.3, 3.4, 4.5, 4.8, 6.2	Holt e-text and on-line resources; <b>United Streaming</b> : A Camera Lens, Where do we use Logarithms

<b>A3.1.3</b>	Using the adapted general symbolic form, draw reasonable conclusions about the situation being modeled. In the example above, the exact solution is 365.698, but for this problem an appropriate approximation is 365.	3, 4, 6	3.4, 4.5, 4.8, 6.1, 6.2	Gizmo: Distance Formula; <b>Holt e-text</b> and on-line resources
---------------	--	---------	-------------------------	---

<b>STRAND 3: GEOMETRY AND TRIGONOMETRY</b>				
<b>G1 Figures And Their Properties</b>				
<b>G1.7</b>	<b>Conic Sections and Their Properties</b>	<b>Unit</b>	<b>Lesson</b>	<b>Resources</b>
<b>G1.7.1</b>	Find an equation of a circle given its center and radius; given the equation of a circle, find its center and radius.	6	6.2, 6.6	Annenburg Video: Circles and Parabolas; <b>Gizmo</b> : Circles; <b>Holt e-text</b> and on-line resources; <b>TI Graphing Calculator Activity</b> : Equations of Circles with TI-84 Graphing Calculator
<b>G1.7.2</b>	Identify and distinguish among geometric representations of parabolas, circles, ellipses, and hyperbolas; describe their symmetries, and explain how they are related to cones.	6	6.1, 6.2, 6.3, 6.4, 6.5, 6.6	Gizmo: Parabola - Activity A; <b>Holt e-text</b> and on-line resources; <b>United Streaming</b> : Degenerate Conic Sections, Double Napped cones, Identifying Conic Sections
<b>G1.7.3</b>	Graph ellipses and hyperbolas with axes parallel to the x- and y-axes, given equations.	6	6.3, 6.4	Annenburg Video: Ellipse and Hyperbola; <b>Gizmo</b> : Ellipse - Activity A, Hyperbola - Activity A; <b>Holt e-text</b> and on-line resources; <b>United Streaming</b> : Constructing a Hyperbola, Graphing a Hyperbola
<b>*G1.7.4</b>	Know and use the relationship between the vertices and foci in an ellipse, the vertices and foci in a hyperbola, and the directrix and focus in a parabola; interpret these relationships in applied contexts.	6	6.3, 6.4, 6.5, 6.6	Annenburg Video: Circles and Parabolas; <b>United Streaming</b> : Graphs of Quadratics

<b>STRAND 4: STATISTICS AND PROBABILITY</b>				
<b>S1 Univariate Data – Examining Distributions</b>				
<b>S1.1</b>	<b>Producing and Interpreting Plots</b>	<b>Unit</b>	<b>Lesson</b>	<b>Resources</b>
<b>S1.1.1</b>	Construct and interpret dot plots, histograms, relative frequency histograms, bar graphs, basic control charts, and box plots with appropriate labels and scales; determine which kinds of plots are appropriate for different types of data; compare data sets and interpret differences based on graphs and summary statistics.	8, 9	8.1, 8.2, 8.4, 9.1, 9.2, 9.3, 9.4, 9.5	Annenburg Video: Five Number Summaries; <b>Gizmo</b> : Constructing Box-and Whisker Plots, Exploring Data Using Histograms, Histograms, Line Plots; <b>Statistics In Action e-text</b> and on-line resources; <b>Texas Instruments Activity</b> : Constructing Box Plots, Histograms; <b>United Streaming</b> : Bar Graphs, Box Plots
<b>S1.1.2</b>	Given a distribution of a variable in a data set, describe its shape, including symmetry or skewness, and state how the shape is related to measures of center (mean and median) and measures of variation (range and standard deviation) with particular attention to the effects of outliers on these measures.	8, 9, 10	8.4, 8.5, 8.6, 9.1, 9.2, 9.3, 9.4, 9.5, 10.1, 10.2	Annenburg Video: Data Organization and Representation; <b>Gizmo</b> : Describing Data Using Statistics; <b>Statistics In Action e-text</b> and on-line resources; <b>United Streaming</b> : Constructing Data Sets
<b>S1.2</b>	<b>Measures of Center and Variation</b>	<b>Unit</b>	<b>Lesson</b>	<b>Resources</b>
<b>S1.2.1</b>	Calculate and interpret measures of center including: mean, median, and mode; explain uses, advantages and disadvantages of each measure given a particular set of data and its context.	8	8.2, 8.6, 9.2, 9.4, 9.5	Gizmo: Describing Data Using Statistics; <b>Holt e-text</b> and on-line resources; <b>Statistics In Action e-text</b> and on-line resources; <b>United Streaming</b> : Measures of Central Tendency
<b>S1.2.2</b>	Estimate the position of the mean, median, and mode in both symmetrical and skewed distributions, and from a frequency distribution or histogram.	8, 10	8.2, 10.1	Annenburg Video: Picturing Distributions, Variation about the Mean;
<b>S1.2.3</b>	Compute and interpret measures of variation, including percentiles, quartiles, interquartile range, variance, and standard deviation.	8, 10	8.3, 8.4, 8.5, 10.2	Statistics In Action e-text and on-line resources; <b>TI Graphing Calculator Activity</b> : Standard Deviation; <b>United Streaming</b> : Measures of Variability, Variance
<b>S1.3</b>	<b>The Normal Distribution</b>	<b>Unit</b>	<b>Lesson</b>	<b>Resources</b>
<b>S1.3.1</b>	Explain the concept of distribution and the relationship between summary statistics for a data set and parameters of a distribution.	7, 8, 10	7.4, 8.4, 8.6, 10.1	Statistics In Action e-text and on-line resources; <b>United Streaming</b> : Summary Statistics
<b>S1.3.2</b>	Describe characteristics of the normal distribution, including its shape and the relationships among its mean, median, and mode.	7, 9, 10	7.4, 9.4, 9.5, 10.1, 10.4	Annenburg Video: Describing Distributions, <b>Gizmo</b> : Exploring Data Using Histograms; <b>Statistics In Action e-text</b> and on-line resources; <b>United Streaming</b> : Interpreting Data with the Normal Distribution Curve, Presenting Data Using Relative Frequency Histograms, Properties of the Normal Curve
<b>S1.3.3</b>	Know and use the fact that about 68%, 95%, and 99.7% of the data lie within one, two, and three standard deviations of the mean, respectively in a normal distribution.	8, 10	8.4, 8.5, 10.1, 10.2, 10.3	Annenburg Video: Normal Distributions; <b>Statistics In Action e-text</b> and on-line resources; <b>United Streaming</b> : Standard Deviation

<b>S1.3.4</b>	Calculate z-scores, use z-scores to recognize outliers, and use z-scores to make informed decisions.	10	10.3, 10.4	Statistics In Action e-text and on-line resources; <b>TI Graphing Calculator Activity:</b> calculating z-scores; <b>United Streaming:</b> Application of Z-scores, Z-scores
---------------	--	----	------------	---

<b>S3 Samples, Surveys, And Experiments</b>				
<b>S3.1</b>	<b>Data Collection and Analysis</b>	<b>Unit</b>	<b>Lesson</b>	<b>Resources</b>
<b>S3.1.1</b>	Know the meanings of a sample from a population and a census of a population, and distinguish between sample statistics and population parameters.	8, 10, 11	8.1, 10.4, 11.2, 11.3	Annenburg Video: Choosing Samples; <b>Statistics In Action</b> e-text and on-line resources
<b>S3.1.2</b>	Identify possible sources of bias in data collection and sampling methods and simple experiments; describe how such bias can be reduced and controlled by random sampling; explain the impact of such bias on conclusions made from analysis of the data; and know the effect of replication on the precision of estimates.	11	11.1, 11.2	Annenburg Video: Case Study, Sampling and Blocking; <b>Statistics In Action</b> e-text and on-line resources
<b>S3.1.3</b>	Distinguish between an observational study and an experimental study, and identify, in context, the conclusions that can be drawn from each.	11	11.1	Annenburg Video: Experimental Design, Hypothesis; <b>Gizmo:</b> Geometric Probability - Activity A; <b>Statistics In Action</b> e-text and on-line resources
<b>*S3.1.4</b>	Design simple experiments or investigations to collect data to answer questions of interest; interpret and present results.			Final Exam - research proposal
<b>*S3.1.5</b>	Understand methods of sampling, including random sampling, stratified sampling, and convenience samples, and be able to determine, in context, the advantages and disadvantages of each.	11	11.2, 11.3	Annenburg Video: Samples and Surveys; <b>Statistics In Action e-text</b> and on-line resources; <b>Web resources:</b> <a href="http://www.gifted.uconn.edu/siegle/research/Samples/instructormotessamples.htm">http://www.gifted.uconn.edu/siegle/research/Samples/instructormotessamples.htm</a> , <a href="http://www.stats.gla.ac.uk/steps/glossary/sampling.html">http://www.stats.gla.ac.uk/steps/glossary/sampling.html</a>
<b>*S3.1.6</b>	Explain the importance of randomization, double-blind protocols, replication, and the placebo effect in designing experiments and interpreting the results of studies.	11	11.2, 11.3	Annenburg Video: Samples and Surveys; <b>Statistics In Action e-text</b> and on-line resources; <b>Web resources:</b> <a href="http://www.gifted.uconn.edu/siegle/research/Samples/instructormotessamples.htm">http://www.gifted.uconn.edu/siegle/research/Samples/instructormotessamples.htm</a> , <a href="http://www.stats.gla.ac.uk/steps/glossary/sampling.html">http://www.stats.gla.ac.uk/steps/glossary/sampling.html</a>
<b>*S3.2.1</b>	Explain the basic ideas of statistical process control, including recording data from a process over time.	10, 11	10.2, 11.1	Annenburg Video: Time Series; <b>Web resource:</b> <a href="http://www.kwaliteg.co.za/quality/statistical%20process%20control.I.htm">http://www.kwaliteg.co.za/quality/statistical%20process%20control.I.htm</a> ;
<b>*S3.2.2</b>	Read and interpret basic control charts; detect patterns and departures from patterns.	10	10.2	Annenburg Video: Time Series;
<b>S4 Probability Models And Probability Calculation</b>				
<b>S4.1</b>	<b>Probability</b>	<b>Unit</b>	<b>Lesson</b>	<b>Resources</b>
<b>S4.1.1</b>	Understand and construct sample spaces in simple situations (e.g., tossing two coins, rolling two number cubes and summing the results).	7	7.5, 7.6, 7.7	<b>United Streaming:</b> Compound Events, Determining Theoretical Probability
<b>S4.1.2</b>	Define mutually exclusive events, independent events, dependent events, compound events, complementary events and conditional probabilities; and use the definitions to compute probabilities.	7	7.6, 7.7, 10.3	<b>Gizmo:</b> Independent and Dependent Events; <b>Holt e-text</b> and on-line Resources; <b>Statistics In Action e-text</b> and on-line resources; <b>United Streaming:</b> Application of z-scores
<b>*S4.1.3</b>	Design and carry out an appropriate simulation using random digits to estimate answers to questions about probability; estimate probabilities using results of a simulation; compare results of simulations to theoretical probabilities.	7	7.5, 7.6, 7.7	<b>Gizmo:</b> Compound Independent and Dependent Events; <b>TI Activity:</b> Experimental Probability
<b>S4.2</b>	<b>Application and Representation</b>	<b>Unit</b>	<b>Lesson</b>	<b>Resources</b>
<b>S4.2.1</b>	Compute probabilities of events using tree diagrams, formulas for combinations and permutations, Venn diagrams, or other counting techniques.	7	7.1, 7.2, 7.3, 7.5, 7.6, 7.7	<b>Holt e-text</b> and on-line resources; <b>Statistics In Action e-text</b> and on-line resources; <b>United Streaming:</b> Permutations and the Fundamental Counting Principal, Using the Fundamental Counting Principle
<b>S4.2.2</b>	Apply probability concepts to practical situations, in such settings as finance, health, ecology, or epidemiology, to make informed decisions.	7, 8	7.5, 7.6, 7.7, 8.1	<b>TI Activity:</b> Experimental Probability; <b>United Streaming:</b> What is Statistics?