SOL Curriculum Correlation – Pre-Algebra

Pre-algebra	Desktop Publishing	Database	Spreadsheet	Presentation	Graphic Organizers	WebQuests & Interactive Lessons
Chp. 1 Tools for algebra and geometry **SOL 6.7, 6.23, 7.3, 7.4, 7.23, 7.24, 7.26, 8.2,8.4,8.5** **Lesson by lesson online review quizzes for all lessons in this text.** **Online Glencoe Investigations** **USA Today/Glencoe Internet Activities**	Explain inverse operations and how they are used to solve equations and inequalities	Begin a vocabulary database. Words, definitions, and examples should be included. Include properties. Data updates for exercises in text	Place the correct formula in a spreadsheet to calculate the y value when the x value and the function rule are known.	Create a short survey, collect the data, present the data in a spreadsheet and with charts, and analyze the data.	Make a tree diagram with words used for mathematical operations. Compare equations and inequalities	Online games and activities for text Histogram and Bar Graphs Interactive Histogram Activity Interactive Graphs-Stem & Leaf, Etc Interactive Box Plot Generator
Chp. 2 Exploring Integers **SOL 6.5, 6.21, 7.4, 7.6, 7.20, 7.26**	Draw a coordinate grid. Explain why the position of the coordinate pair determines the sign of the digit.	Continue the vocab. database	Create a spreadsheet with integers in one column and a formula for multiplying each integer by a positive integer and another column for multiplying by a negative integer. Students can determine the rules for multiplying integers with this exercise.	Create a presentation showing examples of real-life uses of integers.	Create a flowchart for adding and subtracting integers.	
Chp. 3 Solving one-step equations and inequalities. **SOL 6.11, 7.8, 7.25, 8.4, 8.19**	Explain the steps in solving equations. Compare this to the steps for solving inequalities.	Add properties to database. Create a database with formulas, identify the meaning of each variable in the formula, explain when and how to use the formula. Include drawings if the formulas pertain to a shape or a space figure.	Set up a spreadsheet with perimeters in 1st col. Length, width and area in the next 3 columns. Draw as many rectangles as possible with the given perimeter. Record the dimensions and use a formula to find the area of each rectangle.	Create a presentation which includes realistic problems that could be solved using the following equations and inequalities: 10x = 550 x + 5 = 25 3x – 9 = 12 30m>300 b + 9 < -16 Illustrate the problems with relevant clip art or drawings.	Create a flowchart with steps for solving equations and with steps for solving inequalitites. Compare and contrast rectangles and squares.	
Chp. 4 Exploring Factors and Fractions **SOL 6.4, 6.7, 6.22, 7.1, 7.2, 7.3, 7.25, 8.2, 8.4**	Create a poster illustrating a property.	Add properties to database.	Make a budget. Use a spreadsheet to track income and expenses for a week. Graph the data.	Create a presentation with slides naming, defining and illustrating properties. Each person in the group will create one slide.	Create a Venn diagram with whole numbers and integers. Add to this Venn diagram as you introduce rational,, irrational, and real numbers. Compare and contrast GCF and LCM	Visual Fractions
Chp. 5 Rationals: Patterns in addition and subtraction. **SOL 6.6, 6.7, 6.21, 7.1, 7.19, 7.25, 8.3, 8.4**	Create a bar graph in a spreadsheet. Use information from newspapers or from internet. Write problems that can be solved by estimating sums and differences.	Add vocabulary to Database. Add new properties to property database.	Create a spreadsheet using the example on page 258. Have students input the correct formulas to comlete the table. Does distance show as a decimal number or a fraction? Have students convert the decimal to a fraction. Use a spreadsheet to complete problem 41 on pg. 262.	Create a presentation on how to solve rational equations. Draw models of rational numbers and include these on the slides.	Create a Venn diagram of the types of rational numbers: i.e. terminating and repeating. Create a flowchart showing steps for adding and subtracting fractions with like denominators and unlike denominators.	
Chp. 6 Rationals: Patterns in multiplication and division. **Sol 6.1, 6.4, 6.6, 6.7, 6.19, 6.21, 7.1, 7.4, 7.19, 7.25.** The roller coaster investigation in the text incorporates use of internet, SS, and presentations. Can be used along with the roller coaster webquest.	Research the use of decimals in sports statistics. Explain what the decimal numbers represent and what ratio is used to compute the decimal number.	Have each student research one player and create a record of his/her statistics. Use one database and have each student input the information for one record. Use the information to create spreadsheets and graphs.	Gather sports statistics on a favorite player. Input the data in a spreadsheet. Compute batting average, or freethrow average.	Make a presentation on the roller coaster investigation.	Create a timeline on the development of computing. Find data and images to use on the internet to insert in you graphic organizer timeline. Compare mean, median, and mode.	

Chp. 7 Solving Equations and Inequalities **SOL 6.9, 6.12, 7.25, 8.16**	Why is the solution of an equation one number and the solution to an inequality many numbers? Write a real world problem for 5x + 15 = 35. illustrate with clipart or drawings.	Add vocabulary and properties to databases	Input data in the first column of a SS and then use a function rule to evaluate an algebraic expression for several different values.		Create a flowchart with steps for solving equations. Create another showing steps for solving inequalities	Use graphing calculator to solve equations.
Chp. 8 Functions and Graphing **SOL 7.20, 7.21, 7.2, 8.17, 8.18, 8.19**	Compare and contrast dependent and independent variables. Give examples of each. What symbol is most often used in math for dependent variable and what symbol is most often used for independent variable.	Add vocabulary to database.	Alien Spreadsheets-Determine the Function Rule Input data in a spreadsheet and graph the data. Determine if the graph is a function. Create scatter plots with student generated data.	Create a presentation on the different ways used to represent functions. Use one example and show how it is represented by a rule, a table, and a graph.	Compare and contrast functions and relations. Create a flowmap with steps for finding slope. Create a flowmap showing how you determine if 2 lines are parallel.	Use graphing calculators to graph functions. Complete pg.411 with graphing calculators
Chp. 9 Ratio, proportion, and percent **SOL 6.1, 6.2, 6.8, 7.1, 7.5, 7.7, 7.17, 7.21, 8.1, 8.4, 8.19**	Explain the relationship between fractions, decimals and percents.	Add vocabulary to DB.	Create a spreadsheet to determine % of change. Template	Create a presentation giving examples of the 3 types of percent problems. Show steps to solve each type. Explain how to solve using % proportion and equations.	Compare ratios and rates.	
Chp. 10 More Statistics and Probability **SOL 6.18, 6.19, 6.20, 7.15, 7.16, 7.17, 7.18, 7.19, 7.20, 7.21, 8.13**	Create survey and collect the data. Input data in a table in a word processing document. Create a graph. Analyze the data and explain the graph.	Add vocabulary to database.	Input data collected from the survey the class created. Include numerical and categorical data. Create different types of graphs with the selected data.	Create a presentation showing the different types of games in Va. Lottery. Give examples and show whether combinations or permutations are used to determine your chance of winning. Go online to research the lottery.	Create a tree diagram showing the number of combinations if you owned 3 shirts-blue, green and red that you would like to combine with 4 pair of pants-blue, black, khaki and green. Compare and contrast dependent and independent events.	Is this graph possible or not? Histogram and Bar Graphs Interactive Histogram Activity Interactive Graphs-Stem & Leaf, Etc Interactive Box Plot Generator
Chp. 11 Applying Algebra to Geometry **SOL 6.9, 6.13, 6.14, 6.16, 7.11, 7.12, 7.22, 8.1, 8.9, 8.15**	Use the draw program to show examples of each type of transformation. Explain how you can transform shapes mathematically or by using patty paper	Geometric vocabulary.	Input data in a soreadsheet and use to create circle graphs. Show percent of each segment on the graph. These % can then be used to construct a circle graph using a protractor and compass. Use a spreadsheet as a table to determine the sum of measures of interior and exterior angles of a polygon. Include a graphic of each shape. If the student finds the correct function rule have them input to check their data.	Create a presentation illustrating the geometric shapes and symbols used in the chapter. Include types of triangles, parallel lines. Use copy and paste to create congruent polygons and use picture format to create similar figures by changing the scale.	Create a Venn diagram to classify quadrilaterals. Classify polygons.	Transform shapes with this interactive graph.
Chp. 12 Measuring Area and Volume **SOL 6.11, 6.12, 6.17, 7.9, 8.8, 8.10**	Create a word problem that can be solved by drawing a diagram. Provide the diagram used to solve the problem.	Add vocabulary to DB.		Create a presentation showing real-life examples of the different types of space figures. Photos from internet or clipart can be used. Give real life examples of why the shape of the materials inside help determine the shape of the container. (i.e-tennis balls, chips, golf balls, cereal)	Create flowmaps to show steps for: finding surface area of prisms and cylinders. Pyramids and cones. Finding volume of prisms and cylinders. Vol. of pyramids and cones.	Surface area and volume of prisms
Chp. 13 Applying Algebra to right triangles	Explain how to use the Pythagorean theorem in real-life situations. How do you determine a route of a map, how far across the lake is it, is the foundation of the house square? Think of several examples	Add vocabulary.		Create a presentaion showing examples of professions that use the Pythagorean theorem. Go online to find examples.	Use graphic organizer to teach lesson on page 669. Create a Venn diagram identify numbers of the real number system.	