Contact Information	*Cody Johnson cjohnso3@lane.k12.or.us*
School	*Oakridge High School*
District	*Oakridge School District #76*
Unit Title	*Stock Market Project*
Grade level with which unit is aligned to state standards.	*10th / CIM*
Grade level(s) at which unit may be taught.	*9-12*
Duration	*Variable (2-22 weeks)*
Unit Overview	*Students will follow a few stocks and chart their gain/loss*
Subject(s)	*Math*
Strand(s)	*Calculations and Estimation*
Common Curriculum Goal(s)	*Numbers* *Computation and estimation* *Operations and properties* *Statistics* *Collect and display data* *Change* *Unit and tools*
Academic Standards Addressed	*Compare real numbers* *Equivalent forms of real numbers* *Compute with real numbers, absolute value, and scientific notation* *Estimate the results of real number calculations* *Apply properties to simplify computations with real numbers* *Analyze a variety of summary statistics and graphical displays* *Analyze bivariate data (linear and exponential functions)* *Histograms and stem-and-leaf plots* *Approximate rates of change in graphical and numeric data* *Determine the appropriate units, scales and tools*
Instructional Technology Common Curriculum Goals (CCG) Addressed	

Career Related Learning Standards Addressed:	
How will student use the technology as a tool to enhance their learning?	*The use of technology engages and facilitates data collection and information processing nearly essential to the activity. It will allow students to perform calculations, analyze and organize their data, and make graphical displays that are accurate, comparable, and professional.*
Objective	*Students will learn how to filter and read through information about individual stocks, calculate percent change, organize data in a spreadsheet, make pie and line graphs, and write a research report.*
Prerequisites	*A basic foundation and understanding of numbers.*
Non-Technology Materials	*Paper and pencil.*
Does this unit involve the use of technology	*Yes.*
Required Hardware	*Calculator, computer, and printer*
Required Software	*Internet access, word processor (e.g. Word), and spreadsheet software (e.g. Excel)*
Links to relevant web sites and Other Technology	*Yahoo.finance.com (and related links)* *Registerguard.com*
Preparation	*Read through the lesson plan and decide on modifications (like the number of stocks to follow and the duration of the tracking of the investments). Reservation of computing facilities and/or newspapers.*

Instruction	*On the first day start out by having students generate a KWL list about the stock market. Allow ample time for students to make the W list (you may even want them to add at least one question per day to this section). Use these questions to further the lessons and tailor them to meet individual needs. What the Know, what they Want to know, and what they have Learned. They will revisit this at the end of the project to complete the Learned section.*
	Give a brief overview of the stock market (a place to buy and sell pieces of ownership in a company) making sure to explain the difference between public and private companies. Public companies are the ones students may invest in (buy stock) because they are owned by the public-shareholders.
	Let students list stocks they have heard of before and ones where they feel the company might make a sound investment. They will need to justify their choices. The handout will further explain this process including the recommendation stock..
	On the second day. Have the students randomly select a stock from the newspaper (by throwing a dart or stabbing with a thumbtack). Then, when they have their 5 stocks, have them allocate their $1,000 (this amount is flexible). They must buy in whole shares and may not exceed the $1000. Any remaining money will not be counted. Explain how to calculate percentages and make a pie graph. Once this is done by hand. Allow students to make the table on the computer and show them how to use a graphing program.
	Now, and for each day (or once per week), have students collect the closing prices for their stocks. Each time have them calculate the dollar and percent change from the previous price and from the beginning price.
	At the end of the time period. Have students calculate the dollar and percent change for each of their 5 stocks. Then, have students do the same for their portfolio. Teach them how to do this using weighted average calculations. Have them make a final pie graph to show their ending allocation. Show students how to make a bar graph to show the percent change of their stocks. They should also make a histogram to show the number of stocks in each 10% change range. Use each student's data to make a class histogram. Include the indices to mark a target. Also, have them make a stem-and-leaf plot for the prices of the class stock and one other of their choosing. Have them calculate the mean price for each of their stocks. Did they close above or below the mean? Finally, write a conclusion reflecting on the project and their learning. Make sure they record this on their KWL list.

Modifications for Special Needs Students:	*Individual attention so they can have assistance in accomplishing the necessary task.*
Modifications for Gifted Students:	*Increased research to gain more knowledge based upon an individuals interests. Track a mutual fund or learn more about the bond market. Allow them buy and sell their stocks during the project and incur appropriate costs. Have them derive weighted average calculation formulas on the spreadsheet program or experiment with formatting.*
Motivation	*Students will want to be engaged in the lesson because it involves technology and money. There is also a natural and healthy competition with their peers to see who will make the most money (or at least not lose the least).*
Assessment	*There will be a pre and post assessment about the stock market and the related mathematical skills.. In addition their final submissions of graphs and data tables will be accurate and their percent returns will be reasonable.*