

# COURSE: Math and Financial Applications

## Grade Level: 11 & 12

MAIN/ GENERAL TOPIC	SUB-TOPIC:	ESSENTIAL QUESTIONS:	WHAT THE STUDENTS WILL KNOW:	WHAT THE STUDENT WILL BE ABLE TO DO:	Assessments:	WHEN STUDENT DOES IT:
Gross Income	Hourly pay Overtime pay Weekly time cards Piecework Salary Commission Graduated Commission	Why is it important to know how to determine your pay?	-- Key terms used with gross Income -Calculate straight-time pay -Figure out straight time, overtime, and total pay -Calculate the total hours on a weekly time card -Compute the total pay on a piecework basis -Determine the salary per pay period -Calculate the straight commission & determine the gross pay -Compute the total graduated commission -Create an employee's earnings record -Create a payroll register -Use excel to create a payroll register & calculate various methods of compensation	Identify terms for computing gross earnings Determine straight-time pay Determine total pay Use excel to compute straight time, overtime and double time Calculate compensation using various methods	Worksheets Quizzes Unit Test Excel Exercises	Sept
Net Income	Federal Income Tax State Income Tax Graduated State Income Tax Social Security & Medicare Taxes Group Health Insurance Statement of Earnings Tax Forms	Why is it important to know how much money you actually bring in or take home?  Why is it important to keep abreast of tax laws?	-- Key terms used with Net Income -Read tables to find the amount withheld for federal income tax -Compute the state taxes on a straight percent basis -Determine the state taxes on a straight time basis -Determine the state taxes on a graduated income basis -Work out the amount of income withheld for Social Security & Medicare taxes -Calculate the deductions for group insurance -Figure out net pay per pay period -Use excel to calculate social security, Medicare, federal income tax, and state income tax	Understand deductions and amounts for SS, Medicare, federal income tax, and state income tax Fill out a 1040 EZ form Research & identify online tax web sites regarding tax laws	Worksheets Quizzes Unit Test Excel Exercises	Sept
Recordkeeping	Average Monthly Expenditures Preparing a budget sheet Using a Budget	Why is it important to keep track of the money you spend? Why keep a budget?	- Key terms used with recordkeeping -Compute the average monthly expenditure -Use records of past expenditures to prepare a monthly budget sheet -Compute amount budgeted to actual expenditures -Learn about tools for financial success	Interpret Gabe's Budget (simulation) Create a budget-keep track of your spending Find total monthly expenses Compute the average monthly expenditure Understand difference between fixed and varying expenses	Worksheets Quizzes Unit Test Excel Exercises Video Questions	Oct
Checking Accounts	Deposits Writing Checks Check Registers Bank Statements Reconciling the Bank Statement Online Banking	What are some advantages for opening a checking account?	-Key terms used with checking accounts -Compute the total checking account deposits -Write checks -Figure out the balance in a check register -Calculate the present balance on a checking account bank statement -Reconcile a check register with a bank account statement	Identify current interest rates Use excel to complete a deposit slip and check register Use excel to reconcile a bank statement Take a Poll Online banking vs. Standard checking and create a excel spreadsheet and graph Make predictions	Worksheets Quizzes Unit Test Excel Exercises	Nov

Savings Accounts	Deposits Withdrawals Account Statements Simple Interest Compound Interest Compound Interest Tables Daily Compounding	Do you want to work for money or have money work for you?  How will a savings account help you accomplish this?	-Key terms used with saving accounts -Complete a savings account deposit slips, and compute the total deposit -Fill out a savings account withdrawal slip -Compute new balance on a savings account -Calculate simple interest -Figure out the compound interest and the amount -Find compound interest using tables -Find interest for daily compounding	Read & interpret tables Use excel to calculate simple interest, exact interest, maturity value, number of days, and due date	Worksheets Quizzes Unit Test Excel Exercises	Dec
Sales	Markup Markup rate Net profit Net profit rate Selling price-Markup based on selling price Markup Rate based on cost Selling price-Markup based on cost Markdown	Why is it important to develop relationships with customers?	-Key terms used with Sales -Compute the markup in dollars -Calculate the markup as a percent of selling price -Figure out the net profit in dollars -Find the net profit as a percent of the selling price -Calculate the selling price of an item based on cost & markup rate -Solve for the markup rate based on cost -Compute the selling price based on cost & markup rate -Calculate the markdown in dollars & as a percent of the regular selling price	Determine the costs and markup of a product Use excel to calculate markup & selling price Use excel to calculate markup & selling price Use excel to calculate markdown rate Create a graph to projected sales using excel and trend lines	Worksheets Quizzes Unit Test Excel Exercises	Dec/Jan
Marketing	Opinion Surveys Sales Potential Market Share Sales Projection Sales Projections-factor method Newspaper advertising costs Television Advertising costs Pricing	What does the term marketing mean to you?  What are some product names that you see on TV, Internet, or billboards frequently?  If you have a product to sell, how do you go about letting people know about it and its purpose?  What does the US spend on advertising? Compare to other countries.	-Key terms used with marketing -Compute the rate of a particular response in an opinion survey -Figure out the annual sales potential of a new product -Calculate the market share of a new product -Use a graph to compute projected sales -Calculate the cost of advertising in a newspaper -Compute the cost of advertising on television -Calculate the selling price that results in the highest possible net profit	Figure out the annual sales potential of a new product using excel Research internet to determine advertising cost for different countries and identify reasons for those differences	Worksheets Quizzes Unit Test Excel Exercises	Feb
Consumer Credit	Credit cards Accounts statements Credit Reports Finance charges Consumer Fraud	Why should you have a credit card?	-Key terms used with credit cards -How to choose the best credit card -Do\$ and Don\$ of having a credit card -Consequences of irresponsible credit card use -Determine finance charges effect on items purchased	read a credit report chose and use a credit card find federal law regarding your credit Analyze pros and cons of credit card use Use excel to calculate finance changes and new balances	Worksheets Quizzes Unit Test Excel Exercises	Feb

Accounting	Payroll Register Business Expenses Apportioning Expenses Depreciation-Straight line method Depreciation-book value Modified Accelerated Cost Recovery System	Why do companies have to keep records of employee expenses and company equipment?  What is an accountant?  What role does the account play in a company?	- Key terms used with accounting -Complete a payroll register -Calculate the percent of a particular business expense of the total expense -Figure out a department's share of the total business expense -Utilize the straight-line method to compute the annual depreciation of an item -Apply the straight line method to compute the book value of an item -Use the modified accelerated cost recovery system to compute the annual depreciation & book value	understand need for international consistency in accounting standards and auditing approaches Understand framework of generally accepted accounting principals (US GAAP)	Worksheets Quizzes Unit Test Excel Exercises	Mar
Accounting Records	Assets, liabilities, and Equity Balance Sheet Cost of goods sold Income Statement Vertical Analysis Horizontal Analysis	Who maintains accounting records in a business?  Why is it important to keep good records?  What role does the Internet play in reporting financial information?	- Key terms used with accounting records -Compute the total assets, liabilities and owner's equity -Calculate a balance sheet -Complete an income statement -Analyze balance sheets and income statements -Compare two income statements using horizontal analysis, and compute the percent change	Use excel to create an income statement Create, interrupt and analyze account statements for a service business	Worksheets Quizzes Unit Test Excel Exercises	Apr
Financial Management	Corporate Income Taxes Stocks & Bonds Borrowing Investments- Treasury Bills Commercial Paper Growth Expenses	Why is it important for companies to strong financial strategies?	-Key terms used with financial management -Compute taxable income and the corporate income tax -Calculate the selling expenses of stocks & bonds -Determine maturity value of a commercial loan -Work out the cost & yield of a Treasury bill -Determine the cost & yield for commercial paper -Compute total cost of expanding a business	Calculate dividends Read a stock table Use excel to calculate annuities, stock and bond investments	Worksheets Quizzes Unit Test Excel Exercises	Apr/May
Corporate Planning	Inflation Gross Domestic Product CPI Budget	Why are company executives interested in economic trend indicators such as, GNP, GDP and CPI?	-Key terms used with Corporate planning -Compute inflation rate -Explain and explain gross domestic product -Calculate the consumer price index, current cost, and cost of a given commodity -Analyze a budget	Compute the CPI, the current cost and the cost of a commodity Understand the affects of CPI figure out the inflation rate Understand the affects of GDP Use excel to prepare a straight-line depreciation schedule	Worksheets Quizzes Unit Test Excel Exercises	May/June