Financial Algebra GREEN = must do YELLOW = could do RED = don't do

Chapter: 1 Discretionary Expenses Total Time : 3 weeks

Math Standard (Link in textbook is broken)	Section	Math Topics (Which math topics are covered in the section)	Assignment	Notes (resources, suggestions, etc.
	1-1 Discretionary and Essential Expenses	Central Tendency Sigma Notation Frequency Table	2, 5, 12, 13, 14, 15	Sigma notation makes talking about standard deviation and Payout (chapter 10) easier
	1-2 Travel Expenses	Cumulative Frequency Relative Frequency Relative Cumulative Frequency	6, 7	Spreadsheets Introduction Students probably don't know how to set up equations in spreadsheets.
	1-3 Entertainment Expenses	Dispersion Mean Absolute Deviation Variance Standard Deviation	3, 4, 5, 14	Spreadsheet
	1-4 Vacation Expenses	Z-Score Normal Distribution Percent Under the Curve	2, 4, 8, 11	Tables in textbook https://www.z-table.com/
	1-5 Personal Expenses	Scatter plots Correlation Linear Regression	3, 5, 8, 12	Correlation is not causation

Chapter: 2 Banking Services Total Time : 4 weeks

Math Standard	Topics	Math Topics	Assignment	Notes (resources, suggestions, etc.
	2-1 Checking Accounts	Check Register	4, 5, 8, 10, 15	How to write a check
	2-2 Reconcile A Bank Statement		2, 3, 7, 8	
	2-3 Savings Accounts	Simple Interest	3, 5, 6, 8, 9, 12, 14	
	2-4 Explore Compound Interest		2, 3, 6, 7, 8	Derives Compound Interest, could be a useful time to brush up on skills
	2-5 Compound Interest Formula		3, 4, 5, 6, 9, 16	
	2-6 Continuous Compounding			Could be used to solidify solving with logs.
	2-7 Future Value of Investments	Periodic Investment	3, 4, 6, 7, 9	
	2-8 Present Value of Investments	Periodic Investment solved for P	4, 5, 8, 9, 10	
	2-9 Term of a Single Deposit Account	logarithm	2, 4, 7, 8, 9	Algebra 2 uses Change of Base
	2-10 Terms of a Systemic Account	Systemic withdrawal	4, 5, 12, 14	

Chapter: 3 Consumer Credit Total Time : 4 weeks

Math Standard	Topics	Math Topics	Assignment	Notes (resources, suggestions, etc.
	3-1 Introduction to Consumer Credit	Finance Charge (Interest)	3, 4, 6, 7, 12, 13	
	3-2 Loans	Monthly Payment Payday Loan APR	3, 7, 8, 10, 12, 15	Important to understand payday loans to avoid them
	3-3 Student Loans	Unsubsidized Loan (simple interest)	7, 8, 9, 10, 11, 12, 13	Struggle here is the difference between subsidized and unsubsidized loans. Take extra time to practice with them
	3-4 Loan Calculations and Regression	Loan Length (Logs)	2, 3, 4, 7, 8, 10	
	3-5 Credit Cards		5, 8, 9, 11	
	3-6 Credit Card Statement		2-7, 9, 12	
	3-7 Average Daily Balance		2, 4, 5, 7	Give students a calendar to help show how the average daily balance works

Chapter: 4 Automobile Ownership Total Time : 3 Weeks

Math Standard	Topics	Math Topics	Assignment	Notes (resources, suggestions, etc.
	4-1 Automobile Ads			
	4-2 Automobile Transactions	Quartiles Box-and-Whisker Plot	3, 4, 5, 7	
	4-3 Automobile Insurance	Insurance claims	4, 6, 8, 9, 12, 19	https://www.dmv.ca.gov/portal/vehicle-registration/insurance-requirements/ PIP Insurance is not in CA (2024)
	4-4 Probability the Basis of Insurance	Two-way table Conditional Probability Venn Diagrams Z-Scores	3, 4, 5, 6	Theory of how insurance works, why some people pay higher insurance
	4-5 Linear Automobile Depreciation	Slope Graph a line		
	4-6 Historical and Exponential Depreciation	Exponential decay		
	4-7 Driving Data	Distance Price per gallon	3, 6, 8, 10, 15	
	4-8 Driving Safety Data	Stopping distance	2, 3, 7, 9, 10, 12	Useful to remind children why speeding or driving in the rain is dangerous. Show exponential function for acceleration
	4-9 Accident Investigation Data			Very strange chapter, deals with physics of collisions

Chapter: 5 Employment Basics Total Time : 2 Weeks

Math Standard	Topics	Math Topics	Assignment	Notes (resources, suggestions, etc.
	5-1 Looking for Employment	Fees (Percent Change)	3, 4, 11	
	5-2 Pay Periods and Hourly Rates	Rate Conversion Unit Conversion Overtime	2-7, 10, 12, 17, 23	
	5-3 Commissions Royalties, and Piecework Pay		2, 4, 7, 11, 12, 19	
	5-4 Employee Benefits			Math here not interesting, could bring in more pieces of information. Used this section to talk about importance of Unions (used actor strikes)
	5-5 Social Security and Medicare	Social Security Tax	2, 3, 4, 5	Sets up groundwork for chapter 10

WINTER BREAK

Chapter: 6 Income Taxes

Total Time : 3 weeks

Math Standard	Topics	Math Topics	Assignment	Notes (resources, suggestions, etc.
	Tax Tables, Worksheets and Schedules		2, 11-17	
	Modeling Tax Schedules			
	Income Statements	W2 Form 1099	2, 3	
	~~1040 EZ and 1040 A~~			Form No Longer Exists. Was removed in more recent version of textbook
	1040	How to fill out a 1040	https://www.irs.gov/pub/irs-pdf/f1040.pdf Fill out the 1040 2, 7	Start on block period. FILLING OUT A 1040 https://www.irs.gov/pub/irs-pdf/i1040gi.pdf https://www.irs.gov/pub/irs-pdf/f1040.pdf
	540			California tax form
	Have students fill out 1040			Used as assessment for chapter. Open notes

Chapter: 7.5 Mini unit on Trigonometry — Total Time: 1 week

Math Standard	Topics	Math Topics	Assignment	Notes (resources, suggestions, etc.
	7-2 Reading a Floor Plan	Area -Rectangle -Circle -Polygon -Irregular Shape (Monte Carlo) BTU	3, 4, 5, 8, 9	Should know how to apply triangle to more complicated shapes
	7-7 Home Maintenance and Improvement	Pythagorean THM Proportions Similar Triangles Trig Functions (Tan, Sin)	3, 4, 6, 8, 9, 10	Show a lot of the similar triangle problems, students struggle with setting those up
Chapter: 7 Independent Living				Total Time : 3 weeks
	7-1 Finding a place to live	Monthly range	2, 4, 5, 7	
	7-3 Mortgage Application Process	Monthly Payment Front End Ratio Back End Ratio	4, 5, 8, 13	
	7-4 Purchasing a Home			
	7-5 Mortgage Points	Break Even	2, 3, 7, 9, 10	BREAK EVEN IS HUGE! Make sure students know what it is early on.
	7-6 Rentals Condominiums, and Cooperatives		6, 9, 12, 17	Legal difference between apartments, condos and owning (what you are responsible for maintaining)

Chapter: 8 The Stock Market

Total Time : 3 weeks

Math Standard	Topics	Math Topics	Assignment	Notes (resources, suggestions, etc.
	8-1 Business Organization	Ratios	3, 4, 6, 7, 8, 9, 15, 18	
	8-2 Stock Market Data	Percent Increase	2-8, 10	
	8-3 Stock Market Data Charts	Stock Bar Chart Candle Stick Chart		
	8-4 Trends in Stock Closing Prices	Simple Moving Average Crossover Regression Analysis	2, 5, 12, 13, 15, 17	Why we care about closing prices (to analyze in long term) How do people analyze stocks Desmos activity
	8-5 Stock Market Ticker	Stock Ticker Money Flow		
	8-6 Stock Transactions	Capital Gain	2, 3, 5, 6, 8, 10, 7	
	8-7 Stock Transaction Fees	Net Proceeds	2, 3, 5, 12, 13	Capital gains, but taking into account fees.
	8-8 Stock splits	Stock Split Reverse Stock Split	2, 3, 7, 11, 12, 13-15	a for b split: a/b*shares; b/a*price Look for examples, it happens pretty frequently
	8-9 Dividend Income	Dividend income	5, 6, 10, 11, 13, 16	Shows alternative to growth stocks
	Cryptocurrencies			Students always get curious. Explain what it is, how it works and why it is problematic

Chapter: 9 Modeling a Business Total Time : 3 weeks

Math Standard	Topics	Math Topics	Assignment	Notes (resources, suggestions, etc.
	9-0 Solving systems by substitution	Solving systems by substitution		Supplementary lesson, review to connect student's prior knowledge with how the skills work. Seems to help
	9-3 Supply and Demand	Equilibrium Demand Function	3, 4, 7, 9	
	9-4 Fixed and Variable Expenses	Expense Function Revenue Function Breakeven	2, 3, 7, 9, 13	Substitute an equation in for a variable
	9-5 Graphs of Expense and Revenue Functions	Parabolas Quadratic Function Maximum of a parabola	2, 3, 4	
	9-6 Break Even Analysis	Quadratic Formula	3, 4, 5, 10	
	9-7 Profit Equation	Maximum of a parabola	2-9, 12, 13, 14, 15	
	9-8 Mathematically Modeling a Business	Dependence		Chapter is a combination of the last section of chapters. Putting it all together, would be a good review but is redundant

Spring Break (Chapter 10 can be moved before 9 if time is short before spring break)

Chapter: 9.5 Research and Bias Total Time : 1 week

This section is useful information, but overloads the students when combined with section 9. Broken out in separate unit.

Math Standard	Topics	Math Topics	Assignment	Notes (resources, suggestions, etc.
	9-1 Inventions	Bias Question-Wording Bias	3, 4, 5, 6, 9, 10	Useful to know because of media literacy
	9-2 Market Research	Combinations Bias 2 Electric Boogaloo	3, 4, 6, 12	
	9-9 Optimal Outcomes	Linear Programming System of Linear Inequality	8, 9, 11	Graphing

Chapter: 10 Planning for Retirement Total Time : 2 weeks

Math Standard	Topics	Math Topics	Assignment	Notes (resources, suggestions, etc.
	10-1 Retirement Income From Savings	Periodic Deposit	2, 3, 5, 6, 10	Return of chapter 2 equations
	10-2 Social Security Benefits		2, 5, 6, 7, 8	
	10-3 Pensions		3, 4, 5, 6, 15-18	Being phased out for 401k
	10-4 Life Insurance	Profit Function	2, 3, 10, 11, 13	Mortality Tables 2 days on this because students will struggle with the tables
	10-5 Investments Diversification	Monthly Payment Periodic Deposit	2, 3, 5, 6, 9	

Chapter: 11 Prepare a Budget Total Time : 2 weeks

Math Standard	Topics	Math Topics	Assignment	Notes (resources, suggestions, etc.
	11-1 Utility Expenses		2, 5, 7, 10, 17, 20	
	11-2 Electronic Utilities	Rational Functions	2, 3, 10, 11, 12	
	11-3 Charting a Budget	Using Excel	3, 4, 14, 15	Final review of spreadsheets
	11-4 Cash Flow and Budgeting	Net Worth Debt to Income ratio	2, 3, 4, 12	
	11-5 Budget Matrices	Matrices	2, 3, 4, 7	More fun with spreadsheets

FINAL
(1 week review)