

# Ganado Unified School District

## (HS Career Math)

### PACING Guide SY 2021-2022

Timeline & Resources	AZ College and Career Readiness Standard	Essential Question (HESS Matrix)	Learning Goal	Vocabulary (Content/Academic)
Unit 1 Introduction and Applications of Graphing Calculator Technology  2 Weeks	HS.MP.1. Make sense of problems and persevere in solving them.  HS.MP.5. Use appropriate tools strategically  AZ-HS.F-IF.A Understand the concept of a function and use function notation.  A1.S-ID.A Summarize, represent, and interpret data on a single count or measurement variable	How do I model real life problems utilizing the graphing calculator?	I will learn the basic functions of the graphing calculator including linear regression and various statistical applications.	Correlation Coefficient Scatter Plots Mean Median Mode Scatter Plot Box and Whisker Plot

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<p>Unit 2 The Basics of Employment – pay periods, types of jobs and corresponding remuneration, and benefits.</p> <p>8 weeks</p>	<p>AZ-HS.A-CED.A Create equations that describe numbers or relationships</p> <p>AZ-HS.A-CED.A.2. Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales. [From cluster: Create equations that describe numbers or relationships]</p> <p>AZ-HS.A-CED.A.4. Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. For example, rearrange Ohm’s law <math>V = IR</math> to highlight resistance R. [From cluster: Create equations that describe numbers or relationships]</p> <p>AZ-HS.F-BF.A.1. Write a function that describes a relationship between two quantities. [From cluster: Build a function that models a relationship between two quantities]</p>	<p>What are the basics of employment? How do I find a job and how are my wages calculated?</p>	<p>I will determine methods that are used in finding employment and I will understand various methods of remuneration.</p>	<p>Weekly Bi-weekly Semi-monthly Monthly Hourly Rate Overtime Hours Overtime hourly rate Gross Pay Minimum Wage Commission Royalty Piecework Employee Benefits Paid Vacation Time Health Care Base Period Workers’ Compensation</p>

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<p>Unit 3 Explore business concepts such as expense, revenue and profit to model businesses and draw conclusions from those models.</p> <p>8 weeks</p>	<p>A1.F-IF.C Analyze functions using different representations.</p> <p>AZ-HS.F-IF.C.7. Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases. [From cluster: Analyze functions using different representations]</p> <p>AZ-HS.N-Q.A.1. Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays. [From cluster: Reason quantitatively and use units to solve problems]</p> <p>AZ-HS.N-Q.A.2. Define appropriate quantities for the purpose of descriptive modeling. [From cluster: Reason quantitatively and use units to solve problems]</p>	<p>How do I model a business mathematically using variables and concepts such as expense, revenue, profit, and supply and demand</p>	<p>I will model real-world situations by using real-life data to create equations, make inferences and predictions.</p>	<p>Scatterplots Linear Regression Correlation Causality Supply and Demand Point of Equilibrium Fixed expense Variable Expense Revenue Break-even point Profit Loss Data Trend Interpolation Extrapolation Wholesale price Retail price Quadratic equation Parabola Vertex of a parabola</p>

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<p>Unit 4</p> <p>Research a business of interest. How did their decisions serve to meet success or failure? Explain the rationale behind a business decision made by a particular company and analyze the results of this Decision.</p> <p>2 weeks</p>	<p>HS.MP.1. Make sense of problems and persevere in solving them.</p> <p>HS.MP.5. Use appropriate tools strategically. AZ.HS.A-CED.A Create equations that describe numbers or relationships.</p> <p>AZ.HS.A-CED.A.2 Create equations in two or more variables to represent relationships between quantities graph equations on coordinate axes with labels and scales.</p>	<p>What data does a business look at in determining a strategy for their companies?</p>	<p>I will research a real-life business decision and write a paper outlining the decision-making process and the results of making that decision.</p>	<p>Profit Loss Supply and Demand Fixed Expenses Variable Expenses Competition</p>

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<p>3<sup>rd</sup> Quarter</p> <p>Unit 5 The basics of banking Services. What are checking and savings accounts? How does my money make money?</p> <p>8 weeks</p>	<p>AZ-HS.A-CED.A.4. Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. For example, rearrange Ohm’s law <math>V = IR</math> to highlight resistance <math>R</math>. [From cluster: Create equations that describe numbers or relationships]</p> <p>AZ-HS.A-SSE.A.1. Interpret expressions that represent a quantity in terms of its context. [From cluster: Interpret the structure of expressions]</p> <p>AZ-HS.F-IF.C.8.b Use the properties of exponents to interpret expressions for exponential functions. For example, identify percent rate of change in functions such as <math>y = (1.02)^t</math>, <math>y = (0.97)^t</math>, <math>y = (1.01)^{12t}</math>, <math>y = (1.2)^{t/10}</math>, and classify them as representing exponential growth or decay. [From cluster: Analyze functions using different representations]</p>	<p>In what manner, can I use and save my money safely so as to meet my financial goals?</p>	<p>I will learn methods used to save money, pay bills in a timely fashion and have my money make money for me.</p>	<p>Checking account Electronic Funds transfer (EFT) Direct Deposit Insufficient Funds Overdraft protection Automated Teller machine Personal Identification number Maintenance Fee Debit Credit Account Number Bank Statement Starting balance Ending balance Reconciling Savings account Interest Interest rate Principal Simple Interest Compound Interest Annual, semiannual, quarterly, and daily compounding Annual Percentage Rate (APR)</p>

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Unit 6 Exploring Compound Interest --- make computations using the Compound Interest Formula and be familiar with Continuous Compounding. 2 weeks	HS.MP.1. Make sense of problems and persevere in solving them. HS.MP.5. Use appropriate tools strategically.  AZ.HS.A-CED.A Create equations that describe numbers or relationships.  AZ.HS.A-CED.A.1 Create equations and inequalities in one variable and use them to solve problems. Include problem-solving opportunities utilizing real-world context. Focus on linear, quadratic, exponential and piecewise-defined functions (limited to absolute value and step)	What protections do I have in banking and other financial services? What strategic plan should I make for my own financial future – how much do I spend and how do I go about setting aside money for the future?	I will complete a research topic on personal finance and/or banking?	Federal Deposit Insurance Company (FDIC) Savings Big Ticket Item Pyramid Schemes

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<p>4th Quarter Unit 7</p> <p>The Basics of Employment – pay periods, types of jobs and corresponding remuneration, and benefits.</p> <p>8 weeks</p>	<p>AZ-HS.S-ID.A Summarize, represent, and interpret data on a single count or measurement variable.</p> <p>AZ-HS.SP-ID.A.1. Represent data with plots on the real number line (dot plots, histograms, and box plots). [From cluster: Summarize, represent, and interpret data on a single count or measurement variable]</p> <p>AZ-HS.SP-ID.A.2. Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets. [From cluster: Summarize, represent, and interpret data on a single count or measurement variable]</p> <p>AZ-HS. N-Q.A.1. Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays. [From cluster: Reason quantitatively and use units to solve problems]</p> <p>AZ-HS.N-Q.A.2. Define appropriate quantities for the purpose of descriptive modeling. [From cluster: Reason quantitatively and use units to solve problems]</p>	<p>How can I take advantage of a financial plan to improve my standard of living and live within my income? What are all the costs associated with purchasing and owning an automobile?</p>	<p>I will understand the benefits and costs associated with credit especially in the case of purchasing an automobile.</p>	<p>Credit Debtor Creditor Credit rating Installment plan Down payment Interest Finance charge Principal Annual percentage rate (APR) Lending institution Balloon payment Wage garnishment Monthly Payment Calculator Credit Card Debit Card Average daily balance Mean Sales tax Piecewise function Cusp Statistics data measures of central tendency outlier Quartiles frequency distribution Frequency Stem-and-leaf plot Box-and-whisker plot</p>

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Unit 8 Research a Profession of interest. What is needed to qualify as a candidate to be hired? How is Math a part of this work?  2 weeks	HS.MP.1. Make sense of problems and persevere in solving them.  HS.MP.5. Use appropriate tools strategically.	What are the costs associated with automobile ownership?  How can I monitor my spending and enhance my credit worthiness so as to obtain a higher standard of living?	I will write a research paper on a topic associated with credit or with automobiles. Topics may include: Rising gas prices Alternative energy sources for autos; Automobile insurance pricing; A summary of six laws that regulate consumer credit in the US; Fair Isaac Corporation and their method of determining credit risk.;	FICO Automobile Insurance Inflation Hybrid Electric Vehicles Consumer Credit Regulation