

# Appendix C: Financial Literacy Across the K-12 Mathematics Standards

This section highlights the K–12 mathematics standards that directly support the financial literacy requirements established by [Montana HB535 \(2023\)](#) and Administrative Rule [10.55.905](#). Under this statute, all Montana high school graduates must complete **0.5 credits in economics or personal finance**, which may be offered through [select courses](#) in **social studies, mathematics, or career and technical education (CTE)** ([OPI, 2024](#)).

Montana has adopted six general themes of economic and financial literacy instruction. These themes, based upon the [National Standards for Personal Finance Education \(Jump\\$tart, 2021\)](#), establish essential understandings for Montana high school graduates. These themes are summarized below.

Summary of Themes of Economic and Financial Literacy Instruction	
Theme:	Summary:
I. Earning Income	Most people earn wage and salary income in return for working, and they can also earn income from interest, dividends, rents, entrepreneurship, business profits, or increases in the value of investments. Employee compensation may also include access to employee benefits such as retirement plans and health insurance. Employers generally pay higher wages and salaries to more educated, skilled, and productive workers. The decision to invest in additional education or training can be made by weighing the benefit of increased income-earning and career potential against the opportunity costs in the form of time, effort, and money. Spendable income is lower than gross income due to taxes assessed on income by federal, state, and local governments.
II. Spending	A budget is a plan for allocating a person’s spendable income to necessary and desired goods and services. When there is sufficient money in their budget, people may decide to give money to others, save, or invest to achieve future goals. People can often improve their financial well-being by making well-informed spending decisions, which include critical evaluation of price, quality, product information, and method of payment. Individual spending decisions may be influenced by financial constraints, personal preferences, unique needs, peers, and advertising.
III. Saving	People who have sufficient income can choose to save some of it for future uses such as emergencies or later purchases. Savings decisions depend on individual preferences and circumstances. Funds needed for transactions, bill-paying, or purchases, are commonly held in federally insured checking or savings accounts at financial institutions because these accounts offer easy access to their money and low risk. Interest rates, fees, and other account features vary by type of account and among financial institutions, with higher rates resulting in greater compound interest earned by savers.



## Summary of Themes of Economic and Financial Literacy Instruction

Theme:	Summary:
<b>IV. Investing</b>	People can choose to invest some of their money in financial assets to achieve long-term financial goals, such as buying a house, funding future education, or securing retirement income. Investors receive a return on their investment in the form of income and/or growth in value of their investment over time. People can more easily achieve their financial goals by investing steadily over many years, reinvesting dividends, and capital gains to compound their returns. Investors have many choices of investments that differ in expected rates of return and risk. Riskier investments tend to earn higher long-run rates of return than lower-risk investments. Investors select investments that are consistent with their risk tolerance, and they diversify across a number of different investment choices to reduce investment risk.
<b>V. Managing Credit</b>	Credit allows people to purchase and enjoy goods and services today, while agreeing to pay for them in the future, usually with interest. There are many choices for borrowing money, and lenders charge higher interest and fees for riskier loans or riskier borrowers. Lenders evaluate creditworthiness of a borrower based on the type of credit, past credit history, and expected ability to repay the loan in the future. Credit reports compile information on a person's credit history, and lenders use credit scores to assess a potential borrower's creditworthiness. A low credit score can result in a lender denying credit to someone they perceive as having a low level of creditworthiness. Common types of credit include credit cards, auto loans, home mortgage loans, and student loans. The cost of post-secondary education can be financed through a combination of grants, scholarships, work-study, savings, and federal or private student loans.
<b>VI. Managing Risk</b>	People are exposed to personal risks that can result in lost income, assets, health, life, or identity. They can choose to manage those risks by accepting, reducing, or transferring them to others. When people transfer risk by buying insurance, they pay money now in return for the insurer covering some or all financial losses that may occur in the future. Common types of insurance include health insurance, life insurance, and homeowner's or renter's insurance. The cost of insurance is related to the size of the potential loss, the likelihood that the loss event will happen, and the risk characteristics of the asset or person being insured. Identity theft is a growing concern for consumers and businesses. Stolen personal information can result in financial losses and fraudulent credit charges. The risk of identity theft can be minimized by carefully guarding personal financial information.

## Financial Literacy in the K-8 Standards

Financial literacy is a critical **life skill**, and its development should begin well before high school. While Montana statute 10.55.905 establishes a graduation requirement for a half-credit in personal finance or economics, students benefit most when they have opportunities to build financial understanding **early and often**. This section highlights K–8 mathematics standards that connect to financial literacy concepts, helping educators and



families recognize where foundational skills can be introduced and reinforced. Integrating financial literacy in the earlier grades supports long-term understanding while helping students see the relevance of mathematics in their daily lives. Early and intentional exposure promotes access to financial skills and better prepares students for the expectations they encounter in high school and beyond.

In this section, two categories of standards are identified:

- **Standards explicitly addressing financial literacy:** These standards have a direct and clear connection to financial literacy concepts. Teaching these standards in alignment with financial literacy themes will support students' preparation for high school expectations and informed citizenship. Because application varies, specific financial literacy themes are not predefined.
- **Standards that may support financial literacy in context:** These standards have the **potential** to incorporate financial literacy concepts depending on the instructional approach. Because application varies, specific financial literacy themes are not predefined. Adding financial literacy context to a standard that does not require it can elevate the task to a "mastery" level, offering students an opportunity to demonstrate deeper understanding. While integrating financial literacy contexts can enrich instruction, educators should exercise care during assessment to ensure they are accurately measuring student proficiency with the content standards. This consideration applies generally to all assessments, regardless of the context used.

For additional resources and guidance on financial literacy instruction, please refer to the [OPI Career and Technical Education website](#).

Kindergarten		
<i>Kindergarten standards that address financial literacy <b>explicitly</b>:</i>		
MT.K.MD.4		
<i>Kindergarten standards that <b>could</b> address financial literacy <b>through problems in context</b>:</i>		
MT.K.CC.1	MT.K.CC.6	MT.K.MD.2
MT.K.CC.3	MT.K.NBT.1	MT.K.MD.3
MT.K.CC.5		



Grade 1					
<i>Grade 1 standards that address financial literacy <b>explicitly</b>:</i>					
MT.1.MD.4					
<i>Grade 1 standards that <b>could</b> address financial literacy <b>through problems in context</b>:</i>					
MT.1.OA.1	MT.1.OA.4	MT.1.OA.7	MT.1.NBT.1	MT.1.NBT.4	MT.1.MD.5
MT.1.OA.2	MT.1.OA.5	MT.1.OA.8	MT.1.NBT.2	MT.1.NBT.5	
MT.1.OA.3	MT.1.OA.6	MT.1.OA.9	MT.1.NBT.3	MT.1.NBT.6	

Grade 2				
<i>Grade 2 standards that address financial literacy <b>explicitly</b>:</i>				
MT.2.MD.8				
<i>Grade 2 standards that <b>could</b> address financial literacy <b>through problems in context</b>:</i>				
MT.2.OA.1	MT.2.OA.4	MT.2.NBT.3	MT.2.NBT.6	MT.2.MD.10
MT.2.OA.2	MT.2.NBT.1	MT.2.NBT.4	MT.2.NBT.7	MT.2.MD.11
MT.2.OA.3	MT.2.NBT.2	MT.2.NBT.5	MT.2.NBT.8	

Grade 3			
<i>Grade 3 standards that address financial literacy <b>explicitly</b>:</i>			
None			
<i>Grade 3 standards that <b>could</b> address financial literacy <b>through problems in context</b>:</i>			
MT.3.OA.1	MT.3.OA.5	MT.3.OA.9	MT.3.NBT.3
MT.3.OA.2	MT.3.OA.7	MT.3.NBT.1	MT.3.NF.1
MT.3.OA.4	MT.3.OA.8	MT.3.NBT.2	MT.3.MD.3



Grade 4			
<i>Grade 4 standards that address financial literacy <b>explicitly</b>:</i>			
MT.4.MD.2			
<i>Grade 4 standards that <b>could</b> address financial literacy <b>through problems in context</b>:</i>			
MT.4.OA.1	MT.4.OA.5	MT.4.NBT.3	MT.4.NF.6
MT.4.OA.2	MT.4.NBT.1	MT.4.NBT.4	MT.4.NF.7
MT.4.OA.3	MT.4.NBT.2	MT.4.NBT.5	

Grade 5	
<i>Grade 5 standards that address financial literacy <b>explicitly</b>:</i>	
None	
<i>Grade 5 standards that <b>could</b> address financial literacy <b>through problems in context</b>:</i>	
MT.5.OA.2	MT.5.NBT.2
MT.5.OA.3	MT.5.NBT.4
MT.5.NBT.1	MT.5.NBT.5

Grade 6				
<i>Grade 6 standards that address financial literacy <b>explicitly</b>:</i>				
None				
<i>Grade 6 standards that <b>could</b> address financial literacy <b>through problems in context</b>:</i>				
MT.6.NS.2	MT.6.NS.6	MT.6.EE.5	MT.6.SP.2	MT.6.SP.4
MT.6.NS.3	MT.6.EE.2	MT.6.EE.7	MT.6.SP.3	MT.6.SP.5
MT.6.NS.5	MT.6.EE.4	MT.6.EE.8		



Grade 7		
<i>Grade 7 standards that address financial literacy <b>explicitly</b>:</i>		
MT.7.RP.3		
<i>Grade 7 standards that <b>could</b> address financial literacy <b>through problems in context</b>:</i>		
MT.7.RP.2	MT.7.EE.3	MT.7.SP.2
MT.7.NS.2	MT.7.EE.4	MT.7.SP.3
MT.7.EE.2	MT.7.SP.1	MT.7.SP.4

Grade 8				
<i>Grade 8 standards that address financial literacy <b>explicitly</b>:</i>				
None				
<i>Grade 8 standards that <b>could</b> address financial literacy <b>through problems in context</b>:</i>				
MT.8.EE.3	MT.8.EE.7	MT.8.F.3	MT.8.SP.1	MT.8.SP.3
MT.8.EE.4	MT.8.EE.8	MT.8.F.4	MT.8.SP.2	MT.8.SP.4
MT.8.EE.5	MT.8.F.1	MT.8.F.5		

## Financial Literacy in the 9-12 Standards:

In support of Montana's financial literacy graduation requirement, the task force reviewed the high school mathematics standards to identify where connections to financial literacy may exist. Recognizing the need for clarity, the task force has outlined the **domains** within the new high school mathematics standards that have the **potential** to support financial literacy instruction, depending on how the content is taught. To assist educators, the task force has also provided examples of **possible applications** within each domain. These examples are labeled "*possible applications include, but are not limited to*" to acknowledge that they are illustrative—not exhaustive—and that flexibility in instructional design is essential.

It is important to note that not all mathematics curricula will naturally incorporate financial literacy within these domains. **Financial literacy instruction within the 9-12 mathematics classroom will only occur when educators intentionally integrate these themes into their teaching and curricula.** Thoughtful planning is necessary to ensure that mathematical content is delivered in ways that also build the financial understanding students need for real-world decision making and long-term success.



<b>Grades 9-12</b>		
<i>CORE NUMERIC REASONING STANDARDS</i>		
Domain:	Themes addressed:	Possible applications include, but are not limited to:
The Real Number System (REAL)	<b>II. Spending IV. Managing Credit</b>	This domain can assist with the development of skills related to large numbers and scientific notation within the context of national debt, national student loan balances, etc.
<i>CORE ALGEBRAIC AND FUNCTIONAL REASONING STANDARDS</i>		
Domain:	Themes addressed:	Possible applications include, but are not limited to:
Understand Functions and Expressions (FUN)	<b>I. Earning Income</b>	Multiple representations of functions and discussions of domain and range could involve examples such as wages earned vs. hours worked for hourly employees and total compensation vs. sales for commission workers; students can examine the practical restrictions on the domains.
Linear Functions and Expressions (LIN)	<b>I. Earning Income</b>	Situations involving wages earned vs. hours worked or wages earned vs. base pay plus percentage commission can be used to illustrate the constant rate of change, initial value, and multiple representations of linear situations; and simple cost vs. revenue graphs can be expressed as systems of linear equations providing for multiple methods of solution and determination of “break-even” points.
Quadratic Functions and Expressions (QUAD)	<b>I. Earning Income</b>	The maximum value for a quadratic function could be used to find the optimal number of units to produce or sell in a small business situation.



Exponential Functions and Expressions (EXP)	<b>III. Saving</b> <b>IV. Investing</b> <b>V. Managing Credit</b>	Various applications can be found in this domain, including working with exponential growth in savings; compounding simple interest in banking; compounding simple interest in credit card debt; investing for retirement; and compound simple interest.
<b>CORE DATA REASONING AND PROBABILITY STANDARDS</b>		
Domain:	Themes addressed:	Possible applications include, but are not limited to:
Quantitative Literacy (LIT)	<b>I. Earning Income</b> <b>II. Spending</b> <b>III. Saving</b> <b>IV. Investing</b> <b>V. Managing Credit</b> <b>VI. Managing Risk</b>	There are extensive application opportunities within this domain to the field of financial literacy. Specific examples could include analyzing income and degree type data for associations and using measures of spread and variability; determining and analyzing risk factors for insurability; representing budget spending using appropriate diagrams and representations; comparing retirement savings based on age; and making comparisons of earnings based on types of investments.
Probability (PROB)	<b>I. Earning Income</b> <b>II. Spending</b> <b>III. Saving</b> <b>IV. Investing</b> <b>V. Managing Credit</b> <b>VI. Managing Risk</b>	Numerous applications involving a two-way table exist in this domain. For example, students may compare savings rates for different age groups to determine if the two variables are independent.



## *CORE PLUS ALGEBRAIC AND FUNCTIONAL REASONING STANDARDS*

Domain:	Themes addressed:	Possible applications include, but are not limited to:
Exponential and Logarithmic Functions (EXP)	<b>III. Savings</b> <b>IV. Investing</b> <b>V. Managing Credit</b>	Various applications exist such as exponential growth in savings, compounding interest in both savings, investment, and debt-related scenarios, and investing for retirement.

## *CORE PLUS DATA REASONING STANDARDS*

Domain:	Themes addressed:	Possible applications include, but are not limited to:
Experimental Design (DES)	<b>I. Earning Income</b> <b>II. Spending</b> <b>III. Saving</b> <b>IV. Investing</b> <b>V. Managing Credit</b> <b>VI. Managing Risk</b>	Applications may include assessing the reliability of sample and population data based upon the design of the study including assessing experimental design for hidden bias and flaws in design.
Statistical Inference Using Simulation (INF)	<b>I. Earning Income</b> <b>II. Spending</b> <b>III. Saving</b> <b>IV. Investing</b> <b>V. Managing Credit</b> <b>VI. Managing Risk</b>	Each of the examples in the Core Data Reasoning section above can be expanded upon to determine if there is a statistically significant difference between the two sets of data.