NEW MILFORD PUBLIC SCHOOLS

New Milford, Connecticut



Practical Math: Percent

November/2021

BOE Approved May 2022

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New Milford's Mission Statement

The mission of the New Milford Public Schools, a collaborative partnership of students, educators, family and community, is to prepare each and every student to compete and excel in an ever-changing world, embrace challenges with vigor, respect and appreciate the worth of every human being, and contribute to society by providing effective instruction and dynamic curriculum, offering a wide range of valuable experiences, and inspiring students to pursue their dreams and aspirations.

Practical Math: Percent

9-12

This is a one-semester course designed to give students exposure to real-world applications of percents. Because this is a course in practical math; standards will focus on the <u>Standards for Mathematical Practice</u> and assessments will often be practical in nature.

From the Program of Studies:

The goal of this course is to provide a review of foundational skills and concepts related to percentages before exploring how the concept is used in a variety of fields.Skills to be reviewed will include but are not limited to:solving single variable equations, including proportions and converting percent to decimal and vice versa.Applications that will be discussed include but are not limited to taxes, discounts/markups, interest (auto/home loans, banking, etc.), and estate division.

Pacing Guide

Include a list of the units and the approximate number of days/weeks it will take to teach the unit.

Unit Title	# of Weeks
Working with Percents	3 Weeks
Working with Decimals, Fractions, Ratios and Proportions	3 Weeks
Applications of Percents: Interest	3 Weeks
Applications of Percents: Budgeting	4 Weeks
Applications of Percents: Taxes	4 Weeks
Culminating Project & Exam	2 Weeks

UNIT TITLE Working with Percents

ESTABLISHED GOALS	Transfer	
goals (Power standards).	Students will be able to independently use their lear	ning to
CCSS.MATH.CONTENT.6.RP.A.3.C Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.	 Make sense of problems initiating a plan and percentages. Model with mathematics by choosing the coninformation. Attend to precision by calculating percentage 	d implementing a procedure when expressing rrect method of calculating a percentage given ges using a given method
CCSS.MATH.CONTENT.7.RP.A.3 Use proportional relationships to solve multistep ratio and percent problems.		
Examples: simple interest, tax, markups and	Meaning	
fees, percent increase and decrease, percent error.	UNDERSTANDINGS Students will understand that	ESSENTIAL QUESTIONS Students will keep considering
	 Percents can be expressed in a variety of different forms 	 How do I express a percent? How do I calculate a percentage given different information? When is a percentage appropriate to use?
	Acquisition	
	Students will know	Students will be skilled at
	 Calculating a percentage of a quantity Verbally expressing a percentage correctly Calculating a percentage of a quantity given a real world scenario and applying the answer to the context 	 Writing mathematically correct statements about percentages Writing and solving expressions involving percentages.

Code	Evaluative Criteria	Assessment Evidence
T, M, A	 Scoring Rubric used to evaluate successful understanding of using knowledge of percentages to compare and contrast and ultimately choose a car that is the most cost effective. The rubric will look for: Students will accurately calculate the taxes and maintenance costs of the car Students will write a detailed explanation of reasoning Their work is visually neat, organized Communication Rubric for NMHS 	 Goal: Choose the most cost effective option for buying a car out of three choices. Role: Prospective buyer at a car dealership Audience: The car salesman Situation: The car salesman has given three different options for buying a car and to decide the student must use their knowledge of percentages to calculate the most cost effective option. Product or Performance: a written explanation and mathematical work explaining why they chose the car option. Standards for Success: accurate calculation of the taxes and maintenance costs of the car a detailed written explanation of reasoning visually neat, organized Communication Rubric for NMHS

	 OTHER EVIDENCE: Students will show they have achieved Stage 1 goals by Monitoring class work through board work, group work, questioning, and walk-arounds Check for understanding via going over homework, whiteboard activities, and medium such as reflections, exit tickets, and journals Differentiate through purposeful or flexible grouping, use of diagrams and explanations to demonstrate understanding and active lessons
	 Alternative assessment projects such as posters, drawings, pictures and real world applications. Unit Test - to include a variety of DOK level problems.
	• Quiz on Working with Percents, fluency with the mathematics of expressing percentages

Code	Pro-Assossmo	nt
T, M	 Teacher checks for prerequisite skills and prior knowledge activities, such as basic problems on order of operations as properties with fractions and decimals. 	e via warm-up, pre-assessment and questioning nd the associative, commutative and distributive
Т, М	 Prerequisite knowledge will be reviewed as it is incorpora review assignments. 	ted into multi-step problems both in class and on
	Summary of Key Learning Events and Instruction	Progress Monitoring
	Student success at transfer meaning and acquisition depends on	• Warm up questions
A A A A, M A, M A, M, T	 Students will participate in an introductory activity that involves using ratios and proportions, as well as fractions and decimals and converting between them. This activity will be a review of the previous unit in order to prepare the students for this new application. Teacher will guide students to use percentages to find the part of a number, the whole number, and the percentage. Teacher will introduce vocabulary and corresponding examples having to do with percentages and finding percentages. Teacher will introduce to the students how to calculate percentages using specific procedures. The teacher will lead students to discover the difference between each procedure. Students will practice by relating vocabulary to real life 	 Students will compare and contrast the procedures used to find percentages given different information Students will demonstrate precision when calculating percentages, parts, and wholes Students will practice on whiteboard/chalkboard with direct teacher observation Students will complete Kahoot quizzes or pear deck slideshows with review questions and direct teacher observation
A, M, T	 examples Students will use kahoots, peardeck slide shows, matching activities and crossword puzzles as ways to review vocab definitions and application to real world scenarios 	• Students will complete projects/performance tasks modeling real world problems, crossword puzzles and matching activities
A, M, T	• Teacher and students will partake in a discussion on the differences between the procedure for finding the part, whole, and percentage in different mathematical problems.	• Summative assessments: Quizzes, Performance Assessment

ESTABLISHED GOALS	Transfer	
goals (Power standards).	Students will be able to independently use their learning to	
CCSS.MATH.CONTENT.6.RP.A.3.C Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.	 Make sense of problems initiating a plan and implementing a procedure. Model with mathematics by choosing the correct representation of percentage value for a given situation. Attend to precision by writing and solving proportions to represent real life problems 	
CCSS.MATH.CONTENT.7.RP.A.3 Use proportional relationships to solve multistep ratio and percent problems.		
Examples: simple interest, tax, markups and	Meaning	
fees percent increase and decrease percent	UNDERSTANDINGS	ESSENTIAL QUESTIONS
error.	Students will understand that	Students will keep considering
	 A numerical value can be expressed as a decimal or a fraction A numerical value can be converted between fraction and decimal A proportion can be used to express a certain fraction with a different whole. 	 How else can I express a percentage? How can I change between a fraction and percentage? How can a proportion be used to rewrite a fraction?
	Acq	
	Students will know	Students will be skilled at
	 How to change between fraction and percentage How to solve a proportion How to use a proportion to change a fraction 	 Apply a proportion to change the terms of a fraction Read a blueprint and/or survey Scale a photo or copy to size

Code	Evaluative Criteria	Assessment Evidence
Code T, M, A	 Evaluative Criteria Scoring Rubric used to evaluate successful understanding of using knowledge of ratios and proportions, as well as fractions and decimals, to create a blueprint of a home to scale for a client. The rubric will look for: Students will accurately convert between decimals and fractions. Students will accurately use proportions and ratios to scale up and down Students will write a detailed explanation of reasoning Their work is visually neat, organized Presentation rubric for NMHS 	Assessment Evidence Goal: Create a blueprint to accurately model a design Role: Architect Audience: Client Situation: You need to create a blueprint for the house of a client to scale Product or Performance: a blueprint which is correct to scale Standards for Success: - accurate conversions between decimals and fractions, as well as accurate use of proportions and ratios to scale up and down - a detailed written explanation of reasoning - visually neat, organized - Presentation rubric for NMHS

OTHER EVIDENCE:
Students will show they have achieved Stage 1 goals by
 Monitoring class work through board work, group work, questioning, and walk-arounds Check for understanding via going over homework, whiteboard activities, and medium such as reflections, exit tickets, and journals Differentiate through purposeful or flexible grouping, use of diagrams and explanations to demonstrate understanding and active lessons involving discovery, scaffolding, jigsaw activities and use of hands-on manipulatives Alternative assessment projects such as posters, drawings, pictures and real world applications. Unit Test - to include a variety of DOK level problems.
• Students will practice skills on changing forms of a numerical value
 Students will apply ratios and proportions
• Students will apply failes and proportions
• Quiz on conversion skills, fluency with the mathematics of ratios and proportions

Code	Pre-Assessment	
Т, М	• Teacher checks for prerequisite skills and prior knowledge via warm-up, pre-assessment and questioning activities, such as basic problems on order of operations and the associative, commutative and distributive properties with fractions and decimals.	
Т, М	 Prerequisite knowledge will be reviewed as it is incorpora review assignments. 	ted into multi-step problems both in class and on
	Summary of Key Learning Events and Instruction	Progress Monitoring
	Student success at transfer meaning and acquisition depends on	Warm up questions
A	• Students will participate in an introductory activity that involves using ratios and proportions, as well as fractions and decimals and converting between them. This activity will be referenced throughout the unit.	• Students will compare and contrast the procedures used to convert between decimals, fractions, ratios, and percentages given different
Α, Τ	• Teacher will introduce the difference between each form (decimal, fraction, ratio, proportion) by leading them through an investigation	information
A, M, T	 Students will practice by relating vocabulary to real life examples Tassher will introduce students to the difference between the 	calculating decimals, fractions, ratios, and proportions
	 reacher with introduce students to the difference between the procedures for converting between and calculating each decimal, fraction, ratio, and proportion 	• Students will practice on whiteboard/chalkboard with direct teacher observation
A, M, T	• Students will engage in activities that allow them to match the fractions ratios and percentages to different scenarios	• Students will complete Kaboot avizzes or near
A, M, T	 Students will use kahoots, peardeck slide shows, matching activities and crossword puzzles as ways to review vocab definitions and application to real world scenarios 	deck slideshows with review questions and direct teacher observation
A, M, T	• Teacher and students will partake in discussions involving when it would be appropriate to express numerical answers as ratios, fractions, or percentages in different real world scenarios	• Students will complete projects/performance tasks modeling real world problems, crossword puzzles and matching activities
A, M, T	• Additional review assignments will be provided where students examine all aspects of implementing learning about ratios, percentages, and fractions to different scenarios.	• Summative assessments: Quizzes, Performance Assessment

UNIT TITLE Applications of Percents: Interest

ESTABLISHED GOALS	Tr	ansfer	
Include any national/state/or school	Transjer		
goals (Power standards).	Students will be able to independently use their lear	ning to	
CCSS.MATH.CONTENT.6.RP.A.3.C Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent. CCSS.MATH.CONTENT.7.RP.A.3 Use proportional relationships to solve multitate ratio and percent problems	 Make sense of problems by initiating a plan and implementing a procedure to calculate interest. Model with mathematics by solving word problems with a variety of loan and interest calculations in order to converse about real world applications. Use appropriate tools by calculating interest using their knowledge of percentages Attend to precision by defining and conversing about loans and interest using mathematical vocabulary 		
Examples: simple interest, tax, markups and	Meaning		
fees percent increase and decrease percent	UNDERSTANDINGS	ESSENTIAL QUESTIONS	
error.	Students will understand that	Students will keep considering	
	• Percents are presented daily in news	• How does interest work?	
	articles and the world around us.	• How much will a loan cost at its conclusion?	
	• 'Interest' and 'loan' are both financial	• What is a good interest rate?	
	terms that require an understanding of	• What is the difference between a low and high	
	percentages and how to find them	interest rate?	
	Acquisition		
	Students will know	Students will be skilled at	
	• Calculating a percentage	• Using an amortization table	
	• Calculating interest and loan payments	• Calculating the monthly payment for a loan	
	• How to express a percentage as a decimal.	• Calculating interest on an account	
	fraction, or percentage	• Calculating interest and loan payments given a word problem/real world scenario.	

Cala	Free Long track Constraints	
Code T, M, A	 Evaluative Criteria Scoring Rubric used to evaluate successful understanding of utilizing the amortization table and knowledge of loans and interest to calculate payments on car, student, or mortgage loans. The rubric will look for: Accurate calculations and mathematical work shown for calculations of interest on loans for car, student loan or mortgage over time. A detailed written explanation of reasoning Visually neat, organized Specific Product rubric 	Assessment Evidence Goal: Create a table which amortizes a car, student loan or mortgage over its term Role: Consumer Audience: Co-signer Situation: The consumer wants to demonstrate that the loan is a good deal to the co-signer. Product or Performance: a table with description and summary of terms of a loan. Standards for Success: - accurate calculations and mathematical work shown for calculations of interest on loans for car, student loan or mortgage over time. - a detailed written explanation of reasoning - visually neat, organized - Specific Product rubric

OTHER EVIDENCE:
Students will show they have achieved Stage 1 goals by
• Monitoring class work through board work, group work, questioning,
and walk-arounds
• Check for understanding via going over homework, whiteboard
activities, and medium such as reflections, exit tickets, and journals
• Differentiate through purposeful or flexible grouping, use of diagrams
and explanations to demonstrate understanding and active lessons
involving discovery, scaffolding, jigsaw activities and use of hands-on
manipulatives
• Alternative assessment projects such as posters drawings pictures and
real world applications
 Students will research amortization tables and navments
 Students will define terms used in interest and loans
 Students will define terms used in interest and roans Veech quiz on terms of loons and interest
• vocao quiz on terms or ioans and interest $-$
• Quiz on amortization tables

CodePre-AssessmentT, M• Teacher checks for prerequisite skills and prior knowledge via warm-up, pre-assessment and activities, such as basic problems on order of operations and the associative, commutative a	d questioning and distributive
properties with fractions and decimals.	
T, M • Prerequisite knowledge will be reviewed as it is incorporated into multi-step problems both review assignments. Summary of Key Learning Events and Instruction Progress Monitoring Student success at transfer magning and acquisition depends on Progress Monitoring	n in class and on
 A Student success at transfer meaning and acquisition depends on Student success at transfer meaning and acquisition depends on Student success at transfer meaning and acquisition depends on Student success at transfer meaning and acquisition depends on Student success at transfer meaning and acquisition depends on Student success at transfer meaning and acquisition depends on Student success at transfer meaning and acquisition depends on Student success at transfer meaning and acquisition depends on Student suit participate in an introductory activity that involves using ratios and proportions, as well as fractions and decimals and converting between them. This activity will be a review of the previous unit in order to prepare the students for this new application. Teacher will introduce vocabulary and corresponding examples, starting with differentiating between "good" and "bad" interest rates, and compound rates. Students will practice to the students how to calculate loans and interest on loans. A, M, T Students will practice by relating vocabulary to real life examples A, M, T Students will practice by relating vocabulary to real life examples A, M, T Students will lead students to discover how to calculate interest on different loans that they will have in the future and reason about which loans have the best interest rates. Students will use kahoots, peardeck slide shows, matching Stummative accessments: O 	contrast good interest precision when n loans for cars, ns whiteboard/chalkboard ttion hoot quizzes or pear ew questions and direct jects/performance problems, crossword vities
• Students will use kanools, peardeck side shows, matching activities and crossword puzzles as ways to review vocab definitions and application to real world scenarios	Quizzes, Performance

A, M, T	• Teacher and students will partake in discussions involving the difference between a 'good' interest rate and a 'bad' interest rate for a loan in different real world scenarios	

UNIT TITLE Applications of Percents: Budgeting

ESTABLISHED GOALS	Transfer		
goals (Power standards).	Students will be able to independently use their learning to		
CCSS.MATH.CONTENT.6.RP.A.3.C Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.	 Make sense of problems by initiating a plan and implementing a procedure to calculate tax. Model with mathematics by applying knowledge of finding percentages and sales tax to budgeting exercises and other real world applications. Use appropriate tools to define and converse about budgeting using mathematical vocabulary Attend to precision by calculating sales tax and using percentages to budget income. 		
CCSS.MATH.CONTENT.7.RP.A.3 Use proportional relationships to solve multistep ratio and percent problems.	olve ns.		
Examples: simple interest, tax, markups and	Meaning		
markdowns, gratuities and commissions,	UNDERSTANDINGS	ESSENTIAL QUESTIONS	
error.	Students will understand that	Students will keep considering	
	• A budget is a helpful tool for a consumer	• How do I create a budget?	
	in society.	• What percent should I allot to the portions of	
	• A budget can be calculated by percent of	my budget?	
	one's monthly income	• How much do I get taxed on purchases?	
	Acquisition		
	Students will know	Students will be skilled at	
	• How to calculate a percentage	• Create a budget	
	• How to divide a monthly income	• Present a budget in various graphical forms	
	Determine sales tax	• Creating and using a budget to track expenses	

Code	Evaluative Criteria	Assessment Evidence
Т, М, А	Scoring Rubric used to evaluate successful	Goal: Create a budget in graph format and table format.
	understanding of creating a budget using knowledge of percentages and how to calculate the	Role: Consumer
	amount of income projected for each section of a budget. This rubric will consider:	Audience: Self/peers
	oudget. This fuorie will consider.	Situation: The consumer needs to divide their income into appropriate
	• Students will accurately calculate and have	sections in order to budget effectively
	of the budget	Product or Performance: a budget presented in both graphical and tabular
	• Students will write a detailed explanation	forms.
	of reasoning	Standards for Success:
	Their work is visually neat, organizedPresentation rubric for NMHS	- accurate calculations and mathematical work shown for calculations of the budget
		- a detailed written explanation of reasoning
		- visually neat, organized
		- Presentation rubric for NMHS

	OTHER EVIDENCE:	
	Students will show they have achieved Stage 1 goals by	
	 Monitoring class work through board work, group work, questioning, and walk-arounds Check for understanding via going over homework, whiteboard activities, and medium such as reflections, exit tickets, and journals Differentiate through purposeful or flexible grouping, use of diagrams and explanations to demonstrate understanding and active lessons 	
	involving discovery, scaffolding, jigsaw activities and use of hands-on manipulatives	
	• Alternative assessment projects such as posters, drawings, pictures and real world applications.	
	• Students will display a budget in both graphical and tabular forms.	
	• Quiz on student's ability to budget a given amount and budgeting vocabulary	

Code	Pre-Assessme	nt set and set
Т, М	• Teacher checks for prerequisite skills and prior knowledge via warm-up, pre-assessment and questioning activities, such as basic problems on order of operations and the associative, commutative and distributive properties with fractions and decimals.	
	 Prerequisite knowledge will be reviewed as it is incorporate review assignments. Summary of Key Learning Events and Instruction 	ted into multi-step problems both in class and on
	Summary of Key Learning Events and Instruction Student success at transfer meaning and acquisition depends on	Warm up questions
A	• Students will participate in an introductory activity that involves using ratios and proportions, as well as fractions and decimals and converting between them. This activity will be a review of the previous unit in order to prepare the students for this new application.	 Students will converse about wants versus needs in a budget and how to determine the difference. Students will demonstrate precision when
A	• Teacher will introduce vocabulary and corresponding examples, starting with differentiating between "good" and "bad" interest rates, terms, principle rates, and compound rates.	 calculating budgets and sales tax. Students will practice on whiteboard/chalkboard with direct teacher observation
А	• Teacher will introduce to the students how to calculate budgets and sales tax.	 Students will complete Kaboot quizzes or pear
A, M, T	 Students will practice by relating vocabulary to real life examples The teacher will lead students to discover how to calculate 	deck slideshows with review questions and direct teacher observation
	 The teacher will lead students to discover now to calculate portions of a budget off of one's monthly income and which percentages are the most beneficial amounts for certain categories of the budget. 	• Students will complete projects/performance tasks modeling real world problems, crossword puzzles and matching activities
A, M, 1	 Students will use kahoots, peardeck slide shows, matching activities and crossword puzzles as ways to review vocab definitions and application to real world scenarios 	• Summative assessments: Quizzes, Performance Assessment
A, M, T	• Teacher and students will partake in discussions to discover how to budget effectively to save money. Students will discuss the difference between fixed and discretionary	

expenses and how to categorize their own expenses for a budget.	

ESTABLISHED GOALS

Include any national/state/or school goals (Power standards).

CCSS.MATH.CONTENT.6.RP.A.3.C

Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.

CCSS.MATH.CONTENT.7.RP.A.3

Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.

Transfer

Students will be able to independently use their learning to...

- *Make sense of problems by initiating a plan and implementing a procedure to calculate tax.*
- Model with mathematics by applying operations with percentages to finding tax withholding, taxable income and more, given an annual income.
- Use appropriate tools to calculate taxes on income using operations with percentages.
- *Attend to precision by identifying and defining different types of taxes*

narkups and	aps and Meaning		
nissions, ase, percent	 UNDERSTANDINGS Students will understand that Taxes are calculated by a percentage of one's income There are many different types of taxes and they all do different things for us and our communities 	 ESSENTIAL QUESTIONS Students will keep considering How much do I get taxed? What are the different types of taxes that will come out of my paycheck? How do I file taxes? 	
	Acquisition		
	 Students will know How to calculate a percentage How to calculate their tax rate for income tax Determine sales tax 	 Students will be skilled at Identify a tax bracket and calculate net income after income tax Prepare a basic tax document 	

Codo	Fuchactive Criteria	A seessment Evidence
Code T, M, A	 Evaluative Criteria Scoring Rubric used to evaluate successful understanding of why we pay taxes and also how the tax system works. Students will be scored on their ability to navigate and define terms like deductible, tax withholding, personal exemption, and more. This rubric is considering: Students will have accurate answers to questions on scavenger hunt Students will write a detailed explanation of understanding Work is visually neat, organized Communication rubric for NMHS 	Assessment Evidence Goal: Investigate the theory of why we need to pay taxes and to understand the tax system. Role: Investigator Audience: Class Situation: The investigator needs to navigate the IRS website to learn why we need to pay taxes and to overall understand the tax system and its nuances. Product or Performance: Students will fill out a 'scavenger hunt' displaying all of the new information they have gleaned from the IRS website about taxes. Standards for Success: - accurate answers to questions on scavenger hunt - a detailed written explanation of understanding - visually neat, organized - Communication rubric for NMHS

	OTHER EVIDENCE:
	Students will show they have achieved Stage 1 goals by
	• Monitoring class work through board work, group work, questioning,
	and walk-arounds
	• Check for understanding via going over homework, whiteboard
	activities, and medium such as reflections, exit tickets, and journals
	• Differentiate through purposeful or flexible grouping, use of diagrams
	and explanations to demonstrate understanding and active lessons
	involving discovery scaffolding jigsaw activities and use of hands-on
	manipulatives
	• Alternative assessment projects such as posters drawings nictures and
	real world applications
	 Students will explore the process of filing taxes
	 Students will complete heric tex worksheets
	• Students will complete basic tax worksheets
	Quiz on basic tax information
	Completion of personal Tax Worksheet

Code	Pre-Assessment	
Т, М	• Teacher checks for prerequisite skills and prior knowledge via warm-up, pre-assessment and questioning activities, such as basic problems on order of operations and the associative, commutative and distributive properties with fractions and decimals.	
Т, М	 Prerequisite knowledge will be reviewed as it is incorporated into multi-step problems both in class and on review assignments. 	
	Summary of Key Learning Events and Instruction	Progress Monitoring
	Student success at transfer meaning and acquisition depends on	Warm up questions
A	• Students will participate in an introductory activity that involves using ratios and proportions, as well as fractions and decimals and converting between them. This activity will be a review of the previous unit in order to prepare the students for this new application.	• Students will converse about types of taxes they have heard of and what existing knowledge they have about them.
A	• Teacher will introduce vocabulary and corresponding examples, starting with differentiating between "taxable earnings" and "tax withheld", net income, gross income, and the different types of tax.	• Students will demonstrate precision when calculating taxes, deductibles, and personal exemptions.
T, A T, M, A	 The teacher will guide students to calculate tax on income. Teacher will introduce to the students how to determine someone's tax bracket and calculate tax on income, retirement medical etc. 	• Students will practice on whiteboard/chalkboard with direct teacher observation
T, M, A	 The teacher will lead students to discover how to calculate personal exemptions and tax withholding given someone's income and societal status (i.e. married, single, children). 	• Students will complete Kahoot quizzes or pear deck slideshows with review questions and direct teacher observation
Т, М, А	 Students will practice by relating vocabulary to real life examples 	• Students will complete projects/performance
T, M, A	• Students will use kahoots, peardeck slide shows, matching activities and crossword puzzles as ways to review vocab definitions and application to real world scenarios	 Summative assessments: Quizzes, Performance
T, M, A	• Teacher and students will partake in discussions involving how to categorize	Assessment

ESTABLISHED GOALS	Transfer			
goals (Power standards).	Students will be able to independently use their lear	ning to		
CCSS.MATH.CONTENT.6.RP.A.3.C Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent. CCSS.MATH.CONTENT.7.RP.A.3 Use proportional relationships to solve multistep ratio and percent problems.	 Make sense of problems by initiating a plan and implementing a procedure to calculate percentages. Model with mathematics by applying their knowledge of percentages to calculating budgets, interest/loans, and taxes. Use appropriate tools when calculating percentages and converting between fractions, decimals, ratios, and proportions. Attend to precision by defining and conversing about percentages and their applications to the real world. 			
markdowns, gratuities and commissions,		Meaning		
fees, percent increase and decrease, percent	t UNDERSTANDINGS	ESSENTIAL QUESTIONS		
error.	Students will understand that	Students will keep considering		
	 Items in this course will provide me with useful skills for my life Budgeting is a helpful exercise for healthy spending habits 	 What would your taxes look like if you prepared them? What would your realistic monthly budget look like? 		
	Acq	Acquisition		
	Students will know	Students will be skilled at		
	How to calculate percentages and fractions	• Model a set of prepared taxes		
	• How to read tax documents	Model their monthly budget		

Code	Evaluative Criteria	Assessment Evidence
T, M, A	 Scoring Rubric used to evaluate successful understanding of why budgeting and taxes are important as well as procedures used to calculate a budget and taxes. This rubric will consider: Students will have accurate answers to questions on scavenger hunt Students will write a detailed explanation of understanding Work is visually neat, organized Specific Rubric for Task 	Goal: Prepare taxes and create monthly budget
		Role: Student
		Audience: Teacher
		Situation: You will create a culminating project to display learned skills of
		calculating a budget and taxes.
		Product or Performance: Prepared Taxes and a Realistic Budget
		Standards for Success:
		- accurate answers to questions on scavenger hunt
		- a detailed written explanation of understanding
		- visually neat, organized
		- Specific Rubric for Task
		OTHER EVIDENCE:
		Students will show they have achieved Stage 1 goals by
		• Monitoring class work through board work, group work, questioning, and walk-arounds
		• Students will prepare their mock taxes
		• Students will be able to create a monthly budget
		• Final Exam for course on skills

Code T, M	 <i>Pre-Assessment</i> Teacher checks for prerequisite skills and prior knowledge via warm-up, pre-assessment and questioning activities, such as basic problems on order of operations and the associative, commutative and distributive 		
Т, М	 properties with fractions and decimals. Prerequisite knowledge will be reviewed as it is incorporated into multi-step problems both in class and on review assignments. 		
A A, T A, M, T A, M, T A, M, T A, M, T	 Summary of Key Learning Events and Instruction Student success at transfer meaning and acquisition depends on Students will participate in an introductory activity that involves using ratios and proportions, as well as fractions and decimals and converting between them. This activity will be a review of the previous units in order to prepare the students for this new application. Teacher will review vocabulary and corresponding examples from previous units. Teacher will guide students through a review of core concepts for this course Students will practice by relating vocabulary and procedures to real life examples Students will use kahoots, peardeck slide shows, matching activities and crossword puzzles as ways to review vocab definitions and application to real world scenarios. Teacher and students will partake in discussions involving when to use different procedures. Students will discuss best methods to use when solving different problems relating to percentages, interest, loans, taxes, and budgeting. 	 Progress Monitoring Warm up questions Students will actively review concepts Students will demonstrate precision when calculating interest rates, taxes, and budgeting review questions. Students will practice on whiteboard/chalkboard with direct teacher observation Students will complete Kahoot quizzes or pear deck slideshows with review questions and direct teacher observation Students will complete a practical final exam for this course. 	