

i-PATHWAYS ALIGNMENT

CASAS STANDARDS

Table of Contents

READING/WRITING	4
Unit 1: The Reading Process.....	4
Unit 2: Vocabulary and Word Skills	8
Unit 3: Reading Comprehension Skills	10
Unit 4: Patterns of Organization	11
Unit 5: Purpose and Tone.....	12
Unit 6: Reading Graphics and Electronic Texts.....	13
Unit 7: Writing	14
MATHEMATICS	17
Unit 1: Introduction to Real Numbers	17
Unit 2: Variables and Algebraic Expressions.....	20
Unit 3: Introduction to Geometry.....	23
Unit 4: Linear Inequalities in One Variable	25
Unit 5: Linear Functions.....	26
Unit 6: Polynomials and Factoring.....	28
Unit 7: Rational Expressions	30
BASIC MATH	32
Unit 1: Number Sense	32
Unit 2: Prime Numbers and Least Common Multiples.....	35
Unit 3: Decimals	38
Unit 4: Ratios and Proportions.....	40
Unit 5: Percents.....	41

BASIC WRITING	43
Unit 1: Sentence Structure/Mechanics	43
Unit 2: Introduction to the Writing Process	45
Unit 3: Effective Sentences	47
Unit 4: Introduction to Referencing Materials	49
Unit 5: Essay Writing	50

The i-Pathways project provides all ICCB funded programs access to an online High School Equivalency Test Preparation Curriculum that can be used as a classroom supplement, hybrid, or at-a-distance model. The following documents identify the alignment between i-Pathways and the CASAS (Comprehensive Adult Student Assessment Systems) Standards.

A team of expert adult educators spanning 12 states developed and vetted the curriculum scope and sequence. Once the curriculum outline was developed, instructors who were experts in the field created and reviewed the content for both instructional approach and relevance toward the High School Equivalency Exam.

Reasoning Through Language Arts/Writing

This module helps learners build skills in reading comprehension and vocabulary development through the use of research based instructional strategies. Passages reflect a cross curricular approach by presenting a variety of literary and non-fiction complex texts.

Within the RLA Module, there is a Unit on the Writing Process. This unit connects critical reading strategies with writing strategies such as writing a strong thesis statement, organizing an essay, determining the role of an audience and editing texts.

Mathematics

The Mathematics units and lessons were designed to help students build foundational skills in mathematical reasoning as well as fluency in problem solving and procedural application.

Basic Writing

The units in Basic Writing will prepare students for effective writing by providing instruction in language development, writing conventions, and development/organization of ideas.

Basic Math

The Basic Math will provide learners with instruction in number sense and prepare them for the transition into higher-level math.

READING/WRITING

CCR Standard	CASAS Standard	CASAS Standard Description	i-Pathways Unit Lesson	Lesson Objectives
Unit 1: The Reading Process				
RI.9-10.1	RDG3.10 RDG4.6 RDG4.7	<ul style="list-style-type: none"> • RDG3.10: Locate and interpret specific information by scanning text features (e.g., boldface print, icons, headings, sidebars), items in an alphabetical, numeric, or other ordered listing (e.g., table of contents, department store directory, electronic menus) or using digital search tools (e.g., key words, hyperlinks). • RDG4.6: Use text features (e.g., boldface print, symbols) to locate key details and interpret how these features influence meaning. • RDG4.7: Describe and analyze the overall structure and organization of a text (e.g., chronology, cause and effect, comparison and contrast, problem and solution). 	Lesson 1: What is Reading	<ul style="list-style-type: none"> • Identify specific reading strategies • Apply newly learned reading strategies to a variety of complex literary and real-world texts
RI.9-10.5	R3.4-19 R4.10 R6.1-6 R7.1-12	<ul style="list-style-type: none"> • R3.4: Read and understand moderately complex texts (e.g., general informational materials, common workplace materials) • R3.5: Read and understand complex texts (e.g., newspaper and magazine articles, technical materials, literature) • R3.6: Interpret simple written instructions • R3.7: Interpret detailed instructions (e.g., workplace procedures, operating instructions, consumer materials) • R3.8: Interpret basic sentence structure and grammar (e.g., statements, questions, negatives; adjectives modifying nouns) • R3.9: Interpret complex sentence structure and grammar (e.g., relative clauses, perfect tenses) • R3.10: Follow pronoun references within a text. • R3.11: Make connections between related information across different sections of a text • R3.12: Use supporting illustrations to interpret text 	Lesson 2: Pre-Reading	<ul style="list-style-type: none"> • Define background knowledge and identify how activating background knowledge will improve reading comprehension • Understand how identifying topics and introductory sentences will improve reading comprehension

		<ul style="list-style-type: none">• R3.13: Use contextual clues to determine the meaning of words and phrases.• R3.14: Interpret signal words as clues to the organization and content of a text.• R3.15: Interpret idioms and collocations from context.• R3.16: Interpret figurative meanings of words from context.• R3.17: Interpret the connotative meaning of a word.• R3.18: Interpret analogies in familiar contexts.• R3.19: Interpret meaning of metaphors and similes in context.• R4.10: Interpret written materials using formatting clues (e.g., headings, captions, bullets, print features such as bold).• R6.1: Predict the content of a text from title, pictures, type of material• R6.2: Scan simple text to find specific information• R6.3: Scan complex or extended text to find specific information.• R6.4: Skim simple text for general meaning.• R6.5: Skim complex text for general meaning or to determine subject matter or organization.• R6.6: Use appropriate reading strategy to understand content of unfamiliar material or specialized information.• R7.1: Identify the main idea of a simple paragraph.• R7.2: Identify the main idea of a multi-paragraph text.• R7.3: Identify supporting points or details for a statement, position, or argument on a familiar topic.• R7.4: Determine the sequence of events in a simple narrative.• R7.5: Determine the sequence of events in a complex narrative.• R7.6: Paraphrase information.• R7.7: Summarize a text.• R7.8: Make inferences and draw conclusions from simple text.• R7.9: Make inferences and draw conclusions from a complex text.• R7.10: Differentiate fact from opinion in a written text.• R7.11: Identify the writer, audience, and purpose of a text.• R7.12: Determine a writer's point of view.		
--	--	---	--	--

<p>RI/RL.7.1 RI/RL.9-10.1</p>	<p>R3.4-19 R4.10 R6.1-6 R7.1-12</p>	<ul style="list-style-type: none"> • R3.4: Read and understand moderately complex texts (e.g., general informational materials, common workplace materials) • R3.5: Read and understand complex texts (e.g., newspaper and magazine articles, technical materials, literature) • R3.6: Interpret simple written instructions • R3.7: Interpret detailed instructions (e.g., workplace procedures, operating instructions, consumer materials) • R3.8: Interpret basic sentence structure and grammar (e.g., statements, questions, negatives; adjectives modifying nouns) • R3.9: Interpret complex sentence structure and grammar (e.g., relative clauses, perfect tenses) • R3.10: Follow pronoun references within a text. • R3.11: Make connections between related information across different sections of a text • R3.12: Use supporting illustrations to interpret text • R3.13: Use contextual clues to determine the meaning of words and phrases. • R3.14: Interpret signal words as clues to the organization and content of a text. • R3.15: Interpret idioms and collocations from context. • R3.16: Interpret figurative meanings of words from context. • R3.17: Interpret the connotative meaning of a word. • R3.18: Interpret analogies in familiar contexts. • R3.19: Interpret meaning of metaphors and similes in context. • R4.10: Interpret written materials using formatting clues (e.g., headings, captions, bullets, print features such as bold). • R6.1: Predict the content of a text from title, pictures, type of material • R6.2: Scan simple text to find specific information • R6.3: Scan complex or extended text to find specific information. • R6.4: Skim simple text for general meaning. • R6.5: Skim complex text for general meaning or to determine subject matter or organization. • R6.6: Use appropriate reading strategy to understand content of unfamiliar material or specialized information. • R7.1: Identify the main idea of a simple paragraph. • R7.2: Identify the main idea of a multi-paragraph text. 	<p>Lesson 3: During Reading</p>	<ul style="list-style-type: none"> • Identify an author's purpose in a literary or real-world text • Analyze strategies for making inferences and drawing conclusions
-----------------------------------	---	--	-------------------------------------	---

		<ul style="list-style-type: none"> • R7.3: Identify supporting points or details for a statement, position, or argument on a familiar topic. • R7.4: Determine the sequence of events in a simple narrative. • R7.5: Determine the sequence of events in a complex narrative. • R7.6: Paraphrase information. • R7.7: Summarize a text. • R7.8: Make inferences and draw conclusions from simple text. • R7.9: Make inferences and draw conclusions from a complex text. • R7.10: Differentiate fact from opinion in a written text. • R7.11: Identify the writer, audience, and purpose of a text. • R7.12: Determine a writer's point of view. 		
RI.9-10.6	R7.9-11	<ul style="list-style-type: none"> • R7.9: Make inferences and draw conclusions from a complex text. • R7.10: Differentiate fact from opinion in a written text. • R7.11: Identify the writer, audience, and purpose of a text. 	Lesson 4: After Reading	<ul style="list-style-type: none"> • Identify an author's purpose in a literary or real-world text • Analyze strategies for making inferences and drawing conclusions

Unit 2: Vocabulary and Word Skills				
L.11-12.4	R2.8-10	<ul style="list-style-type: none"> • R2.8: Interpret meaning from word formations (e.g., verb endings, plurals, possessives, comparative forms). • R2.9: Interpret common prefixes and suffixes to determine the meaning of words. • R2.10: Interpret less common prefixes and suffixes to determine the meaning of words. 	Lesson 1: Understanding Word Parts	<ul style="list-style-type: none"> • Increase vocabulary by understanding root words • Apply knowledge of word parts in order to improve reading comprehension
L.11-12.4 L.11-12.4.a	R3.15-19	<ul style="list-style-type: none"> • R3.15: Interpret idioms and collocations from context. • R3.16: Interpret figurative meanings of words from context. • R3.17: Interpret the connotative meaning of a word. • R3.18: Interpret analogies in familiar contexts. • R3.19: Interpret meaning of metaphors and similes in context. 	Lesson 2: Vocabulary in Context	<ul style="list-style-type: none"> • Apply a variety of context clues in reading to learn new vocabulary
L.11.12.4.b	R2.11 R3.13 R3.15-19	<ul style="list-style-type: none"> • R2.11: Interpret familiar words used in a new context. • R3.13: Use contextual clues to determine the meaning of words and phrases. • R3.15: Interpret idioms and collocations from context. • R3.16: Interpret figurative meanings of words from context. • R3.17: Interpret the connotative meaning of a word. • R3.18: Interpret analogies in familiar contexts. • R3.19: Interpret meaning of metaphors and similes in context. 	Lesson 3: Confused Pairs	<ul style="list-style-type: none"> • Identify homonyms and commonly confused words

L.8.6 L.11-12.6	R2.8-12 R3.13 R3.16-19	<ul style="list-style-type: none">• R2.8: Interpret meaning from word formations (e.g., verb endings, plurals, possessives, comparative forms).• R2.9: Interpret common prefixes and suffixes to determine the meaning of words.• R2.10: Interpret less common prefixes and suffixes to determine the meaning of words.• R2.11: Interpret familiar words used in a new context.• R2.12: Interpret specialized vocabulary in context.• R3:13: Use contextual clues to determine the meaning of words and phrases.• R3.16: Interpret figurative meanings of words from context.• R3.17: Interpret the connotative meaning of a word.• R3.18: Interpret analogies in familiar contexts.• R3.19: Interpret meaning of metaphors and similes in context.	Lesson 4: Learning Vocabulary	<ul style="list-style-type: none">• Understand schema and strategies for building vocabulary connections
--------------------	------------------------------	--	-------------------------------------	--

Unit 3: Reading Comprehension Skills				
RI.9-10.2	R6.6 R7.1-3	<ul style="list-style-type: none"> • R6.6: Use appropriate reading strategy to understand content of unfamiliar material or specialized information. • R7.1: Identify the main idea of a simple paragraph. • R7.2: Identify the main idea of a multi-paragraph text. • R7.3: Identify supporting points or details for a statement, position, or argument on a familiar topic. 	Lesson 1: Main Ideas	<ul style="list-style-type: none"> • Determine the main idea in a passage • Identify a direct and implied main idea
RL.9-10.2 RI.9-10.2	R7.3	<ul style="list-style-type: none"> • R7.3: Identify supporting points or details for a statement, position, or argument on a familiar topic. 	Lesson 2: Details	<ul style="list-style-type: none"> • Define supporting details • Evaluate a written passage and identify the supporting details • Differentiate between types of supporting details
RI.9-10.2	R7.8 R7.9	<ul style="list-style-type: none"> • R7.8: Make inferences and draw conclusion from simple text. • R7.9: Make inferences and draw conclusions from complex text. 	Lesson 3: Inferences	<ul style="list-style-type: none"> • Develop strategies for making inferences

Unit 4: Patterns of Organization				
RI.11-12.9	R7.10	<ul style="list-style-type: none"> R7.10: Differentiate fact from opinion in a written text. 	Lesson 1: Fact and Opinion	<ul style="list-style-type: none"> Differentiate between fact and opinion
RH.9-10.3	R8.11	<ul style="list-style-type: none"> R8.11: Analyze the way in which clarity of meaning is affected by the patterns of organization, hierarchical structures, repetition of the main ideas, syntax, and the word choice in the text. 	Lesson 2: Cause & Effect and Compare & Contrast	<ul style="list-style-type: none"> Determine cause and effect relationships Differentiate between cause and effect
RH.9-10.3	R7.4-5	<ul style="list-style-type: none"> R7.4: Determine the sequence of events in a simple narrative. R7.5: Determine the sequence of events in a complex narrative. 	Lesson 3: Time order, Narrative Process	<ul style="list-style-type: none"> Identify time order pattern of organization Compare time order and narrative pattern of organization Define signal words that identify time order pattern of organization
RI.7.5	R3.14 R6.5 R6.6	<ul style="list-style-type: none"> R3.14: Interpret signal words as clues to the organization and content of a text. R6.5: Skim complex text for general meaning or to determine subject matter or organization. R6.6: Use appropriate reading strategy to understand content of unfamiliar material or specialized information. 	Lesson 4: Classification, Description, and Listing of Examples	<ul style="list-style-type: none"> Differentiate between the classification, description, and listing of examples patterns of organization

Unit 5: Purpose and Tone				
RI.9-10.6 RI.11-12.7	R7.1-3 R7.11-12	<ul style="list-style-type: none"> • R7.1: Identify the main idea of a simple paragraph. • R7.2: Identify the main idea of a multi-paragraph text. • R7.3: Identify supporting points or details for a statement, position or argument on a familiar topic. • R7.11: Identify the writer, audience, and purpose of a text. • R7.12: Determine a writer's point of view. 	Lesson 1: Purpose and Tone	<ul style="list-style-type: none"> • Recognize an author's purpose for writing • Define connotations
W.11-12.9	R3.12 R4.8 R6.6 R7.9-11	<ul style="list-style-type: none"> • R3.12: Use supporting illustrations to interpret text. • R4.8: Interpret information in charts and tables. • R6.6 Use appropriate reading strategy to understand content of unfamiliar material or specialized information. • R7.9 Make inferences and draw conclusions from complex text. • R7.10: Differentiate fact from opinion in a written text. • R7.11: Identify the writer, audience, and purpose of a text. 	Lesson 2: Informative Reading	<ul style="list-style-type: none"> • Determine a variety of informative reading strategies • Create strategies for using graphic organizers in reading
W.11-12.9	R9.1 R9.3 R9.4 R9.8	<ul style="list-style-type: none"> • R9.1: Identify the story elements such as setting, character, plot, and resolution. • R9.3: Identify uncomplicated themes in reading selections. • R9.4: Differentiate between factual and fictional elements. • R9.8: Respond to a work of literature by explaining how the motives of the characters or the causes of events compare with those in his/her life. 	Lesson 3: Reading for Pleasure	<ul style="list-style-type: none"> • Recognize elements of fictional writing • Identify reading strategies for fictional texts

Unit 6: Reading Graphics and Electronic Texts				
RST.9-10.7	R4.8-10	<ul style="list-style-type: none">• R4.8: Interpret information in charts and tables.• R4.9: Interpret maps, diagrams, and graphs.• R4.10: Interpret written materials using formatting clues.	Lesson 1: Reading Graphics with Understanding	<ul style="list-style-type: none">• Determine function of graphics• Identify different types of graphics• Establish techniques for reading graphics

Unit 7: Writing				
W.6.4 W.7.4 W.8.4	W5.1-9 W6.2 W6.13-14	<ul style="list-style-type: none"> • W5.1: Plan writing by brainstorming and/or using graphic organizers. • W5.2: Present information in a logical sequence. • W5.3: Write related sentences to form a cohesive paragraph. • W5.4: Write and make connections between related information across different sections of a text. • W5.5: Use signal words as clues to the organization and content of a text. • W5.6: Organize text in paragraphs with clear beginning, middle, and end. • W5.7: Use an appropriate organizational structure which unifies relevant main ideas. • W5.8: Organize and summarize information using a variety of organizational patterns: list, sequence, comparison, contrast, classification, cause and effect. • W5.9: Synthesize information using a variety of organizational patterns: sequence, comparison, contrast, classification, cause and effect, chronology, hierarchy, topic. • W6.2: Take into account the context, audience, and purpose of writing. • W6.13: Write supporting points or details for a statement, position, or argument on a familiar topic. • W6.14: Present information and ideas concisely, logically, and persuasively. 	Lesson 1: Paragraph and Sentences	<ul style="list-style-type: none"> • Determine the purpose of a written response • Organize paragraphs • Create an essay
W.9-10.1	W5.8-9	<ul style="list-style-type: none"> • W5.8: Organize and summarize information using a variety of organizational patterns: list, sequence, comparison, contrast, classification, cause and effect. • W5.9: Synthesize information using a variety of organizational patterns: sequence, comparison, contrast, classification, cause and effect, chronology, hierarchy, topic. 	Lesson 2: Patterns of Organization	<ul style="list-style-type: none"> • Organize information when writing • Identify the appropriate pattern of development for the written response to the prompt

<p>W.11-12.4</p>	<p>W5.1-9 W6.1-15</p>	<ul style="list-style-type: none"> • W5.1: Plan writing by brainstorming and/or using graphic organizers. • W5.2: Present information in a logical sequence. • W5.3: Write related sentences to form a cohesive paragraph. • W5.4: Write and make connections between related information across different sections of a text. • W5.5: Use signal words as clues to the organization and content of a text. • W5.6: Organize text in paragraphs with clear beginning, middle, and end. • W5.7: Use an appropriate organizational structure which unifies relevant main ideas. • W5.8: Organize and summarize information using a variety of organizational patterns: list, sequence, comparison, contrast, classification, cause and effect. • W5.9: Synthesize information using a variety of organizational patterns: sequence, comparison, contrast, classification, cause and effect, chronology, hierarchy, topic. • W6.1: Write simple sentences that contain familiar vocabulary. • W6.2: Take into account the context, audience, and purpose of writing. • W6.3: Write the main idea of a simple paragraph. • W6.4: Write the main idea of a multi-paragraph text. • W6.5: Write the sequence of events in a simple narrative. • W6.6: Write the sequence of events in a complex narrative. • W6.7: Write simple texts on familiar topics. • W6.8: Use details that elaborate on main ideas: examples, descriptions, personal experiences. • W6.9: Use a range of different styles of writing for different purposes. • W6.10. Use appropriate terms of address. • W6.11: Draft, review and revise a text. • W6.12: Proof-read, revise for accuracy and meaning. • W6.13: Write supporting points or details for a statement, position, or argument on a familiar topic. • W6.14: Present information and ideas concisely, logically, and persuasively. 	<p>Lesson 3: The Writing Process</p>	<ul style="list-style-type: none"> • Write a strong thesis statement • Organize an essay • Determine the role of audience
------------------	---------------------------	---	--------------------------------------	--

		<ul style="list-style-type: none"> W6.15: Use appropriate tone. 		
<p>W.11-12.7 W.6.8 W.7.8 W.8.8</p>	<p>W8.1-9</p>	<ul style="list-style-type: none"> W8.1: Paraphrase information. W8.2: Summarize a text. W8.3: Write critically with evidence to put forth arguments to anticipate and address reader concerns and counterclaims. W8.4: Generate relevant research questions. W8.5: Prepare a bibliography of reference materials for a report using a variety of consumer, workplace, and public documents. W8.6: Extend ideas presented in primary or secondary sources through original analysis, evaluation, and elaboration. W8.7: Make warranted and reasonable assertions about the author's arguments by using elements of the text to defend and clarify interpretations. W8.8: Position the argument using appropriate structure and tone based on the intention. W8.9: Synthesize content from several sources or works dealing with a single issue, paraphrase the ideas and connect them to other sources and related topics. 	<p>Lesson 4: Introduction to Referencing Materials</p>	<ul style="list-style-type: none"> Define plagiarism Understand how to correctly cite information

MATHEMATICS

CCR Standard	CASAS Standard	CASAS Standard Description	i-Pathways Unit Lesson	Lesson Objectives
Unit 1: Introduction to Real Numbers				
6.NS.5	M1.1 M1.1.1-13	<ul style="list-style-type: none"> • M1.1: Read, write, order, and compare rational numbers. • M1.1.1: Associate numbers with quantities. • M1.1.2: Count with whole numbers. • M1.1.3: Count by 2s, 5s, and 10s up to 100. • M1.1.4: Recognize odd and even numbers. • M1.1.5: Understand the decimal place value system: read, write, order, and compare whole and decimal numbers. • M1.1.6: Round off numbers to the nearest 10, 100, 1000 and/or to the nearest whole number, tenth, hundredth, or thousandth according to the demands of the context. • M1.1.7: Using place value, compose and decompose numbers with up to 5 digits and/or with three decimal places. • M1.1.8: Interpret and use a fraction in context (e.g., as a portion of a whole area or set) • M1.1.9: Find equivalent fractions and simplify fractions to lowest terms. • M1.1.10: Use common fractions to estimate the relationship between two quantities. • M1.1.11: Convert between mixed numbers and improper fractions. • M1.1.12: Use common fractions and their decimal equivalents interchangeably. • M1.1.13: Read, write, order, and compare positive and negative real numbers. 	Lesson 1: Integers	<ul style="list-style-type: none"> • Identify integers on a number line • Compare integers

7.NS.1	M1.2 M1.2.2	<ul style="list-style-type: none"> • M1.2: Demonstrate understanding of the operations of addition and subtraction, their relation to each other, and their application in solving problems with rational numbers. • M1.2.2: Add and subtract positive multi-digit numbers, including decimal numbers. 	Lesson 2: Addition with Integers	<ul style="list-style-type: none"> • Add signed numbers
7.NS.1	M1.2.2-3	<ul style="list-style-type: none"> • M1.2.2: Add and subtract positive multi-digit numbers, including decimal numbers. • M1.2.3: Recognize when a problem situation requires addition or subtraction with multi-digit positive integers and decimal numbers, carry out the computation, and interpret the answer in context. 	Lesson 3: Subtraction with Integers	<ul style="list-style-type: none"> • Subtract signed numbers
7.NS.2	M1.1 M1.2.2-9	<ul style="list-style-type: none"> • M1.1: Read, write, order, and compare rational numbers. • M1.2.2: Add and subtract positive multi-digit numbers, including decimal numbers. • M1.2.3: Recognize when a problem situation requires addition or subtraction with multi-digit positive integers and decimal numbers, carry out the computation, and interpret the answer in context. • M1.2.4: Use the inverse relationship between addition and subtraction to write problem statements and to check computation. • M1.2.5: Use the commutative property of addition to restate problems and recognize the proper order to write subtraction problems and enter them into a calculator. • M1.2.6: Add and subtract fractions and mixed numbers, including those with unlike denominators. • M1.2.7: Recognize when a problem situation requires adding and/or subtracting with fractions and mixed numbers, carry out the computation, and interpret the answer in context. • M1.2.8: Use estimation strategies to determine reasonable answers to addition and subtraction problems involving integers, decimal numbers, and fractions. • M1.2.9: Express the result of adding and subtracting to the level of precision indicated by the problem. 	Lesson 4: Adding and Subtracting Signed Numbers	<ul style="list-style-type: none"> • Solve word problems with signed numbers

7.NS.2	M1.3	<ul style="list-style-type: none">• M1.3: Demonstrate understanding of the operations of multiplication and division, their relation to each other, and their application in solving problems with rational numbers.	Lesson 5: Multiplication, Division, and Order of Operations with Integers	<ul style="list-style-type: none">• Solve problems with integers• Use the rules for order of operations to evaluate expressions
7.NS.2	M1.3 M2.1.4	<ul style="list-style-type: none">• M1.3: Demonstrate understanding of the operations of multiplication and division, their relation to each other, and their application in solving problems with rational numbers.• M2.1.4: Apply the correct order of operations.	Lesson 6: Multiplication, Division, and Order of Operations with Rational Numbers	<ul style="list-style-type: none">• Apply order of operations with rational numbers

Unit 2: Variables and Algebraic Expressions				
6.EE.1-9 7.EE.1-3 A.SSE.1	M.2.2	<ul style="list-style-type: none"> M.2.2: Use variables, simplify expressions, and solve equations. 	Lesson 1: Variables and Algebraic Expressions	<ul style="list-style-type: none"> Identify variables in English phrases Write algebraic expressions using signed numbers, integers, and variables Interpret algebraic expressions
6.EE.3	M2.2 M2.2.5	<ul style="list-style-type: none"> M.2.2: Use variables, simplify expressions, and solve equations. M2.2.5: Use the distributive property and combine like terms to simplify an expression. 	Lesson 2: Combining Like Terms and Simplifying Expressions	<ul style="list-style-type: none"> Combine like terms in algebraic expressions Simplify expressions using the distributive property
6.EE.5	M2.2.8	<ul style="list-style-type: none"> M2.2.8: Solve simple one-step equations with unknowns. 	Lesson 3: Solving Algebraic Equations Using the Addition and Subtraction Principle	<ul style="list-style-type: none"> Solve equation problems using the addition principle Solve equation problems using the subtraction principle
6.EE.5	M2.2	<ul style="list-style-type: none"> M.2.2: Use variables, simplify expressions, and solve equations. 	Lesson 4: Solving Algebraic Equations Using the Multiplication Principle	<ul style="list-style-type: none"> Solve equations using the multiplication principle Solve equations using the division principle

6.EE.5	M2.2	<ul style="list-style-type: none"> M2.2: Use variables, simplify expressions, and solve equations. 	Lesson 5: Solving Algebraic Equations Using the Multiplication and Addition Principles	<ul style="list-style-type: none"> Solve equations for the unknown variable using multiple mathematical operations
6.EE.5	M2.2	<ul style="list-style-type: none"> M2.2: Use variables, simplify expressions, and solve equations. 	Lesson 6: Solving Algebraic Equations with Fractions and Decimals	<ul style="list-style-type: none"> Solve equations containing fractions Solve equations containing decimals
6.EE.6-7	M2.3.15	<ul style="list-style-type: none"> M2.3.15: Interpret algebraic concepts and terminology used at the secondary level to solve computationally and conceptually challenging multi-step problems. 	Lesson 7: Translating and Word Problems	<ul style="list-style-type: none"> Identify trigger words used in mathematical operations Translate word problems into algebraic equations Solve problems using principles of multiplication, division, addition, and subtraction
6.EE.9	M2.2	<ul style="list-style-type: none"> M2.2: Use variables, simplify expressions, and solve equations. 	Lesson 8: Solving Linear Equations	<ul style="list-style-type: none"> Combine like terms Solve equations which require simplification Clear equations of fractions and decimals
7.EE.3	M2.2.13	<ul style="list-style-type: none"> M2.2.13: Graph non-linear functions (quadratic, rational, exponential) and compare rates of change. 	Lesson 9: Solving Linear Equations with Variable on Both Sides	<ul style="list-style-type: none"> Solve equations with variables on both sides

7.EE.3	M2.2	<ul style="list-style-type: none">• M2.2: Use variables, simplify expressions, and solve equations.	Lesson 10: Solving Literal Equations	<ul style="list-style-type: none">• Solve literal equations for a specified variable
7.EE.3	M2.2.13	<ul style="list-style-type: none">• M2.2.13: Graph non-linear functions (quadratic, rational, exponential) and compare rates of change.	Lesson 11: Use Linear Equations to Solve Word Problems	<ul style="list-style-type: none">• Apply strategies to solve word problems involving linear equations

Unit 3: Introduction to Geometry				
7.G.5	M3.1 M3.1.1	<ul style="list-style-type: none"> M3.1: Recognize, identify, and describe the attributes of geometric shapes and use them in solving problems. M3.1.1: Identify lines of symmetry in two-dimensional figures. 	Lesson 1: Points, Lines, Planes, and Angles	<ul style="list-style-type: none"> Identify the difference between lines, planes, and angles Measure angles in diagrams Identify complementary and supplementary angles
7.G.5 8.G.7	M3.1.3 M2.2.14 M3.1.11	<ul style="list-style-type: none"> M3.1.3: Identify and describe specific types of triangles based on their properties. M2.2.14: Apply the Pythagorean Theorem. M3.1.11: Use concepts and attributes of geometric shapes to find unknown dimensions in figures and applications. 	Lesson 2: Classifying Triangles and the Pythagorean Theorem	<ul style="list-style-type: none"> Classify triangles Solve problems involving measurement of angles in a triangle Solve problems involving the Pythagorean Theorem
6.G.1	M3.1.5-7 M3.1.11	<ul style="list-style-type: none"> M3.1.5: Identify and describe specific types of quadrilaterals based on their properties. M3.1.6: Recognize and use the property that the angles of a quadrilateral have a sum of 360 degrees. M3.1.7: Identify polygons of various types. M3.1.11: Use concepts and attributes of geometric shapes to find unknown dimensions in figures and applications. 	Lesson 3: Classifying Quadrilaterals	<ul style="list-style-type: none"> Classify quadrilaterals Determine the relationship between quadrilaterals
7.G.4	M3.1.8 M3.1.11	<ul style="list-style-type: none"> M3.1.8: Identify elements of a circles: center, radius, diameter, arc, chord, sector. M3.1.11: Use concepts and attributes of geometric shapes to find unknown dimensions in figures and applications. 	Lesson 4: Circles	<ul style="list-style-type: none"> Identify the basic parts of a circle Identify the circumference and area of a circle

7.G.6	M3.1.7 M3.1.11	<ul style="list-style-type: none">• M3.1.7: Identify polygons of various types.• M3.1.11: Use concepts and attributes of geometric shapes to find unknown dimensions in figures and applications.	Lesson 5: Area of Polygons	<ul style="list-style-type: none">• Solve for unknown lengths• Solve for the area of irregular figures• Find the area of squares, rectangles, parallelograms, and trapezoids
7.G.6	M4.3 M4.3.6	<ul style="list-style-type: none">• M4.3: Calculate the measures of two and three-dimensional figures.• M4.3.6: Calculate volume and surface area of rectangular and other common shapes, using a given formula.	Lesson 6: Volume	<ul style="list-style-type: none">• Solve for volume of three-dimensional figures• Solve for a surface area• Solve for the volume of area using formulas

Unit 4: Linear Inequalities in One Variable				
8.EE.7	M2.2	<ul style="list-style-type: none"> M2.2: Use variables, simplify expressions, and solve equations. 	Lesson 1: Set Notation, Interval Notation, and Terminology	<ul style="list-style-type: none"> Identify set-builder and interval notation Write solution sets for equations and inequalities in both set-builder and interval notation
8.EE.7	M2.3	<ul style="list-style-type: none"> M2.3: Model mathematical relationships (particularly functional relationships) found in context, using words, tables and graphs, as well as algebraic expressions and equations. 	Lesson 2: Solve and Graph Single Linear Inequalities in One Variable	<ul style="list-style-type: none"> Solve linear inequalities in one variable Graph linear inequalities in one variable
8.EE.8	M2.2 M2.2.12	<ul style="list-style-type: none"> M2.2: Use variables, simplify expressions, and solve equations. M2.2.12: Solve inequalities. 	Lesson 3: Solve and Graph Compound Linear Inequalities in One Variable	<ul style="list-style-type: none"> Solve compound linear inequalities in one variable Graph solution sets of linear inequalities
8.EE.8	M2.2.13	<ul style="list-style-type: none"> M2.2.13: Solve systems of linear equations. 	Lesson 4: Solve Linear Equations and Inequalities Containing Absolute Value	<ul style="list-style-type: none"> Solve linear inequalities containing absolute value Graph solutions to linear inequalities containing absolute value

Unit 5: Linear Functions				
F.IF.2	M2.3.9	<ul style="list-style-type: none"> M2.3.9: Use a graph to answer questions about functional relationships between independent and dependent variables. 	Lesson 1: Introduction to Graphing	<ul style="list-style-type: none"> Identify the location of a point Solve an equation by identifying the ordered pair
F.IF.4	M2.3.12	<ul style="list-style-type: none"> M2.3.12: Graph a linear function. 	Lesson 2: Graphing Linear Functions Using a Table of Values	<ul style="list-style-type: none"> Graph linear equations using a table of values
F.IF.4	M2.3	<ul style="list-style-type: none"> M2.3: Model mathematical relationships found in context, using words, tables, and graphs, as well as algebraic expressions and equations. 	Lesson 3: Graphing Horizontal and Vertical Lines	<ul style="list-style-type: none"> Graph horizontal lines when given its equation Graph vertical lines when given its equation
F.IF.4	M2.3	<ul style="list-style-type: none"> M2.3: Model mathematical relationships found in context, using words, tables, and graphs, as well as algebraic expressions and equations. 	Lesson 4: Graphing Linear Functions Using Intercepts	<ul style="list-style-type: none"> Locate the x and y intercept of a line Graph lines using the x and y intercept
F.IF.4	M2.3	<ul style="list-style-type: none"> M2.3: Model mathematical relationships found in context, using words, tables, and graphs, as well as algebraic expressions and equations. 	Lesson 5: Rate of Change—Understanding Slope and Context	<ul style="list-style-type: none"> Interpret positive, negative, zero, and undefined slope
F.IF.4	M2.3.8	<ul style="list-style-type: none"> M.2.3.8: Determine the slope of a line and relate it to the rate of change in one quantity with respect to the other. 	Lesson 6: Slope of a Line	<ul style="list-style-type: none"> Identify the slope of a line

F.IF.4	M2.3.8	<ul style="list-style-type: none"> M.2.3.8: Determine the slope of a line and relate it to the rate of change in one quantity with respect to the other. 	Lesson 7: Equations of Lines (Slope-Intercept and Point-Slope Form)	<ul style="list-style-type: none"> Understand the slope and y-intercept form from its equation Write an equation of a line given the slope and y-intercept
F.IF.4	M2.3.8	<ul style="list-style-type: none"> M.2.3.8: Determine the slope of a line and relate it to the rate of change in one quantity with respect to the other. 	Lesson 8: Graphing Linear Functions in Slope-Intercept Form or Point-Slope Form	<ul style="list-style-type: none"> Graph a linear function when given its equation in slope-intercept form Graph a linear function when given its equation in point-slope form
F.IF.9	M2.3.15	<ul style="list-style-type: none"> M.2.3.15 Interpret algebraic concepts and terminology used at the secondary level to solve computationally and conceptually challenging multi-step problems. 	Lesson 9: Applications of Linear Functions	<ul style="list-style-type: none"> Solve word problems involving linear equations in two variables
F.IF.4	M3.2 M3.2.1	<ul style="list-style-type: none"> M3.2: Recognize, identify, describe, and reason about lines and angles in two dimensions. M3.2.1: Identify parallel, perpendicular, and intersecting lines. 	Lesson 10: Write the Equation of a Line Perpendicular or Parallel to a Given Line	<ul style="list-style-type: none"> Write an equation for parallel lines Write equations for perpendicular lines
F.IF.4	M2.3	<ul style="list-style-type: none"> M2.3: Model mathematical relationships found in context, using words, tables, and graphs, as well as algebraic expressions and equations. 	Lesson 11: Graph Linear Inequalities in Two Variables	<ul style="list-style-type: none"> Graph linear inequalities in two variables

Unit 6: Polynomials and Factoring				
A.APR.1	M2.2	<ul style="list-style-type: none"> M2.2: Use variables, simplify expressions, and solve equations. 	Lesson 1: Introduction to Polynomials	<ul style="list-style-type: none"> Classify polynomials
A.APR.1	M2.2.7	<ul style="list-style-type: none"> M2.2.7: Add, subtract, multiply, and divide polynomial expressions. 	Lesson 2: Addition and Subtraction in Polynomials	<ul style="list-style-type: none"> Solve addition and subtraction problems containing polynomials
A.APR.1	M2.2.7	<ul style="list-style-type: none"> M2.2.7: Add, subtract, multiply, and divide polynomial expressions. 	Lesson 3: Multiplication of Polynomials	<ul style="list-style-type: none"> Solve multiplication problems with binomials and polynomials
A.APR.1	M2.2.7	<ul style="list-style-type: none"> M2.2.7: Add, subtract, multiply, and divide polynomial expressions. 	Lesson 4: Division of Polynomials	<ul style="list-style-type: none"> Solve division problems containing polynomials and monomials
A.APR.1	M2.3.15	<ul style="list-style-type: none"> M2.3.15: Interpret algebraic concepts and terminology used at the secondary level to solve computationally and conceptually challenging multi-step problems. 	Lesson 5: Factoring by Greatest Common Factor and Grouping	<ul style="list-style-type: none"> Factor polynomials using grouping and the greatest common factor
A.APR.1	M2.3.15	<ul style="list-style-type: none"> M2.3.15: Interpret algebraic concepts and terminology used at the secondary level to solve computationally and conceptually challenging multi-step problems. 	Lesson 6: Factoring Differences of Squares	<ul style="list-style-type: none"> Factor the difference of squares
A.APR.1	M2.3.15	<ul style="list-style-type: none"> M2.3.15: Interpret algebraic concepts and terminology used at the secondary level to solve computationally and conceptually challenging multi-step problems. 	Lesson 7: Factoring trinomials	<ul style="list-style-type: none"> Factor trinomials

A.SEE.2	M2.3.15	<ul style="list-style-type: none">• M2.3.15: Interpret algebraic concepts and terminology used at the secondary level to solve computationally and conceptually challenging multi-step problems.	Lesson 8: Factoring Sum and Difference of Cubes	<ul style="list-style-type: none">• Factor the sum of cubes• Factor the difference of cubes
A.REI.4	M2.3.15	<ul style="list-style-type: none">• M2.3.15: Interpret algebraic concepts and terminology used at the secondary level to solve computationally and conceptually challenging multi-step problems.	Lesson 9: Solving Equations by Factoring	<ul style="list-style-type: none">• Solve equations by factoring
A.REI.4	M2.3.15	<ul style="list-style-type: none">• M2.3.15: Interpret algebraic concepts and terminology used at the secondary level to solve computationally and conceptually challenging multi-step problems.	Lesson 10: Word Problems	<ul style="list-style-type: none">• Solve word problems using factoring
A.REI.4	M2.2.15	<ul style="list-style-type: none">• M2.2.15: Interpret algebraic concepts and terminology used at the secondary level to solve computationally and conceptually challenging multi-step problems.	Lesson 11: Equations in Quadratic Form	<ul style="list-style-type: none">• Solve equations in quadratic form

Unit 7: Rational Expressions				
A.APR.1	M2.3.15	<ul style="list-style-type: none"> M2.3.15: Interpret algebraic concepts and terminology used at the secondary level to solve computationally and conceptually challenging multi-step problems. 	Lesson 1: Simplifying Expressions and Determining Excluded Values	<ul style="list-style-type: none"> Simplify rational value expressions
A.APR.1	M2.3.15	<ul style="list-style-type: none"> M2.3.15: Interpret algebraic concepts and terminology used at the secondary level to solve computationally and conceptually challenging multi-step problems. 	Lesson 2: Multiplication and Division of Rational Expressions	<ul style="list-style-type: none"> Multiply and divide rational expressions
A.APR.1	M2.3.15	<ul style="list-style-type: none"> M2.3.15: Interpret algebraic concepts and terminology used at the secondary level to solve computationally and conceptually challenging multi-step problems. 	Lesson 3: Addition and Subtraction of Rational Expressions	<ul style="list-style-type: none"> Add and subtract rational expressions
A.APR.1	M2.3.15	<ul style="list-style-type: none"> M2.3.15: Interpret algebraic concepts and terminology used at the secondary level to solve computationally and conceptually challenging multi-step problems. 	Lesson 4: Perform Operations with Complex Fractions	<ul style="list-style-type: none"> Simplify complex rational expressions
A.APR.1	M2.3.15	<ul style="list-style-type: none"> M2.3.15: Interpret algebraic concepts and terminology used at the secondary level to solve computationally and conceptually challenging multi-step problems. 	Lesson 5: Solve Equations with Rational Expressions	<ul style="list-style-type: none"> Solve equations involving rational expressions with fractions

A.APR.1	M2.3.15	<ul style="list-style-type: none">• M2.3.15: Interpret algebraic concepts and terminology used at the secondary level to solve computationally and conceptually challenging multi-step problems.	Lesson 6: Applications: Word Problems	<ul style="list-style-type: none">• Solve word problems involving rational expressions
---------	---------	--	--	--

BASIC MATH

CCR Standard	CASAS Standard	CASAS Standard Description	i-Pathways Unit Lesson	Lesson Objectives
Unit 1: Number Sense				
3.NBT.3	M1.1 M1.1-5	<ul style="list-style-type: none"> • M1.1: Read, write, order, and compare rational numbers. • M1.1.1: Associate numbers with quantities. • M1.1.2: Count with whole numbers. • M1.1.3: Count by 2s, 5s, and 10s up to 100. • M1.1.4: Recognize odd and even numbers. • M1.1.5: Understand the decimal place value system: read, write, order, and compare whole and decimal numbers. 	Lesson 1: Place, Value, Rounding, and Estimating	<ul style="list-style-type: none"> • Identify place value of a digit in a number • Round numbers to a given place value • Estimate numbers
3.NBT.4	M1.1 M1.2.2-9 M1.3	<ul style="list-style-type: none"> • M1.1: Read, write, order, and compare rational numbers. • M1.2.2: Add and subtract positive multi-digit numbers, including decimal numbers. • M1.2.3: Recognize when a problem situation requires addition or subtraction with multi-digit positive integers and decimal numbers, carry out the computation, and interpret the answer in context. • M1.2.4: Use the inverse relationship between addition and subtraction to write problem statements and to check computation. • M1.2.5: Use the commutative property of addition to restate problems and recognize the proper order to write subtraction problems and enter them into a calculator. • M1.2.6: Add and subtract fractions and mixed numbers, including those with unlike denominators. • M1.2.7: Recognize when a problem situation requires adding and/or subtracting with fractions and mixed numbers, carry out the computation, and interpret the answer in context. • M1.2.8: Use estimation strategies to determine reasonable answers to addition and subtraction problems involving integers, decimal numbers, and fractions. 	Lesson 2: Addition, Subtraction, Multiplication, Division	<ul style="list-style-type: none"> • Add, subtract, multiply, and divide whole numbers

		<ul style="list-style-type: none"> • M1.2.9: Express the result of adding and subtracting to the level of precision indicated by the problem. • M1.3: Demonstrate understanding of the operations of multiplication and division, their relation to each other, and their application in solving problems with rational numbers. 		
3.NBT.4	M1.2 M1.3	<ul style="list-style-type: none"> • M1.2: Demonstrate understanding of the operations of addition and subtraction, their relation to each other, and their application in solving problems with rational numbers. • M1.3 Demonstrate understanding of the operations of multiplication and division, their relation to each other, and their application in solving problems with rational numbers. 	Lesson 3: Mean, Median, Mode	<ul style="list-style-type: none"> • Define mean, median, and mode • Solve math problems involving mean, median, mode, and range
4.EE.14	M.1.3.16	<ul style="list-style-type: none"> • M1.3.16: Use exponential notation to indicate repeated multiplication, as in squaring and cubing. 	Lesson 4: Exponents	<ul style="list-style-type: none"> • Identify exponents or powers • Simplify powers of 0 and 1 • Use exponents with geometry
4.NS.10	M2.1 M2.1.4	<ul style="list-style-type: none"> • M2.1: Find structure and patterns in arithmetic number sequences and contextual situations. • M2.1.4: Apply the correct order of operations. 	Lesson 5: Order of Operations	<ul style="list-style-type: none"> • Apply the rules of order of operations to simplify mathematical expressions
3.OA.4	M1.1	<ul style="list-style-type: none"> • M1.1: Read, write, order, and compare rational numbers. 	Lesson 6: Prime Numbers	<ul style="list-style-type: none"> • Identify prime and composite numbers • Identify at least two pairs of factors of composite numbers • Find pairs of factors that add to give a given number

3.OA.4	M1.3 M1.3.5	<ul style="list-style-type: none"> • M1.3: Demonstrate understanding of the operations of multiplication and division, their relation to each other, and their application in solving problems with rational numbers. • M1.3.5: Find factors of whole numbers to 100. 	Lesson 7: Prime Factorization	<ul style="list-style-type: none"> • Identify when a number is written as a product of primes • Understand the Fundamental Theorem of Arithmetic • Find the prime factorization for any counting number
3.NF.8	M1.3	<ul style="list-style-type: none"> • M1.3: Demonstrate understanding of the operations of multiplication and division, their relation to each other, and their application in solving problems with rational numbers. 	Lesson 8: Least Common Multiples	<ul style="list-style-type: none"> • Identify the least common multiple mean • Find the least common multiple for a group of two or three numbers • Understand what prime numbers have to do with least common multiples
3.NF.9	M1.5	<ul style="list-style-type: none"> • M1.5: Use strategies and tool to solve problems. 	Lesson 9: Problem Solving	<ul style="list-style-type: none"> • Use strategies to solve word problems • Determine key words in word problems

Unit 2: Prime Numbers and Least Common Multiples				
3.NF.1	M1.1 M1.1.8-9 M1.1.11-12	<ul style="list-style-type: none"> • M1.1: Read, write, order, and compare rational numbers. • M1.1.8: Interpret and use a fraction in context. • M1.1.9: Find equivalent fractions and simplify fractions to lowest terms. • M1.1.11: Convert between mixed numbers and improper fractions. • M1.1.12: Use common fractions and their decimal equivalents interchangeably. 	Lesson 1: Fractions	<ul style="list-style-type: none"> • Understand fractions • Identify equivalent fractions • Simplify or expand fractions
4.NS.1	M1.3 M1.3.9-14	<ul style="list-style-type: none"> • M1.3: Demonstrate understanding of the operations of multiplication and division, their relation to each other, and their application in solving problems with rational numbers. • M1.3.9: Use the context to determine whether the answer to a division problem should be rounded off or if the remainder should be expressed as a fraction. • M1.3.10: Use fractional notation to indicate division. • M1.3.11: Find fractional parts of whole numbers and/or decimal numbers. • M1.3.12: Recognize when a problem situation requires multiplying and/or dividing with fractions and mixed numbers, carry out the computation, and interpret the answer in context. • M1.3.13: Use estimation strategies to determine reasonable answers to multiplication and division problems involving integers, decimal numbers, and fractions. • M1.3.14: Use the commutative property of multiplication to restate problems and recognize the proper order to write a division problem and to enter it into a calculator. 	Lesson 2: Multiplication with Fractions	<ul style="list-style-type: none"> • Multiply fractions
4.NS.1	M1.3 M1.3.9-14	<ul style="list-style-type: none"> • M1.3: Demonstrate understanding of the operations of multiplication and division, their relation to each other, and their application in solving problems with rational numbers. • M1.3.9: Use the context to determine whether the answer to a division problem should be rounded off or if the remainder should be expressed as a fraction. • M1.3.10: Use fractional notation to indicate division. 	Lesson 3: Division with Fractions	<ul style="list-style-type: none"> • Divide Fractions

		<ul style="list-style-type: none"> • M1.3.11: Find fractional parts of whole numbers and/or decimal numbers. • M1.3.12: Recognize when a problem situation requires multiplying and/or dividing with fractions and mixed numbers, carry out the computation, and interpret the answer in context. • M1.3.13: Use estimation strategies to determine reasonable answers to multiplication and division problems involving integers, decimal numbers, and fractions. • M1.3.14: Use the commutative property of multiplication to restate problems and recognize the proper order to write a division problem and to enter it into a calculator. 		
3.NF.8	M1.2 M1.2.6-8	<ul style="list-style-type: none"> • M1.2: Demonstrate understanding of the operations of addition and subtraction, their relation to each other, and their application in solving problems with rational numbers. • M1.2.6: Add and subtract fractions and mixed numbers, including those with unlike denominators. • M1.2.7: Recognize when a problem situation requires adding and/or subtracting with fractions and mixed numbers, carry out the computation, and interpret the answer in context. • M1.2.8: Use estimation strategies to determine reasonable answers to addition and subtraction problems involving integers, decimal numbers, and fractions. 	Lesson 4: Addition with Fractions	<ul style="list-style-type: none"> • Determine the least common denominator (LCD) • Add fractions
3.NF.8	M1.2 M1.2.6-8	<ul style="list-style-type: none"> • M1.2: Demonstrate understanding of the operations of addition and subtraction, their relation to each other, and their application in solving problems with rational numbers. • M1.2.6: Add and subtract fractions and mixed numbers, including those with unlike denominators. • M1.2.7: Recognize when a problem situation requires adding and/or subtracting with fractions and mixed numbers, carry out the computation, and interpret the answer in context. • M1.2.8: Use estimation strategies to determine reasonable answers to addition and subtraction problems involving integers, decimal numbers, and fractions. 	Lesson 5: Subtraction with Fractions	<ul style="list-style-type: none"> • Subtract fractions

3.NF.4	M1.1 M1.1.11	<ul style="list-style-type: none"> • M1.1: Read, write, order, and compare rational numbers. • M1.1.11: Convert between mixed numbers and improper fractions. 	Lesson 6: Mixed Numbers	<ul style="list-style-type: none"> • Use mixed numbers to represent figures and real-life data • Write mixed numbers as improper fractions • Write improper fractions as mixed numbers
3.NF.4	M1.3 M1.3.12	<ul style="list-style-type: none"> • M1.3: Demonstrate understanding of the operations of multiplication and division, their relation to each other, and their application in solving problems with rational numbers. • M1.3.12: Recognize when a problem situation requires multiplying and/or dividing with fractions and mixed numbers, carry out the computation, and interpret the answer in context. 	Lesson 7: Multiply and Divide with Mixed Numbers	<ul style="list-style-type: none"> • Multiply mixed numbers • Divide mixed numbers
3.NF.3	M1.2 M1.2.6-7	<ul style="list-style-type: none"> • M1.2: Demonstrate understanding of the operations of addition and subtraction, their relation to each other, and their application in solving problems with rational numbers. • M1.2.6: Add and subtract fractions and mixed numbers, including those with unlike denominators. • M1.2.7: Recognize when a problem situation requires adding and/or subtracting with fractions and mixed numbers, carry out the computation, and interpret the answer in context. 	Lesson 8: Adding Mixed Numbers	<ul style="list-style-type: none"> • Add mixed numbers
3.NF.3	M1.2 M1.2.6-7	<ul style="list-style-type: none"> • M1.2: Demonstrate understanding of the operations of addition and subtraction, their relation to each other, and their application in solving problems with rational numbers. • M1.2.6: Add and subtract fractions and mixed numbers, including those with unlike denominators. • M1.2.7: Recognize when a problem situation requires adding and/or subtracting with fractions and mixed numbers, carry out the computation, and interpret the answer in context. 	Lesson 9: Subtracting with Mixed Numbers	<ul style="list-style-type: none"> • Subtract mixed numbers

Unit 3: Decimals				
3.NBT.8	M1.1 M1.1.5	<ul style="list-style-type: none"> M1.1: Read, write, order, and compare rational numbers. M1.1.5: Understand the decimal place value system: read, write, order, and compare whole and decimal numbers. 	Lesson 1: Decimal Numbers	<ul style="list-style-type: none"> Read decimal numbers written as numerals Write numerals that contain decimals and are expressed as words Identify the value of a digit in a number Round decimals to an indicated place of accuracy
3.NBT.14	M1.2 M1.2.2	<ul style="list-style-type: none"> M1.2 Demonstrate understanding of the operations of addition and subtraction, their relation to each other, and their application in solving problems with rational numbers. M1.2.2: Add and subtract positive multi-digit numbers, including decimal numbers. 	Lesson 2: Addition and Subtraction with Decimal Numbers	<ul style="list-style-type: none"> Add with decimal numbers Subtract with decimal numbers
4.NS.3	M1.3 M1.3.6	<ul style="list-style-type: none"> M1.3: Demonstrate understanding of the operations of multiplication and division, their relation to each other, and their application in solving problems with rational numbers. M1.3.6: Recognize when a problem situation requires multiplying and/or dividing with multi-digit positive integers and decimal numbers, carry out the computation, and interpret the answer in context. 	Lesson 3: Multiplication and Division with Decimal Numbers	<ul style="list-style-type: none"> Multiply with decimal numbers Divide with decimal numbers
4.RP.3	M1.4 M1.4.3-4	<ul style="list-style-type: none"> M1.4: Understand the meaning of ratio, proportion, and percent, and use them to solve problems. M1.4.3: Find the percent equivalents to fractions and decimals. M1.4.4: Know the percent equivalent to common benchmark fractions and use them interchangeably for solving problems. 	Lesson 4: Decimals, Fractions, and Percents	<ul style="list-style-type: none"> Convert fractions to decimals Convert decimals to fractions Convert decimals to percents

4.G.17	M1.3 M1.3.16-17 M2.2.14	<ul style="list-style-type: none">• M1.3: Demonstrate understanding of the operations of multiplication and division, their relation to each other, and their application in solving problems with rational numbers.• M1.3.16: Use exponential notation to indicate repeated multiplication, as in squaring and cubing.• M1.3.17: Read, write, and interpret radical sign for square roots and for cube roots.• M2.2.14: Apply the Pythagorean theorem.	Lesson 5: Square Roots and Pythagorean Theorem	<ul style="list-style-type: none">• Apply the Pythagorean Relationship/Theorem• Find the square root of a number
--------	-------------------------------	--	--	---

Unit 4: Ratios and Proportions				
4.RP.1 4.RP.2	M1.4	<ul style="list-style-type: none"> M1.4: Understand the meaning of ratio, proportion, and percent, and use them to solve problems. 	Lesson 1: Ratio and Price per Unit	<ul style="list-style-type: none"> Understand ratios Write a ratio using several notations Calculate price per unit, miles per gallon and miles per hour
4.RP.5	M1.4 M1.4.1-2	<ul style="list-style-type: none"> M1.4: Understand the meaning of ratio, proportion, and percent, and use them to solve problems. M1.4.1: Recognize comparisons between quantities in situations that can be expressed as a ratio and those that can't. M1.4.2: Write and solve proportions for situations where two ratios are equal. 	Lesson 2: Ratios and Proportions	<ul style="list-style-type: none"> Identify a proportion Determine if a statement is a true proportion
4.RP.5	M1.4 M1.4.2	<ul style="list-style-type: none"> M1.4: Understand the meaning of ratio, proportion, and percent, and use them to solve problems. M1.4.2: Write and solve proportions for situations where two ratios are equal. 	Lesson 3: Finding the Unknown Term in a Proportions	<ul style="list-style-type: none"> Find the unknown number in a proportion
4.RP.6	M1.4 M1.4.2	<ul style="list-style-type: none"> M1.4: Understand the meaning of ratio, proportion, and percent, and use them to solve problems. M1.4.2: Write and solve proportions for situations where two ratios are equal. 	Lesson 4: Problem Solving with Proportions	<ul style="list-style-type: none"> Set up a proportion correctly given a situation with one unknown term Use a chart to help set up proportions
4.RP.3	M3.1 M3.1.3	<ul style="list-style-type: none"> M3.1: Recognize, identify, and describe the attributes of geometric shapes and use them in solving problems. M3.1.3: Identify and describe specific types of triangles based on their properties. 	Lesson 5: Similar Triangles and Similar Figures	<ul style="list-style-type: none"> Find unknown lengths of sides for pairs of similar figures using proportions

Unit 5: Percents				
4.RP.6	M1.4	<ul style="list-style-type: none"> M1.4: Understand the meaning of ratio, proportion, and percent, and use them to solve problems. 	Lesson 1: Decimals and Percents	<ul style="list-style-type: none"> Determine the meaning of a percent Change the decimal to a percent Change a percent to a decimal
4.RP.5	M1.4 M1.4.3-6	<ul style="list-style-type: none"> M1.4: Understand the meaning of ratio, proportion, and percent, and use them to solve problems. M1.4.3: Find the percent equivalents to fractions and decimals. M1.4.4: Know the percent equivalent to common benchmark fractions and use them interchangeably for solving problems. M1.4.5: Mentally find 10% and 1% of an integer or decimal number. M1.4.6: Estimate percentages of numbers by using benchmark percents (10%, 25%, 50%) or combinations of them. 	Lesson 2: Fractions and Percents	<ul style="list-style-type: none"> Change fractions, mixed numbers, and improper fractions into percents Change percents to fractions and mixed numbers
4.RP.6	M1.4 M1.4.3-6	<ul style="list-style-type: none"> M1.4: Understand the meaning of ratio, proportion, and percent, and use them to solve problems. M1.4.3: Find the percent equivalents to fractions and decimals. M1.4.4: Know the percent equivalent to common benchmark fractions and use them interchangeably for solving problems. M1.4.5: Mentally find 10% and 1% of an integer or decimal number. M1.4.6: Estimate percentages of numbers by using benchmark percents (10%, 25%, 50%) or combinations of them. 	Lesson 3: Applications with Percents	<ul style="list-style-type: none"> Identify types of numbers found in percent problems Write simple percent statements Use two formulas to solve percent problems Translate real-life problems to simple percent statements Solve percent word problems

4.RP.5	M1.4 M1.4.3-6	<ul style="list-style-type: none">• M1.4: Understand the meaning of ratio, proportion, and percent, and use them to solve problems.• M1.4.3: Find the percent equivalents to fractions and decimals.• M1.4.4: Know the percent equivalent to common benchmark fractions and use them interchangeably for solving problems.• M1.4.5: Mentally find 10% and 1% of an integer or decimal number.• M1.4.6: Estimate percentages of numbers by using benchmark percents (10%, 25%, 50%) or combinations of them.	Lesson 4: Simple and Compound Interest	<ul style="list-style-type: none">• Apply concepts of simple and compound interest to real-world problems
4.RP.6	M1.4.9	<ul style="list-style-type: none">• M1.4.9: Calculate percent of change (increase or decrease) in a variety of situations, including those involving money.	Lesson 5: Percent of Increase and Percent of Decrease	<ul style="list-style-type: none">• Solve problems involving percent of increase• Solve problems involving percent of decrease

BASIC WRITING

CCR Standard	CASAS Standard	CASAS Standard Description	i-Pathways Unit Lesson	Lesson Objectives
Unit 1: Sentence Structure/Mechanics				
4.W.CS1-2	W3.1	<ul style="list-style-type: none"> W3.1: Demonstrate knowledge of grammar (rules governing use of language). 	Lesson 1: Identifying and Using Parts of Speech	<ul style="list-style-type: none"> Correctly identify each of the eight parts of speech Correctly use each of the parts of speech in sentences
4.W.CS.2	W2.4 W2.12 W3.2-3 W3.8	<ul style="list-style-type: none"> W.2.4: Using capitalization and end punctuation to make the beginning and end of sentences. W2.12: Use commas with relative and dependent clauses, as well as other types of punctuation (e.g., semi-colons, colons, quotation marks). W3.2: Demonstrate knowledge of syntax (grammatical arrangement of words in sentences). W3.3: Use basic grammar and structures with present tense verbs and modals in high-frequency usage. W3.8: Write in complete sentences (e.g., avoiding fragments and comma splices). 	Lesson 2: Understanding Sentence Structure	<ul style="list-style-type: none"> Use periods correctly Use question marks correctly Use exclamation points correctly Use colons correctly Use italics correctly

4.W.KL.1	W3.8 W3.15	<ul style="list-style-type: none"> • W3.8: Write in complete sentences (e.g., avoiding fragments and comma splices). • W3.15: Use advanced grammar and structures, passive voice, reported speech, compound/complex sentences. 	Lesson 3: Combining Sentences	<ul style="list-style-type: none"> • Identify simple sentences, compound sentences, and complex sentences • Identify and correct sentence errors, such as run-ons and fragments • Connect sentences or parts of sentences with coordinating conjunctions, semicolons, and subordinating conjunctions
4.W.CS.2	W3.1-3 W3.11	<ul style="list-style-type: none"> • W3.1: Demonstrate knowledge of grammar. • W3.2: Demonstrate knowledge of syntax. • W3.3: Use basic grammar and structures with present tense verbs and modals in high-frequency usage. • W3.11: Use intermediate level grammar and structures (e.g., simple past, modals, real conditional, present perfect, compound simple sentences). 	Lesson 4: Errors in Grammar	<ul style="list-style-type: none"> • Identify basic grammatical errors in Standard English • Practice identifying grammatical errors in writing

Unit 2: Introduction to the Writing Process				
4.W.WL.3	W5.1-9	<ul style="list-style-type: none"> • W5.1: Plan writing by brainstorming and/or using graphic organizers. • W5.2: Present information in a logical sequence. • W5.3: Write related sentences to form a cohesive paragraph. • W5.4: Write and make connections between related information across different sections of a text. • W5.5: Use signal words as clues to the organization and content of a text. • W5.6: Organize text in paragraphs with clear beginning, middle, and end. • W5.7: Use an appropriate organizational structure which unifies relevant main ideas. • W5.8: Organize and summarize information using a variety of organizational patterns: list, sequence, comparison, contrast, classification, cause and effect. • W5.9: Synthesize information using a variety of organizational patterns: sequence, comparison, contrast, classification, cause and effect, chronology, hierarchy, topic. 	Lesson 1: Introduction to the Writing Process	<ul style="list-style-type: none"> • Gather ideas to write about • Analyze to decide on the topic, purpose, and audience • Write a first draft • Revise your draft • Edit your writing

4W.WL.3	W5.3-8	<ul style="list-style-type: none"> • W5.3: Write related sentences to form a cohesive paragraph. • W5.4: Write and make connections between related information across different sections of a text. • W5.5: Use signal words as clues to the organization and content of a text. • W5.6: Organize text in paragraphs with clear beginning, middle, and end. • W5.7: Use an appropriate organizational structure which unifies relevant main ideas. • W5.8: Organize and summarize information using a variety of organizational patterns: list, sequence, comparison, contrast, classification, cause and effect. 	Lesson 2: Sentences and Paragraphs	<ul style="list-style-type: none"> • Identify the parts of a paragraph • Write good topic sentences • Identify major and minor details • Define order, unity, and coherence
4.W.WL.3	W5.7-9	<ul style="list-style-type: none"> • W5.7: Use an appropriate organizational structure which unifies relevant main ideas. • W5.8: Organize and summarize information using a variety of organizational patterns: list, sequence, comparison, contrast, classification, cause and effect. • W5.9: Synthesize information using a variety of organizational patterns: sequence, comparison, contrast, classification, cause and effect, chronology, hierarchy, topic. 	Lesson 3: Patterns of Developments Part I	<ul style="list-style-type: none"> • Write five types of paragraphs • Understand purpose, characteristics, and patterns of organization
4.W.TT.2 4.W.TT.3	W5.7-9	<ul style="list-style-type: none"> • W5.7: Use an appropriate organizational structure which unifies relevant main ideas. • W5.8: Organize and summarize information using a variety of organizational patterns: list, sequence, comparison, contrast, classification, cause and effect. • W5.9: Synthesize information using a variety of organizational patterns: sequence, comparison, contrast, classification, cause and effect, chronology, hierarchy, topic. 	Lesson 4: Patterns of Development Part II	<ul style="list-style-type: none"> • Write paragraphs according to patterns of development • Compare and contrast developed paragraphs • Understand how classification paragraphs are developed • Understand how cause and effect paragraphs are developed • Understand how persuasive paragraphs are developed

Unit 3: Effective Sentences				
4.W.TT.1	W3.12-14 W4.1-10	<ul style="list-style-type: none"> • W3.12: Use comparative forms of adjectives. • W3.13: Use comparative forms of adverbs. • W3.14: Use signal words and cohesive devices that give clues to organization and content of message related to time, sequence, comparison, contrast, reason, choice, place, condition, cause-and-effect, purpose. • W4.1: Use common basic vocabulary. • W4.2: Use simple words and phrases from familiar context. • W4.3: Use common high-frequency words and phrases in everyday contexts. • W4.4: Use simple words, phrases, and idioms drawn from functional life skill topics. • W4.5: Use specialized vocabulary. • W4.6: Use common prefixes and suffixes to add meaning to words. • W4.7: Use words that are appropriate for informal (colloquial slang) written discourse vs. formal written discourse. • W4.8: Use precise and appropriate vocabulary to convey intended meaning. • W4.9: Use idioms and collocations appropriately. • W4.10: Use a wide range of vocabulary such as synonyms, antonyms, precise terminology, phrasal verbs and idioms on a variety of topics. 	Lesson 1: Word Choice	<ul style="list-style-type: none"> • Use concrete and vivid words • Write concisely • Avoid redundance • Avoid cliches • Use apostrophes correctly • Choose the right spelling of words
4.W.KL.1	W3.11 W5.3	<ul style="list-style-type: none"> • W3.11: Use intermediate grammar and structures, simple past, modals, real conditional, present perfect, compound simple sentences. • W5.3: Write related sentences to form a cohesive paragraph. 	Lesson 2: Sentence Variety	<ul style="list-style-type: none"> • Place emphasis on the major ideas of a sentence • Differentiate between coordination and subordination • Use variations of sentence structure • Use and punctuate transitional elements in a paragraph

4.W.KL.1	W3.11	<ul style="list-style-type: none">W3.11: Use intermediate grammar and structures, simple past, modals, real conditional, present perfect, compound simple sentences	Lesson 3: Sentence Clarity	<ul style="list-style-type: none">Identify and correct misplaced modifiersIdentify and correct dangling modifiersUse parallel structureIdentify and correct mixed construction
5.W.PD.1	W3.11	<ul style="list-style-type: none">W3.11: Use intermediate grammar and structures, simple past, modals, real conditional, present perfect, compound simple sentences	Lesson 4: Revising and Editing	<ul style="list-style-type: none">Revise and rewrite an essay to strengthen its content, organization, and wordingEdit an essay applying the standards of correct grammar and mechanics

Unit 4: Introduction to Referencing Materials				
4.W.RB.2	W8.1-2	<ul style="list-style-type: none">• W8.1: Paraphrase information.• W8.2: Summarize a text.	Lesson 1: Gathering Information and Citing Resources	<ul style="list-style-type: none">• Identify the types of sources used in research• Determine whether a source is credible or not• Understand the purpose of a Words Cited page
5.W.TT.1	W8.1-2	<ul style="list-style-type: none">• W8.1: Paraphrase information.• W8.2: Summarize a text.	Lesson 2: Summarizing, Paraphrasing, and Quoting Directly from Outside Source	<ul style="list-style-type: none">• Avoid plagiarism• Summarize from an outside source• Paraphrase from an outside source• Quote directly from an outside source• Use in-text citations

Unit 5: Essay Writing				
5.W.PD.1	W5.1-9	<ul style="list-style-type: none"> • W5.1: Plan writing by brainstorming and/or using graphic organizers. • W5.2: Present information in a logical sequence. • W5.3: Write related sentences to form a cohesive paragraph. • W5.4: Write and make connections between related information across different sections of a text. • W5.5: Use signal words as clues to the organization and content of a text. • W5.6: Organize text in paragraphs with clear beginning, middle, and end. • W5.7: Use an appropriate organizational structure which unifies relevant main ideas. • W5.8: Organize and summarize information using a variety of organizational patterns: list, sequence, comparison, contrast, classification, cause and effect. • W5.9: Synthesize information using a variety of organizational patterns: sequence, comparison, contrast, classification, cause and effect, chronology, hierarchy, topic. 	Lesson 1: The Writing Process	<ul style="list-style-type: none"> • Prepare to write • Organize an essay • Consider audience while writing • Draft, revise, and edit an essay
5.W.TT.2	W5.1-9	<ul style="list-style-type: none"> • W5.1: Plan writing by brainstorming and/or using graphic organizers. • W5.2: Present information in a logical sequence. • W5.3: Write related sentences to form a cohesive paragraph. • W5.4: Write and make connections between related information across different sections of a text. • W5.5: Use signal words as clues to the organization and content of a text. • W5.6: Organize text in paragraphs with clear beginning, middle, and end. • W5.7: Use an appropriate organizational structure which unifies relevant main ideas. • W5.8: Organize and summarize information using a variety of organizational patterns: list, sequence, comparison, contrast, classification, cause and effect. 	Lesson 2: Essay Development	<ul style="list-style-type: none"> • Write thesis statements • Write an introduction and conclusion • Write body paragraphs with topic sentences, support, and transitions

		<ul style="list-style-type: none"> W5.9: Synthesize information using a variety of organizational patterns: sequence, comparison, contrast, classification, cause and effect, chronology, hierarchy, topic. 		
5.W.TT.2	W5.1-9	<ul style="list-style-type: none"> W5.1: Plan writing by brainstorming and/or using graphic organizers. W5.2: Present information in a logical sequence. W5.3: Write related sentences to form a cohesive paragraph. W5.4: Write and make connections between related information across different sections of a text. W5.5: Use signal words as clues to the organization and content of a text. W5.6: Organize text in paragraphs with clear beginning, middle, and end. W5.7: Use an appropriate organizational structure which unifies relevant main ideas. W5.8: Organize and summarize information using a variety of organizational patterns: list, sequence, comparison, contrast, classification, cause and effect. W5.9: Synthesize information using a variety of organizational patterns: sequence, comparison, contrast, classification, cause and effect, chronology, hierarchy, topic. 	Lesson 3: Writing Strategies	<ul style="list-style-type: none"> Define and write a narrative essay Define and write an expository essay Define and write a persuasive essay Understand the difference between first and third person narration