Unit 3 Reveal Grade 5

Content Area: **Math**
Course(s): **Math**
Time Period: **October**
Length: **3 weeks**
Status: **Published**

Unit overview

UNIT 3 PLANNER

Place Value and Number Relationships

PACING: 12 days

LESSON	MATH OBJECTIVE	LANGUAGE OBJECTIVE	SOCIAL AND EMOTIONAL LEARNING OBJECTIVE	LESSON	KEY VOCABULARY
Unit Opener IntheH! Number Lines	Estimate decimal locations on open number lines.				
3-1 Generalize Place Value	Students relate the value of a digit in a multi-digit whole number in one place value position to that of the same digit in the place to its right. Students relate the value of a digit in a multi-digit whole number in one place value position to that of the same digit in the place to its left.	Students explain how the value of a digit compares to that of the same digit in a different place-value position while answering *Wh-* and yes/no questions and using the academic term *relationship*.	Students identify personal traits that make them good students, peers, and math learners.	3-1	Math Terms digit place value place-value chart
3-2 Extend Place Value to Decimals	Students relate the value of a digit in a decimal in one place value position to that of the same digit in the place to its right. Students relate the value of a digit in a decimal in one place value position to that of the same digit in the place to its left.	Students discuss how the value of a digit in a decimal compares to that of the same digit in a different decimal place-value position, using the terms *hundredths* and *tenths*.	Students discuss and practice strategies for managing stressful situations.	3-2	decimal decimal point tenth hundredth thousandth
3-3 Read and Write Decimals	Students read and write decimals to the thousandths place in standard form, expanded form, and word form.	Students explain how to read and write decimals to the thousandths place while making sure to include *and*.	Students actively listen without interruption as peers describe how they approached a complex mathematical task.	3-3	expanded form standard form word form
3-4 Compare Decimals	Students compare two decimals to the thousandths place using place value and record the comparison using appropriate symbols.	Students explain how to use place value and number lines to compare two decimals, using the terms *greater than*, *less than*, and *equal to*.	Students engage in respectful discourse with peers about various perspectives for approaching a mathematical challenge.	3-4	greater than (>) less than (<)
Math Probe Comparing Decimals	Compare two decimals by reasoning about the digits and their values based on place-value positions.				
3-5 Use Place Value to Round Decimals	Students round decimals to any place value position. Students identify situations that call for rounding decimals and determine the place to which to round.	Students identify place values to the nearest whole and tenths place using *about*.	Students demonstrate thoughtful reflection through identifying the causes of challenges and successes while completing a mathematical task.	3-5	estimate round
Unit Review **Fluency Practice**					
Unit Assessment **Performance Task**					

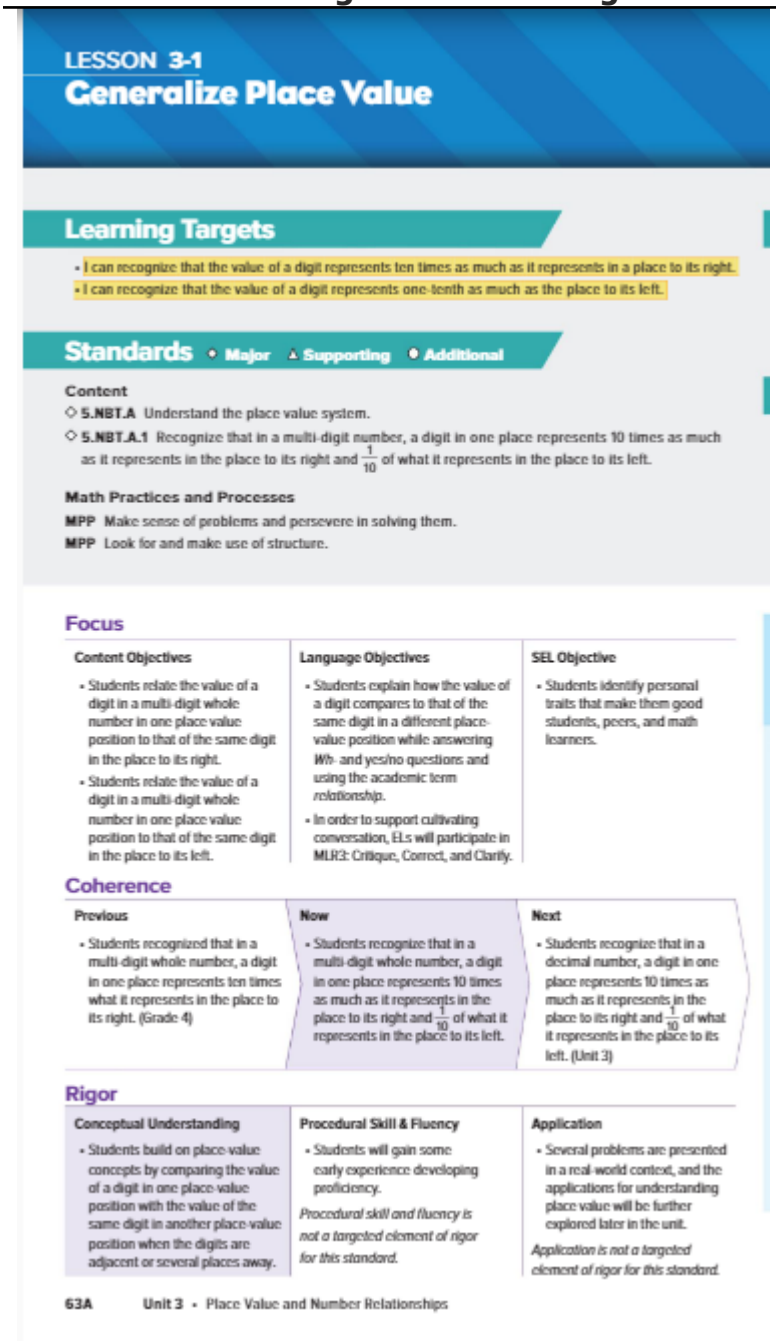
Enduring Understandings

See Above.

Essential Questions

See Above.

Instructional Strategies and Learning Activities



LESSON 3-1

Generalize Place Value

Learning Targets

- I can recognize that the value of a digit represents ten times as much as it represents in a place to its right.
- I can recognize that the value of a digit represents one-tenth as much as the place to its left.

Standards ◇ Major △ Supporting ○ Additional

Content

◇ **5.NBT.A** Understand the place value system.

◇ **5.NBT.A.1** Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and $\frac{1}{10}$ of what it represents in the place to its left.

Math Practices and Processes

MPP Make sense of problems and persevere in solving them.

MPP Look for and make use of structure.

Focus

Content Objectives

- Students relate the value of a digit in a multi-digit whole number in one place value position to that of the same digit in the place to its right.
- Students relate the value of a digit in a multi-digit whole number in one place value position to that of the same digit in the place to its left.

Language Objectives

- Students explain how the value of a digit compares to that of the same digit in a different place-value position while answering *Wh-* and yes/no questions and using the academic term *relationship*.
- In order to support cultivating conversation, ELs will participate in MLR3: Critique, Correct, and Clarify.

SEL Objective

- Students identify personal traits that make them good students, peers, and math learners.

Coherence

Previous

- Students recognized that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. (Grade 4)

Now

- Students recognize that in a multi-digit whole number, a digit in one place represents 10 times as much as it represents in the place to its right and $\frac{1}{10}$ of what it represents in the place to its left.

Next

- Students recognize that in a decimal number, a digit in one place represents 10 times as much as it represents in the place to its right and $\frac{1}{10}$ of what it represents in the place to its left. (Unit 3)

Rigor

Conceptual Understanding

- Students build on place-value concepts by comparing the value of a digit in one place-value position with the value of the same digit in another place-value position when the digits are adjacent or several places away.

Procedural Skill & Fluency

- Students will gain some early experience developing proficiency.

Procedural skill and fluency is not a targeted element of rigor for this standard.

Application

- Several problems are presented in a real-world context, and the applications for understanding place value will be further explored later in the unit.

Application is not a targeted element of rigor for this standard.

LESSON 3-2

Extend Place Value to Decimals

Learning Targets

- I can extend the place value relationship to decimal numbers.
- I can explain the relationship of place values in decimal numbers.

Standards • Major ▲ Supporting ○ Additional

Content

◇ **5.NBT.A** Understand the place value system.

◇ **5.NBT.A.1** Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and $\frac{1}{10}$ of what it represents in the place to its left.

Math Practices and Processes

MPP Model with mathematics.

MPP Look for and make use of structure.

Focus

Content Objective	Language Objectives	SEL Objective
• Students relate the value of a digit in a decimal in one place value position to that of the same digit in the place to its right or left.	• Students discuss how the value of a digit in a decimal compares to that of the same digit in a different decimal place-value position, using the terms *hundredths* and *tenths*. • In order to support sense-making, ELs will participate in MLR2: Collect and Display.	• Students discuss and practice strategies for managing stressful situations.

Coherence

Previous	Now	Next
• Students recognized that in a multi-digit whole number, a digit in one place represents 10 times as much as it represents in the place to its right and $\frac{1}{10}$ of what it represents in the place to its left. (Unit 3)	• Students recognize that in a multi-digit decimal number, a digit in one place represents 10 times as much as it represents in the place to its right and $\frac{1}{10}$ of what it represents in the place to its left.	• Students read and write decimals to thousandths using standard form, word form, and expanded form. (Unit 3)

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students deepen and extend their understanding of place-value patterns by reading and writing decimals, and by making multiplicative comparisons by 10 of decimals.	• Students have some early experiences developing proficiency. *Procedural skill and fluency is not a targeted element of rigor for this standard.*	• Students apply their understanding of place value to solve contextual problems. *Application is not a targeted element of rigor for this standard.*

LESSON 3-3

Read and Write Decimals

Learning Targets

- I can read and write decimals to thousandths using standard form, expanded form, and word form.
- I can make sense of decimals to the thousandths place.

Standards ◇ Major △ Supporting ○ Additional

Content

◇ **5.NBT.A** Understand the place value system.

◇ **5.NBT.A.3.a** Read and write decimals to thousandths using base-ten numerals, number names, and expanded form.

Math Practices and Processes

MPP Construct viable arguments and critique the reasoning of others.

MPP Attend to precision.

Focus

Content Objective	Language Objectives	SEL Objective
• Students read and write decimals to the thousandths place in standard form, expanded form, and word form.	• Students explain how to read and write decimals to the thousandths place while make sure to include *and*. • In order to support maximizing meta-awareness, ELs will participate in MLR1: Stronger and Clearer Each Time.	• Students actively listen without interruption as peers describe how they approached a complex mathematical task.

Coherence

Previous	Now	Next
• Students wrote multi-digit whole numbers using standard form, word form, and expanded form. (Grade 4) • Students explain the relationship of the value of digits in different place value positions. (Unit 3)	• Students read and write decimals to thousandths using standard form, word form, and expanded form.	• Students apply their understanding of decimals to compare decimals. (Unit 3)

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students build on their understanding of place-value patterns to read and write decimals to the thousandths place.	• Students build proficiency with decimals to the thousandths.	• Students apply understanding of decimals to solve real-world problems. *Application is not a targeted element of rigor for this standard.*

LESSON 3-4

Compare Decimals

Learning Target

- I can compare two decimals to the thousandths place using place value.

Standards ◆ Major ▲ Supporting ○ Additional

Content

◇ **5.NBT.A** Understand the place value system.

◇ **5.NBT.A.3.b** Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.

Math Practices and Processes

MPP Reason abstractly and quantitatively.

MPP Use appropriate tools strategically.

Focus

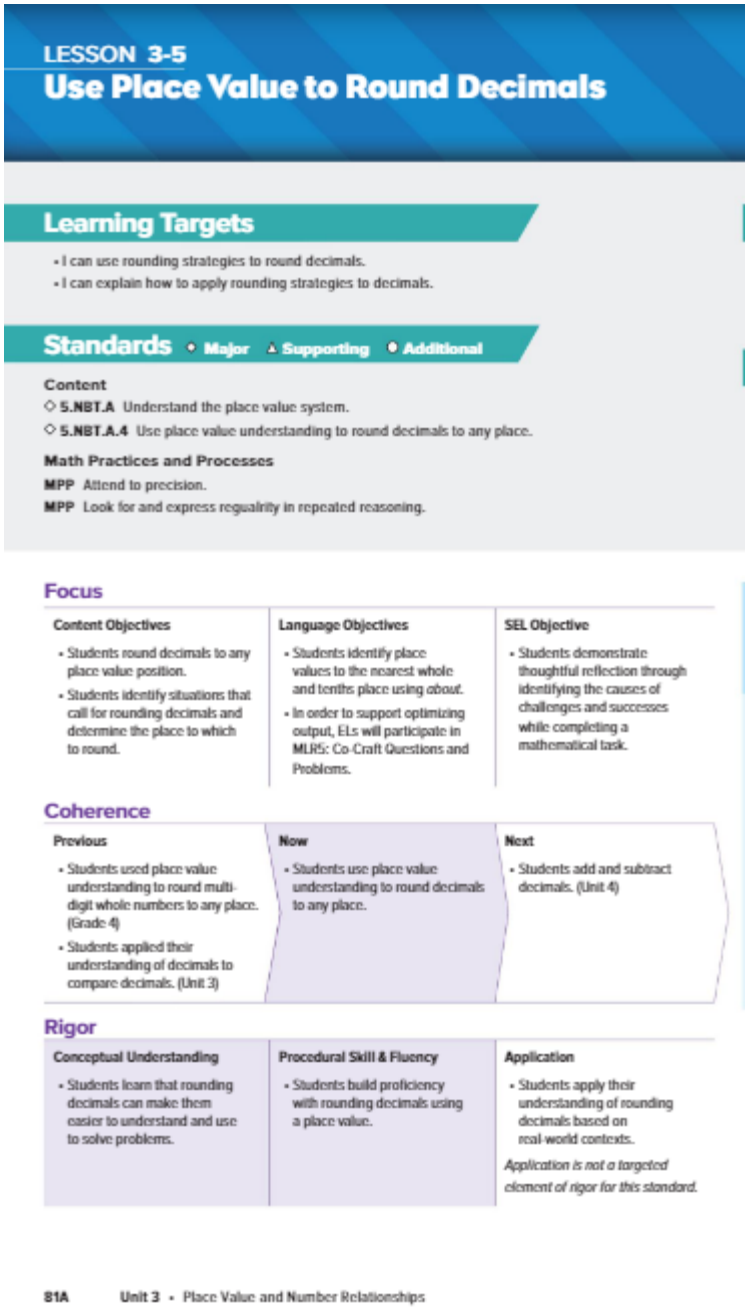
Content Objective	Language Objectives	SEL Objective
• Students compare two decimals to the thousandths place using place value and record the comparison using appropriate symbols.	• Students explain how to use place value and number lines to compare two decimals, using the terms greater than, less than, and equal to. • In order to support cultivating conversation, ELs will participate in MLR8: Discuss Supports.	• Students engage in respectful discourse with peers about various perspectives for approaching a mathematical challenge.

Coherence

Previous	Now	Next
• Students compared two multi-digit numbers based on meanings of the digits in each place, using >, <, and = symbols to record the results of comparisons. (Grade 4) • Students read and wrote decimals to thousandths using standard form, word form, and expanded form. (Unit 3)	• Students apply their understanding of decimals to compare decimals.	• Students use place value understanding to round decimals to any place. (Unit 3)

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students build on their number sense by examining patterns that extend place-value concepts from previous lessons to decimals in the thousandths.	• Students build proficiency in comparing decimals to the thousandths place using >, <, and = symbols to record the results of comparisons.	• Students apply their knowledge of using patterns to compare decimals based on real-world contexts. *Application is not a targeted element of rigor for this standard.*



LESSON 3-5

Use Place Value to Round Decimals

Learning Targets

- I can use rounding strategies to round decimals.
- I can explain how to apply rounding strategies to decimals.

Standards ◆ Major ▲ Supporting ● Additional

Content

◇ **5.NBT.A** Understand the place value system.

◇ **5.NBT.A.4** Use place value understanding to round decimals to any place.

Math Practices and Processes

MPP Attend to precision.

MPP Look for and express regularity in repeated reasoning.

Focus

Content Objectives	Language Objectives	SEL Objective
• Students round decimals to any place value position. • Students identify situations that call for rounding decimals and determine the place to which to round.	• Students identify place values to the nearest whole and tenths place using *about*. • In order to support optimizing output, ELs will participate in MLR5: Co-Craft Questions and Problems.	• Students demonstrate thoughtful reflection through identifying the causes of challenges and successes while completing a mathematical task.

Coherence

Previous	Now	Next
• Students used place value understanding to round multi-digit whole numbers to any place. (Grade 4) • Students applied their understanding of decimals to compare decimals. (Unit 3)	• Students use place value understanding to round decimals to any place.	• Students add and subtract decimals. (Unit 4)

Rigor

Conceptual Understanding	Procedural Skill & Fluency	Application
• Students learn that rounding decimals can make them easier to understand and use to solve problems.	• Students build proficiency with rounding decimals using a place value.	• Students apply their understanding of rounding decimals based on real-world contexts. *Application is not a targeted element of rigor for this standard.*

Integration of Career Readiness, Life Literacies and Key Skills

9.4.8.CI.1	Assess data gathered on varying perspectives on causes of climate change (e.g., cross-cultural, gender-specific, generational), and determine how the data can best be used to design multiple potential solutions (e.g., RI.7.9, 6.SP.B.5, 7.1.NH.IPERS.6, 8.2.8.ETW.4).
9.2.5.CAP.1	Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
9.2.5.CAP.2	Identify how you might like to earn an income.
9.2.5.CAP.3	Identify qualifications needed to pursue traditional and non-traditional careers and occupations.

9.4.8.CI.4	Explore the role of creativity and innovation in career pathways and industries.
9.2.5.CAP.4	Explain the reasons why some jobs and careers require specific training, skills, and certification (e.g., life guards, child care, medicine, education) and examples of these requirements.
9.1.2. FI.1	Differentiate the various forms of money and how they are used (e.g., coins, bills, checks, debit and credit cards).
9.4.8.CT.2	Develop multiple solutions to a problem and evaluate short- and long-term effects to determine the most plausible option (e.g., MS-ETS1-4, 6.1.8.CivicsDP.1).
9.4.8.CT.3	Compare past problem-solving solutions to local, national, or global issues and analyze the factors that led to a positive or negative outcome.
9.4.8.DC.2	Provide appropriate citation and attribution elements when creating media products (e.g., W.6.8).
9.1.2.PB.2	Explain why an individual would choose to save money.
9.4.8.DC.4	Explain how information shared digitally is public and can be searched, copied, and potentially seen by public audiences.
9.4.8.DC.5	Manage digital identity and practice positive online behavior to avoid inappropriate forms of self-disclosure.
9.4.8.DC.8	Explain how communities use data and technology to develop measures to respond to effects of climate change (e.g., smart cities).
9.4.8.GCA.1	Model how to navigate cultural differences with sensitivity and respect (e.g., 1.5.8.C1a).
9.4.8.GCA.2	Demonstrate openness to diverse ideas and perspectives through active discussions to achieve a group goal.
9.4.8.IML.2	Identify specific examples of distortion, exaggeration, or misrepresentation of information.
9.4.8.IML.3	Create a digital visualization that effectively communicates a data set using formatting techniques such as form, position, size, color, movement, and spatial grouping (e.g., 6.SP.B.4, 7.SP.B.8b).
9.4.8.IML.4	Ask insightful questions to organize different types of data and create meaningful visualizations.
9.4.8.IML.5	Analyze and interpret local or public data sets to summarize and effectively communicate the data.
9.4.8.IML.7	Use information from a variety of sources, contexts, disciplines, and cultures for a specific purpose (e.g., 1.2.8.C2a, 1.4.8.CR2a, 2.1.8.CHSS/IV.8.AI.1, W.5.8, 6.1.8.GeoSV.3.a, 6.1.8.CivicsDP.4.b, 7.1.NH. IPRET.8).
9.4.8.IML.12	Use relevant tools to produce, publish, and deliver information supported with evidence for an authentic audience.
9.4.8.TL.1	Construct a spreadsheet in order to analyze multiple data sets, identify relationships, and facilitate data-based decision-making.
9.4.8.TL.2	Gather data and digitally represent information to communicate a real-world problem (e.g., MS-ESS3-4, 6.1.8.EconET.1, 6.1.8.CivicsPR.4).
9.4.8.TL.3	Select appropriate tools to organize and present information digitally.
9.4.8.TL.5	Compare the process and effectiveness of synchronous collaboration and asynchronous collaboration.
9.4.8.TL.6	Collaborate to develop and publish work that provides perspectives on a real-world problem.

Technology and Design Thinking

8.1.5.CS.3	Identify potential solutions for simple hardware and software problems using common troubleshooting strategies.
	Data can be organized, displayed, and presented to highlight relationships.
8.1.5.DA.1	Collect, organize, and display data in order to highlight relationships or support a claim.
8.1.5.DA.3	Organize and present collected data visually to communicate insights gained from different views of the data.
8.1.5.DA.4	Organize and present climate change data visually to highlight relationships or support a claim.

Interdisciplinary Connections

LA.RI.5.1	Quote accurately from a text and make relevant connections when explaining what the text says explicitly and when drawing inferences from the text.
LA.RI.5.2	Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.
LA.RI.5.3	Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.
LA.RI.5.4	Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic or subject area.
LA.RI.5.5	Compare and contrast the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in two or more texts.
LA.RI.5.6	Analyze multiple accounts of the same event or topic, noting important similarities and differences in the point of view they represent.
LA.RI.5.7	Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.
LA.RI.5.8	Explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence support which point(s).
LA.RI.5.9	Integrate and reflect on (e.g., practical knowledge, historical/cultural context, and background knowledge) information from several texts on the same topic in order to write or speak about the subject knowledgeably.
LA.RI.5.10	By the end of year, read and comprehend literary nonfiction at grade level text-complexity or above, with scaffolding as needed.
LA.W.5.4	Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)
LA.SL.5.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.
LA.L.5.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
LA.L.5.2	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

Differentiation

- Understand that gifted students, just like all students, come to school to learn and be challenged.
- Pre-assess your students. Find out their areas of strength as well as those areas you may need to address before students move on.
- Consider grouping gifted students together for at least part of the school day.
- Plan for differentiation. Consider pre-assessments, extension activities, and compacting the curriculum.
- Use phrases like "You've shown you don't need more practice" or "You need more practice" instead of words like "qualify" or "eligible" when referring to extension work.
- Encourage high-ability students to take on challenges. Because they're often used to getting good grades, gifted students may be risk averse.

- **Definitions of Differentiation Components**:

    - Content – the specific information that is to be taught in the lesson/unit/course of instruction.
    - Process – how the student will acquire the content information.
    - Product – how the student will demonstrate understanding of the content.
    - Learning Environment – the environment where learning is taking place including physical location and/or student grouping

Differentiation occurring in this unit:

Use Differentiation guide in Teacher's manual for each unit

Modifications and Accommodations

Refer to QSAC EXCEL SMALL SPED ACCOMMOCATIONS spreadsheet in this discipline.

Modifications and Accommodations used in this unit:

Benchmark Assessments

Benchmark Assessments are given periodically (e.g., at the end of every quarter or as frequently as once per month) throughout a school year to establish baseline achievement data and measure progress toward a standard or set of academic standards and goals.

Schoolwide Benchmark assessments:

Aimsweb benchmarks 3X a year

Linkit Benchmarks 3X a year

DRA

Additional Benchmarks used in this unit:

End of Unit assessments

Formative Assessments

Assessment allows both instructor and student to monitor progress towards achieving learning objectives, and can be approached in a variety of ways. **Formative assessment** refers to tools that identify misconceptions, struggles, and learning gaps along the way and assess how to close those gaps. It includes effective tools for helping to shape learning, and can even bolster students' abilities to take ownership of their learning when they understand that the goal is to improve learning, not apply final marks (Trumbull and Lash, 2013). It can include students assessing themselves, peers, or even the instructor, through writing, quizzes, conversation, and more. In short, formative assessment occurs throughout a class or course, and seeks to improve student achievement of learning objectives through approaches that can support specific student needs (Theal and Franklin, 2010, p. 151).

Formative Assessments used in this unit:

Teacher Observations

Checklists

Questions and Discussions

Quizzes

Summative Assessments

Summative assessments evaluate student learning, knowledge, proficiency, or success at the conclusion of an instructional period, like a unit, course, or program. Summative assessments are almost always formally graded and often heavily weighted (though they do not need to be). Summative assessment can be used to great effect in conjunction and alignment with formative assessment, and instructors can consider a variety of ways to combine these approaches.

Summative assessments for this unit:

End of Unit Assessments

Instructional Materials

See Above

Standards

5.NBT.A	Understand the place value system
5.NBT.A.3	Read, write, and compare decimals to thousandths.
5.NBT.A.4	Use place value understanding to round decimals to any place.