

# 4<sup>th</sup>

2019-2020

**Thematic Scope and Sequence**  
English Pathway



# 4<sup>th</sup>

2019-2020

Challenge 1

**Thematic Scope and Sequence**  
English Pathway





## Health and Well-Being

Fourth Grade

### Magnetik® Understanding:

Diet and lifestyle impact our personal and community well-being.

### Magnetik® Question:

In what way can our diet and lifestyle affect our health?

### Global Issue:

Unhealthy diets and lifestyles

### Challenge-Action Question:

How can I promote a healthy lifestyle in my family?



Knotion® supports the Sustainable Development Goals





Knotion® Subject	Topic	Learning Outcome	Content
Life Science	• Structures and Processes of Organisms	• Identifies the organs of the digestive system and explains how they work.	• Organs and functions of the digestive system
		• Understands that the digestive system takes in food and breaks it down into nutrients.	• Nutrients and how they are absorbed
		• Explains how the immune system works.	• Immune system
		• Describes how vaccines work and how they help the immune system.	• Vaccines
	• Health	• Identifies practices to keep the digestive and immune systems healthy.	• Actions to avoid diseases: bring healthy lunches, wash fruits and vegetables, drink filtered water
	• Describes and compares the elements of a healthy diet.	• Fats, carbohydrates, proteins, vitamins, minerals	
	• Concludes that a balanced diet and good habits lead to healthy growth.	• Healthy eating and physical activity	

Knotion® Subject	Topic	Learning Outcome	Content
 <b>Citizenship Awareness</b>	<ul style="list-style-type: none"> <li>• Civic Ideals, Cultural Principles, and Ethics</li> </ul>	<ul style="list-style-type: none"> <li>• Analyzes health messages in the media.</li> </ul>	<ul style="list-style-type: none"> <li>• Importance of media on healthy lifestyles and diets</li> </ul>
	<ul style="list-style-type: none"> <li>• Civic Ideals, Cultural Principles, and Ethics</li> </ul>	<ul style="list-style-type: none"> <li>• Recognizes the importance in complying with the national vaccination program.</li> </ul>	<ul style="list-style-type: none"> <li>• National vaccination program; mandatory vaccines</li> </ul>
 <b>Productivity Awareness</b>	<ul style="list-style-type: none"> <li>• Economic Issues</li> </ul>	<ul style="list-style-type: none"> <li>• Understands that it is better to prevent disease rather than try to find cures for diseases after they occur.</li> </ul>	<ul style="list-style-type: none"> <li>• Prevention</li> </ul>



Knotion® Subject	Topic	Learning Outcome	Content
 Language Mastery	• Word Knowledge	• Acquires new grade-level vocabulary words in a variety of contexts.	• High-frequency words
		• Acquires new vocabulary words related to the challenge.	• Challenge words
	• Phonics	• Understands what constitutes the long vowel sound o.	• Long vowel o /oo/
		• Understands what constitutes the short vowel sound in words with the VCCV pattern.	• Short vowels in VCCV
		• Identifies the spelling-sound correspondences for the long e sound.	• Long e sound, ei, ee, ey, y /i/
		• Understands what constitutes the long vowel sound u.	• Vowel sound /u/ /ju/
	• Structure and Function	• Identifies and creates complete sentences.	• Sentences
		• Identifies the subject and predicate of sentences.	• Subjects and predicates
		• Structures compound and complex sentences.	• Compound and complex sentences
		• Identifies and fixes run-on sentences.	• Run-on sentences

Knotion® Subject	Topic	Learning Outcome	Content
 <b>Reading Skills</b>	<ul style="list-style-type: none"> <li>• Genre</li> </ul>	<ul style="list-style-type: none"> <li>• Understands that persuasive writing is a type of nonfiction writing used to convince the reader on agreeing with the author about an issue.</li> </ul>	<ul style="list-style-type: none"> <li>• Persuasive article</li> </ul>
		<ul style="list-style-type: none"> <li>• Identifies the main idea of a text and the details that support it.</li> </ul>	<ul style="list-style-type: none"> <li>• Main idea and key details</li> </ul>
	<ul style="list-style-type: none"> <li>• Strategies and Skills</li> </ul>	<ul style="list-style-type: none"> <li>• Describes how a narrator's or speaker's point of view influences how events are described.</li> </ul>	<ul style="list-style-type: none"> <li>• Author's point of view</li> </ul>
		<ul style="list-style-type: none"> <li>• Summarizes a story or text using the most important events and supporting details.</li> </ul>	<ul style="list-style-type: none"> <li>• Summarizing</li> </ul>
		<ul style="list-style-type: none"> <li>• Asks and answers questions to demonstrate understanding of a text.</li> </ul>	<ul style="list-style-type: none"> <li>• Asking and answering questions</li> </ul>
 <b>Writing Workshop</b>	<ul style="list-style-type: none"> <li>• Type of Writing</li> </ul>	<ul style="list-style-type: none"> <li>• Expresses an opinion on a topic by including persuasive arguments.</li> </ul>	<ul style="list-style-type: none"> <li>• Persuasive writing</li> </ul>



Knotion® Subject	Topic	Learning Outcome	Content
Communication Lab	• Oral Communication	<ul style="list-style-type: none"> <li>Analyzes and evaluates media.</li> </ul>	<ul style="list-style-type: none"> <li>Purposes of media</li> </ul>
		<ul style="list-style-type: none"> <li>Comments on and compares advertisements.</li> </ul>	<ul style="list-style-type: none"> <li>Advertisements</li> </ul>
		<ul style="list-style-type: none"> <li>Poses and responds to specific questions to clarify or follow up on information, and makes comments that contribute to the discussion making reference to the remarks of others.</li> </ul>	<ul style="list-style-type: none"> <li>Listening, asking questions, explaining individual ideas, speaking on topic, and being able to paraphrase materials read aloud</li> </ul>
		<ul style="list-style-type: none"> <li>Gives and follows health care instructions.</li> </ul>	<ul style="list-style-type: none"> <li>Giving and following instructions</li> </ul>

# 4<sup>th</sup>

2019-2020

Challenge 2



**Thematic Scope and Sequence**  
English Pathway





## Biomes and Ecosystems

Fourth Grade

### Magnetik® Understanding:

A balanced ecosystem depends on the interaction between its biotic and abiotic factors.

### Magnetik® Question:

How do the interactions between organisms keep an ecosystem balanced?

### Global Issue:

Ecological disruption

### Challenge-Action Question:

How can I contribute to solving an ecological problem in my community?



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Life Science

Knotion® Subject	Topic	Learning Outcome	Content
	<ul style="list-style-type: none"> <li>Structures and Processes of Organisms</li> </ul>	<ul style="list-style-type: none"> <li>Understands that the difference between a plant and an animal is that a plant makes its own food.</li> </ul>	<ul style="list-style-type: none"> <li>Autotrophs and heterotrophs</li> </ul>
		<ul style="list-style-type: none"> <li>Understands that plants get nutrients from the ground to make their own food.</li> </ul>	<ul style="list-style-type: none"> <li>Plants as autotrophs</li> </ul>
		<ul style="list-style-type: none"> <li>Explains and demonstrates that plants produce sugar through photosynthesis, and identifies that photosynthesis needs light, water, and carbon dioxide.</li> </ul>	<ul style="list-style-type: none"> <li>The role of light in the photosynthesis process</li> </ul>
	<ul style="list-style-type: none"> <li>Ecology</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrates how energy is transferred through food webs and what happens when this flow is interrupted.</li> </ul>	<ul style="list-style-type: none"> <li>Energy flow; the Sun as the food source of all consumers (directly or indirectly)</li> </ul>
		<ul style="list-style-type: none"> <li>Identifies and explains food chains, food webs, and trophic levels.</li> </ul>	<ul style="list-style-type: none"> <li>Food chains, food webs, trophic levels</li> </ul>
		<ul style="list-style-type: none"> <li>Understands food decomposition and demonstrates how it can be prevented or delayed.</li> </ul>	<ul style="list-style-type: none"> <li>Decomposers: fungi and bacteria; canning, refrigerating, and fermentation</li> </ul>

Knotion® Subject	Topic	Learning Outcome	Content
 <b>Citizenship Awareness</b>	<ul style="list-style-type: none"> <li>• Civic Ideals, Cultural Principles, and Ethics</li> </ul>	<ul style="list-style-type: none"> <li>• Recognizes that people have the right to be protected against discrimination and abuse to guarantee civil and human rights.</li> </ul>	<ul style="list-style-type: none"> <li>• Social and environmental discrimination</li> </ul>
 <b>Environmental Awareness</b>	<ul style="list-style-type: none"> <li>• Human Interaction With the Environment</li> </ul>	<ul style="list-style-type: none"> <li>• Describes ways humans can improve or harm the health of an ecosystem.</li> </ul>	<ul style="list-style-type: none"> <li>• The human factor that improves or harms the health of an ecosystem</li> </ul>



Knotion® Subject	Topic	Learning Outcome	Content
 Language Mastery	• Word Knowledge	• Acquires new grade-level vocabulary words in a variety of contexts.	• High-frequency words
		• Acquires new vocabulary words related to the challenge.	• Challenge words
	• Phonics	• Uses the parts of a compound word to determine the meaning of the whole word.	• Compound words
		• Determines the meanings of words with the prefixes mis-, dis-, in-.	• Prefixes mis-, dis-, in-
		• Identifies the spelling-sound correspondences for the consonant digraph ng and the blend nk.	• Digraph ng /ŋ/ and blend nk /nk/
		• Identifies the r-sound relationships of r-controlled vowels a and o.	• R- controlled vowels a /ar/ and o /ɔr/
	• Structure and Function	• Identifies compound nouns.	• Compound nouns
		• Identifies collective nouns.	• Collective nouns
		• Uses possessive nouns.	• Possessive nouns
		• Identifies pronouns and their antecedents in order to verify their agreement.	• Pronouns and antecedents

Knotion® Subject	Topic	Learning Outcome	Content
 <b>Reading Skills</b>	<ul style="list-style-type: none"> <li>• Genre</li> </ul>	<ul style="list-style-type: none"> <li>• Understands that historical fiction is a genre based on real historical events, however, the characters are not real, and the minor events may not be realistic.</li> </ul>	<ul style="list-style-type: none"> <li>• Historical fiction</li> </ul>
		<ul style="list-style-type: none"> <li>• Explains what might happen next in a story or what the author may tell next.</li> </ul>	<ul style="list-style-type: none"> <li>• Making, confirming, and revising predictions</li> </ul>
	<ul style="list-style-type: none"> <li>• Strategies and Skills</li> </ul>	<ul style="list-style-type: none"> <li>• Summarizes a story or text using the most important events and supporting details.</li> </ul>	<ul style="list-style-type: none"> <li>• Summarizing</li> </ul>
		<ul style="list-style-type: none"> <li>• Identifies problem and solution as story elements.</li> </ul>	<ul style="list-style-type: none"> <li>• Problem and solution</li> </ul>
		<ul style="list-style-type: none"> <li>• Determines the theme of a story, drama, or poem from details in the text.</li> </ul>	<ul style="list-style-type: none"> <li>• Theme</li> </ul>
 <b>Writing Workshop</b>	<ul style="list-style-type: none"> <li>• Type of Writing</li> </ul>	<ul style="list-style-type: none"> <li>• Informs about a specific topic using relevant and factual information.</li> </ul>	<ul style="list-style-type: none"> <li>• Informational writing</li> </ul>



Knotion® Subject	Topic	Learning Outcome	Content
Communication Lab	• Oral Communication	<ul style="list-style-type: none"> <li>• Delivers informational speech supporting spoken ideas with details and examples.</li> </ul>	<ul style="list-style-type: none"> <li>• Informational speech</li> </ul>
		<ul style="list-style-type: none"> <li>• Expresses and responds to concerns in brief dialogues.</li> </ul>	<ul style="list-style-type: none"> <li>• Expressing concerns</li> </ul>
		<ul style="list-style-type: none"> <li>• Understands the function and use of the conventions of academic language when speaking.</li> </ul>	<ul style="list-style-type: none"> <li>• Appropriate rate and accuracy</li> </ul>

# 4<sup>th</sup>

2019-2020

Challenge 3



**Thematic Scope and Sequence**  
English Pathway





## Science, Technology, and Innovation

Fourth Grade

### Magnetik® Understanding:

Technology allows a better understanding of natural phenomena.

### Magnetik® Question:

How does science help us understand and prepare for a natural phenomenon?

### Global Issue:

How can I help improve the school's protocols before, during, and after a disaster caused by natural phenomena?

### Challenge-Action Question:

How can I be better prepared to deal with a natural disaster?



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Knotion® Subject	Topic	Learning Outcome	Content
 <b>Physical Science</b>	<ul style="list-style-type: none"> <li>• Motion, Forces, and Interactions</li> </ul>	<ul style="list-style-type: none"> <li>• Explains how forces can cause an object to speed up, slow down, or go in a different direction.</li> </ul>	<ul style="list-style-type: none"> <li>• Relationship between a force and an object's change in direction</li> </ul>
		<ul style="list-style-type: none"> <li>• Understands that changes in speed or direction of motion are caused by a force.</li> </ul>	<ul style="list-style-type: none"> <li>• Predicting the speed or direction of an object</li> </ul>
 <b>Earth Science</b>	<ul style="list-style-type: none"> <li>• Earth's Systems</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrates how temperature and water masses cause tropical storms and hurricanes.</li> </ul>	<ul style="list-style-type: none"> <li>• Tropical storms and hurricanes</li> </ul>
		<ul style="list-style-type: none"> <li>• Illustrates how mountain ranges, deep ocean trenches, ocean floor structures, earthquakes, and volcanoes occur in patterns.</li> </ul>	<ul style="list-style-type: none"> <li>• Data from maps to describe patterns of Earth's features</li> </ul>
		<ul style="list-style-type: none"> <li>• Demonstrates how the landscape changes when earthquakes or volcanic eruptions occur.</li> </ul>	<ul style="list-style-type: none"> <li>• Changes in a landscape when a volcanic eruption occurs</li> </ul>
		<ul style="list-style-type: none"> <li>• Understands that humans cannot eliminate natural hazards but can take steps to reduce their impact.</li> </ul>	<ul style="list-style-type: none"> <li>• Impacts of natural phenomena</li> </ul>
<ul style="list-style-type: none"> <li>• Earth and Human Activity</li> </ul>			



Knotion® Subject	Topic	Learning Outcome	Content
 <b>Citizenship Awareness</b>	<ul style="list-style-type: none"> <li>Government Organization, Laws, and Political Systems</li> </ul>	<ul style="list-style-type: none"> <li>Creates safety procedures and rules and explains why they are needed.</li> </ul>	<ul style="list-style-type: none"> <li>Importance of following rules and having procedures in case of natural disasters</li> </ul>
		<ul style="list-style-type: none"> <li>Investigates disaster and emergency planning for preparedness, response, and recovery.</li> </ul>	<ul style="list-style-type: none"> <li>Emergency and disaster planning</li> </ul>
 <b>Historical Awareness</b>	<ul style="list-style-type: none"> <li>Causes and Consequences of Historical Events</li> </ul>	<ul style="list-style-type: none"> <li>Investigates causes and consequences of natural disasters in the past.</li> </ul>	<ul style="list-style-type: none"> <li>Examples: Pompeii, Hurricane Katrina, Mexico City Earthquake</li> </ul>



Knotion® Subject	Topic	Learning Outcome	Content
 Language Mastery	• Word Knowledge	• Acquires new grade-level vocabulary words in a variety of contexts.	• High-frequency words
		• Acquires new vocabulary words related to the challenge.	• Challenge words
	• Phonics	• Identifies and uses three letter blends.	• Three letter blends
		• Identifies and reads words with the silent letter combinations wr, kn, and mb.	• Words with silent letters wr, kn, and mb
		• Identifies the r-controlled vowel spelling patterns er, ir, and ur.	• R-controlled vowels er, ir, and ur /ɜr/
		• Recognizes soft c and soft g spelling patterns.	• Soft c /s/ and g /dʒ/
	• Structure and Function	• Applies subject-verb agreement rules.	• Subject-verb agreement
		• Understands the difference between the past simple and past progressive tenses.	• Past simple vs. past progressive tenses
		• Understands present perfect tense to express experiences, immediate past, and actions that started in the past but continue in the present.	• Present perfect tense
		• Understands the difference between the present perfect and past simple tenses.	• Present perfect vs. past simple tenses

Knotion® Subject	Topic	Learning Outcome	Content
 <b>Reading Skills</b>	<ul style="list-style-type: none"> <li>• Genre</li> </ul>	<ul style="list-style-type: none"> <li>• Understands that the purpose of expository nonfiction is to teach readers about a specific topic in an interesting way.</li> </ul>	<ul style="list-style-type: none"> <li>• Informational expository text</li> </ul>
		<ul style="list-style-type: none"> <li>• Identifies the main idea of a text and the details that support it.</li> </ul>	<ul style="list-style-type: none"> <li>• Main idea and key details</li> </ul>
	<ul style="list-style-type: none"> <li>• Strategies and Skills</li> </ul>	<ul style="list-style-type: none"> <li>• Summarizes a story or text using the most important events and supporting details.</li> </ul>	<ul style="list-style-type: none"> <li>• Summarizing</li> </ul>
		<ul style="list-style-type: none"> <li>• Identifies the similarities and differences between two or more things (example: characters, ideas, issues, concepts, topics, events, places).</li> </ul>	<ul style="list-style-type: none"> <li>• Comparing and contrasting</li> </ul>
		<ul style="list-style-type: none"> <li>• Retells important events in sequential order.</li> </ul>	<ul style="list-style-type: none"> <li>• Sequence</li> </ul>
 <b>Writing Workshop</b>	<ul style="list-style-type: none"> <li>• Type of Writing</li> </ul>	<ul style="list-style-type: none"> <li>• Writes stories using descriptive words to make stories clearer and more interesting.</li> </ul>	<ul style="list-style-type: none"> <li>• Creative writing</li> </ul>
		<ul style="list-style-type: none"> <li>• Writes dialogues in which expressions that offer and ask for help are used.</li> </ul>	<ul style="list-style-type: none"> <li>• Asking for help</li> </ul>



Knotion® Subject	Topic	Learning Outcome	Content
Communication Lab	• Oral Communication	<ul style="list-style-type: none"> <li>• Delivers oral presentations maintaining a clear focus.</li> </ul>	<ul style="list-style-type: none"> <li>• Presentation</li> </ul>
		<ul style="list-style-type: none"> <li>• Poses and responds to specific questions to clarify or follow up on information, and makes comments that contribute to the discussion by referencing the remarks of others.</li> </ul>	<ul style="list-style-type: none"> <li>• Listening, asking questions, explaining individual ideas, speaking on topic, and being able to paraphrase materials read aloud</li> </ul>
		<ul style="list-style-type: none"> <li>• Exchanges expressions used to offer and ask for help.</li> </ul>	<ul style="list-style-type: none"> <li>• Asking for help</li> </ul>

# 4<sup>th</sup>

2019-2020

Challenge 4

**Thematic Scope and Sequence**  
English Pathway





## Origins and Cultural Diversity

Fourth Grade

### Magnetik® Understanding:

Different traditions and cultural heritages contribute to a country's diversity.

### Magnetik® Question:

How can different cultures impact our community life?

### Global Issue:

Migration issues

### Challenge-Action Question:

How can I enrich my culture with the contribution of other cultures?



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 **Physical Science**

Knotion® Subject	Topic	Learning Outcome	Content
<p><b>Physical Science</b></p>	<ul style="list-style-type: none"> <li>• Matter and Its Interactions</li> </ul>	<ul style="list-style-type: none"> <li>• Explains that matter has different states and that each state has distinct physical properties.</li> </ul>	<ul style="list-style-type: none"> <li>• States of matter and physical properties</li> </ul>
		<ul style="list-style-type: none"> <li>• Identifies characteristics of a simple physical change.</li> </ul>	<ul style="list-style-type: none"> <li>• How heating or cooling changes water from one state to another and back</li> </ul>
		<ul style="list-style-type: none"> <li>• Identifies characteristics of a simple chemical change.</li> </ul>	<ul style="list-style-type: none"> <li>• Chemical changes</li> </ul>
		<ul style="list-style-type: none"> <li>• Understands that materials made by chemically combining two or more substances may have properties that differ from the original materials.</li> </ul>	<ul style="list-style-type: none"> <li>• Materials used in a chemical reaction; reactants and materials formed in chemical reactions; products</li> </ul>

Knotion® Subject	Topic	Learning Outcome	Content
 <b>Citizenship Awareness</b>	<ul style="list-style-type: none"> <li>• Civic Ideals, Cultural Principles, and Ethics</li> </ul>	<ul style="list-style-type: none"> <li>• Understands the key ideals of unity and diversity.</li> </ul>	<ul style="list-style-type: none"> <li>• Characteristics of unity and diversity and how culture is affected by them</li> </ul>
	<ul style="list-style-type: none"> <li>• Government Organization, Laws, and Political Systems</li> </ul>	<ul style="list-style-type: none"> <li>• Recognizes people's struggle with cultural and ethnic discrimination.</li> </ul>	<ul style="list-style-type: none"> <li>• Struggles against cultural and ethnic discrimination</li> </ul>
	<ul style="list-style-type: none"> <li>• Physical and Cultural Characteristics</li> </ul>	<ul style="list-style-type: none"> <li>• Describes the social and cultural life and interactions of people based on values and traditions.</li> </ul>	<ul style="list-style-type: none"> <li>• Values, traditions and interactions between people of different heritages</li> </ul>
 <b>Environmental Awareness</b>	<ul style="list-style-type: none"> <li>• Historical Chronology</li> </ul>	<ul style="list-style-type: none"> <li>• Compares the main characteristics of different cultures around the world.</li> </ul>	<ul style="list-style-type: none"> <li>• Characteristics of different cultures around the world</li> </ul>
	<ul style="list-style-type: none"> <li>• Historical Cultural Heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Explains the benefits of diversity on a community.</li> </ul>	<ul style="list-style-type: none"> <li>• Benefits of cultural diversity, including the increased range of viewpoints, ideas, customs, and choices available</li> </ul>
 <b>Historical Awareness</b>	<ul style="list-style-type: none"> <li>• Creates and explains a community timeline that displays events still celebrated or remembered today.</li> </ul>	<ul style="list-style-type: none"> <li>• Creates and explains a community timeline that displays events still celebrated or remembered today.</li> </ul>	<ul style="list-style-type: none"> <li>• Timeline of celebrations and traditions in the community</li> </ul>
	<ul style="list-style-type: none"> <li>• Examines the historical conditions that have contributed to cultural division around the world.</li> </ul>	<ul style="list-style-type: none"> <li>• Examines the historical conditions that have contributed to cultural division around the world.</li> </ul>	<ul style="list-style-type: none"> <li>• Causes and consequences of cultural diversity around the world</li> </ul>



Knotion® Subject	Topic	Learning Outcome	Content
Language Mastery	<ul style="list-style-type: none"> <li>Word Knowledge</li> </ul>	<ul style="list-style-type: none"> <li>Acquires new grade-level vocabulary words in a variety of contexts.</li> </ul>	<ul style="list-style-type: none"> <li>High-frequency words</li> </ul>
		<ul style="list-style-type: none"> <li>Acquires new vocabulary words related to the challenge.</li> </ul>	<ul style="list-style-type: none"> <li>Challenge words</li> </ul>
	<ul style="list-style-type: none"> <li>Phonics</li> </ul>	<ul style="list-style-type: none"> <li>Identifies and writes words that contain the inflectional endings -ing and -ed.</li> </ul>	<ul style="list-style-type: none"> <li>Inflectional endings -ing /əŋ/ and -ed /d/ /t/ /ə/</li> </ul>
		<ul style="list-style-type: none"> <li>Writes and spells words containing the diphthongs oi and ou.</li> </ul>	<ul style="list-style-type: none"> <li>Diphthongs /ɔɪ/ and /oʊ/</li> </ul>
		<ul style="list-style-type: none"> <li>Creates and uses plural nouns.</li> </ul>	<ul style="list-style-type: none"> <li>Plural nouns</li> </ul>
		<ul style="list-style-type: none"> <li>Reads and forms words that contain consonant-le.</li> </ul>	<ul style="list-style-type: none"> <li>Consonant +le syllable /əl/</li> </ul>
	<ul style="list-style-type: none"> <li>Structure and Function</li> </ul>	<ul style="list-style-type: none"> <li>Identifies and uses the modal can.</li> </ul>	<ul style="list-style-type: none"> <li>Can and can't</li> </ul>
		<ul style="list-style-type: none"> <li>Identifies and uses modal verbs of probability: may and might.</li> </ul>	<ul style="list-style-type: none"> <li>Modal verbs: may and might for permission and possibility</li> </ul>
		<ul style="list-style-type: none"> <li>Identifies and uses adverbs.</li> </ul>	<ul style="list-style-type: none"> <li>Adverbs</li> </ul>
		<ul style="list-style-type: none"> <li>Uses the comparative form of adverbs.</li> </ul>	<ul style="list-style-type: none"> <li>Comparing with adverbs</li> </ul>

Knotion® Subject	Topic	Learning Outcome	Content
 <b>Reading Skills</b>	<ul style="list-style-type: none"> <li>• Genre</li> </ul>	<ul style="list-style-type: none"> <li>• Understands that drama is a type of prose or verse composition intended to be played by actors personifying the characters and performing the dialogue and action.</li> </ul>	<ul style="list-style-type: none"> <li>• Drama</li> </ul>
		<ul style="list-style-type: none"> <li>• Asks and answers questions to demonstrate understanding of a text.</li> </ul>	<ul style="list-style-type: none"> <li>• Asking and answering questions</li> </ul>
	<ul style="list-style-type: none"> <li>• Strategies and Skills</li> </ul>	<ul style="list-style-type: none"> <li>• Determines the theme of a story, drama, or poem from details in the text.</li> </ul>	<ul style="list-style-type: none"> <li>• Theme</li> </ul>
		<ul style="list-style-type: none"> <li>• Creates mental images that reflect or represent the ideas in the text.</li> </ul>	<ul style="list-style-type: none"> <li>• Visualization</li> </ul>
		<ul style="list-style-type: none"> <li>• Describes how a narrator or speaker’s point of view influences how events are described.</li> </ul>	<ul style="list-style-type: none"> <li>• Author’s point of view</li> </ul>
 <b>Writing Workshop</b>	<ul style="list-style-type: none"> <li>• Type of Writing</li> </ul>	<ul style="list-style-type: none"> <li>• Writes narratives to develop real or imagined experiences or events using effective techniques, well-chosen details, and well-structured event sequences.</li> </ul>	<ul style="list-style-type: none"> <li>• Narrative writing</li> </ul>



Knotion® Subject	Topic	Learning Outcome	Content
Communication Lab	• Oral Communication	<ul style="list-style-type: none"> <li>• Tells a story in logical sequence with a beginning, middle, and end including an effective introduction and conclusion.</li> </ul>	<ul style="list-style-type: none"> <li>• Telling a story</li> </ul>
		<ul style="list-style-type: none"> <li>• Understands the function and use of the conventions of academic language when speaking.</li> </ul>	<ul style="list-style-type: none"> <li>• Appropriate rate and accuracy to be understood</li> </ul>
		<ul style="list-style-type: none"> <li>• Interprets and compares information given by an image.</li> </ul>	<ul style="list-style-type: none"> <li>• Information in illustrated texts</li> </ul>

# 4<sup>th</sup>

2019-2020

Challenge 5

**Thematic Scope and Sequence**  
English Pathway





## Productivity and Economy

Fourth Grade

### Magnetik® Understanding:

Employment boosts economic development and contributes to people's well-being.

### Magnetik® Question:

How does employment influence people's lives?

### Global Issue:

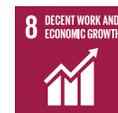
Unemployment

### Challenge-Action Question:

How can I help the unemployed in my community?



Knotion® supports the Sustainable Development Goals



Knotion® Subject	Topic	Learning Outcome	Content
 <b>Physical Science</b>	<ul style="list-style-type: none"> <li>• Energy</li> </ul>	<ul style="list-style-type: none"> <li>• Explains how light travels and interacts with other objects.</li> </ul>	<ul style="list-style-type: none"> <li>• Reflection and refraction</li> </ul>
		<ul style="list-style-type: none"> <li>• Understands that objects can be seen only when light is available to illuminate them.</li> </ul>	<ul style="list-style-type: none"> <li>• Objects can be seen only when illuminated</li> </ul>
		<ul style="list-style-type: none"> <li>• Illustrates that some materials block light.</li> </ul>	<ul style="list-style-type: none"> <li>• Transparent, translucent, opaque</li> </ul>
		<ul style="list-style-type: none"> <li>• Investigates what happens when a light source is partially blocked with various materials.</li> </ul>	<ul style="list-style-type: none"> <li>• Light diffraction</li> </ul>
 <b>Earth Science</b>	<ul style="list-style-type: none"> <li>• Earth's Place in the Universe</li> </ul>	<ul style="list-style-type: none"> <li>• Understands that an eclipse happens when a planet or a moon gets in the way of the Sun's light.</li> </ul>	<ul style="list-style-type: none"> <li>• Eclipses</li> </ul>
		<ul style="list-style-type: none"> <li>• Describes the positioning of the Sun, the Moon, and the Earth during a solar and lunar eclipse.</li> </ul>	<ul style="list-style-type: none"> <li>• Types of eclipses</li> </ul>



Knotion® Subject	Topic	Learning Outcome	Content
 <b>Productivity Awareness</b>	<ul style="list-style-type: none"> <li>Economic Concepts and Activities</li> </ul>	<ul style="list-style-type: none"> <li>Explores economic concepts, such as salary, wage, and profit.</li> </ul>	<ul style="list-style-type: none"> <li>Characteristics of economic concepts</li> </ul>
		<ul style="list-style-type: none"> <li>Understands that people sell goods and/or provide services to earn income.</li> </ul>	<ul style="list-style-type: none"> <li>Difference between selling products and providing services</li> </ul>
		<ul style="list-style-type: none"> <li>Distinguishes between price and value and gives examples.</li> </ul>	<ul style="list-style-type: none"> <li>Difference between price and value</li> </ul>
		<ul style="list-style-type: none"> <li>Understands that labor is a human resource that is used to produce goods and services.</li> </ul>	<ul style="list-style-type: none"> <li>Characteristics of labor</li> </ul>
	<ul style="list-style-type: none"> <li>Economic Issues</li> </ul>	<ul style="list-style-type: none"> <li>Understands that people's incomes, in part, reflect choices they have made about education, training, skill development, and careers.</li> </ul>	<ul style="list-style-type: none"> <li>Education, training, skill development</li> </ul>
		<ul style="list-style-type: none"> <li>Understands that workers with greater skills are likely to earn higher wages.</li> </ul>	<ul style="list-style-type: none"> <li>Importance of professional development</li> </ul>



Knotion® Subject	Topic	Learning Outcome	Content
Language Mastery	<ul style="list-style-type: none"> <li>Word Knowledge</li> </ul>	<ul style="list-style-type: none"> <li>Acquires new grade-level vocabulary words in a variety of contexts.</li> </ul>	<ul style="list-style-type: none"> <li>High-frequency words</li> </ul>
		<ul style="list-style-type: none"> <li>Acquires new vocabulary words related to the challenge.</li> </ul>	<ul style="list-style-type: none"> <li>Challenge words</li> </ul>
	<ul style="list-style-type: none"> <li>Phonics</li> </ul>	<ul style="list-style-type: none"> <li>Identifies open syllables.</li> </ul>	<ul style="list-style-type: none"> <li>Open syllables</li> </ul>
		<ul style="list-style-type: none"> <li>Identifies closed syllables.</li> </ul>	<ul style="list-style-type: none"> <li>Closed syllables</li> </ul>
		<ul style="list-style-type: none"> <li>Recognizes and pronounces vowel pairs correctly.</li> </ul>	<ul style="list-style-type: none"> <li>Vowel teams</li> </ul>
		<ul style="list-style-type: none"> <li>Identifies when to change a final y to i before adding -ed or -s.</li> </ul>	<ul style="list-style-type: none"> <li>Inflectional endings: changing y to i</li> </ul>
	<ul style="list-style-type: none"> <li>Structure and Function</li> </ul>	<ul style="list-style-type: none"> <li>Creates complex sentences by learning about independent and dependent clauses.</li> </ul>	<ul style="list-style-type: none"> <li>Clauses and complex sentences</li> </ul>
		<ul style="list-style-type: none"> <li>Uses different types of sentences: statements and questions.</li> </ul>	<ul style="list-style-type: none"> <li>Declarative and interrogative sentences</li> </ul>
		<ul style="list-style-type: none"> <li>Understands and uses wh- question words to ask questions.</li> </ul>	<ul style="list-style-type: none"> <li>Wh- questions</li> </ul>
		<ul style="list-style-type: none"> <li>Uses different types of sentences: imperative and exclamatory.</li> </ul>	<ul style="list-style-type: none"> <li>Imperative and exclamatory sentences</li> </ul>

Knotion® Subject	Topic	Learning Outcome	Content
 <b>Reading Skills</b>	<ul style="list-style-type: none"> <li>• Genre</li> </ul>	<ul style="list-style-type: none"> <li>• Understands that an autobiography is a story of the writer's life that has an organized sequence of events and is written in first person (using I).</li> </ul>	<ul style="list-style-type: none"> <li>• Autobiography</li> </ul>
	<ul style="list-style-type: none"> <li>• Strategies and Skills</li> </ul>	<ul style="list-style-type: none"> <li>• Describes how a narrator's or speaker's point of view influences how events are described.</li> </ul>	<ul style="list-style-type: none"> <li>• Author's point of view</li> </ul>
		<ul style="list-style-type: none"> <li>• Identifies problem and solution as story elements.</li> </ul>	<ul style="list-style-type: none"> <li>• Problem and solution</li> </ul>
		<ul style="list-style-type: none"> <li>• Summarizes a story or text using the most important events and supporting details.</li> </ul>	<ul style="list-style-type: none"> <li>• Summarizing</li> </ul>
		<ul style="list-style-type: none"> <li>• Retells important events in sequential order.</li> </ul>	<ul style="list-style-type: none"> <li>• Sequence</li> </ul>
 <b>Writing Workshop</b>	<ul style="list-style-type: none"> <li>• Type of Writing</li> </ul>	<ul style="list-style-type: none"> <li>• Applies characteristics of personal narratives that tell a story focusing on one significant event.</li> </ul>	<ul style="list-style-type: none"> <li>• Personal writing</li> </ul>
		<ul style="list-style-type: none"> <li>• Writes and answers letters with personal experiences.</li> </ul>	<ul style="list-style-type: none"> <li>• Personal experiences</li> </ul>



Knotion® Subject	Topic	Learning Outcome	Content
Communication Lab	• Oral Communication	<ul style="list-style-type: none"> <li>Speaks clearly, accurately, and fluently using a series of steps that can be followed to make or do something.</li> </ul>	<ul style="list-style-type: none"> <li>How to: demonstration</li> </ul>
		<ul style="list-style-type: none"> <li>Engages in a range of collaborative discussions (one-on-one, in groups, and teacher-led) effectively.</li> </ul>	<ul style="list-style-type: none"> <li>Social interaction and balanced participation in conversation</li> </ul>
		<ul style="list-style-type: none"> <li>Shares and compares personal experiences.</li> </ul>	<ul style="list-style-type: none"> <li>Personal experiences</li> </ul>

# 4<sup>th</sup>

2019-2020

Challenge 6

**Thematic Scope and Sequence**  
English Pathway





## Power, Authority, and Civil Ideals

Fourth Grade

### Magnetik® Understanding:

Leaders can change the social, economic, and political direction of a nation.

### Magnetik® Question:

How do we identify a leader?

### Global Issue:

Abuse of power

### Challenge-Action Question:

How can I become a good leader?



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Physical Science

Knotion® Subject	Topic	Learning Outcome	Content
Physical Science	• Motion, Force, and Interactions	<ul style="list-style-type: none"> <li>• Understands that the motion of an object can be described and measured.</li> </ul>	<ul style="list-style-type: none"> <li>• Objects move in many different ways and at varying rates of speed</li> </ul>
		<ul style="list-style-type: none"> <li>• Knows that an object may move in a straight line at a constant speed, speed up, slow down, or change direction depending on net force acting on the object.</li> </ul>	<ul style="list-style-type: none"> <li>• Different kinds of motion: constant, variable, periodic, circular, and vibrational.</li> </ul>
		<ul style="list-style-type: none"> <li>• Predicts the changes when an object experiences a force.</li> </ul>	<ul style="list-style-type: none"> <li>• Push or pull, weight, friction</li> </ul>
		<ul style="list-style-type: none"> <li>• Compares contact and noncontact forces that affect the motion of an object.</li> </ul>	<ul style="list-style-type: none"> <li>• Gravity, magnetism, collision</li> </ul>
		<ul style="list-style-type: none"> <li>• States Newton's three laws of motion.</li> </ul>	<ul style="list-style-type: none"> <li>• Newton's three laws of motion</li> </ul>



Knotion® Subject	Topic	Learning Outcome	Content
 <b>Citizenship Awareness</b>	<ul style="list-style-type: none"> <li>• Government Organization, Laws, and Political Systems</li> </ul>	<ul style="list-style-type: none"> <li>• Identifies some of the advantages and disadvantages of using authority.</li> </ul>	<ul style="list-style-type: none"> <li>• Importance of authority in a community</li> </ul>
		<ul style="list-style-type: none"> <li>• Identifies and analyzes the characteristics of a leader.</li> </ul>	<ul style="list-style-type: none"> <li>• Characteristics of a leader</li> </ul>
		<ul style="list-style-type: none"> <li>• Compares positive and negative leaders and explains their differences and similarities.</li> </ul>	<ul style="list-style-type: none"> <li>• Differences and similarities of a few good and bad leaders</li> </ul>
		<ul style="list-style-type: none"> <li>• Explains the need to limit the power given to a person in a position of authority.</li> </ul>	<ul style="list-style-type: none"> <li>• Power control</li> </ul>
		<ul style="list-style-type: none"> <li>• Understands that special events turn common people with outstanding values and attitudes into leaders.</li> </ul>	<ul style="list-style-type: none"> <li>• Characteristics of leadership and leaders</li> </ul>
 <b>Historical Awareness</b>	<ul style="list-style-type: none"> <li>• Historical Cultural Heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Identifies good and bad leaders in history.</li> </ul>	<ul style="list-style-type: none"> <li>• Famous leaders: Hitler, Mother Theresa, Churchill, Mandela, Ghandi, Lenin, Stalin, De Gaulle</li> </ul>



Knotion® Subject	Topic	Learning Outcome	Content
Language Mastery	<ul style="list-style-type: none"> <li>Word Knowledge</li> </ul>	<ul style="list-style-type: none"> <li>Acquires new grade-level vocabulary words in a variety of contexts.</li> </ul>	<ul style="list-style-type: none"> <li>High-frequency words</li> </ul>
		<ul style="list-style-type: none"> <li>Acquires new vocabulary words related to the challenge.</li> </ul>	<ul style="list-style-type: none"> <li>Challenge words</li> </ul>
	<ul style="list-style-type: none"> <li>Phonics</li> </ul>	<ul style="list-style-type: none"> <li>Identifies the spelling-sound correspondences for the variant vowel sound /ɔ/.</li> </ul>	<ul style="list-style-type: none"> <li>Variant vowel ough, o, aw, a, /ɔ/</li> </ul>
		<ul style="list-style-type: none"> <li>Correctly uses homographs.</li> </ul>	<ul style="list-style-type: none"> <li>Homographs</li> </ul>
		<ul style="list-style-type: none"> <li>Correctly uses homophones.</li> </ul>	<ul style="list-style-type: none"> <li>Homophones</li> </ul>
		<ul style="list-style-type: none"> <li>Becomes familiar with r-controlled spelling patterns.</li> </ul>	<ul style="list-style-type: none"> <li>R-controlled vowels er, ir, ur, or /ɜr/, or /ɔr/, ar /ar/</li> </ul>
	<ul style="list-style-type: none"> <li>Structure and Function</li> </ul>	<ul style="list-style-type: none"> <li>Understands and uses adjectives as words that modify and provide characteristics about nouns.</li> </ul>	<ul style="list-style-type: none"> <li>Adjectives</li> </ul>
		<ul style="list-style-type: none"> <li>Recognizes and uses demonstrative adjectives.</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrative adjectives</li> </ul>
		<ul style="list-style-type: none"> <li>Uses a range of comparative adjectives.</li> </ul>	<ul style="list-style-type: none"> <li>Comparative adjectives</li> </ul>
		<ul style="list-style-type: none"> <li>Uses a range of superlative adjectives.</li> </ul>	<ul style="list-style-type: none"> <li>Superlative adjectives</li> </ul>

Knotion® Subject	Topic	Learning Outcome	Content
 <b>Reading Skills</b>	<ul style="list-style-type: none"> <li>• Genre</li> </ul>	<ul style="list-style-type: none"> <li>• Understands that an informational narrative is nonfiction writing with the intention of informing the reader about a specific topic using a narrative style (autobiographies, histories, correspondence, memoirs, news articles)</li> </ul>	<ul style="list-style-type: none"> <li>• Informational text: narrative</li> </ul>
		<ul style="list-style-type: none"> <li>• Asks and answers questions to demonstrate understanding of a text.</li> </ul>	<ul style="list-style-type: none"> <li>• Asking and answering questions</li> </ul>
	<ul style="list-style-type: none"> <li>• Strategies and Skills</li> </ul>	<ul style="list-style-type: none"> <li>• Identifies statements that show cause and effect and understands the difference between them.</li> </ul>	<ul style="list-style-type: none"> <li>• Cause and effect</li> </ul>
		<ul style="list-style-type: none"> <li>• Identifies the main idea of a text and the details that support it.</li> </ul>	<ul style="list-style-type: none"> <li>• Main idea and key details</li> </ul>
		<ul style="list-style-type: none"> <li>• Summarizes a story using the most important events and supporting details.</li> </ul>	<ul style="list-style-type: none"> <li>• Summarizing</li> </ul>
 <b>Writing Workshop</b>	<ul style="list-style-type: none"> <li>• Type of Writing</li> </ul>	<ul style="list-style-type: none"> <li>• Writes opinion pieces on topics or texts, supporting a point of view with facts and details.</li> </ul>	<ul style="list-style-type: none"> <li>• Opinion writing</li> </ul>



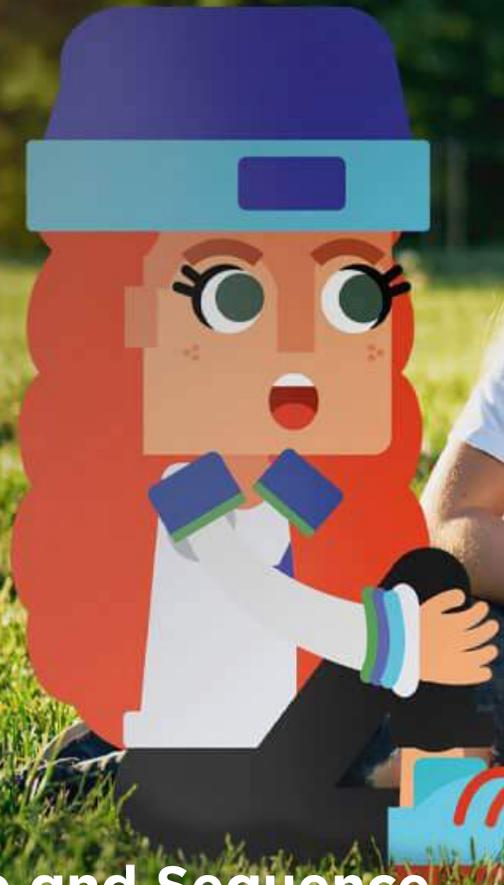
Communication Lab

Knotion® Subject	Topic	Learning Outcome	Content
 Communication Lab	<ul style="list-style-type: none"> <li>• Oral Communication</li> </ul>	<ul style="list-style-type: none"> <li>• Participates in conversations and discussions.</li> </ul>	<ul style="list-style-type: none"> <li>• Panel discussion</li> </ul>
		<ul style="list-style-type: none"> <li>• Engages effectively in a range of collaborative discussions (one-on-one, in teams, and teacher-led).</li> </ul>	<ul style="list-style-type: none"> <li>• Social interaction and balanced participation in conversation</li> </ul>

# 4<sup>th</sup>

2019-2020

Challenge 7



**Thematic Scope and Sequence**  
English Pathway





## Crisis and Conflict Resolution

Fourth Grade

### Magnetik® Understanding:

Accepting others the way they are is one way to achieve positive relationships.

### Magnetik® Question:

What does it mean to accept people for who they are?

### Global Issue:

Discrimination and school bullying

### Challenge-Action Question:

What can I do to prevent school bullying?



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Life Science

Knotion® Subject	Topic	Learning Outcome	Content
	<ul style="list-style-type: none"> <li>Structures and Processes of Organisms</li> </ul>	<ul style="list-style-type: none"> <li>Understands the basics of the endocrine system.</li> </ul>	<ul style="list-style-type: none"> <li>Parts and functions of the endocrine system, and how hormones affect emotions during puberty</li> </ul>
		<ul style="list-style-type: none"> <li>Names the organs of the urinary system and lists their general functions.</li> </ul>	<ul style="list-style-type: none"> <li>Organs of the urinary system and general functions</li> </ul>
	<ul style="list-style-type: none"> <li>Health</li> </ul>	<ul style="list-style-type: none"> <li>Recognizes that teens who are bullied during puberty have higher emotional stress.</li> </ul>	<ul style="list-style-type: none"> <li>Mood and mental state of bullied teens based on the signs of anxiety or depression</li> </ul>



**Citizenship Awareness**

Knotion® Subject	Topic	Learning Outcome	Content
<p>Citizenship Awareness</p>	<p>• Civic Ideals, Cultural Principles, and Ethics</p>	<ul style="list-style-type: none"> <li>• Describes and explains the characteristics of bullying and explains bullying behaviors.</li> </ul>	<ul style="list-style-type: none"> <li>• Characteristics of bullying</li> </ul>
		<ul style="list-style-type: none"> <li>• Recognizes and describes different types of bullying and examines their effects.</li> </ul>	<ul style="list-style-type: none"> <li>• Physical, social, verbal, emotional, and cyber bullying</li> </ul>
		<ul style="list-style-type: none"> <li>• Identifies strategies to prevent or reduce bullying.</li> </ul>	<ul style="list-style-type: none"> <li>• Strategies to reduce and prevent bullying</li> </ul>
		<ul style="list-style-type: none"> <li>• Identifies ways that bullying makes people feel and demonstrates what to say and do when witnessing or dealing with bullying.</li> </ul>	<ul style="list-style-type: none"> <li>• What to do or say when witnessing bullying</li> </ul>
		<ul style="list-style-type: none"> <li>• Recognizes strategies to handle or overcome bullies.</li> </ul>	<ul style="list-style-type: none"> <li>• Strategies to overcome bullying</li> </ul>



Knotion® Subject	Topic	Learning Outcome	Content
Language Mastery	<ul style="list-style-type: none"> <li>Word Knowledge</li> </ul>	<ul style="list-style-type: none"> <li>Acquires new grade-level vocabulary words in a variety of contexts.</li> </ul>	<ul style="list-style-type: none"> <li>High-frequency words</li> </ul>
		<ul style="list-style-type: none"> <li>Acquires new vocabulary words related to the challenge.</li> </ul>	<ul style="list-style-type: none"> <li>Challenge words</li> </ul>
	<ul style="list-style-type: none"> <li>Phonics</li> </ul>	<ul style="list-style-type: none"> <li>Understands that the schwa sound is only found in unstressed syllables.</li> </ul>	<ul style="list-style-type: none"> <li>Schwa /ə/</li> </ul>
		<ul style="list-style-type: none"> <li>Determines the meanings of words with the suffixes -ful, -ly, -ion .</li> </ul>	<ul style="list-style-type: none"> <li>Suffixes: -ful, -ly, -ion</li> </ul>
		<ul style="list-style-type: none"> <li>Determines the meanings of words with the number prefixes.</li> </ul>	<ul style="list-style-type: none"> <li>Number prefixes: dec-, semi-, cent-, centi-</li> </ul>
		<ul style="list-style-type: none"> <li>Reads and forms words that contain consonant final syllables -le and -el.</li> </ul>	<ul style="list-style-type: none"> <li>Final syllable -el and -le /əl/</li> </ul>
	<ul style="list-style-type: none"> <li>Structure and Function</li> </ul>	<ul style="list-style-type: none"> <li>Understands and uses correct pronoun-verb agreement.</li> </ul>	<ul style="list-style-type: none"> <li>Pronoun-verb agreement</li> </ul>
		<ul style="list-style-type: none"> <li>Uses pronouns and homophones correctly.</li> </ul>	<ul style="list-style-type: none"> <li>Pronouns and homophones</li> </ul>
		<ul style="list-style-type: none"> <li>Understands and uses subject and object pronouns.</li> </ul>	<ul style="list-style-type: none"> <li>Subject and object pronouns</li> </ul>
		<ul style="list-style-type: none"> <li>Understands and uses possessive pronouns.</li> </ul>	<ul style="list-style-type: none"> <li>Possessive pronouns</li> </ul>

Knotion® Subject	Topic	Learning Outcome	Content
 <b>Reading Skills</b>	<ul style="list-style-type: none"> <li>• Genre</li> </ul>	<ul style="list-style-type: none"> <li>• Understands that realistic fiction is about specific characters and events in their lives.</li> </ul>	<ul style="list-style-type: none"> <li>• Realistic fiction</li> </ul>
		<ul style="list-style-type: none"> <li>• Creates mental images that reflect or represent the ideas in the text.</li> </ul>	<ul style="list-style-type: none"> <li>• Visualization</li> </ul>
	<ul style="list-style-type: none"> <li>• Strategies and Skills</li> </ul>	<ul style="list-style-type: none"> <li>• Explains what might happen next in a story or what the author may tell next.</li> </ul>	<ul style="list-style-type: none"> <li>• Making, confirming, and revising predictions</li> </ul>
		<ul style="list-style-type: none"> <li>• Identifies story elements including, setting, characters, and plot.</li> </ul>	<ul style="list-style-type: none"> <li>• Characters, setting, and plot</li> </ul>
		<ul style="list-style-type: none"> <li>• Identifies problem and solution as part of story elements.</li> </ul>	<ul style="list-style-type: none"> <li>• Problem and solution</li> </ul>
 <b>Writing Workshop</b>	<ul style="list-style-type: none"> <li>• Type of Writing</li> </ul>	<ul style="list-style-type: none"> <li>• Writes real or imagined stories using details and a well-structured sequence of events.</li> </ul>	<ul style="list-style-type: none"> <li>• Free writing</li> </ul>



Knotion® Subject	Topic	Learning Outcome	Content
Communication Lab	• Oral Communication	<ul style="list-style-type: none"> <li>• Delivers an oral book report identifying and retelling the most important ideas.</li> </ul>	<ul style="list-style-type: none"> <li>• Book report</li> </ul>
		<ul style="list-style-type: none"> <li>• Engages effectively in a range of collaborative discussions (one-on-one, in teams, and teacher-led).</li> </ul>	<ul style="list-style-type: none"> <li>• Social interaction and balanced participation in conversation</li> </ul>
		<ul style="list-style-type: none"> <li>• Tells stories from images.</li> </ul>	<ul style="list-style-type: none"> <li>• Visual storytelling</li> </ul>
		<ul style="list-style-type: none"> <li>• Formulates and answers questions to get information about a concrete topic.</li> </ul>	<ul style="list-style-type: none"> <li>• Asking and answering questions</li> </ul>

# 4<sup>th</sup>

2019-2020

Challenge 8



**Thematic Scope and Sequence**  
English Pathway





## Environment and Sustainability

Fourth Grade

### Magnetik® Understanding:

Water is a valuable, limited natural resource.

### Magnetik® Question:

How do human actions impact the water cycle?

### Global Issue:

Lack of access to fresh water

### Challenge-Action Question:

How can I reduce water pollution and water waste?



Knotion® supports the Sustainable Development Goals





Earth Science

Knotion® Subject	Topic	Learning Outcome	Content
<p>Earth Science</p>	<ul style="list-style-type: none"> <li>• Earth and Human Activity</li> </ul>	<ul style="list-style-type: none"> <li>• Describes the various forms of fresh water.</li> </ul>	<ul style="list-style-type: none"> <li>• Evaporation, transpiration, precipitation, runoff, surface water, groundwater</li> </ul>
		<ul style="list-style-type: none"> <li>• Explains the effects of contaminants in the water supply, and how the survival of living things depends on clean water and its conservation.</li> </ul>	<ul style="list-style-type: none"> <li>• Effect of water pollution on living things; how to make water drinkable</li> </ul>
		<ul style="list-style-type: none"> <li>• Analyzes problems of water quality and proposes solutions to address water pollution.</li> </ul>	<ul style="list-style-type: none"> <li>• Household chemicals that contaminate water</li> </ul>



 **Environmental Awareness**

Knotion® Subject	Topic	Learning Outcome	Content
<p><b>Environmental Awareness</b></p>	<ul style="list-style-type: none"> <li>Human Interaction With the Environment</li> </ul>	<ul style="list-style-type: none"> <li>Understands that water should be used wisely and the consequences of wasting it.</li> </ul>	<ul style="list-style-type: none"> <li>Consequences of water usage</li> </ul>
		<ul style="list-style-type: none"> <li>Describes the different ways in which water is used and the quantities used for various purposes.</li> </ul>	<ul style="list-style-type: none"> <li>Water usage</li> </ul>
		<ul style="list-style-type: none"> <li>Recognizes that resource availability has guided the development of human society.</li> </ul>	<ul style="list-style-type: none"> <li>How different factors (availability of natural resources, occurrence of natural hazards, and changes in climate) influence human activity</li> </ul>



Knotion® Subject	Topic	Learning Outcome	Content
Language Mastery	<ul style="list-style-type: none"> <li>Word Knowledge</li> </ul>	<ul style="list-style-type: none"> <li>Acquires new grade-level vocabulary words in a variety of contexts.</li> </ul>	<ul style="list-style-type: none"> <li>High-frequency words</li> </ul>
		<ul style="list-style-type: none"> <li>Acquires new vocabulary words related to the challenge.</li> </ul>	<ul style="list-style-type: none"> <li>Challenge words</li> </ul>
	<ul style="list-style-type: none"> <li>Phonics</li> </ul>	<ul style="list-style-type: none"> <li>Determines whether words contain a prefix or a suffix.</li> </ul>	<ul style="list-style-type: none"> <li>Prefixes super-, semi-, and suffixes -able, -ous.</li> </ul>
		<ul style="list-style-type: none"> <li>Determines the meanings of Greek and Latin roots.</li> </ul>	<ul style="list-style-type: none"> <li>Greek and Latin roots: bio, photo, audi, manu</li> </ul>
		<ul style="list-style-type: none"> <li>Determines the meaning of Latin prefixes.</li> </ul>	<ul style="list-style-type: none"> <li>Latin prefixes: co-, post-, sub-</li> </ul>
		<ul style="list-style-type: none"> <li>Correctly spells frequently misspelled words.</li> </ul>	<ul style="list-style-type: none"> <li>Frequently misspelled words</li> </ul>
	<ul style="list-style-type: none"> <li>Structure and Function</li> </ul>	<ul style="list-style-type: none"> <li>Uses a range of prepositions.</li> </ul>	<ul style="list-style-type: none"> <li>Prepositions</li> </ul>
		<ul style="list-style-type: none"> <li>Identifies and forms prepositional phrases.</li> </ul>	<ul style="list-style-type: none"> <li>Prepositional phrases</li> </ul>
		<ul style="list-style-type: none"> <li>Identifies and uses definite and indefinite articles.</li> </ul>	<ul style="list-style-type: none"> <li>Articles</li> </ul>
		<ul style="list-style-type: none"> <li>Identifies actions that are expressed with the verbs make and do.</li> </ul>	<ul style="list-style-type: none"> <li>Make or do</li> </ul>

Knotion® Subject	Topic	Learning Outcome	Content
 <b>Reading Skills</b>	<ul style="list-style-type: none"> <li>• Genre</li> </ul>	<ul style="list-style-type: none"> <li>• Understands that a lyric is a verse poem that expresses intense emotion and can be sung to the accompaniment of a musical instrument.</li> </ul>	<ul style="list-style-type: none"> <li>• Lyric poetry</li> </ul>
		<ul style="list-style-type: none"> <li>• Understands that a haiku is a Japanese poem that evokes images of the natural world and has seventeen syllables distributed into three lines (5, 7, 5).</li> </ul>	<ul style="list-style-type: none"> <li>• Haiku</li> </ul>
	<ul style="list-style-type: none"> <li>• Strategies and Skills</li> </ul>	<ul style="list-style-type: none"> <li>• Determines the theme of a story, drama, or poem from details in the text.</li> </ul>	<ul style="list-style-type: none"> <li>• Theme</li> </ul>
		<ul style="list-style-type: none"> <li>• Creates mental images that reflect or represent the ideas in the text.</li> </ul>	<ul style="list-style-type: none"> <li>• Visualization</li> </ul>
		<ul style="list-style-type: none"> <li>• Makes connections to real life experiences, events, and other texts to understand a text better.</li> </ul>	<ul style="list-style-type: none"> <li>• Making connections</li> </ul>
		<ul style="list-style-type: none"> <li>• Identifies the author’s purpose (example: to inform, entertain, or explain) in text.</li> </ul>	<ul style="list-style-type: none"> <li>• Author’s purpose</li> </ul>
 <b>Writing Workshop</b>	<ul style="list-style-type: none"> <li>• Type of Writing</li> </ul>	<ul style="list-style-type: none"> <li>• Writes a research report that defines the topic, gathers information, determines credibility, and reports findings.</li> </ul>	<ul style="list-style-type: none"> <li>• Research writing</li> </ul>



Communication Lab

Knotion® Subject	Topic	Learning Outcome	Content
	<ul style="list-style-type: none"> <li>• Oral Communication</li> </ul>	<ul style="list-style-type: none"> <li>• Delivers a persuasive speech by supporting spoken ideas with details and examples, and includes an effective introduction and conclusion.</li> </ul>	<ul style="list-style-type: none"> <li>• Persuasive speech</li> </ul>
		<ul style="list-style-type: none"> <li>• Engages effectively in a range of collaborative discussions (one-on-one, in teams, and teacher-led).</li> </ul>	<ul style="list-style-type: none"> <li>• Social interaction and balanced participation in conversation</li> </ul>