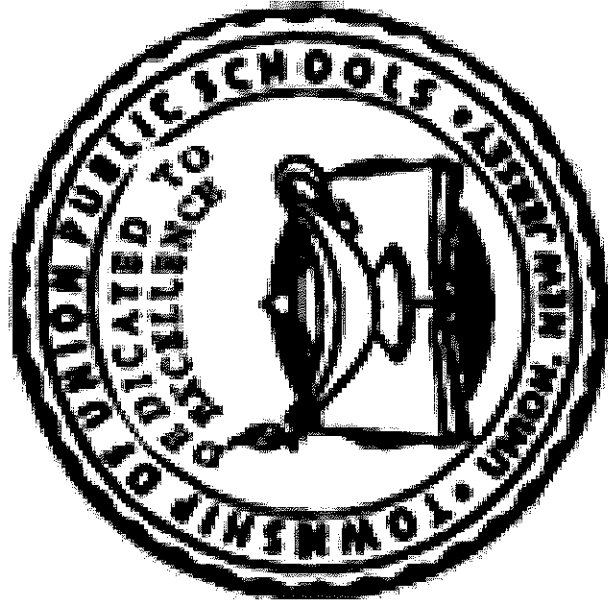


TOWNSHIP OF UNION PUBLIC SCHOOLS

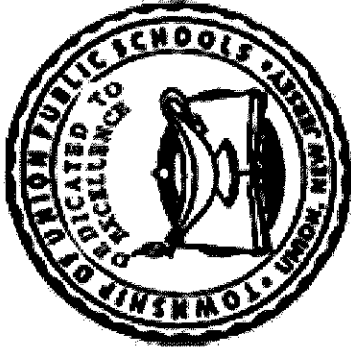


English 175

Curriculum Guide 2016

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Board Members

Board Members

Vito Nufrio, President

David Armenio, Vice President

Guy Francis

Steven Le

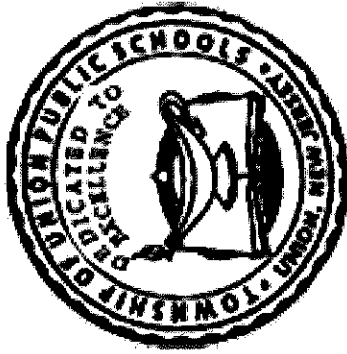
Jeff Monge

Ronald McDowell

Nellis Regis-Darby

Angel Salcedo

Nancy Zuena



TOWNSHIP OF UNION PUBLIC SCHOOLS
Administration

District Superintendent	Mr. Gregory Tatum
Assistant Superintendent	Mrs. Annie Moses
Assistant Superintendent	Dr. Noreen Lishak
Director of Student Information/Technology	Ms. Ann M. Hart
Director of Athletics, Health, Physical Education and Nurses.....	Ms. Linda Ionta

DEPARTMENT SUPERVISORS

Language Arts/Social Studies 3-5	Mr. Robert Chiretti
Mathematics/Science 3-5	Ms. Terri Mathews
Elementary Pre K-2 (All Subjects)	Ms. Maureen Corbett
Guidance K-12/SAC	Ms. Nicole Ahern
Language Arts 6-12	Ms. Randi Moran
Math 6-12.....	Dr. Jeremy Cohen
Science 6-12.....	Ms. Maureen Guilfoyle
Social Studies/Business 6-12.....	Ms. Libby Galante
World Language/ESL/Career Education/G&T/Technology.....	Ms. Yvonne Lorenzo
Art/Music	Mr. Ronald Rago

Curriculum Committee

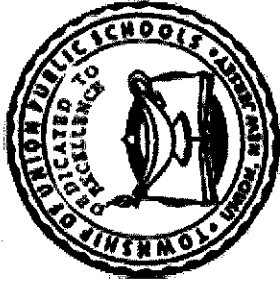
Gabrielle Sobreiro

District Mission Statement

The Township of Union Board of Education believes that every child is entitled to an education, designed to meet his or her individual needs, in an environment that is conducive to learning. State standards, federal and state mandates, and local goals and objectives, along with community input, must be reviewed and evaluated on a regular basis to ensure that an atmosphere of learning is both encouraged and implemented. Furthermore, any disruption to or interference with a healthy and safe educational environment must be addressed, corrected, or, when necessary, removed, in order for the district to maintain the appropriate educational setting.

District Philosophy Statement

The Township of Union Public School District, as a societal agency, reflects democratic ideals and concepts through its educational practices. It is the belief of the Board of Education that a primary function of the Township of Union Public School System is the formulation of a learning climate conducive to the needs of all students in general, providing therein for individual differences. The school operates as a partner with the home and community.



Statement of District Goals

- ❖ Develop reading, writing, speaking, listening, and mathematical skills.
- ❖ Develop a pride in work and a feeling of self-worth, self-reliance, and self-discipline.
- ❖ Acquire and use the skills and habits involved in critical and constructive thinking.
- ❖ Develop a code of behavior based on moral and ethical principles.
- ❖ To be able to work with others cooperatively.
- ❖ Acquire a knowledge and appreciation of the historical record of human achievement and failures and current societal issues.
- ❖ Acquire a knowledge and understanding of the physical and biological sciences.
- ❖ Efficient and effective participation in economic life and the development of skills to enter a specific field of work.
- ❖ Appreciate and understand literature, art, music, and other cultural activities.
- ❖ Develop an understanding of the historical and cultural heritage.
- ❖ Develop a concern for the proper use and/or preservation of natural resources.
- ❖ Develop basic skills in sports and other forms of recreation.

Course Description

EN175 Freshman English Foundations

Foundations classes are offered in addition to students' regular English course. The English Foundations course accommodates the tutorial needs of students who fail to meet state requirements in reading and / or writing on state assessments. Students in this course will receive enhanced instruction in grammar, content reading, reasoning skills, vocabulary, reading comprehension strategies, and expository writing skills in order to meet grade level standards. The course will enable students to become skilled readers and to write adequate prose, composing in a variety of subjects, purposes, and forms.

Recommended Textbooks

Blueford Series:

- *Someone to Love Me*
- *Shattered*

The Contender

Lost in Yonkers

Pearson: Common Core Literature

Pacing Guide

- Unit 1: Short Story – Is Conflict Necessary?
- Unit 2: *Someone to Love Me*
- Unit 3: *Shattered*
- Unit 4: *The Contender*
- Unit 5: *Lost in Yonkers*
- Unit 6: Supplemental Grammar Unit

UHS EN175 Pacing Guide – 9th Grade Foundations English

Semester 1 (Marking Periods 1&2)

Story	Applicable Literary Terms / Concepts to be Taught	Suggested Activities
“The Cask of Amontillado”	<ul style="list-style-type: none"> -foreshadowing -theme -plot/rising action -characters -resolution - conflict 	<ul style="list-style-type: none"> - paraphrasing text -short story format page -plot diagram
“The Jade Peony”	<ul style="list-style-type: none"> - paraphrasing - questioning reading technique - simile -metaphor -climax - conflict 	<ul style="list-style-type: none"> - short story format page - plot diagram

<p>"The Girl Who Can"</p>	<ul style="list-style-type: none"> -tone -mood -flashback - climax - resolution - conflict 	<ul style="list-style-type: none"> - paraphrase story - short story format page - plot diagram - alternate ending
<p><i>Someone to Love Me</i></p>	<ul style="list-style-type: none"> - plot - foreshadowing - paraphrase - mood/tone - internal and external conflict - cause/effect - theme/link to own life 	<ul style="list-style-type: none"> - graphic organizers - character illustrations - essay - reenactment - journals - open-ended responses - alternate ending - plot diagram
<p><i>Shattered</i></p>	<ul style="list-style-type: none"> -theme -point of view -foreshadowing -symbolism -irony -historical background/American history -racial justice/equality -internal/external conflict -cause and effect -dramatic irony -soliloquy/monologue/aside 	<ul style="list-style-type: none"> -point of view -graphic organizers -character illustrations -essay -reenactment -time period information/web quest -open ended -timeline -letters to and from characters - journals

Vocabulary	Specific Skills	Suggested Activities
Vocabulary	<ul style="list-style-type: none"> - developing advanced vocabulary - using context clues 	<ul style="list-style-type: none"> - Perfect 12 - Vocabulary Tic-Tac-Toe - Vocabulary in-context of stories

Writing	Specific Skills	Suggested Activities
Open-Ended	<ul style="list-style-type: none"> - rubrics - open-ended formatting (RACES) - using supporting details 	<ul style="list-style-type: none"> - based on stories or PARCC preparatory materials
Reading Non-fiction articles	<ul style="list-style-type: none"> - reading comprehension - open ended - persuasive writing - expository writing 	<ul style="list-style-type: none"> - various reading comprehension exercises - various essays - various open ended linked to life and texts
Grammar and Mechanics	<ul style="list-style-type: none"> - Proper use of all elements of grammar and mechanics (including punctuation, fragments, etc.) - sentence construction - subject/verb agreement 	<ul style="list-style-type: none"> - Daily Oral Language - open-ended responses

Semester 2 (Marking Periods 3&4)

Story	Literary Terms	Suggested Activities
<p><i>The Contender</i></p>	<ul style="list-style-type: none"> -theme -point of view -foreshadowing -symbolism -irony -historical background/American history -racial justice/equality -internal/external conflict -cause and effect -dramatic irony 	<ul style="list-style-type: none"> -point of view -graphic organizers -character illustrations -essay -open ended -timeline -letters to and from characters -journals -paraphrasing text -plot diagram
<p><i>Lost in Yonkers</i></p>	<ul style="list-style-type: none"> -plot -foreshadowing -characters -paraphrase -mood/tone -internal and external conflict -cause/effect -theme/link to own life -dramatic irony 	<ul style="list-style-type: none"> -point of view -graphic organizers -character illustrations -essay -journals -open-ended responses -alternate ending -plot diagram -letters to and from characters

Vocabulary	Specific Skills	Suggested Activities
Vocabulary	<ul style="list-style-type: none"> - developing advanced vocabulary - using context clues 	<ul style="list-style-type: none"> - Perfect 12 - Vocabulary Tic-Tac-Toe - Vocabulary in-context of stories

Curriculum Units

Unit 1 (Short Story – Is Conflict Necessary?)

#	STUDENT LEARNING OBJECTIVES	CORRESPONDING CCSS
1	<p>SWBAT:</p> <ul style="list-style-type: none"> • Describe or graphically represent the relationship between central ideas and specific details. • Determine a theme or central idea of a text 	<p>RI.9-10.2</p>
2	<p>SWBAT:</p> <ul style="list-style-type: none"> • Draw conclusions about characters and events in a text and identify how author's choices affect theme 	<p>RI.9-10.3</p>
3	<p>SWBAT:</p> <ul style="list-style-type: none"> • Identify multiple and/or conflicting motivations of complex characters • Identify various types of conflict (man vs. man, man vs. nature, man vs. self, man vs. society) 	<p>RI.9-10.3</p>
4	<p>SWBAT:</p> <ul style="list-style-type: none"> • Write arguments to support claims in an analysis of topics related to text, using valid reasoning and sufficient evidence. 	<p>W.9-10.1</p>

5	SWBAT: <ul style="list-style-type: none"> • Draw evidence from texts to support analysis and reflection. • Identify what constitutes good evidence. 	W.9-10.2
6	SWBAT: <ul style="list-style-type: none"> • Identify figurative language within text. • Evaluate meaning of figurative language within text. 	L.9-10.3

Parson Common Core Literary Vocabulary Literary Terms (appropriate to source) (Identified by PARCC Model Content Frameworks).
Bold type indicates grade level fluency requirements. (Identified by PARCC Model Content Frameworks).

Selected Opportunities for Connection to Mathematical Practices

CCSS #	Assessments
L.9-10.4	Vocabulary Quiz
RI.9-10.2	Short Story End of Unit Assessment
RI.9-10.2	Short Story Format Sheet
W.9-10.3	Open-ended responses

Unit 2 (Someone to Love Me)

#	STUDENT LEARNING OBJECTIVES	CORRESPONDING CCSS
1	SWBAT: <ul style="list-style-type: none"> • Draw conclusions about characters and events in a text and identify how author's choices affect theme 	RC.9-10.1
2	SWBAT: <ul style="list-style-type: none"> • Identify multiple and/or conflicting motivations of complex characters • Identify various types of conflict (man vs. man, man vs. nature, man vs. self, man vs. society) 	RC.9-10.1
3	SWBAT: <p>Write arguments to support claims in an analysis of topics related to text, using valid reasoning and sufficient evidence.</p>	W.9-10.1
4	Determine the meaning of words or phrases using context clues	9-10

Someone to Love Me Vocabulary (Identified by PARCC Model Content Frameworks).

Bold type indicates grade level fluency requirements. (Identified by PARCC Model Content Frameworks).

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Assessments	
CCSS #	
R.9-10.1	Study Guide Questions
W.9-10.4	Open-Ended Responses
R.9-10.2	End of Novel Test
L.9-10.4	Vocabulary Quiz

Unit 3 (Shattered)

#	STUDENT LEARNING OBJECTIVES	CORRESPONDING CCSS
1	SWBAT: <ul style="list-style-type: none"> • Draw conclusions about characters and events in a text and identify how author's choices affect theme • Analyze what text says explicitly as well as inferentially and cite textual evidence to support that analysis 	RL.9-10.1
2	SWBAT: <ul style="list-style-type: none"> • Identify multiple and/or conflicting motivations of complex characters 	RL.9-10.3

	<ul style="list-style-type: none"> Identify various types of conflict (man vs. man, man vs. nature, man vs. self, man vs. society) Differentiate among complex or multi-dimensional character types and roles within a story or drama 	
3	<p>SWBAT:</p> <ul style="list-style-type: none"> Explain the impact of specific language choices by the author Explain how authors use language choices to create an effect Analyze how specific language choices have a cumulative effect on meaning and tone in literary texts <p>Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the cumulative impact of specific word choices on meaning and tone</p>	RI.9-10
4	<p>SWBAT:</p> <p>Write arguments to support claims in an analysis of topics related to text, using valid reasoning and sufficient evidence.</p>	W.9-10
5	Determine the meaning of words or phrases using context clues	RI.9-10
6		

Math Vocabulary (Identified by PARCC Model Content Frameworks).

Bold type indicates grade level fluency requirements. (Identified by PARCC Model Content Frameworks).

Selected Opportunities for Connection to Mathematical Practices

CCSS #	Assessments
RI.9-10	Study Guide Questions
W.9-10	Open-Ended Responses
RI.9-10	End of Story Test

L:9-10.4	Vocabulary Quiz Nonfiction Synthesis

Unit 4 (The Contender)

#	STUDENT LEARNING OBJECTIVES	CORRESPONDING CCSS
1	<p>SWBAT:</p> <ul style="list-style-type: none"> • Draw conclusions about characters and events in a text and identify how author's choices affect theme • Analyze what text says explicitly as well as inferentially and cite textual evidence to support that analysis 	<p>RS.9-10.1</p>
2	<p>SWBAT:</p> <ul style="list-style-type: none"> • Identify multiple and/or conflicting motivations of complex characters • Identify various types of conflict (man vs. man, man vs. nature, man vs. self, man vs. society) • Differentiate among complex or multi-dimensional character types and roles within a story or drama • Explain what specific lines of dialogue reveal about characters 	<p>RS.9-10.3</p>
3	<p>SWBAT:</p> <ul style="list-style-type: none"> • Explain the impact of specific language choices by the author • Explain how authors use language choices to create an effect • Analyze how specific language choices have a cumulative effect on meaning and tone in literary texts <p>Determine the meaning of words and phrases as they are used in the text, including</p>	<p>RS.9-10.5</p>

	figurative and connotative meanings; analyze the cumulative impact of specific word choices on meaning and tone	
4	SWBAT: Write arguments to support claims in an analysis of topics related to text, using valid reasoning and sufficient evidence.	W.9-10
5	Determine the meaning of words or phrases using context clues	L.9-10
6		

The Colored Nonfiction Articles Vocabulary (Identified by PARCC Model Content Frameworks).
Bold type indicates grade level fluency requirements. (Identified by PARCC Model Content Frameworks).

CCSS #	Assessments
RI.9-10	Study Guide Questions
W.9-10	Open-Ended Responses
RI.9-10.2	End of Story Test
L.9-10	Vocabulary Quiz

Unit 5 (Lost in Yonkers)

#	STUDENT LEARNING OBJECTIVES	CORRESPONDING CCSS
1	SWBAT: <ul style="list-style-type: none"> • Draw conclusions about characters and events in a text and identify how author's choices affect theme 	RI.9-10.3
2	SWBAT: <ul style="list-style-type: none"> • Identify multiple and/or conflicting motivations of complex characters • Identify various types of conflict (man vs. man, man vs. nature, man vs. self, man vs. society) 	RI.9-10.3
3	SWBAT: <p>Write arguments to support claims in an analysis of topics related to text, using valid reasoning and sufficient evidence.</p>	W.9-10.1
4	Determine the meaning of words or phrases using context clues	L.9-10.4

Lost in Yonkers Vocabulary (Identified by PARCC Model Content Frameworks).
Bold type indicates grade level fluency requirements. (Identified by PARCC Model Content Frameworks).

Selected Opportunities for Connection to Mathematical Practices

CCSS #	Assessments
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RI.9-10.3	Study Guide Questions
W.9-10.4	Open-Ended Responses
RI.9-10.2	End of Novel Test
L.9-10.4	Vocabulary Quiz

Supplemental Grammar Unit (Incorporated Full Year)

#	STUDENT LEARNING OBJECTIVES	CORRESPONDING CCSS
1	SWBAT: <ul style="list-style-type: none"> • Successfully use various types of phrases to convey specific meanings and add variety and interest to writing. 	L.9-10.1
2	SWBAT: <ul style="list-style-type: none"> • Correctly use semi colons and colons • Identify and correct punctuation, capitalization and spelling errors. 	L.9-10.2

Daily Oral Grammar Exercises (identified by PARCC Model Content Frameworks)
Bold type indicates grade level fluency requirements. (identified by PARCC Model Content Frameworks).

Common Core State Standards

Key Ideas and Details:

CCSS.ELA-LITERACY.RL.11-12.1 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/RL/11-12/1/](http://www.corestandards.org/ELA-LITERACY/RL/11-12/1/)) Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.

CCSS.ELA-LITERACY.RL.11-12.2 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/RL/11-12/2/](http://www.corestandards.org/ELA-LITERACY/RL/11-12/2/)) Determine two or more themes or central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to produce a complex account; provide an objective summary of the text.

CCSS.ELA-LITERACY.RL.11-12.3 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/RL/11-12/3/](http://www.corestandards.org/ELA-LITERACY/RL/11-12/3/)) Analyze the impact of the author's choices regarding how to develop and relate elements of a story or drama (e.g., where a story is set, how the action is ordered, how the characters are introduced and developed).

Craft and Structure:

CCSS.ELA-LITERACY.RL.11-12.4 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/RL/11-12/4/](http://www.corestandards.org/ELA-LITERACY/RL/11-12/4/)) Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including words with multiple meanings or language that is particularly fresh, engaging, or beautiful. (Include Shakespeare as well as other authors.)

CCSS.ELA-LITERACY.RL.11-12.5 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/RL/11-12/5/](http://www.corestandards.org/ELA-LITERACY/RL/11-12/5/)) Analyze how an author's choices concerning how to structure specific parts of a text (e.g., the choice of where to begin or end a story, the choice to provide a comedic or tragic resolution) contribute to its overall structure and meaning as well as its aesthetic impact.

CCSS.ELA-LITERACY.RL.11-12.6 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/RL/11-12/6/](http://www.corestandards.org/ELA-LITERACY/RL/11-12/6/)) Analyze a case in which grasping a point of view requires distinguishing what is directly stated in a text from what is really meant (e.g., satire, sarcasm, irony, or understatement).

Integration of Knowledge and Ideas:

CCSS.ELA-LITERACY.RL.11-12.7 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/RL/11-12/7/](http://www.corestandards.org/ELA-LITERACY/RL/11-12/7/)) Analyze multiple interpretations of a story, drama, or poem (e.g., recorded or live production of a play or recorded novel or poetry), evaluating how each version interprets the source text. (Include at least one play by Shakespeare and one play by an American dramatist.) [CCSS.ELA-LITERACY.RL.11-12.8 \(HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/RL/11-12/8/\)](http://www.corestandards.org/ELA-LITERACY/RL/11-12/8/)

(RL.11-12.8 not applicable to literature)

CCSS.ELA-LITERACY.RL.11-12.9 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/RL/11-12/9/](http://www.corestandards.org/ELA-LITERACY/RL/11-12/9/)) Demonstrate knowledge of eighteenth-, nineteenth- and early-twentieth-century foundational works of American literature, including how two or more texts from the same period treat similar themes or topics.

Range of Reading and Level of Text Complexity:

CCSS.ELA-LITERACY.RL.11-12.10 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/RL/11-12/10/](http://www.corestandards.org/ELA-LITERACY/RL/11-12/10/)) By the end of grade 11, read and comprehend literature, including stories, dramas, and poems, in the grades 11-CCR text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 12, read and comprehend literature, including stories, dramas, and poems, at the high end of the grades 11-CCR text complexity band independently and proficiently.

Key Ideas and Details:

CCSS.ELA-LITERACY.RL.11-12.1 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/RI/11-12/1/](http://www.corestandards.org/ELA-LITERACY/RI/11-12/1/)) Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.

CCSS.ELA-LITERACY.RL.11-12.2 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/RI/11-12/2/](http://www.corestandards.org/ELA-LITERACY/RI/11-12/2/)) Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.

CCSS.ELA-LITERACY.RL.11-12.3 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/RI/11-12/3/](http://www.corestandards.org/ELA-LITERACY/RI/11-12/3/)) Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text.

Craft and Structure:

CCSS.ELA-LITERACY.RL.11-12.4 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/RI/11-12/4/](http://www.corestandards.org/ELA-LITERACY/RI/11-12/4/)) Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze how an author uses and refines the meaning of a key term or terms over the course of a text (e.g., how Madison defines faction in Federalist No. 10).

CCSS.ELA-LITERACY.RL.11-12.5 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/RI/11-12/5/](http://www.corestandards.org/ELA-LITERACY/RI/11-12/5/)) Analyze and evaluate the effectiveness of the structure an author uses in his or her exposition or argument, including whether the structure makes points clear, convincing, and engaging.

CCSS.ELA-LITERACY.RL.11-12.6 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/RI/11-12/6/](http://www.corestandards.org/ELA-LITERACY/RI/11-12/6/)) Determine an author's point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how style and content contribute to the power, persuasiveness or beauty of the text.

Integration of Knowledge and Ideas:

CCSS.ELA-LITERACY.RI.11-12.7 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/RI/11-12/7/](http://www.corestandards.org/ELA-LITERACY/RI/11-12/7/)) Integrate and evaluate multiple sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a question or solve a problem.

CCSS.ELA-LITERACY.RI.11-12.8 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/RI/11-12/8/](http://www.corestandards.org/ELA-LITERACY/RI/11-12/8/)) Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning (e.g., in U.S. Supreme Court majority opinions and dissents) and the premises, purposes, and arguments in works of public advocacy (e.g., The Federalist, presidential addresses).

CCSS.ELA-LITERACY.RI.11-12.9 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/RI/11-12/9/](http://www.corestandards.org/ELA-LITERACY/RI/11-12/9/)) Analyze seventeenth-, eighteenth-, and nineteenth-century foundational U.S. documents of historical and literary significance (including The Declaration of Independence, the Preamble to the Constitution, the Bill of Rights, and Lincoln's Second Inaugural Address) for their themes, purposes, and rhetorical features.

Range of Reading and Level of Text Complexity:

CCSS.ELA-LITERACY.RI.11-12.10 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/RI/11-12/10/](http://www.corestandards.org/ELA-LITERACY/RI/11-12/10/)) By the end of grade 11, read and comprehend literary nonfiction in the grades 11-CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.

By the end of grade 12, read and comprehend literary nonfiction at the high end of the grades 11-CCR text complexity band independently and proficiently.

Text Types and Purposes:

CCSS.ELA-LITERACY.W.11-12.1 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/W/11-12/1/](http://www.corestandards.org/ELA-LITERACY/W/11-12/1/)) Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.

CCSS.ELA-LITERACY.W.11-12.1.A ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/W/11-12/1/A/](http://www.corestandards.org/ELA-LITERACY/W/11-12/1/A/)) Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences claim(s), counterclaims, reasons, and evidence.

CCSS.ELA-LITERACY.W.11-12.1.B ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/W/11-12/1/B/](http://www.corestandards.org/ELA-LITERACY/W/11-12/1/B/)) Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level, concerns, values, and possible biases.

CCSS.ELA-LITERACY.W.11-12.1.C ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/W/11-12/1/C/](http://www.corestandards.org/ELA-LITERACY/W/11-12/1/C/)) Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.

CCSS.ELA-LITERACY.W.11-12.1.D ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/W/11-12/1/D/](http://www.corestandards.org/ELA-LITERACY/W/11-12/1/D/)) Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.

- CCSS.ELA-LITERACY.W.11-12.1.E ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/W/11-12/1/E/](http://www.corestandards.org/ELA-LITERACY/W/11-12/1/E/)) Provide a concluding statement or section that follows from and supports the argument presented.
- CCSS.ELA-LITERACY.W.11-12.2 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/W/11-12/2/](http://www.corestandards.org/ELA-LITERACY/W/11-12/2/)) Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.
- CCSS.ELA-LITERACY.W.11-12.2.A ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/W/11-12/2/A/](http://www.corestandards.org/ELA-LITERACY/W/11-12/2/A/)) Introduce a topic; organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.
- CCSS.ELA-LITERACY.W.11-12.2.B ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/W/11-12/2/B/](http://www.corestandards.org/ELA-LITERACY/W/11-12/2/B/)) Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.
- CCSS.ELA-LITERACY.W.11-12.2.C ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/W/11-12/2/C/](http://www.corestandards.org/ELA-LITERACY/W/11-12/2/C/)) Use appropriate and varied transitions and syntax to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts.
- CCSS.ELA-LITERACY.W.11-12.2.D ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/W/11-12/2/D/](http://www.corestandards.org/ELA-LITERACY/W/11-12/2/D/)) Use precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic.
- CCSS.ELA-LITERACY.W.11-12.2.E ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/W/11-12/2/E/](http://www.corestandards.org/ELA-LITERACY/W/11-12/2/E/)) Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.
- CCSS.ELA-LITERACY.W.11-12.2.F ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/W/11-12/2/F/](http://www.corestandards.org/ELA-LITERACY/W/11-12/2/F/)) Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).
- CCSS.ELA-LITERACY.W.11-12.3 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/W/11-12/3/](http://www.corestandards.org/ELA-LITERACY/W/11-12/3/)) Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.
- CCSS.ELA-LITERACY.W.11-12.3.A ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/W/11-12/3/A/](http://www.corestandards.org/ELA-LITERACY/W/11-12/3/A/)) Engage and orient the reader by setting out a problem, situation, or observation and its significance, establishing one or multiple point(s) of view, and introducing a narrator and/or characters; create a smooth progression of experiences or events.
- CCSS.ELA-LITERACY.W.11-12.3.B ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/W/11-12/3/B/](http://www.corestandards.org/ELA-LITERACY/W/11-12/3/B/)) Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, and/or characters.
- CCSS.ELA-LITERACY.W.11-12.3.C ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/W/11-12/3/C/](http://www.corestandards.org/ELA-LITERACY/W/11-12/3/C/)) Use a variety of techniques to sequence

events so that they build on one another to create a coherent whole and build toward a particular tone and outcome (e.g., a sense of mystery, suspense, growth, or resolution).

CCSS.ELA-LITERACY.W.11-12.3.D ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/W/11-12/3/D/](http://www.corestandards.org/ELA-LITERACY/W/11-12/3/D/)) Use precise words and phrases, telling details, and sensory language to convey a vivid picture of the experiences, events, setting, and/or characters.

CCSS.ELA-LITERACY.W.11-12.3.E ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/W/11-12/3/E/](http://www.corestandards.org/ELA-LITERACY/W/11-12/3/E/)) Provide a conclusion that follows from and reflects on what is experienced, observed, or resolved over the course of the narrative.

Production and Distribution of Writing:

CCSS.ELA-LITERACY.W.11-12.4 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/W/11-12/4/](http://www.corestandards.org/ELA-LITERACY/W/11-12/4/)) Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1-3 above.)

CCSS.ELA-LITERACY.W.11-12.5 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/W/11-12/5/](http://www.corestandards.org/ELA-LITERACY/W/11-12/5/)) Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. (Editing for conventions should demonstrate command of Language standards 1-3 up to and including grades 11-12 here (<http://www.corestandards.org/ELA-Literacy/L/11-12/>).

CCSS.ELA-LITERACY.W.11-12.6 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/W/11-12/6/](http://www.corestandards.org/ELA-LITERACY/W/11-12/6/)) Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

Research to Build and Present Knowledge:

CCSS.ELA-LITERACY.W.11-12.7 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/W/11-12/7/](http://www.corestandards.org/ELA-LITERACY/W/11-12/7/)) Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

CCSS.ELA-LITERACY.W.11-12.8 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/W/11-12/8/](http://www.corestandards.org/ELA-LITERACY/W/11-12/8/)) Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.

CCSS.ELA-LITERACY.W.11-12.9 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/W/11-12/9/](http://www.corestandards.org/ELA-LITERACY/W/11-12/9/)) Draw evidence from literary or informational texts to support analysis, reflection, and research.

CCSS.ELA-LITERACY.W.11-12.9.A ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/W/11-12/9/A/](http://www.corestandards.org/ELA-LITERACY/W/11-12/9/A/)) Apply grades 11-12 Reading standards to literature (e.g., "Demonstrate knowledge of eighteenth-, nineteenth- and early-twentieth-century foundational works of American literature, including how two or more texts from the same period treat similar themes or topics").

CCSS.ELA-LITERACY.W.11-12.9.B ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/W/11-12/9/B/](http://www.corestandards.org/ELA-LITERACY/W/11-12/9/B/)) Apply grades 11-12 Reading standards to literary nonfiction (e.g., "Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning [e.g., in U.S. Supreme Court Case majority opinions and dissents] and the premises, purposes, and arguments in works of public advocacy [e.g., The Federalist, presidential addresses]").

Range of Writing:

CCSS.ELA-LITERACY.W.11-12.10 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/W/11-12/10/](http://www.corestandards.org/ELA-LITERACY/W/11-12/10/)) Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

Comprehension and Collaboration:

CCSS.ELA-LITERACY.SL.11-12.1 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/SL/11-12/1/](http://www.corestandards.org/ELA-LITERACY/SL/11-12/1/)) Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11-12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.

CCSS.ELA-LITERACY.SL.11-12.1.A ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/SL/11-12/1/A/](http://www.corestandards.org/ELA-LITERACY/SL/11-12/1/A/)) Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.

CCSS.ELA-LITERACY.SL.11-12.1.B ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/SL/11-12/1/B/](http://www.corestandards.org/ELA-LITERACY/SL/11-12/1/B/)) Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed.

CCSS.ELA-LITERACY.SL.11-12.1.C ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/SL/11-12/1/C/](http://www.corestandards.org/ELA-LITERACY/SL/11-12/1/C/)) Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives.

CCSS.ELA-LITERACY.SL.11-12.1.D ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/SL/11-12/1/D/](http://www.corestandards.org/ELA-LITERACY/SL/11-12/1/D/)) Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task.

CCSS.ELA-LITERACY.SL.11-12.2 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/SL/11-12/2/](http://www.corestandards.org/ELA-LITERACY/SL/11-12/2/)) Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to make informed decisions and solve problems, evaluating the credibility

and accuracy of each source and noting any discrepancies among the data.

CCSS.ELA-LITERACY.SL.11-12.3 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/SL/11-12/3/](http://www.corestandards.org/ELA-LITERACY/SL/11-12/3/)) Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, assessing the stance, premises, links among ideas, word choice, points of emphasis, and tone used.

Presentation of Knowledge and Ideas:

CCSS.ELA-LITERACY.SL.11-12.4 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/SL/11-12/4/](http://www.corestandards.org/ELA-LITERACY/SL/11-12/4/)) Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.

CCSS.ELA-LITERACY.SL.11-12.5 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/SL/11-12/5/](http://www.corestandards.org/ELA-LITERACY/SL/11-12/5/)) Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.

CCSS.ELA-LITERACY.SL.11-12.6 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/SL/11-12/6/](http://www.corestandards.org/ELA-LITERACY/SL/11-12/6/)) Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate. (See grades 11-12 Language standards 1 and 3 here (<http://www.corestandards.org/ELA-Literacy/L/11-12/>) for specific expectations.)

Conventions of Standard English:

CCSS.ELA-LITERACY.L.11-12.1 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/L/11-12/1/](http://www.corestandards.org/ELA-LITERACY/L/11-12/1/)) Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

CCSS.ELA-LITERACY.L.11-12.1.A ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/L/11-12/1/A/](http://www.corestandards.org/ELA-LITERACY/L/11-12/1/A/)) Apply the understanding that usage is a matter of convention, can change over time, and is sometimes contested.

CCSS.ELA-LITERACY.L.11-12.1.B ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/L/11-12/1/B/](http://www.corestandards.org/ELA-LITERACY/L/11-12/1/B/)) Resolve issues of complex or contested usage, consulting references (e.g., Merriam-Webster's Dictionary of English Usage, Garner's Modern American Usage) as needed.

CCSS.ELA-LITERACY.L.11-12.2 ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/L/11-12/2/](http://www.corestandards.org/ELA-LITERACY/L/11-12/2/)) Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

CCSS.ELA-LITERACY.L.11-12.2.A ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/L/11-12/2/A/](http://www.corestandards.org/ELA-LITERACY/L/11-12/2/A/)) Observe hyphenation conventions.

CCSS.ELA-LITERACY.L.11-12.2.B ([HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/L/11-12/2/B/](http://www.corestandards.org/ELA-LITERACY/L/11-12/2/B/)) Spell correctly.

Knowledge of Language:

CCSS.ELA-LITERACY.L.11-12.3 (HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/L/11-12/3/) Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.

CCSS.ELA-LITERACY.L.11-12.3.A (HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/L/11-12/3/A/) Vary syntax for effect, consulting references (e.g., Tufte's Artful Sentences) for guidance as needed; apply an understanding of syntax to the study of complex texts when reading.

Vocabulary Acquisition and Use:

CCSS.ELA-LITERACY.L.11-12.4 (HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/L/11-12/4/) Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grades 11-12 reading and content, choosing flexibly from a range of strategies.

CCSS.ELA-LITERACY.L.11-12.4.A (HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/L/11-12/4/A/) Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.

CCSS.ELA-LITERACY.L.11-12.4.B (HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/L/11-12/4/B/) Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., conceive, conception, conceivable).

CCSS.ELA-LITERACY.L.11-12.4.C (HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/L/11-12/4/C/) Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, its etymology, or its standard usage.

CCSS.ELA-LITERACY.L.11-12.4.D (HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/L/11-12/4/D/) Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).

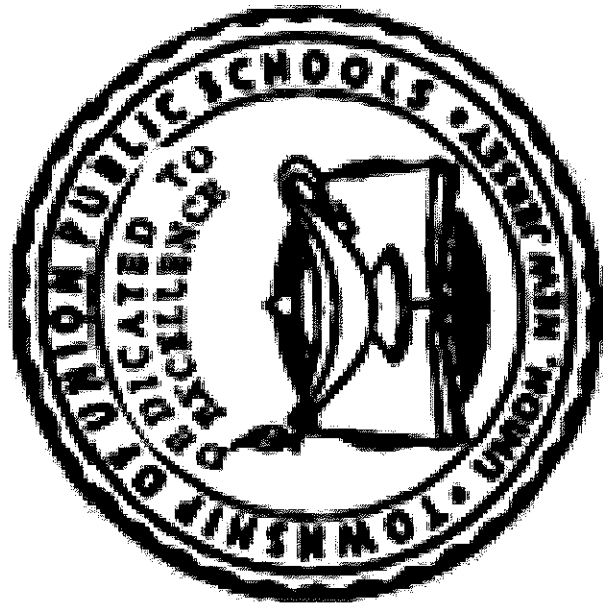
CCSS.ELA-LITERACY.L.11-12.5 (HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/L/11-12/5/) Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.

CCSS.ELA-LITERACY.L.11-12.5.A (HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/L/11-12/5/A/) Interpret figures of speech (e.g., hyperbole, paradox) in context and analyze their role in the text.

CCSS.ELA-LITERACY.L.11-12.5.B (HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/L/11-12/5/B/) Analyze nuances in the meaning of words with similar denotations.

CCSS.ELA-LITERACY.L.11-12.6 (HTTP://WWW.CORESTANDARDS.ORG/ELA-LITERACY/L/11-12/6/) Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.

TOWNSHIP OF UNION PUBLIC SCHOOLS



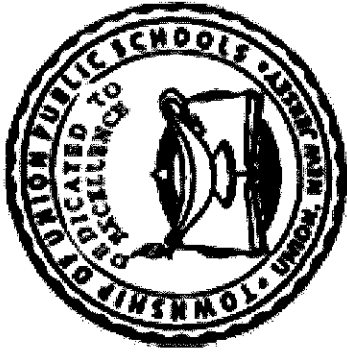
EN350 College Study Skills

Curriculum Guide 2016

Curriculum Guide Approved June 2016

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Board Members

Vito Nufrio, President

David Armenio, Vice President

Guy Francis

Steven Le

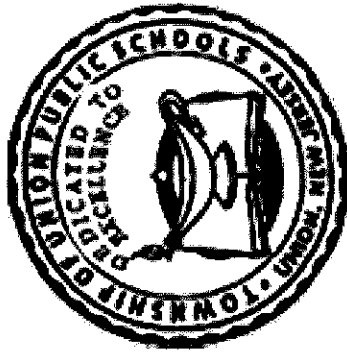
Jeff Monge

Ronald McDowell

Nellis Regis-Darby

Angel Salcedo

Nancy Zuena



TOWNSHIP OF UNION PUBLIC SCHOOLS
Administration

District Superintendent	Mr. Gregory Tatum
Assistant Superintendent	Mrs. Annie Moses
Assistant Superintendent	Dr. Noreen Lishak
Director of Student Information/Technology	Ms. Ann M. Hart
Director of Athletics, Health, Physical Education and Nurses.....	Ms. Linda Ionta

DEPARTMENT SUPERVISORS

Language Arts/Social Studies 3-5	Mr. Robert Chiretti
Mathematics/Science 3-5	Ms. Terri Mathews
Elementary Pre K-2 (All Subjects)	Ms. Maureen Corbett
Guidance K-12/SAC	Ms. Nicole Ahern
Language Arts 6-12	Ms. Randi Moran
Math 6-12.....	Dr. Jeremy Cohen
Science 6-12.....	Ms. Maureen Guilfoyle
Social Studies/Business 6-12.....	Ms. Libby Galante
World Language/ESL/Career Education/G&T/Technology.....	Ms. Yvonne Lorenzo
Art/Music	Mr. Ronald Rago

Curriculum Committee

**EN350
College Study Skills**

Maureen Dreher

Mission Statement

The mission of the Township of Union Public Schools is to build on the foundations of honesty, excellence, integrity, strong family, and community partnerships. We promote a supportive learning environment where every student is challenged, inspired, empowered, and respected as diverse learners. Through cultivation of students' intellectual curiosity, skills and knowledge, our students can achieve academically and socially, and contribute as responsible and productive citizens of our global community.

Philosophy Statement

The Township of Union Public School District, as a societal agency, reflects democratic ideals and concepts through its educational practices. It is the belief of the Board of Education that a primary function of the Township of Union Public School System is to formulate a learning climate conducive to the needs of all students in general, providing therein for individual differences. The school operates as a partner with the home and community.

Statement of District Goals

- Develop reading, writing, speaking, listening, and mathematical skills.
- Develop a pride in work and a feeling of self-worth, self-reliance, and self discipline.
- Acquire and use the skills and habits involved in critical and constructive thinking.
- Develop a code of behavior based on moral and ethical principals.
- Work with others cooperatively.
- Acquire a knowledge and appreciation of the historical record of human achievement and failures and current societal issues.
- Acquire a knowledge and understanding of the physical and biological sciences.
- Participate effectively and efficiently in economic life and the development of skills to enter a specific field of work.
- Appreciate and understand literature, art, music, and other cultural activities.
- Develop an understanding of the historical and cultural heritage.
- Develop a concern for the proper use and/or preservation of natural resources.
- Develop basic skills in sports and other forms of recreation.

Course Description

This course focuses on the development and reinforcement of skills that are typically measured on college entry level assessments and standardized achievement tests. Specific emphasis is placed on preparing for the Scholastic Achievement Test.

The class meets for alternating marking periods during the course of the school year. Students alternate between instruction for language arts and instruction for math.

This curriculum guide focuses on language arts skills.

Recommended Textbooks

The Official SAT Study Guide (ISBN-13: 978-1457304309 / ISBN-10: 1457304309),

Pacing Guide – 1st Marking Period

Overall Focus & Objective	Topics for Understanding Skills for Mastery	Suggested Activities/Assessment
<p>Evidence-based Reading Across the Curriculum</p> <p>Passages drawn from U.S. & World literature, history/social studies, science</p> <p>CCSS.ELA-LITERACY.RL.11-12.1-10 CCSS.ELA-LITERACY.RI.11-12.1-9 CCSS.ELA-LITERACY.L.11-12.4-6 CCSS.ELA-LITERACY.CCRA.R.1-10 CCSS.ELA-LITERACY.CCRA.L.3-6</p>	<p>Test-taking strategies</p> <p>Determine best evidence in passage to support response to question</p> <p>Interpret data in informational graphics</p> <p>Understand how an argument uses evidence to develop claims</p> <p>Improve a passage's structure and focus</p> <p>Interpret words in context</p> <p>Analyze word choice rhetorically</p> <p>Determine central ideas and theme</p> <p>Summarize text</p> <p>Understand relationships between people, ideas, events, and concepts (i.e., cause-and-effect, comparison-contrast, chronology)</p> <p>Interpret what author has said explicitly or implicitly</p> <p>Cite textual evidence to provide support for responses to questions</p> <p>Analyze word choice, text structure, point of view, purpose, and arguments</p> <p>Analyze, compare/contrast multiple texts</p>	<p>SAT Pre-test</p> <p>Apply test-taking strategies (time management, address test anxiety, approach to paired passages)</p> <p>SAT Practice Test #1 (text)</p> <p>Reading test, pg. 334-348</p> <p>SAT Practice Test #2 (text)</p> <p>Reading test, pg. 452-466</p> <p>Do Now: Basic reading conventions</p> <p>Weekly theme-based vocabulary application packet (i.e., Words related to measurement, words related to nature, words encompassing specific roots, commonly confused words)</p> <p>Mock quizzes on vocabulary</p> <p>Transitional/signal term application and differentiation</p> <p>Practice reading and interpreting various graphs and charts</p> <p>Individual and group approach to identifying, comprehending, explaining, interpreting, and synthesizing main ideas, theme, denotative/connotative meanings and author's purpose in passages</p> <p>Computer lab: Complete on-line SAT practice exercises at Khan Academy website, GrammarBytes, 4tests.com, and other relevant websites.</p> <p>Download Daily SAT Questions App onto phones</p>

Overall Focus & Objective	Topics for Understanding Skills for Mastery	Suggested Activities/Assessment
<p>Writing and Language:</p> <p>(1) Expression of Ideas</p> <p>(2) Standard English Conventions</p> <p>(3) SAT Essay</p> <p>Passages drawn from U.S. & World literature, history/social studies, science</p> <p>CCSS.ELA-LITERACY.W.11-12.1-10 CCSS.ELA-LITERACY.L.11-12.1-6 CCSS.ELA-LITERACY.CCRA.R.5 CCSS.ELA-LITERACY.CCRA.W.1-10 CCSS.ELA-LITERACY.CCRA.L-6</p>	<p>Expression of Ideas</p> <p>(1) Refine content of a passage to achieve writer's purpose (focus)</p> <p>(2) Improve structure of passage to improve logic and cohesion (transitions, sequence, connections)</p> <p>(3) Revise text to improve written expression (word choice, style, tone, syntax)</p> <p>Standard English Conventions</p> <p>(1) Refine content of a passage to achieve writer's purpose (focus)</p> <p>(2) Improve structure of passage to improve logic and cohesion (transitions, sequence, connections)</p> <p>(3) Revise text to improve written expression (word choice, style, tone, syntax)</p> <p>Essay: Analyze a text and write an evidence-based essay</p>	<p>SAT Pre-test</p> <p>Apply test-taking strategies (time management, address test anxiety, approach to paired passages)</p> <p>SAT Practice Test #1 (text)</p> <p>Writing & Language test, pg. 350-364</p> <p>SAT Practice Test #2 (text)</p> <p>Writing & Language test, pg. 468-481</p> <p>Do Now: Basic writing conventions</p> <p>Isolated and in-context skill practice on specific skills (subject-verb agreement, pronoun agreement, semi-colon and colon, combining sentences)</p> <p>Practice reading and interpreting various graphs and charts</p> <p>Individual and group approach to identifying and revising errors in writing</p> <p>Computer lab: Complete on-line SAT practice exercises at Khan Academy website, GrammarBytes, 4tests.com, and other relevant websites.</p> <p>Download Daily SAT Questions App onto phones</p>

Suggested Chronology

Note: Teacher will devise and present mini-lessons relative to basic writing and research skills AS NEEDED. (Ex: Selecting appropriate transitional phrases, subject-verb agreement, sentence structure).

Week 1:

Pre-assessment
Identification of student proficiencies and deficiencies
Complete SAT #1 Reading and Writing & Language

Week 2

Theme-related vocabulary packet
Review SAT #1 Reading
Determine areas of development and reinforcement
Implement lessons on identified skills in reading
Vocabulary quiz

Week 3

Theme-related vocabulary packet
Review SAT #1 Writing & Language
Determine areas of development and reinforcement
Implement lessons on identified skills in language
Vocabulary quiz

Week 4

Reading skills assessment on identified skills
Language skills assessment on identified skills
Theme-related vocabulary packet
Determine areas of development and reinforcement
Implement lessons on identified skills in reading
Vocabulary quiz

Week 5

Cumulative vocabulary assessment
Theme-related vocabulary packet
Review SAT #2 Reading
Determine areas of development and reinforcement
Implement lessons on identified skills in reading
Vocabulary quiz

Week 6

Language skills assessment
Theme-related vocabulary packet
Review SAT #2 Writing & Language
Determine areas of development and reinforcement
Implement lessons on identified skills in language
Vocabulary quiz

Week 7

Reading skills assessment on identified skills
Language skills assessment on identified skills
Theme-related vocabulary packet
Determine areas of development and reinforcement
Implement lessons on identified skills in reading
Vocabulary quiz

Week 8

SAT Essay
SAT rubric: Reading, Analysis, Writing
Analysis vocabulary and rhetorical devices

Week 9

Post-assessment

Pacing Guide – 2nd Marking Period

Overall Focus & Objective	Topics for Understanding Skills for Mastery	Suggested Activities/Assessment
<p>Evidence-based Reading Across the Curriculum</p> <p>Passages drawn from U.S. & World literature, history/social studies, science</p> <p>CCSS.ELA-LITERACY.RL.11-12.1-10 CCSS.ELA-LITERACY.RI.11-12.1-9 CCSS.ELA-LITERACY.L.11-12.4-6 CCSS.ELA-LITERACY.CCRA.R.1-10 CCSS.ELA-LITERACY.CCRA.L.3-6</p>	<p>Test-taking strategies</p> <p>Determine best evidence in passage to support response to question</p> <p>Interpret data in informational graphics</p> <p>Understand how an argument uses evidence to develop claims</p> <p>Improve a passage's structure, and focus</p> <p>Interpret words in context</p> <p>Analyze word choice rhetorically</p> <p>Determine central ideas and theme</p> <p>Summarize text</p> <p>Understand relationships between people, ideas, events, and concepts (i.e., cause-and-effect, comparison-contrast, chronology)</p> <p>Interpret what author has said explicitly or implicitly</p> <p>Cite textual evidence to provide support for responses to questions</p> <p>Analyze word choice, text structure, point of view, purpose, and arguments</p> <p>Analyze, compare/contrast multiple texts</p>	<p>SAT Pre-test</p> <p>Apply test-taking strategies (time management, address test anxiety, approach to paired passages)</p> <p>SAT Practice Test #3 (text)</p> <p>Reading test, pg. 564-577</p> <p>SAT Practice Test #4 (text)</p> <p>Reading test, pg. 676-689</p> <p>Do Now: Basic reading conventions</p> <p>Weekly theme-based vocabulary application packet (i.e., Words related to measurement, words related to nature, words encompassing specific roots, commonly confused words)</p> <p>Mock quizzes on vocabulary</p> <p>Transitional/signal term application and differentiation</p> <p>Practice reading and interpreting various graphs and charts</p> <p>Individual and group approach to identifying, comprehending, explaining, interpreting, and synthesizing main ideas, theme, denotative/connotative meanings and author's purpose in passages</p> <p>Computer lab: Complete on-line SAT practice exercises at Khan Academy website, GrammarBytes, 4tests.com, and other relevant websites.</p> <p>Download Daily SAT Questions App onto phones</p>

Overall Focus & Objective	Topics for Understanding Skills for Mastery	Suggested Activities/Assessment
<p>Writing and Language:</p> <p>(1) Expression of Ideas</p> <p>(2) Standard English Conventions</p> <p>(3) SAT Essay</p>	<p>Expression of Ideas</p> <p>(1) Refine content of a passage to achieve writer's purpose (focus)</p> <p>(2) Improve structure of passage to improve logic and cohesion (transitions, sequence, connections)</p> <p>(3) Revise text to improve written expression (word choice, style, tone, syntax)</p> <p>Standard English Conventions</p> <p>(1) Refine content of a passage to achieve writer's purpose (focus)</p> <p>(2) Improve structure of passage to improve logic and cohesion (transitions, sequence, connections)</p> <p>(3) Revise text to improve written expression (word choice, style, tone, syntax)</p> <p>Essay: Analyze a text and write an evidence-based essay</p>	<p>SAT Pre-test</p> <p>Apply test-taking strategies (time management, address test anxiety, approach to paired passages)</p> <p>SAT Practice Test #3 (text)</p> <p>Writing & Language test, pg. 578-593</p> <p>SAT Practice Test #4 (text)</p> <p>Writing & Language test, pg. 690-703</p> <p>Do Now: Basic writing conventions</p> <p>Isolated and in-context skill practice on specific skills (subject-verb agreement, pronoun agreement,. Use of semi-colon and colon, combining sentences)</p> <p>Practice reading and interpreting various graphs and charts</p> <p>Individual and group approach to identifying and revising errors in writing</p> <p>Computer lab: Complete on-line SAT practice exercises at Khan Academy website, GrammarBytes, 4tests.com, and other relevant websites.</p> <p>Download Daily SAT Questions App onto phones</p>
<p>Passages drawn from U.S. & World literature, history/social studies, science</p> <p>CCSS.ELA-LITERACY.W.11-12.1-10</p> <p>CCSS.ELA-LITERACY.L.11-12.1-6</p> <p>CCSS.ELA-LITERACY.CCRA.R.5</p> <p>CCSS.ELA-LITERACY.CCRA.W.1-10</p> <p>CCSS.ELA-LITERACY.CCRA.L-6</p>		

Suggested Chronology

Note: Teacher will devise and present mini-lessons relative to basic writing and research skills AS NEEDED. (Ex: Selecting appropriate transitional phrases, subject-verb agreement, sentence structure).

Week 1:

Pre-assessment
Identification of student proficiencies and deficiencies
Complete SAT #1 Reading and Writing & Language

Week 2

Theme-related vocabulary packet
Review SAT #1 Reading
Determine areas of development and reinforcement
Implement lessons on identified skills in reading
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Determine areas of development and reinforcement
Implement lessons on identified skills in reading
Vocabulary quiz

Week 8

SAT Essay
SAT rubric: Reading, Analysis, Writing
Analysis vocabulary and rhetorical devices

Week 9

Post-assessment

Language Arts Standards

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity.

CCSS.ELA-LITERACY.RL.11-12.1

Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.

CCSS.ELA-LITERACY.RL.11-12.2

Determine two or more themes or central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to produce a complex account; provide an objective summary of the text.

CCSS.ELA-Literacy.RL.11-12.3

Analyze the impact of the author's choices regarding how to develop and relate elements of a story or drama (e.g., where a story is set, how the action is ordered, how the characters are introduced and developed).

CCSS.ELA-Literacy.RL.11-12.4

Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including words with multiple meanings or language that is particularly fresh, engaging, or beautiful. (Include Shakespeare as well as other authors.)

CCSS.ELA-Literacy.RL.11-12.5

Analyze how an author's choices concerning how to structure specific parts of a text (e.g., the choice of where to begin or end a story, the choice to provide a comedic or tragic resolution) contribute to its overall structure and meaning as well as its aesthetic impact.

CCSS.ELA-Literacy.RL.11-12.6

Analyze a case in which grasping a point of view requires distinguishing what is directly stated in a text from what is really meant (e.g., satire, sarcasm, irony, or understatement).

CCSS.ELA-Literacy.RL.11-12.7

Analyze multiple interpretations of a story, drama, or poem (e.g., recorded or live production of a play or recorded novel or poetry), evaluating how each version interprets the source text. (Include at least one play by Shakespeare and one play by an American dramatist.)

CCSS.ELA-Literacy.RL.11-12.8

(RL.11-12.8 not applicable to literature)

CCSS.ELA-Literacy.RL.11-12.9
Demonstrate knowledge of eighteenth-, nineteenth- and early-twentieth-century foundational works of American literature, including how two or more texts from the same period treat similar themes or topics.

CCSS.ELA-Literacy.RL.11-12.10

CCSS.ELA-LITERACY.RI.11-12.1
Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.

CCSS.ELA-LITERACY.RI.11-12.2
Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.

CCSS.ELA-LITERACY.RI.11-12.3
Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text.

CCSS.ELA-Literacy.RI.11-12.4
Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze how an author uses and refines the meaning of a key term or terms over the course of a text (e.g., how Madison defines faction in *Federalist No. 10*).

CCSS.ELA-LITERACY.RI.11-12.5
Analyze and evaluate the effectiveness of the structure an author uses in his or her exposition or argument, including whether the structure makes points clear, convincing, and engaging.

CCSS.ELA-LITERACY.RI.11-12.6
Determine an author's point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how style and content contribute to the power, persuasiveness or beauty of the text.

CCSS.ELA-LITERACY.RI.11-12.7
Integrate and evaluate multiple sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a question or solve a problem.

CCSS.ELA-Literacy.RI.11-12.8
Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning (e.g., in U.S. Supreme Court majority opinions and dissents) and the premises, purposes, and arguments in works of public advocacy (e.g., *The Federalist*, presidential addresses).

- CCSS.ELA-Literacy.RI.11-12.9
Analyze seventeenth-, eighteenth-, and nineteenth-century foundational U.S. documents of historical and literary significance (including The Declaration of Independence, the Preamble to the Constitution, the Bill of Rights, and Lincoln's Second Inaugural Address) for their themes, purposes, and rhetorical features.
- CCSS.ELA-LITERACY.W.11-12.1
Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
- CCSS.ELA-LITERACY.W.11-12.2
Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.
- CCSS.ELA-Literacy.W.11-12.3
Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.
- CCSS.ELA-LITERACY.W.11-12.4
Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
- CCSS.ELA-LITERACY.W.11-12.5
Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. (Editing for conventions should demonstrate command of Language standards 1-3 up to and including grades 11-12 here.)
- CCSS.ELA-LITERACY.W.11-12.6
Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.
- CCSS.ELA-LITERACY.W.11-12.7
Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
- CCSS.ELA-LITERACY.W.11-12.8
Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.

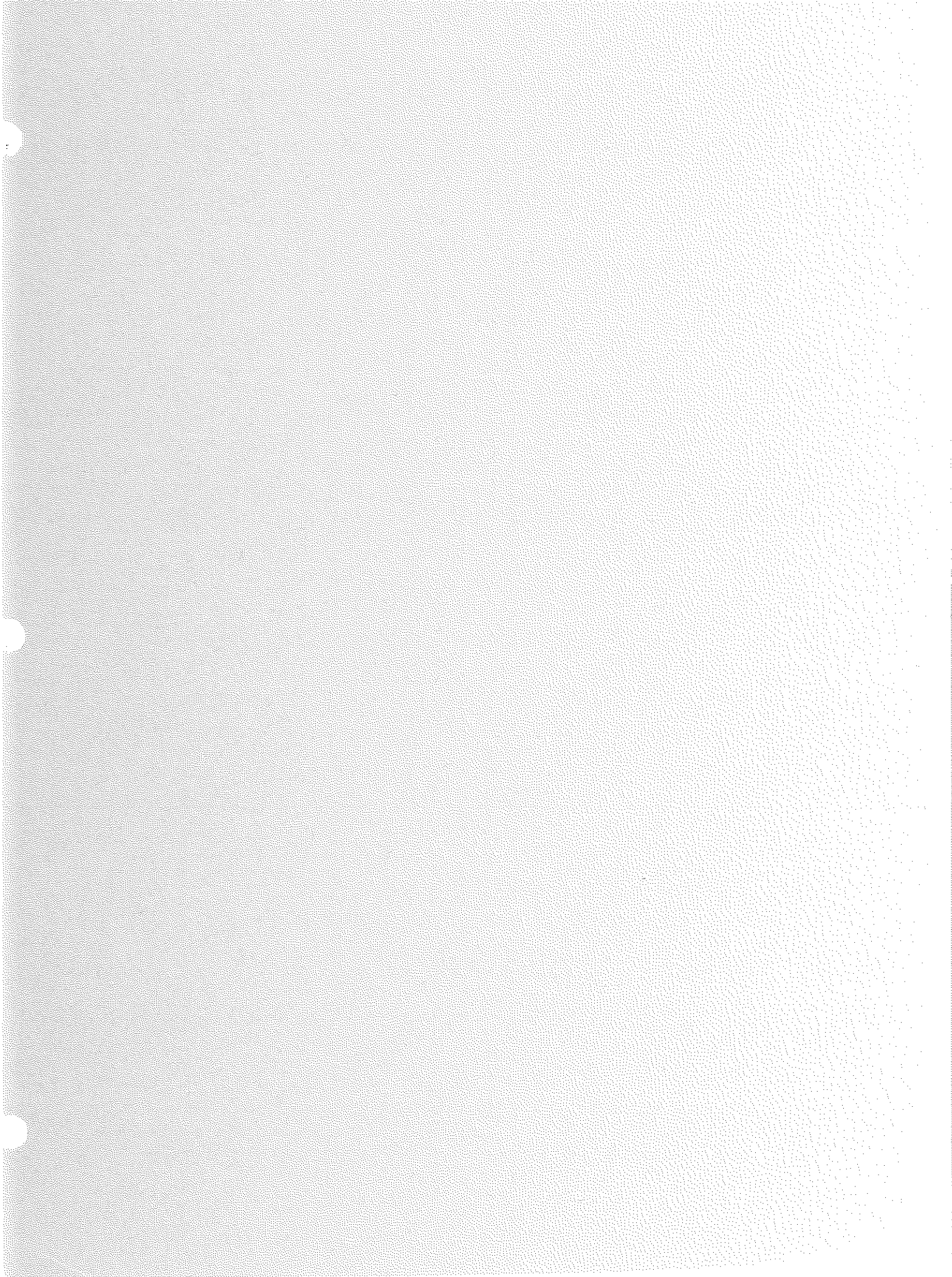
- CCSS.ELA-LITERACY.W.11-12.9
Draw evidence from literary or informational texts to support analysis, reflection, and research.
- CCSS.ELA-LITERACY.W.11-12.10
Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.
- CCSS.ELA-LITERACY.L.11-12.1
Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
- CCSS.ELA-LITERACY.L.11-12.2
Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
- CCSS.ELA-Literacy.L.11-12.3
Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.
- CCSS.ELA-Literacy.L.11-12.4
Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on *grades 11-12 reading and content*, choosing flexibly from a range of strategies.
- CCSS.ELA-Literacy.L.11-12.5
Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
- CCSS.ELA-LITERACY.L.11-12.6
Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.

College and Career Readiness Standards

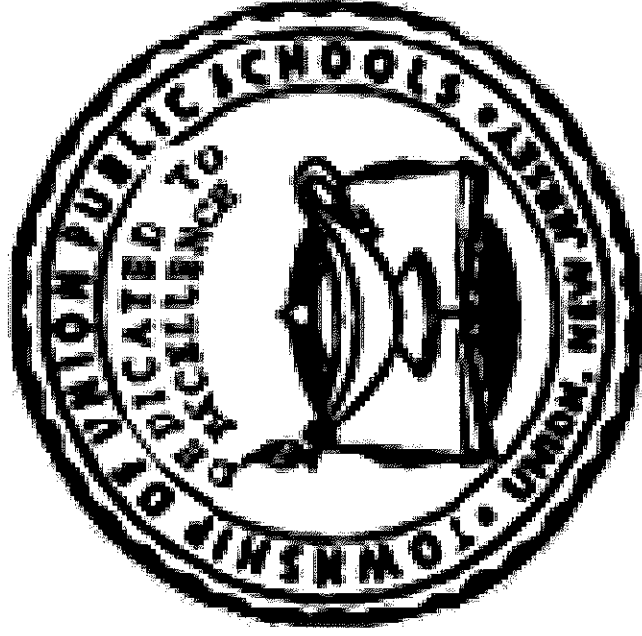
- CCSS.ELA-Literacy.CCRA.R.1
Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
- CCSS.ELA-Literacy.CCRA.R.2
Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
- CCSS.ELA-Literacy.CCRA.R.3
Analyze how and why individuals, events, or ideas develop and interact over the course of a text.

- CCSS.ELA-Literacy.CCRA.R.4
Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
- CCSS.ELA-Literacy.CCRA.R.5
Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.
- CCSS.ELA-Literacy.CCRA.R.6
Assess how point of view or purpose shapes the content and style of a text.
- CCSS.ELA-Literacy.CCRA.R.7
Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.¹
- CCSS.ELA-Literacy.CCRA.R.8
Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
- CCSS.ELA-Literacy.CCRA.R.9
Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.
- CCSS.ELA-Literacy.CCRA.R.10
Read and comprehend complex literary and informational texts independently and proficiently.
- CCSS.ELA-LITERACY.CCRA.W.1
Write arguments to support claims in an analysis of substantive topics or texts using valid reasoning and relevant and sufficient evidence.
- CCSS.ELA-LITERACY.CCRA.W.2
Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
- CCSS.ELA-LITERACY.CCRA.W.4
Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
- CCSS.ELA-LITERACY.CCRA.W.5
Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
- CCSS.ELA-LITERACY.CCRA.W.6
Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

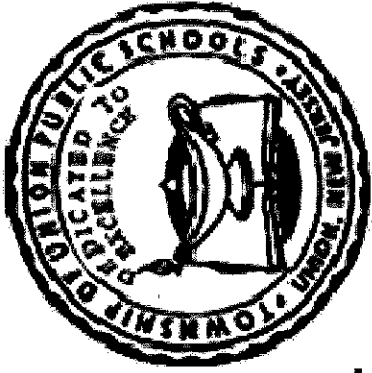
- CCSS.ELA-LITERACY.CCRA.W.7
Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
- CCSS.ELA-LITERACY.CCRA.W.8
Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
- CCSS.ELA-LITERACY.CCRA.W.9
Draw evidence from literary or informational texts to support analysis, reflection, and research.
- CCSS.ELA-LITERACY.CCRA.W.10
Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.
- CCSS.ELA-LITERACY.CCRA.L.1
Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
- CCSS.ELA-LITERACY.CCRA.L.2
Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
- CCSS.ELA-Literacy.CCRA.L.3
Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.
- CCSS.ELA-Literacy.CCRA.L.4
Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.
- CCSS.ELA-Literacy.CCRA.L.5
Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
- CCSS.ELA-Literacy.CCRA.L.6
Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.



TOWNSHIP OF UNION PUBLIC SCHOOLS



Grade 6 Mathematics Curriculum Guide 2015-16



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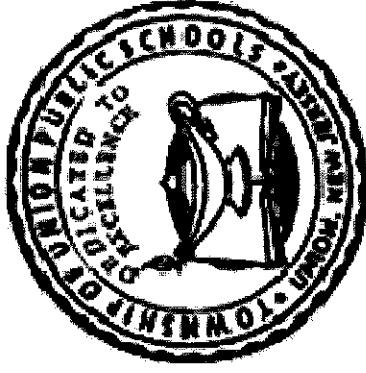
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TOWNSHIP OF UNION PUBLIC SCHOOLS
Administration

District Superintendent	Gregory Tatum
Assistant Superintendent.....	Noreen Lishak
Assistant Superintendent	Annie Moses
Board Attorney/Secretary.....	James Damato
School Business Administrator.....	Manuel Vieira
Director of Personnel	Gerry Benaquista
Director of Special Project	Ann Hart
Director of Special Services	Kim Conti
Director of Athletics, Physical Education, and Nurses.....	Linda Ionta

District Security Nick Ardito

DEPARTMENT SUPERVISORS

School Counseling K-12	Nicole Ahern
Special Services Pre-K - 8.....	Kristin Szawan
Special Services Pre-K - 8	Frank Santora
Special Services 9-12.....	Joseph Seugling
Pre-K English/Math/Science/SS.....	Maureen Corbett
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Mathematics 2-5/Science 2 -5	Theresa Matthews
English 6-12.....	Randi Moran
Mathematics 6-12.....	Jeremy Cohen
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Art, Music, K -12	Ron Rago

**Curriculum Revisions
6th Grade Mathematics**

Jessica Cornacchia

Scott Cornacchia

Lisa Henderson

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Board Members

Administration

Department Supervisors

Curriculum Committee

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Appendix: New Jersey Core Curriculum Content Standards

Mission Statement

The Township of Union Board of Education believes that every child is entitled to an education designed to meet his or her individual needs in an environment that is conducive to learning. State standards, federal and state mandates, and local goals and objectives, along with community input, must be reviewed and evaluated on a regular basis to ensure that an atmosphere of learning is both encouraged and implemented. Furthermore, any disruption to or interference with a healthy and safe educational environment must be addressed, corrected, or when necessary, removed in order for the district to maintain the appropriate educational setting.

Philosophy Statement

The Township of Union Public School District, as a societal agency, reflects democratic ideals and concepts through its educational practices. It is the belief of the Board of Education that a primary function of the Township of Union Public School System is to formulate a learning climate conducive to the needs of all students in general, providing therein for individual differences. The school operates as a partner with the home and community.

Statement of District Goals

- **Develop reading, writing, speaking, listening, and mathematical skills.**
- **Develop a pride in work and a feeling of self-worth, self-reliance, and self discipline.**
- **Acquire and use the skills and habits involved in critical and constructive thinking.**
- **Develop a code of behavior based on moral and ethical principals.**
- **Work with others cooperatively.**
- **Acquire a knowledge and appreciation of the historical record of human achievement and failures and current societal issues.**
- **Acquire a knowledge and understanding of the physical and biological sciences.**
- **Participate effectively and efficiently in economic life and the development of skills to enter a specific field of work.**
- **Appreciate and understand literature, art, music, and other cultural activities.**
- **Develop an understanding of the historical and cultural heritage.**
- **Develop a concern for the proper use and/or preservation of natural resources.**
- **Develop basic skills in sports and other forms of recreation.**

Course Description

This course is designed to cover all 6th grade common core standards. The sixth grade math curriculum is currently aligned with the CCSS. All skills required for mastery are a part of the sixth grade proficiency list. All lessons are created to address differentiated learning styles to ensure each lesson's objective is obtained by each student. The sixth grade curriculum focuses on five critical areas: (1) connecting ratio and rate to solve problems; (2) completing understanding of the division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers; (3) writing, interpreting, and using expressions and equations; (4) develop an understanding of statistical thinking; and (5) develop an understanding of theoretical and experimental probability.

Recommended Textbooks:

Holt McDougal Mathematics Grade 6 (Common Core edition)

Course Proficiencies

Students will be able to...

- Understand ratio concepts and use ratio reasoning to solve problems
- Apply and extend previous understandings of multiplication and division to divide fractions by fractions
- Compute fluently with multi-digit numbers and find common factors and multiples
- Apply and extend previous understandings of numbers to the system of rational numbers
- Apply and extend previous understandings of arithmetic to algebraic expressions
- Reason about and solve one-variable equations and inequalities
- Reason about and solve two step variable equations, including solving equations with variables on both sides of the equal sign.
- Simplify algebraic expressions by combining like terms.
- Represent and analyze quantitative relationships between dependent and independent variables
- Solve real-world and mathematical problems involving area, surface area, and volume
- Develop understanding of statistical variability
- Summarize and describe distributions
- Identify and represent basic geometrical vocabulary terms.
- Understand basic principles of theoretical and experimental probability.

Curriculum Units

Unit 1: Ratios and Proportional Relationships

Unit 2: The Number System
(Incorporating 7.NS.A.1-2)

Unit 3: Expressions and Equations

Unit 4: Geometry

Unit 5: Statistics and Probability

Pacing Guide 6th Grade

<u>Content</u>	<u>Number of Days</u>
<u>Unit 1:</u> Ratios and Proportional Relationships	30 days
<u>Unit 2:</u> The Number System	60 days
<u>Unit 3:</u> Expressions and Equations	40 days
<u>Unit 4:</u> Geometry	25 days
<u>Unit 5:</u> Statistics and Probability	25 days
<u>TOTAL</u>	<u>180 DAYS</u>

Chapter Order

1,2,3,4,5,7 Integer Chapter,
6,10,8,9

Unit 1: Ratios and Proportional Relationships

Essential Questions	Instructional Objectives/ Skills and Benchmarks	Activities and Examples	Assessments
<p>What are ratios and how can they be used to solve real life problems?</p> <p>How do you calculate unit rate and how do you interpret it in context of a real-world scenario?</p>	<p>Understand ratio concepts and use ratio reasoning to solve problems.</p> <p>(6.RP.1) Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.</p> <p>(6.RP.2). Understand the concept of a unit rate a/b associated with a ratio $a:b$ with</p>	<p>Real world applications (tiered to ability), stations, problems around the room, ecr, tic-tac-toe, and choice menus across all units</p> <p>For example, "The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received nearly three votes."</p> <p>For example, "This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is $3/4$</p>	<ul style="list-style-type: none">• Quizzes• Chapter Tests• District CEMPA Exams• Performance Assessments• Cross-curricular Projects• Spiral reviews/Dipstick Quiz• Teacher Observation

$b \neq 0$, and use rate language in the context of a ratio relationship.

(6.RP.3) Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.

(6.RP.3a) Make tables of equivalent ratios relating quantities with whole number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.

(6.RP.3b) Solve unit rate problems including those involving unit pricing and constant speed.



cup of flour for each cup of sugar." "We paid \$75 for 15 hamburgers, which is a rate of \$5 per hamburger."

For example,

Number in Group	3	5	6	12
Amount Paid (\$)	15	25	30	60

Use the table above to predict how much a group of 10 will have to pay.

For example,

Teachers	1	3	7	
Students	18	54		180

Complete the table above to find the missing ratios.

For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?

- Extended Constructed Response
- Find the Mistake Critical Thinking
- Exit tickets following instruction
- I-Ready program diagnostic results

(6.RP.3c) Find a percent of a quantity as a rate per 100

For example, 30% of a quantity means 30/100 times the quantity; solve problems involving finding the whole, given a part and the percent.

(6.RP.3d) Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.

For example, the steel used to make the statue of liberty weighs 125 tons. Approximately how many pounds does it weigh?

**INTERACTIVE
ACTIVITIES**

Best Buy Stations

Students will be given three different sizes of common household items/foods and their corresponding prices, and given their knowledge of unit rate must determine which size item is the best buy (least expensive per

unit).

Class Survey Proportion

Students will conduct a survey of their classmates to see how many students fit certain criteria (ie how many are left handed) and using this data will set up proportions to figure out how many students out of a larger population (500 students) would fit that criteria if the rate stayed the same.

Sales Tax Across the Country

Students will be presented with a variety of items and their individual costs. They must then determine how much sales tax one would have to pay to purchase the item in NJ (7%), PA(6%), NY(4%), MA(6.25%).

Nutrition Label Activity

Students will be provided with 3 nutrition fact labels from common foods. They must then find the percent daily value for key nutrients on each label and express the percent as a fraction in simplest form.

M&M Activity

Students will be provided with a bag of 20 M&Ms. They will then find the ratio of each color to the total number in the bag and express this ratio as a fraction. After converting to a decimal and a percent, students will use proportions to make predictions as to how many m&ms of each color would be in a bag of 50.

Candy Survey Chart

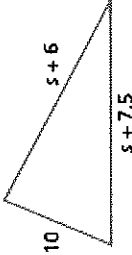
Students are provided with the top 10 candy brands in the US and the

		<p>amount of money each brings in (totaling \$500 million). Students then express each candy's value as a fraction, decimal, and percent.</p> <p>“Game Time” – Triple Play See Textbook page 328</p>	
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Unit 2: **The Number System**

<p>Essential Questions</p>	<p>Instructional Objectives/ Skills and Benchmarks_(CPIs)</p>	<p>Activities and Examples</p>	<p>Assessments</p>
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<p>How can you model multiplying and dividing a fraction by a fraction?</p> <p>How can you add, subtract, multiply, and divide decimals and fractions easily?</p> <p>What is a factor and multiple and how can they be used to solve problems?</p> <p>What are rational numbers?</p> <p>How can you represent negative numbers in real life and on a number line and coordinate plane?</p>	<p>Apply and extend previous understandings of multiplication and division to divide fractions by fractions</p> <p>(6.NS.1) Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem.</p>	<p>Real world applications (tiered to ability), stations, problems around the room, ecr, tic-tac-toe, and choice menus across all units</p>	<ul style="list-style-type: none"> • Quizzes • Chapter Tests • District CEMPA Exams • Performance Assessments • Cross-curricular Projects • Spiral reviews/Dipstick Quiz • Teacher Observation • Extended Constructed Response • Find the Mistake Critical Thinking • Exit tickets following
<p>For example, create a story context for $(\frac{2}{3}) \div (\frac{3}{4})$ and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that $(\frac{2}{3}) \div (\frac{3}{4}) = \frac{8}{9}$ because $\frac{3}{4}$ of $\frac{8}{9}$ is $\frac{2}{3}$.</p> <p>(In general, $(\frac{a}{b}) \div (\frac{c}{d}) = \frac{ad}{bc}$.) How much chocolate will each person get if 3 people share $\frac{1}{2}$ lb of chocolate equally? How many $\frac{3}{4}$-cup servings are in $\frac{2}{3}$ of a cup of yogurt? How wide is a rectangular strip of land with length $\frac{3}{4}$ mi and area $\frac{1}{2}$ square mi?</p>			

	<p>Compute fluently with multi-digit numbers and find common factors and multiples.</p> <p>(6.NS.2) Fluently divide multi-digit numbers using the standard algorithm.</p>	<p>For example, 1) A train travels 2,982 miles at an average speed of 42 miles per hour. At that speed, how long will it take the train to complete its trip? 2) A student solved the division problem $1,182 \div 12$ and got the quotient 98.6. Explain the error and write the correct quotient.</p>	<p>instruction</p> <ul style="list-style-type: none"> I-Ready program diagnostic results
	<p>(6.NS.3) Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.</p>	<p>For example, 1) $s - 3.5 = 10$</p> 	

- a) What is the length of each side of the triangle?
b) What is the perimeter of the triangle?

2) Find the area of a rectangle that has a length of 6.8 inches and a width of 1.24 inches.

For example,

1) Express $36 + 8$ as $4(9 + 2)$.

2) Kim has 16 red roses and 20 pink roses. She is making flower arrangements that must each have the same number of red and pink roses. What is the greatest number of arrangements she can make if every flower is used?

(6.NS.4) Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor.

Apply and extend previous understandings of numbers to the system of rational numbers.

(6.NS.5) Understand that positive and negative numbers are used together to describe quantities having opposite directions or values

For example, temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.

(6.NS.6) Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.

For example, Graph each integer and its opposite on a number line:

- a) -2 b) 1
- c) -6 d) 9

(6.NS.6a) Recognize opposite signs of numbers as

For example,
 $-|-3| = 3$, and that 0 is

indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself

(6.NS.6b) Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.

(6.NS.6c) Find and position integers and other rational numbers on a horizontal or

its own opposite.

For example, understanding the changes to coordinates after a figure after translations:

Horizontal translation of a units:
 $(x, y) \rightarrow (x \pm a, y)$
Vertical translation of b units:
 $(x, y) \rightarrow (x, y \pm b)$
Reflection across the y -axis:
 $(x, y) \rightarrow (-x, y)$
Reflection across the x -axis:
 $(x, y) \rightarrow (x, -y)$
Rotation of 180° :
 $(x, y) \rightarrow (-x, -y)$
Rotation of 90° clockwise:
 $(x, y) \rightarrow (y, -x)$
Rotation of 90° counterclockwise:
 $(x, y) \rightarrow (-y, x)$

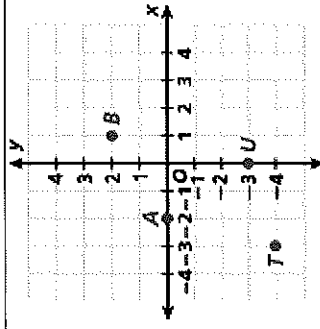
For example,

How can we use a number line to determine the placement of rational numbers after given operations?

How can we apply rational numbers and operations to solve real world problems?

How do operations affect numbers?

vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.



- a) Give the coordinates of points A, B, and U.
- b) Graph the following points E(-4, 2) & F(-1, -4)

For example, order the following from least to greatest: -6, 0, -1, 4, 2, -4

For example, interpret $3 > -7$ as a statement that -3 is located to the right of -7 on a number line oriented from left to right.

For example, write $-3^\circ\text{C} > -7^\circ\text{C}$ to express the fact that -3°C is warmer than -7°C .

(6.NS.7) Understand ordering and absolute value of rational numbers.

(6.NS.7a) Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram.

	<p>(6.NS.7b) Write, interpret, and explain statements of order for rational numbers in real-world contexts.</p> <p>(6.NS.7c) Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation.</p> <p>(6.NS.7d) Distinguish comparisons of absolute value from statements about order.</p> <p>(6.NS.8) Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.</p>	<p>For example, for an account balance of -30 dollars, write $-30 = 30$ to describe the size of the debt in dollars.</p> <p>For example, recognize that an account balance less than -30 dollars represents a debt greater than 30 dollars.</p> <p>For example, Graph the following vertices on the coordinate plane and find the perimeter of the rectangle: $A(1, 3)$, $B(1, -3)$, $C(-3, 3)$, & $D(-3, -3)$</p> <p>For example,</p>	
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(7.NS.1) Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.

(7.NS.A.1a) Describe situations in which opposite quantities combine to make 0.

(7.NS.A.1b) Understand $p + q$ as the number located a distance $|q|$ from p , in the positive or negative direction depending on whether q is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.

Use a number line to find the following sums or differences.

- a) $-8 + 5$
- b) $7 - 11$

For example, a hydrogen atom has 0 charge because its two constituents are oppositely charged.

For example,

- a) Recognition that $-5 + 5 = 0$
- b) The temperature dropped 17 degrees over the course of 6 hours. The final temperature was -3 degrees. Use integer addition to find the starting temperature.

For example,

- a) Applying the keep-change-turn rule to

	<p>(7.NS.A.1c) Understand subtraction of rational numbers as adding the additive inverse, $p - q = p + (-q)$. Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.</p> <p>(7.NS.A.1d) Apply properties of operations as strategies to add and subtract rational numbers.</p> <p>(7.NS.2b) Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero</p>	<p>integer subtraction (keep the sign of the 1st integer, change addition to subtraction, turn the second integer into its opposite</p> <p>b) Find the next three numbers in the pattern using subtraction: 7, 3, -1, -5, -9....</p> <p>For example,</p> <p>a) Using the distributive property to find the product of 7(29)</p> <p>b) Identifying $5 + 11 = 11 + 6$ as the commutative property.</p> <p>For example, Mitchell walked 8.5 laps around the track in 20.4 minutes. If he walked each lap at the same pace, how long did it take him to walk one full lap?</p>	
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divisor) is a rational number. If p and q are integers, then $-(p/q) = (-p)/q = p/(-q)$. Interpret quotients of rational numbers by describing real world contexts.

(7.NS.2c) Apply properties of operations as strategies to multiply and divide rational numbers.

For example,

- a) A scuba diver is swimming at a depth of 12 feet below the ocean surface. She dives down to a coral reef that is five times this depth. What integer represents the depth of the coral reef?
- b) Order from least to greatest: 2.9, $4/5$, $9/11$, 2.91

INTERACTIVE
ACTIVITIES

Human Number Line

Students arrange themselves from least to greatest based on the card they are holding (cards can include fraction, decimal, and integer values).

Supermarket Sweep

Students are given a supermarket flyer and are asked to answer questions that require the use of operations of decimals (ie how much will 3 containers of orange juice cost? What is the total price of milk, eggs, and butter? How much change will you receive if paying with a \$100 bill?)

Translation Partner Activity

Students will draw a shape in quadrant one of the coordinate plane. They will then trade papers with a partner and 1) reflect their partners figure over the x or y axis and 2) translate the figure up/down or right/left. They must then provide the coordinates of the new shape after each translation.

Graphic Organizer

(students fill in graphic organizer giving explanations of properties with examples)

Integer War-

Red cards represent negative and black cards represent positives. Flip two cards and find their sum. The player with the greatest sum wins the cards.

Integer Operations BINGO

In groups, students will solve integer operation problems from a stack of bingo "calling cards". If the answer is on their individual game board, they get to place a chip on it. The first student to get five in a row will win.

Integer GAMEBOARD

Students will take turns in partners flipping a coin onto a teacher-created

game board filled with integer operation problems. Students must compare answers and agree before moving on.

Integer Operations Flipchart

Students will create a "how-to" booklet on the rules for solving addition, subtracting, multiplication, and division of integer problems. They must also demonstrate each rule by providing two examples.

Operations with

Decimals Mystery Word

Students travel around the room solving various operations with decimals problems. Each sum, difference, product, or quotient corresponds to a letter. Students must use their answers to discover and define a mystery word.

“Fractions for Dummies”

Students create a how-to manual on performing tasks with fractions. They must explain procedures as well as write examples for each topic they choose (ie greatest common factor, dividing fractions, or ordering fractions).

Incredible Expressions Poster

Students select one rational number to be their “magic number”. They must then find a minimum of 10 expressions that equal their magic number when evaluated. All four operations must be demonstrated, at least one expression, must include a decimal or fraction, and at least 3 expressions must include negative integers. These

	will be presented to the class.		
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Unit 3: Expressions and Equations

Essential Questions	Instructional Objectives/ Skills and Benchmarks (CPIs)	Activities and Examples	Assessments								
<p>What is the difference between evaluating expressions and solving equations?</p> <p>How can evaluating expressions and solving equations be related to real world problems?</p> <p>How can you represent an unknown quantity in an expression or equation?</p> <p>How do you know if a number is a solution to the equation?</p> <p>How do you solve an equation with decimals</p>	<p>Apply and extend previous understandings of arithmetic to algebraic expressions.</p> <p>(6.EE.1) Write and evaluate whole number expressions involving whole-number exponents.</p> <p>(6.EE.2) Write, read, and evaluate expressions in which letters stand for numbers.</p> <p>(6.EE.2a) Write expressions that record operations with</p>	<p>Real world applications (tiered to ability), stations, problems around the room, ecr, tic-tac-toe, and choice menus across all units</p> <p>For example, write “four cubed” as repeated multiplication and evaluate.</p> <p>For example,</p> <table border="1" data-bbox="982 835 1128 1024"> <tr> <td>w</td> <td>$w \times 3 + 10$</td> </tr> <tr> <td>4</td> <td>22</td> </tr> <tr> <td>5</td> <td></td> </tr> <tr> <td>6</td> <td></td> </tr> </table> <p>Substitute for w to complete the table.</p> <p>For example, express the calculation “Subtract y from</p>	w	$w \times 3 + 10$	4	22	5		6		<ul style="list-style-type: none"> • Quizzes • Chapter Tests • District CEMPA Exams • Performance Assessments • Cross-curricular Projects • Spiral reviews/Dipstick Quiz • Teacher Observation • Extended
w	$w \times 3 + 10$										
4	22										
5											
6											

<p>and/or fractions?</p> <p>What is an inequality and how do you solve it?</p> <p>How can we use equations and expression to represent real world problems?</p> <p>How can we use equivalent expressions to make a solution simpler?</p>	<p>numbers and with letters standing for numbers.</p> <p>(6.EE.2b) Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity.</p> <p>(6.EE.2c) Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations).</p> <p>(6.EE.3) Apply the properties</p>	<p>5" as $5 - y$.</p> <p>For example, describe the expression $2(8 + 7)$ as a product of two factors; view $(8 + 7)$ as both a single entity and a sum of two terms.</p> <p>For example, use the formulas $V = s^3$ and $A = 6s^2$ to find the volume and surface area of a cube with sides of length $s = 1/2$.</p> <p>For example, 1) $3 \times 4 \times 6 = 6 \times 3 \times 4$ due</p>	<p>Constructed Response</p> <ul style="list-style-type: none"> • Find the Mistake Critical Thinking • Exit tickets following instruction • I-Ready program diagnostic results
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of operations to generate equivalent expressions.

(6.EE.4) Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them).

Reason about and solve one-variable equations and inequalities.

(6.EE.5) Understand solving an equation or inequality as a process of answering a question: which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.

to the Commutative Property
2) $4 + (2 + 9) = (4 + 2) + 9$
due to the Associative Property.

For example, the expressions $y + y + y$ and $3y$ are equivalent because they name the same number regardless of which number y stands for.

For example,
1) Is $v = 88$ a solution to the equation $v + 79 = 167$?
2) Robbie has 17 one dollar bills. Kris has 350 nickels. Do they have the same amount of money?

	<p>(6.EE.6) Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.</p> <p>(6.EE.7) Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p, q and x are all nonnegative rational numbers.</p> <p>(6.EE.8) Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many</p>	<p>For example, setting up and solving the equation $28 = 3.5w$ to find the width of a bedroom that is 3.5 meters long and 28 square meters in area.</p> <p>For example, setting up an addition equation to represent the word problem “Abigail is walking to her grandmother’s house. She has already walked one and one third miles. If her grandmother lives 3 miles away, how much further does she have to walk?”</p> <p>For example, 1) “The temperature is below 40 degrees” is represented by the inequality... temperature < 40 2) “There are more than 8 fish in the aquarium” is represented by the</p>	
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solutions; represent solutions of such inequalities on number line diagrams.

Represent and analyze quantitative relationships between dependent and independent variables.

(6.EE.9) Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.

inequality...
number of fish > 8

For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation $d = 65t$ to represent the relationship between distance and time.

INTERACTIVE ACTIVITIES

Function Machine Match

Students will be provided with either a function machine with a rule or an input-output table of values. They must find their match and then work together to come up with three more input/output values for their rule.

Function Robot

Students will be given a blank "function robot" in which they must write in their own "robot rule" (a one or two step expression). They must then choose 4 input values to substitute into their rule and solve to find each one's corresponding output.

Properties Quiz Quiz Trade

Students will each be given cards with a problem such

as $11 + 8 = 8 + 11$ or $9 \times 72 = 9(70) + 9(2)$ and have to identify which property it represents. They will travel around the room and "quiz" one another on their cards.

Inequality Communicator Activity

Students will be presented with inequalities in word form and must graph the inequality correctly on a number line on a communicator while teachers monitor comprehension.

"Game Time" – Try Angles
See Textbook page 452.

Taxi Equation Problems

Given a "newspaper advertisement" students must create and solve two-step equations to find the taxi fare according to various distances traveled

Distributive Property

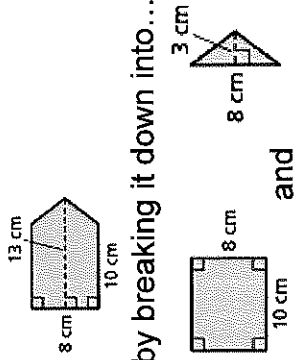
Bingo

Students will be given a blank bingo board in which they will fill in various expressions that have been expanded using the distributive property. The teacher will then announce products and students must use the distributive property and mental math to determine whether or not they have the matching expression on their board.

Exponents Riddle

Students must find the value of various exponents and then use each answer's letter to decode a riddle.

Unit 4: Geometry

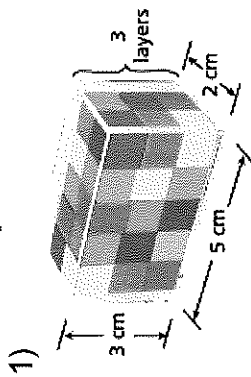
Essential Questions	Instructional Objectives/ Skills and Benchmarks (CPIs)	Activities and Examples	Assessments
<p>What is perimeter and how do you calculate it?</p> <p>What is area and how do you calculate the area of different figures?</p> <p>How can a three dimensional figure be unfolded into a two-dimensional figure?</p> <p>How can you calculate surface area and volume of three-dimensional figures?</p>	<p>Solve real-world and mathematical problems involving area, surface area, and volume.</p> <p>(6.G.1) Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes;</p>	<p>Real world applications (tiered to ability), stations, problems around the room, ecr, tic-tac-toe, and choice menus across all units</p> <p>For example, finding the area of...</p>  <p>by breaking it down into... and</p> <p>and then adding the area of the two separate figures.</p>	<ul style="list-style-type: none"> • Quizzes • Chapter Tests • District CEMPA Exams • Performance Assessments • Cross-curricular Projects • Spiral reviews/Dipstick Quiz • Teacher Observation

(6.G.2) Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism.

Apply the formulas $V = lwh$ and $V = bh$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.

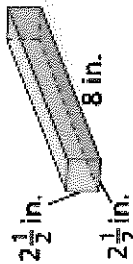
(6.G.3) Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the

For example,



Recognizing it requires 3 layers of 10 cubes to fill the prism, therefore its volume of 30 cubic centimeters (which can also be found by $3 \times 5 \times 2$).

2) Find the volume of the prism below



For example,
A gardener uses string to mark the rectangular border of a garden. On a coordinate plane measured in feet, the

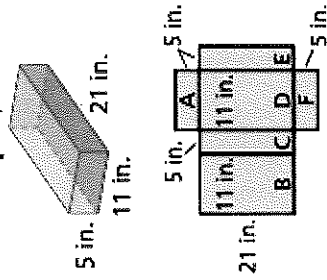
- Extended Constructed Response
- Find the Mistake Critical Thinking
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- I-Ready program diagnostic results

length of a side joining points with the same first coordinate or the same second coordinate.

coordinates are $(-2, 3)$, $(5, 3)$, $(5, -1)$, and $(-2, -1)$. How much string does the gardener need?
**This problem can be modified to include the drawing of the garden on the coordinate plane.*

(6.G.4) Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures.

For example,



Recognizing that this prism is made of six faces, and its surface area can be

found by adding the areas of each of the six rectangular faces.

Interactive Activities

Volume and Surface Area Stations

Students will travel around the room and measure the dimensions of various rectangular prisms (cereal box, tissue box, shoe box, etc.) They will work cooperatively to find the volume and surface area of each prism.

Polygon Area Jeopardy

Students will participate in a jeopardy game in which they are required to find the area of various rectangles, parallelograms, triangles, trapezoids, and composite figures. As point values increase, difficulty level increases (ie measurements will include decimals and fractions).

Graph Paper Nets

Students will draw the nets of a rectangular prism on graph paper. They must then prove why the sum of the area of all six rectangles in the net provides the same surface area as the formula $SA = 2lw + 2wh + 2lh$

Composite Figure

Communicator Activity

Students will physically draw lines to separate composite figures into individual polygons on a communicator and then add the areas to find the area of the total figure.

Area and Perimeter ECR

Students will find the area and perimeter of various shaped gardens. Given the cost of 1 foot of fencing, students must decide and defend which garden their parents should build to save the most money (perimeter) or to plant the most vegetables (area).

		<p>Plot the Picture Students will be given blank coordinate plane worksheets and must plot and connect ordered pairs to create pictures or polygons (can be tiered by difficulty level or readiness).</p> <p>“Game Time” – Poly-cross Puzzle & Polygon Hide-and-seek See Textbook page 380</p>	
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Unit 5: Statistics and Probability

Essential Questions	Instructional Objectives/ Skills and Benchmarks (CPIs)	Activities and Examples	Assessments
What is data and what can it describe?	Develop understanding of statistical variability.	Real world applications (tiered to ability), stations, problems around the room, ecr, tic-tac-toe, and choice menus across all units	<ul style="list-style-type: none"> Quizzes

How can you describe the center of a data distribution?

How can you describe the spread of a data distribution?

What graphical representations can be formed from the data, and when is each appropriate?

How do you summarize data in context of the problem given?

(6.SP.1) Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers.

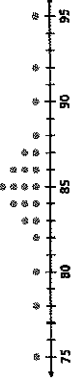
(6.SP.2) Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.

(6.SP.3) Recognize that a measure of center for a

For example, “How old am I?” is not a statistical question, but “How old are the students in my school?” is a statistical question because one anticipates variability in students’ ages.

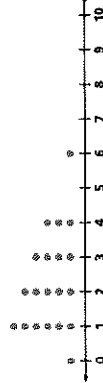
For example, being able to distinguish and explain why a data set’s distribution is normal vs. skewed.

82	95	84	87	85	92	85	78	82	84	83
86	80	86	85	75	83	90	86	84	88	85



Above data set is normally distributed.

1	2	3	0	1	4	2	2	1	3
3	4	2	2	6	1	3	4	1	1



Above data set is skewed.

For example, a mean can

- Chapter Tests

- District Proficiency Exams

- Performance Assessments

- Cross-curricular Projects

- Spiral reviews/Dipstick Quiz

- Teacher Observation

- Extended Constructed Response

- Find the Mistake

numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.

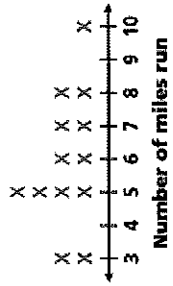
Summarize and describe distributions.

(6.SP.4) Display numerical data in plots on a number line, including dot plots, histograms, and box plots.

be used to summarize all values of a data set with no outliers, whereas a median can better summarize all values of a data set that contain outliers. Variation on the other hand, shows the spread of a data set and how it varies from the measure of center (median)

For example,

1) This line plot represents the data collected by a teacher who surveyed how many miles each of his students ran in a week.

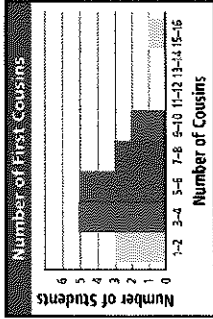


2) This histogram represents the data collected in a survey of many first cousins a class of students has.

(6.SP.5) Summarize numerical data sets in relation to their context, such as by:

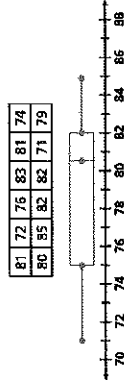
(6.SP.5a) Reporting the number of observations.

(6.SP.5b) Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.



For example,
Presenting numerical observation data reported and presenting it in a frequency table using intervals that can be turned into a histogram.

For example,
Analyzing a box and whisker plot of heights (in inches) of basketball players and noticing a skewed data set because the mean, median, and mode under investigation are varied.



(6.SP.5c) Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.

(6.SP.5d) Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.

For example, Based on the presentation of a box and whisker plot – determining the median and IQR values and assessing if the data is symmetric about the center by its appearance.

For example, drawing conclusions about and making comparisons about data collection as follows:

Comparison of Grams of Sugar in Juice and Soda

Category	Minimum	Q1	Median	Q3	Maximum
Juice	20	22	25	28	30
Soda	30	32	35	38	40

While soda has more grams of sugar, the amount of sugar in juice varies more widely.

INTERACTIVE ACTIVITIES

Weather Around the US

Students are to go on weather.com and find the current temperatures in 10 US state capitals. From this data, students are to create and analyze a box-and-whisker plot.

Haiku Cross Curricular

In English class, students are taught how to write a haiku poem. They are to bring this poem to Math class and then create a frequency table and histogram as to how many times each letter appears (using intervals).

Pi Day Activity

On Pi Day (3/14) students will create a frequency table and histogram based on the first 100 digits of pi.

Physical Education Cross Curricular

Students can create a data set of how many seconds it takes to run one lap around

the field. They can analyze this data by finding the mean, median, mode, and range, and creating a box and whisker plot. They will then explain the shape of the data's distribution.

“Roll the Dice” line plot activity

Students will work with a partner to record the sum when rolling two dice twenty times. This data will be turned into a line plot and critical thinking questions regarding predictions and probability will be used to follow-up.

“Game Time” – Spinnermania
See textbook page 274

New Jersey Scoring Rubric

MATHEMATICS EXTENDED CONSTRUCTED RESPONSE RUBRIC

4

The response indicates application of a reasonable strategy that leads to a correct solution in the context of the problem. The Representations are correct. The explanation and/or justification is logically sound, clearly presented, fully developed, supports the solution, and does not contain significant mathematical errors. The response demonstrates a complete understanding and analysis of the problem.

3

The response indicates application of a reasonable strategy that may or may not lead to a correct solution. The representations are essentially correct. The explanation and/or justification is generally well developed, feasible, and supports the solution. The response demonstrates a clear understanding and analysis of the problem.

2

The response indicates an incomplete application of a reasonable strategy that may or may not lead to a correct solution. The representations are fundamentally correct. The explanation and/or justification supports the solution and is plausible, although it may not be well developed or complete. The response demonstrates a conceptual understanding and analysis of the problem.

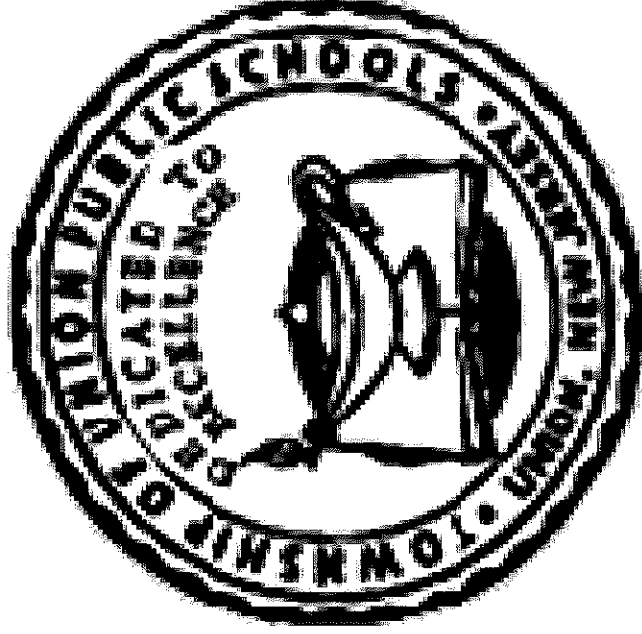
1

The response indicates little or no application of a reasonable strategy. It may or may not have the correct answer. The representations are incomplete or missing. The explanation and/or justification reveals serious flaws in reasoning. The explanation and/or justification may be incomplete or missing. The response demonstrates a minimal understanding and analysis of the problem.

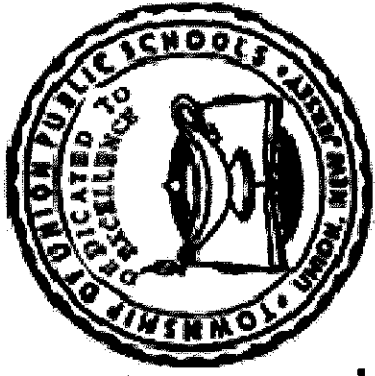
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The response is completely incorrect or irrelevant. There may be no response, or the response may state, "I don't know."

TOWNSHIP OF UNION PUBLIC SCHOOLS



Grade 7 Mathematics Accelerated Curriculum Guide 2015-2016



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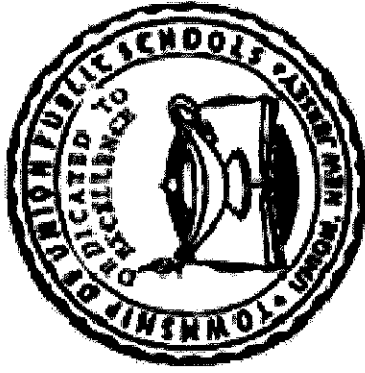
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TOWNSHIP OF UNION PUBLIC SCHOOLS

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District Superintendent Gregory Tatum

Assistant Superintendent..... Noreen Lishak

Assistant SuperintendentAnnie Moses

Board Attorney/Secretary.....James Damato

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Director of Special ProjectAnn Hart

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DEPARTMENT SUPERVISORS

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Special Services Pre-K - 8.....	Kristin Szawan
Special Services Pre-K - 8	Frank Santora
Special Services 9-12.....	Joseph Seugling
Pre-K English/Math/Science/SS.....	Maureen Corbett
English 2-5/Social Studies 2-5	Robert Ghiretti
Mathematics 2-5/Science 2 -5	Theresa Matthews
English 6-12.....	Randi Moran
Mathematics 6-12.....	Jeremy Cohen
Science 6-12/NCLB	Maurcen Guilfoyle
Social Studies 6-12/ Business 9-12	Libby Galante
Career Ed, World Language, ESL.....	Yvonne Lorenzo
Art, Music, K -12	Ron Rago

**Curriculum Revisions
7th Grade Mathematics Accelerated**

Jessica Cornacchia

Scott Cornacchia

Lisa Henderson

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Board Members

Administration

Department Supervisors

Curriculum Committee

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Appendix: New Jersey Core Curriculum Content Standards

Mission Statement

The mission of the Township of Union Public Schools is to build on the foundations of honesty, excellence, integrity, strong family, and community partnerships. We promote a supportive learning environment where every student is challenged, inspired, empowered, and respected as diverse learners. Through cultivation of students' intellectual curiosity, skills and knowledge, our students can achieve academically and socially, and contribute as responsible and productive citizens of our global community.

Philosophy Statement

The Township of Union Public School District, as a societal agency, reflects democratic ideals and concepts through its educational practices. It is the belief of the Board of Education that a primary function of the Township of Union Public School System is to formulate a learning climate conducive to the needs of all students in general, providing therein for individual differences. The school operates as a partner with the home and community.

Statement of District Goals

- **Develop reading, writing, speaking, listening, and mathematical skills.**
- **Develop a pride in work and a feeling of self-worth, self-reliance, and self discipline.**
- **Acquire and use the skills and habits involved in critical and constructive thinking.**
- **Develop a code of behavior based on moral and ethical principals.**
- **Work with others cooperatively.**
- **Acquire a knowledge and appreciation of the historical record of human achievement and failures and current societal issues.**
- **Acquire a knowledge and understanding of the physical and biological sciences.**
- **Participate effectively and efficiently in economic life and the development of skills to enter a specific field of work.**
- **Appreciate and understand literature, art, music, and other cultural activities.**
- **Develop an understanding of the historical and cultural heritage.**
- **Develop a concern for the proper use and/or preservation of natural resources.**
- **Develop basic skills in sports and other forms of recreation.**

Course Description

This course is designed to cover all 7th grade common core standards as well as introduce skill sets needed to be successful in an advanced 7th grade course. The seventh grade math curriculum is currently aligned with the CCSS. All skills required for mastery are a part of the seventh grade proficiency list. All lessons are created to address differentiated learning styles to ensure each lesson's objective is obtained by each student. The seventh grade curriculum focuses on five critical areas: (1) connecting ratio and rate to solve problems; (2) completing understanding of operations of decimals and fractions and extending the notion of number to the system of rational numbers, which includes negative numbers; (3) writing, interpreting, and using expressions and equations; (4) develop an understanding of statistical thinking along with understanding of theoretical and experimental probability; (5) completing understanding of geometrical relationship including angle properties and area/volume; (6) solving and creating linear equations on a graph; and (7) completing understanding of square roots and the Pythagorean Theorem.

Recommended Textbooks:

Holt McDougal Mathematics Grade 7 Holt McDougal Larson Pre-Algebra
(Common Core edition)

Course Proficiencies

Students will be able to...

- Apply and extend previous understanding of operations with fractions to add, subtract, multiply, and divide rational numbers.
- Analyze proportional relationships and use them to solve real-world and mathematical problems
- Use properties of operations to generate equivalent expressions
- Solve real-life and mathematical problems using numerical and algebraic expressions and equations.
- Use random sampling to draw inferences about a population.
- Draw informal comparative inferences about two populations.
- Investigate chance processes and develop, use, and evaluate probability models.
- Draw, construct, and describe geometrical figures and describe the relationships between them.
- Work with radicals and integer exponents.
- Understand connection between proportional relationships, lines, and linear equations.
- Solve system of equations.
- Define, evaluate, and compare functions.
- Understand and apply the Pythagorean Theorem.

Curriculum Units

Unit 1: **The Number System**
(7.NS)

Unit 2: **Ratios and Proportional Relationships**
(7.RP)

Unit 3: **Expressions and Equations**
(7.EE) & (8.EE)

Unit 4: **Statistics and Probability**
(7.SP) & (8.SP)

Unit 5: **Geometry**
(7.G) & (8.G)

Unit 6: **Functions**
(8.F)

Pacing Guide

7th Grade Accelerated

<u>Content</u>	Number of Days
<u>Unit 1:</u> The Number System	32 days
<u>Unit 2:</u> Ratios and Proportional Relationships	28 days
<u>Unit 3:</u> Expressions and Equations	48 days
<u>Unit 4:</u> Statistics and Probability	24 days
<u>Unit 5:</u> Geometry	32 days
<u>Unit 6:</u> Functions	16 days

TOTAL 180 DAYS

Accelerated Extension Chapters
Chapter 4 – Ratios, Fractions, & Integer Exponents
Chapter 8 – Linear Equations
Chapter 9 – Square Roots and Pythagorean Theorem

Unit 1: The Number System

Essential Questions	Instructional Objectives/ Skills and Benchmarks(CPIs)	Activities and Examples	Assessments
<p>What are rational numbers?</p> <p>How do you add, subtract, multiply, and divide decimals and fractions?</p> <p>How do you add, subtract, multiply, and divide integers?</p> <p>How do you use algebraic properties to solve and understand operations of rational numbers?</p> <p>How can you represent rational numbers in real life and on a number line?</p> <p>How do you convert in between rational number?</p>	<p>Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers</p> <p>(7.NS.1) Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram</p>	<p>Real world applications (tiered to ability), stations, problems around the room, ecr, tic-tac-toe, and choice menus across all units</p> <p>For example, 1) Selena picked $\frac{3}{4}$ quart of strawberries. She ate $\frac{1}{12}$ quart, How much was left? 2) Suppose the pattern $1, \frac{7}{8}, \frac{3}{4}, \frac{5}{8}, \frac{1}{2}, \dots$ continued forever. Make a conjecture about the rest of the numbers in the pattern. Draw a number line.</p>	<ul style="list-style-type: none"> • Quizzes • Chapter Tests • District CEMPA Exams • Performance Assessments • Cross-curricular Projects • Spiral reviews/Dipstick Quiz • Teacher Observation • Extended Constructed

<p>How can we use a number line to determine the placement of rational numbers after given operations?</p> <p>How can we apply rational numbers and operations to solve real world problems?</p> <p>How do operations affect numbers?</p>	<p>(7.NS.1A) Describe situations in which opposite quantities combine to make 0.</p> <p>(7.NS.1B) Understand $p + q$ as the number located a distance q from p, in the positive or negative direction depending on whether q is positive or negative. Interpret the sums of rational numbers by describing real-world contexts.</p>	<p>For example,</p> <p>1) temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge); use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.</p> <p>2) $-(-3) = 3$, and that 0 is its own opposite.</p> <p>For example,</p> <p>for an account balance of -30 dollars, write $-30 = 30$ to describe the size of the debt in dollars.</p>	<p>Response</p> <ul style="list-style-type: none"> Find the Mistake Critical Thinking
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	<p>(7.NS.1C) Understand the subtraction of rational numbers as adding the additive inverse, $p - q = p + (-q)$. Show that the distance between two rational numbers on the number line is the absolute value of their difference.</p> <p>(7.NS.2) Apply and extend previous understandings of multiplication and division of fractions to multiply and divide rational numbers.</p> <p>(7.NS.2A) Understand the multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property.</p> <p>(7.NS.2B) Understand that integers can be divided, provided that the divisor is not</p>	<p>For example, recognize that an account balance less than -30 dollars represents a debt greater than 30 dollars.</p> <p>For example, How many $\frac{1}{4}$ lb hamburger patties can be made from a $10\frac{1}{4}$ lb package and an $1\frac{1}{2}$ package of meat?</p> <p>For example, Which expression is greater than $5\frac{5}{8}$? a) $8 \times \frac{9}{16}$ b) $-\frac{7}{9} \times (-8\frac{2}{7})$ c) $3\frac{1}{2} \times \frac{5}{7}$ d) $-\frac{3}{7} \times \frac{14}{27}$</p> <p>For example, As a front passed, the temperature changed steadily over 6 hours.</p>	
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0, and every quotient of integers is a rational number.

(7.NS.2C) Apply properties of operations as strategies to multiply and divide rational numbers.

(7.NS.2D) Convert a rational number to a decimal using long division.

(7.NS.3) Solve real-world and mathematical problems involving the four operations with rational numbers.

Altogether it changed -18 degrees. What was the change in temperature per hour for the 6 hours?

For example,
 $(-1)^5 \times (9 + -3)$

For example,
On a test, Caleb answered 73 out of 86 questions correctly. What portion of the test was correct? Write your answer as a decimal rounded to the nearest thousandth.

For example,
John left school with \$2.38. He found a quarter on his way home and then stopped to buy a banana for \$0.89. How much money did he have when he got home?

		<p><u>Interactive Activities</u></p> <p>Human Number Line (Students order themselves from least to greatest based on the integer they are holding, including absolute values)</p> <p>Graphic Organizer (students fill in graphic organizer giving explanations of properties with examples)</p> <p>Integer War- Red cards represent negative and black cards represent positives. Flip two cards and find their sum. The player with the greatest sum wins the cards.</p> <p>Rational Numbers Operations BINGO In groups, students will</p>	
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solve either an integer, fraction, or decimal operation problems from a stack of bingo "calling cards". If the answer is on their individual game board, they get to place a chip on it. The first student to get five in a row will win.

Integer Operations Flipchart

Students will create a "how-to" booklet on the rules for solving addition, subtracting, multiplication, and division of integer problems. They must also demonstrate each rule by providing two examples.

Rational Number Conversion & Number Line

Students will be given either a fraction or decimal, they are to convert all fraction into all

decimals or all decimals into fractions. Then the students are plot the rational number on a number line to show order.

Fractions/Integers/Decimals for Dummies
Students are to create a how to manual on their chosen type of rational number.

Teach ME

In groups, students are assigned an operation with rational numbers topic. Together they are to create a lesson, complete with PPT, handouts, and HW for all. They are to present to class.

Unit 2: Ratios and Proportional Relationships

Essential Questions	Instructional Objective/ Skills and Benchmarks	Activities and Examples	Assessments
<p>What are ratios and how can they be used to solve real life problems?</p> <p>How do you calculate unit rate and how do you interpret it in context of a real-world scenario?</p> <p>How can you determine whether two quantities are in a proportional relationship?</p> <p>How do you use proportions to solve percent problems?</p> <p>How do you represent proportional relationships by using equations?</p>	<p>Analyze proportional relationships and use them to solve real-world and mathematical problems.</p> <p>(7.RP.1) Compute unit rates associated with ratios of fractions, including ratios of lengths, area, and other quantities measured in like or different units.</p> <p>(7.RP.2) Recognize and represent proportional relationships between quantities.</p>	<p>Real world applications (tiered to ability), stations, problems around the room, tic-tac-toe, and choice menus across all units</p> <p>For example, “This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is $\frac{3}{4}$ cup of flour for each cup of sugar.” “We paid \$75 for 15 hamburgers, which is a rate of \$5 per hamburger.”</p> <p>For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?</p>	<ul style="list-style-type: none"> • Quizzes • Chapter Tests • District CEMPA Exams • Performance Assessments • Cross-curricular Projects • Spiral reviews • Teacher Observation • Find the Mistake Critical Thinking

(7.RP.2A) Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.

(7. RP.2B) Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.

(7.RP.2C) Represent proportional relationships by equations.

For example,
Use the data in the table to determine whether the ratios of oats to water are proportional for both servings of oatmeal?

<u>Servings</u>	<u>Oats</u>	<u>Water</u>
8	2	4
12	3	6

For example,
The Lawsons stop at a roadside market. The market offers lemonade in three sizes. Which size lemonade has the lowest price per fl oz?

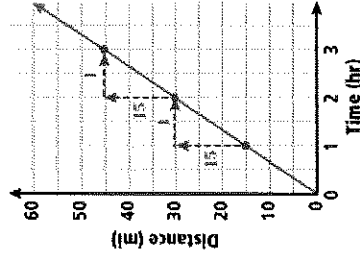
<u>Size</u>	<u>Price</u>
12 fl oz	\$0.89
18 fl oz	\$1.69
24 fl oz	\$2.09

For example,
Density is the ratio of a substance's mass to its volume. The density of ice is 0.92 g/mL. What is the of 3 mL of ice?

- Extended Constructed Response

(7.RP.2D) Explain what a point (x,y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points $(0,0)$ and $(1,r)$ where r is the unit rate.

For example, Using the graph, Does the cyclist travel at a constant or variable speed. How fast was he going per hour?



For example, The regular price of an MP3 player is \$79.99. This week the MP3 player is on sale for 25% off. What is the sale price? Use a proportion to solve.

(7.RP.3) Use proportional relationships to solve multistep ratio and percent problems.

Interactive Activities

School Store (Students shop in another classroom, finding discount, tax)

Shopping School Supplies (Students use coupons from circulars to shop for school supplies and then find total with tax)

Biggest Loser (Students watch a clip from the show "Biggest Loser", they record their starting and ending weights, and find their percent of change. Before they do calculations, they predict who will be voted off, discuss if the weight loss is a fair way to win the game, then introduce the percent of weight loss.)

Comparing Ratio and Rates around the room activities (Students will compete in different activities around the room such as hitting target, making a basketball shot, hula hooping, and jump roping. Based on different times they need to find each person's unit rate to find the winner of each competition.)

Decimal to Fraction to Percent Pair Up
(Students will be given cards with a decimal, fraction or percent and have to find their match)

Better deal? Students are to look through supermarkets ads and find two similar items are compare unit rates to decide which deal was better?

Unit 3: Expressions and Equations

Essential Questions	Instructional Objectives/ Skills and Benchmarks (CPIs)	Activities and Examples	Assessments
<p>How can you represent an unknown quantity in an expression or equation?</p> <p>How do you translate real life situations into expressions or equations?</p> <p>How do you use properties to generate equivalent expressions?</p> <p>How can evaluating expressions and solving equations be related to real world problems?</p> <p>How do you solve multi step equations including all rational numbers (integers, fractions, and decimals)?</p>	<p>Use properties of operations to generate equivalent expressions.</p> <p>(7.EE.1) Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.</p> <p>(7.EE.2) Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related.</p>	<p>Real world applications (tiered to ability), stations, problems around the room, ecr, tic-tac-toe, and choice menus across all units</p> <p>For example, Simplify the expression. $3(p + 9q - 2 + 9)$</p> <p>For example, $a + 0.05a = 1.05a$ means that “increase by 5%” is the same as “multiply by 1.05.”</p>	<ul style="list-style-type: none"> • Quizzes • Chapter Tests • District CEMPA Exams • Performance Assessments • Cross Curricular Projects • Spiral Review/Dipstick Quiz • Teacher Observation • Extended Constructed

How do you know if a number is a solution to the equation?

What is an inequality and how do you solve it?

How can we use equations and expression to represent real world problems?

What is slope? Why is it relevant to an equation?

How do you graph an equation?

Solve real-life and mathematical problems using numerical and algebraic expressions and equations.

(7.EE.3) Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies.

(7.EE.4) Use variables to represent quantities in a real-world or mathematical

Responses

- Find the Mistake Critical Thinking

For example, If a woman making \$25 an hour gets a 10% raise, she will make an additional $\frac{1}{10}$ of her salary an hour, or \$2.50, for a new salary of \$27.50. If you want to place a towel bar $9\frac{3}{4}$ inches long in the center of a door that is $27\frac{1}{2}$ inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.

For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?

problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.

(7.EE.4A) Solve word problems leading to equations of the form $px + b = r$ and $p(x + q) = r$, where p , q , and r are specific rational numbers. Solve equations of these forms fluently.

(7.EE.B.4b) Solve word problems leading to inequalities of the form $px + q > r$ or $px + q < r$, where p , q , and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem.

For example,
A long distance phone company charges \$1.01 for the first 25 minutes of the call, and then \$0.09 for each additional minute. A call costs \$9.56. How long did it last?

For example,
As a salesperson, you are paid \$50 per week plus \$3 per sale. This week you want your pay to be at least \$100. Write an inequality for the number of sales you need to make, and describe the solutions.

Work with radicals and integer exponents.

(8.EE.1) Know and apply the properties of integer exponents to generate equivalent numerical expressions.

(8.EE.2) Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$, where p is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$ is irrational.

(8.EE.3) Use numbers expressed in the form of a single digit times an integer

For example,
 $3^2 \times 3^{-5} = 3^{-3} = 1/3^3 = 1/27$.

For example,
Solve the equation. $361 = x^2$

For example,
Estimate the population of the United States as 3 times 10^8 and the population of the world as 7 times 10^9 , and determine that the world

power of 10 to estimate very large or very small quantities, and to express how many times as much one is than the other.

(8.EE.4) Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.

Understand the connection between proportional relationships, lines, and linear equations.

(8.EE.5) Graph proportional relationships, interpreting

population is more than 20 times larger.

For example,
A wolffia plant is the smallest flowering plant in the world. One wolffia plant has a mass of about 1.5×10^{-4} gram. At least 5×10^3 wolffia plants could fit in a timble. What is the mass of 5×10^3 wolffia plants?

For example,
Compare a distance-time graph to a distance-time equation to determine which of two moving objects has

the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways.

(8.EE.6) Use similar triangles to explain why the slope m is the same between any two distinct points on a non-vertical line in the coordinate plane

Analyze and solve linear equations and pairs of simultaneous linear equations.

(8.EE.8) Analyze and solve pairs of simultaneous linear equations.

(8.EE.8A) Understand that solutions to a system of two linear equations in two variables correspond to

greater speed.

For example,
Find the slope of $y = 2x + 3$ using rise over run method and. Prove your slope by picking 3 pairs of points to derive the slope. Compare the similar triangles formed by the rise over run technique.

For example,
Solve the linear system.
 $y = 2x - 4$ & $y = -3x + 1$

For example,
You own a business that advertises in a local newspaper and over the radio. A newspaper ad costs \$600. A radio ad costs \$300. You have a monthly

	<p>points of intersection of their graphs, because points of intersection satisfy both equations simultaneously.</p> <p>(8.EE.8B) Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection.</p> <p>(8.EE.8C) Solve real-world and mathematical problems leading to two linear equations in two variables.</p>	<p>advertising budget of \$24,000 and want to run 50 ads each month. Write and solve a system of equations to find how many newspaper ads and radio ads you should run each month.</p> <p>For example, $3x + 2y = 5$ and $3x + 2y = 6$ have no solution because $3x + 2y$ cannot simultaneously be 5 and 6.</p> <p>For example, Given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair.</p> <p><u>Interactive Activities</u></p> <p>Taxi Equation Problems Given a “newspaper</p>	
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advertisement" students must create and solve two-step equations to find the taxi fare according to various distances traveled

Calling Africa?

Students are to write an equation given a scenario to solve how much time was the call to Africa for. Students are then to use that equation to create a table of how much the phone call would cost for x amount of minutes.

**Simplifying Expressions
TIC TAC TOE**

Students will work in pairs to simplify expression involving a rational coefficient on a Tic Tac Toe Board. The first student to get three in a row will win.

Write your own word problems

(Based on an expression,

equation, and/or inequality write a corresponding word problem that would require you to write that expression, equation, or inequality as your solution. Solve and interpret what the solution means.)

“?Inequality??”

(Students match the written inequality statement with its equation, then solve and graph. Students display their answers on a poster)

Integer Exponents – How would you solve? Group comparison.

A blue whale may eat between 6 and 7 tons of krill each day. Krill are approximately $2^{-5} \times 3^{-1} \times 5^{-1}$ of the length of the blue whale. Simplify this product.

Integer Exponents ECR

Evaluate

$8^3, 8^2, 8^1, 8^0, 8^{-1},$ and 8^{-2} . Then

describe the pattern of the values. Use the pattern of the values to predict 8^{-3} .

Error Analysis: Square Roots

A student said that if square roots of a certain are 1.5 and -1.5, then that number must be their product (-2.25). What error did the student make?

Name that Square Root

Students will use a decimal number line in clear communicator from 1 to 10 to locate the exact value of the square root of a given number.

Unit 4: Statistics and Probability

Essential Questions	Instructional Objectives/ Skills and Benchmarks (CPIs)	Activities and Examples	Assessments
<p>What is data and what can it describe?</p> <p>How can we use random sampling to produce a representative sample?</p> <p>How can you describe the spread of a data distribution?</p> <p>What graphical representations can be formed from the data, and when is each appropriate?</p> <p>How do you summarize data in context of the problem given?</p>	<p>Use random sampling to draw inferences about a population.</p> <p>(7.SP.A.1) Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and</p>	<p>Real world applications (tiered to ability), stations, problems around the room, ecr, tic-tac-toe, and choice menus across all units</p> <p>For example, "How old am I?" is not a statistical question, but "How old are the students in my school?" is a statistical question because one anticipates variability in students' ages.</p>	<ul style="list-style-type: none"> • Quizzes • Chapter Tests • District CEMPA Exams • Performance Assessments • Cross-curricular Projects • Spiral reviews/Dipstick Quiz • Teacher Observation

<p>How can we examine the differences between experimental and theoretical probability?</p> <p>How can we use experimental probability to make predictions?</p> <p>What does the likeness of an event tell us? What inferences can be made?</p> <p>How can we use tree diagrams, organized lists, and the counting principle to find the total outcomes? How can we use these representations to find the probability of events?</p> <p>How do we find the probability of a compound event?</p> <p>How do we use simulations to generate frequencies for simple and compound events?</p>	<p>support valid inferences.</p> <p>(7.SP.A.2) Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions.</p> <p>Draw informal comparative inferences about two populations.</p> <p>(7.SP.3) Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability.</p>	<p>For example, estimate the mean word length in a book by randomly sampling words from the book; predict the winner of a school election based on randomly sampled survey data. Gauge how far off the estimate or prediction might be.</p> <p>For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability (mean absolute deviation) on either team; on a dot plot, the separation between the two distributions</p>	<ul style="list-style-type: none"> • Extended Constructed Response • Find the Mistake • Critical Thinking
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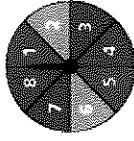
	<p>(7.SP.4) Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations.</p> <p>Investigate chance processes and develop, use, and evaluate probability models.</p> <p>(7.SP.5) Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a</p>	<p>of heights is noticeable.</p> <p>For example, Decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book.</p> <p>For example, Is the likelihood of the event impossible (0), unlikely, as likely as not, likely, or certain (1)...rolling a seven on a number cube.</p>	
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	<p>probability around $\frac{1}{2}$ indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.</p>	
	<p>(7.SP.6) Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long run relative frequency, and predict the approximate relative frequency given the probability.</p>	
	<p>(7.SP.7) Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies</p>	
	<p>For example, If you roll a number cube 15 times, about how many times do you expect to roll a number less than 6?</p> <p>For example, Create a tree diagram to find all possible outcomes of flipping a coin 3 times. Then, flip a coin 3 times to find out the experimental probability. How does that compare to the theoretical and the mode?</p> <p>For example, Use the spinner to determine the probability of landing on yellow.</p>	

(7.SP.7A) Develop a uniform probability model by assigning equal probability to all outcomes and use model to determine probability of events.

(7.SP.7B) Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance.

(7.SP.8) Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.



For example,
In a bag, there are 3 marbles...2 red and 1 blue. Create a tree diagram to determine all outcomes and find the probability of pulling 2 red marbles.

For example,
Jan rolls two number cubes. What is the probability that the sum of the two number cubes will equal 5? Make a table of possible outcomes in the sample space and then determine which pairs have a sum of 5.

For example,
Chaz rolls two number cubes. What is the probability that the sum of the

<p>(7.SP.8a) Understand that , just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.</p>	<p>two numbers will be 7? Write the probability as a fraction.</p> <p>For example, Baby Alyssa arranges blocks for the letters A, B, and T. What is the probability that her arrangement spells a three letter word. Create a table to find all possible outcomes in the sample space and then determine all 3 letter words.</p>	
<p>(7.SP.8b) Represent sample spaces for compound events using methods such as organized lists, tables, tree diagrams, For an event described in everyday language (e.g. “rolling double sixes”), identify the outcomes in the sample space which compose the event.</p>	<p>For example, Technology Lab: Simulations text pg 424-425</p>	
<p>(7.SP.8c) Design and use a simulation to generate frequencies for compound events.</p> <p>Investigate patterns of</p>	<p>For example, The table shows a bamboo plant's growth over 8 hours. Show that the table</p>	

<p>association in bivariate data.</p> <p>(8.SP.1) Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.</p>	<p>represents a liner function. Write an equation. Use a scatter plot to construct line.</p> <p>Time 0 2 4 6 8 Height 6 10 14 18 22</p> <p>For example, The table shows the number of female physicians in the US for 7 years. Approximate the equation of the best fitting line for the data.</p> <table border="1"> <tr> <td>Years</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> </tr> <tr> <td>DR</td> <td>110</td> <td>117</td> <td>125</td> <td>148</td> <td>158</td> <td>168</td> <td>177</td> </tr> </table> <p>For example, In a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.</p>	Years	1	2	3	4	5	6	7	DR	110	117	125	148	158	168	177
Years	1	2	3	4	5	6	7										
DR	110	117	125	148	158	168	177										
<p>(8.SP.2) Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.</p> <p>(8.SP.3) Use the equation of a linear model to solve problems in the context of bivariate measurement data,</p>																	

interpreting the slope and intercept.

Interactive Activities

Horse Race (Roll 2 dice, horses numbered 1-12 are racing, students choose the horse they want to win, see results; compare possible outcomes and fairness of race)

Lets Take a Spin (Students look at a spinner with pieces unevenly divided. They predict who they think will win a proposed game. Then students are asked to change the rules of the game – not the division of the spinner – to make the game fair.)

Pi Day Activity:
(Have students make a frequency table from the first 100 digits of pi, make a bar

graph and analyze the percent of each digit that appears.) Then use chart to find various probabilities.

Get your own data

Students will roll a dice 50 times...record data and then use the experimental probability and compare it to its theoretical probability.

Technology Activity 8.6

Finding Best Fitting Lines
text pg 445

Real World Scatter Plots

Students will be given a scenario (each group will receive a different scenario). Students are to gather table information from given and then plot the table on a coordinate plane. Together as a group, they are to determine the best fitting line and write an equation to represent that line.

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Unit 5: Geometry

Essential Questions	Instructional Objectives/ Skills and Benchmarks (CPIs)	Activities and Examples	Assessments
<p>How do we use actual lengths and areas from a scale drawing to reproduce another scale drawing at a different scale?</p> <p>How do we use angle properties to classify and figure out missing angle measures?</p> <p>What is area and how do you calculate the area of different figures?</p>	<p>Solve real-world and Draw, construct, and describe geometrical figures and describe the relationships between them.</p> <p>(7.G.A.1) Solve problems involving scale drawings of geometric figures, including computing and reproducing a scale drawing at a different scale.</p>	<p>Real world applications (tiered to ability), stations, problems around the room, ecr, tic-tac-toe, and choice menus across all units</p> <p>For example, On a map of Florida, the distance between Hialeah and Tampa is 10.5 cm. The map scale is 3 cm:128 km. What is the actual distance between the 2 cities?</p>	<ul style="list-style-type: none"> • Quizzes • Chapter Tests • District CEMPA Exams • Performance Assessments • Cross-curricular Projects • Spiral reviews/Dipstick Quiz

<p>How can we describe a 2 dimensional "slice" from a 3 dimensional figure?</p> <p>How can you calculate surface area and volume of three-dimensional figures?</p> <p>How can we connect geometry to real world problems?</p>	<p>(7.G.A.2) Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.</p> <p>(7.G.A.3) Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.</p> <p>Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.</p> <p>(7.G.B.4) Know the formulas for the area and circumference of a circle and use them to</p>	<p>For example, Divide a hexagon into triangles to find the sums of its angle measures.</p> <p>For example, Sketch and describe the cross section of a cone that is cut parallel to its base.</p> <p>For example, Find the circumference of a</p>	<ul style="list-style-type: none"> • Teacher Observation • Extended Constructed Response • Find the Mistake Critical Thinking
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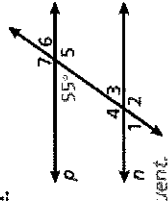
solve problems; give an informal derivation of the relationship between the circumference and area of a circle.

(7.G.B.5) Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.

(7.G.B.6) Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.

circle that has a radius of 3.5 in.

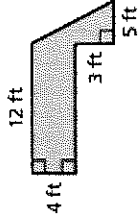
For example,
Line n is parallel to line p . Find the measure of each angle. Write and solve equations for each unknown angle measure.



For example,
Chandra wants to carpet the floor of her closet. A floor plan of the closet is shown below. How much carpet does she need?

Understand and apply the Pythagorean Theorem.

(8.G.7) Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.



For example,
Find the unknown length.
Write your answer in simplest form.



Interactive Activities

How Am I Special?

Students create a "How Am I Special" poster, describing all different polygons and angles showing examples of each.

Create a Figure

Students use manipulative shapes to create complex

figures, then find the total area of their figure.

Irregular Figure: ECR

Students are to find the area of an irregular find given model and all needed dimensions. Students will then use that information to find actual costs of material required in problem.

Solve for Surface Area and Volume of 3-D objects

Students will find the surface area and volume of 3-D objects such as a can, cereal box, tissue box, party hat, etc.

Find missing angles

Given two parallel lines that can be slide up and down a transversal, have students slide one parallel line onto another to see angle relationships. Given two intersecting lines, have students move the lines toward each other and away from each other to make

conclusions about vertical angles.

Cross Section

Have students cut through a 3-D shape to explore cross sections.

Pythagoras Baseball-

Students will use the Pythagorean Theorem to find the distance between home plate and 2nd base given that the distance between home plate and 1st base is 90 ft and the distance between 1st base and 2nd base is also 90ft and there is a right angle form at each base.

Hands On Lab 8:

Pythagorean Theorem

See Teacher Resource Guide

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Unit 6: Functions

Essential Questions	Instructional Objectives/ Skills and Benchmarks (CPI/s)	Activities and Examples	Assessments
<ul style="list-style-type: none"> • How can we determine whether a relationship of numbers form a function? • How do we graph functions on a coordinate plane? 	<p>Define, evaluate, and compare functions.</p> <p>(8.F.1) Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.</p>	<p>Real world applications (tiered to ability), stations, problems around the room, ecr, tic-tac-toe, and choice menus across all units</p> <p>For example, Represent the relation $(-1, 1)$, $(2, 0)$, $(3, 1)$, $(3, 2)$, $(4, 5)$, as a graph and as a mapping diagram.</p>	<ul style="list-style-type: none"> • Quizzes • Chapter Tests • District CEMPA Exams • Performance Assessments • Cross-curricular Projects

<ul style="list-style-type: none"> • How do we find the slope of a linear equation using slope intercept form? • How do we read /find the equation of a line? • How can we find the solution of systems of linear equations? • How we graph linear inequalities? 	<p>(8.F.2) Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions).</p> <p>(8.F.3) Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear.</p> <p>Use functions to model relationships between quantities.</p> <p>(8.F.4) Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change</p>	<p>For example, Given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change.</p> <p>For example, the function $A = s^2$ giving the area of a square as a function of its side length is not linear because its graph contains the points $(1, 1)$, $(2, 4)$ and $(3, 9)$, which are not on a straight line.</p> <p>For example, A paramotor is a parachute propelled by a fan-like motor. Suppose that x-minutes after beginning a descent, a paramotorist has an altitude y (in feet) given by $y=2000-250x$. Graph the given equation on a graphing calculator and identify the slope and y-intercept of the</p>	<ul style="list-style-type: none"> • Spiral reviews/Dipstick Quiz • Teacher Observation • Extended Constructed Response • Find the Mistake Critical Thinking
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and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.

(8.F.5) Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.

graph. What real life quantities do the slope and y-intercept represent?

For example,
For the line that passes through the points (0,-7) and (3,0). What are the x and y intercepts? Graph the linear equation. Describe how you are able to identify the x and y intercepts? Is the line increasing or decreasing?

Interactive Activities

Function Machine Students will use the visual representation of a the "function machine" to show what goes into the machine (input) changes after the machine is turned on to another number (output)

Function Match Up

Students will be given one of 5 function tables and graph paper. They will be asked to graph the function on a coordinate plane. Teacher will then unveil 5 different function graphs around the room. Students are to travel around the room to find their matching graph for their table.

Your Choice? Functions

Write a problem that involves the equation $y = 2x+3$

Hands on Lab 5: Graphs and Functions –

See Teacher Resource Guide

Graphing Functions ECR

The equation $y = 2.5x-2000$ represents the profit made by a manufacturer that sells a product for \$2.50 each, where y is the profit and x is the number of units sold. Construct a table to find the number of units that must be sold for the manufacturer to

		<p>break even. The break-even point is when the profit is equal to 0. Explain the data in the table.</p>	
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MATHEMATICS EXTENDED CONSTRUCTED RESPONSE RUBRIC

4

The response indicates application of a reasonable strategy that leads to a correct solution in the context of the problem. The Representations are correct. The explanation and/or justification is logically sound, clearly presented, fully developed, supports the solution, and does not contain significant mathematical errors. The response demonstrates a complete understanding and analysis of the problem.

3

The response indicates application of a reasonable strategy that may or may not lead to a correct solution. The representations are essentially correct. The explanation and/or justification is generally well developed, feasible, and supports the solution. The response demonstrates a clear understanding and analysis of the problem.

2

The response indicates an incomplete application of a reasonable strategy that may or may not lead to a correct solution. The representations are fundamentally correct. The explanation and/or justification supports the solution and is plausible, although it may not be well developed or complete. The response demonstrates a conceptual understanding and analysis of the problem.

1

The response indicates little or no application of a reasonable strategy. It may or may not have the correct answer. The representations are incomplete or missing. The explanation and/or justification reveals serious flaws in reasoning. The explanation and/or justification may be incomplete or missing. The response demonstrates a minimal understanding and analysis of the problem.

0

The response is completely incorrect or irrelevant. There may be no response, or the response may state, "I don't know."