



# Gunston Middle School Differentiation Report 1st Quarter, 2023-2024



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## English Language Arts 6th Grade ELA

<b>Content</b>	ELA 6
<b>Unit 1</b>	Finding Courage (Mini Literary Analysis)
<b>Pre-assessment</b>	Quick Write

Content	Product	Process
<p>The required text for this unit is "The Breadwinner." However, the students also read "Eleven," "Life Doesn't Frighten Me," "Danger on an Alaskan Trail and "Fears and Phobias."</p> <p>This task is rigorous and requires "Chunking" and scaffolding for some students. On the other hand, for students who need more of a challenge, they can include other additional text that explore the same theme.</p>	<p><b>Mini-Literature Analysis:</b> Fear can prevent people from achieving their goals, deciding something important, or fully enjoying life. How did a character in one of your texts find courage in the face of fear?</p> <p><b>Character Analysis:</b> The students must use "The Breadwinner" as their main text. However, they can analyze more than one text to explain how a character or characters find courage in the face of fear.</p> <p><b>Higher order thinking-</b> The students will synthesize information in order to demonstrate an understanding of how</p>	<p>Plan for tiered learning and the students were grouped according to their interests.</p> <p>Students were able to identify how fear affects people in different ways.</p> <p>They examined a variety of fiction, narrative nonfiction and poetry to understand how others have shown courage in the face of fear.</p> <p>The students were able to select texts other than "The Breadwinner," to support their understanding of how people find courage in the face of fear.</p> <p>They wrote a mini-literary analysis on how others have shown courage when faced with fear.</p>

	people find courage in the face of fear.  <b>Unit 1 Summative- Writing Task</b>	Students give and receive feedback to each other and make revisions based on recommendations.
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## 7th Grade Intensified ELA

<b>Content</b>	Mini Literary Analysis - Fiction
<b>Unit 1</b>	Overcoming Obstacles
<b>Pre-assessment</b>	

<b>Content</b>	<b>Product</b>	<b>Process</b>
<p>Students will ... Make inferences using textual evidence. (7.6c)</p> <p>Recognize the elements of narrative structure including <b>setting, characters</b>, conflict, plot, and theme (7.5a)</p> <p>Decide the difference between first and third person points of view (7.5d)</p> <p>Use graphic organizers to collect evidence and organize ideas (7.7d)</p> <p>Organize ideas to create an expository paragraph (or essay). (7.7d)</p> <p>Create a thesis statement that communicates a central idea and elaborate, using evidence (7.7e)</p>	<p><b>Personal Brochure</b> - Students create a brochure that highlights the most important aspects of their identity, as well as the incredible strengths and diverse interests they bring to the classroom.</p> <p><b>Character Paragraph</b> - "Thank You, Ma'am."</p> <p><b>One-Pager</b> - A written and visual representation of a concept in the short story you read (theme, character traits). This includes the title, author, a thesis statement, three body paragraphs, images connecting to the story and the rubric.</p> <p><b>Unit 1 Assessment</b> - Mastery Connect</p>	<p>Student choice for short story &amp; manner of presentation. All students were offered a graphic organizer as an optional organizational tool.</p> <p><b>Extension Activities:</b> Intensified: Jacob's Ladder Grades 6-7: Margaret Mead Regular: Jacob's Ladder Grades 6-7: The Lion and the Mouse</p> <p>Writing lesson using "Fish Cheeks," by Amy Tan Review Paragraph Organization and "Fish Cheeks" exemplar</p>

<p>Write a paragraph with an organized structure and a formal style (7.7e)</p> <p>Use transition words within paragraphs (7.7j).</p> <p>Use quotation marks with dialogue and direct quotes (7.8e).</p>		
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## 8th Grade ELA

<b>Content</b>	Reading: short stories, poetry, memoir Writing: expository
<b>Unit 1</b>	Places That Shape Who We Are
<b>Pre-assessment</b>	QFT, generating questions about "Home"

Content	Process	Product
"Home" Question Formulation Technique (QFT)	<ul style="list-style-type: none"> <li>Students independently completed a Frayer model for "home."</li> <li>Discussion of the concept of "home" in small groups and whole class</li> <li>Students were divided into groups and the groups went through the steps of the QFT process for the concept "home."</li> <li>Students reflected in writing about the QFT process.</li> <li>The instructor created a shared list of QFT questions for all groups to be used for unit discussions and reflections.</li> </ul>	<ul style="list-style-type: none"> <li>Frayer model notebook entry</li> <li>Individual student written reflection on the QFT process</li> <li>A class list of discussion questions for text analysis and the end-of-unit Socratic seminar</li> <li>The beginning of a personal list of "places that are home" for unit 1 essay planning</li> </ul>
"My Favorite Chaperone", short story	<ul style="list-style-type: none"> <li>Story vocabulary review with a focus on root word analysis</li> <li>Students read the story independently.</li> </ul>	<ul style="list-style-type: none"> <li>Written responses to analysis questions and reading organizers to be used for the unit 1 Socratic</li> </ul>

	<ul style="list-style-type: none"> <li>• Students worked independently and in groups to analyze the story's setting, plot (emphasis on cause and effect), and character motivation. Answers were recorded on reading organizers.</li> <li>• "Talking Chips" discussion activity with QFT questions that applied to the story</li> <li>• Story quiz</li> </ul>	<p>seminar and comparative theme analysis</p> <ul style="list-style-type: none"> <li>• Additional place(s) added to the personal list of "places that are home" based on connections to the story</li> </ul>
Jacob's Ladder: "The Lake Isle of Innisfree", poem	<ul style="list-style-type: none"> <li>• Instructor guided student analysis of the poem using the 3-column poetry analysis strategy (1 = literal, 2 = figurative, 3 = interpretive)</li> <li>• Students then responded to the Jacob's Ladder C and D questions.</li> <li>• Students discussed their responses.</li> </ul>	<ul style="list-style-type: none"> <li>• 3-column poetry analysis notes</li> <li>• Responses to the Jacob's Ladder analysis questions</li> <li>• Additional place(s) added to the personal list of "places that are home" based on connections to the story</li> </ul>
<i>I Was Their American Dream</i> , memoir	<ul style="list-style-type: none"> <li>• Pre-reading <ul style="list-style-type: none"> <li>◦ Students reviewed background information about the author.</li> <li>◦ Students reviewed the format and elements of a graphic memoir.</li> </ul> </li> <li>• During reading <ul style="list-style-type: none"> <li>◦ Students responded to the literary analysis questions provided in the curriculum guide along with questions for graphic memoir analysis.</li> <li>◦ Students used their responses to their questions for small group discussions.</li> </ul> </li> <li>• Post-reading <ul style="list-style-type: none"> <li>◦ Students used their notes and responses to analysis questions to write their literary analysis and prepare for the Socratic seminar.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Written responses to analysis questions to be used for the unit 1 Socratic seminar and comparative theme analysis</li> <li>• Additional place(s) added to the personal list of "places that are home" based on connections to the story</li> </ul>
Unit 1 Literary Theme Analysis (synthesis)	<ul style="list-style-type: none"> <li>• Students used their notes for the short stories and the memoir and to identify a common theme subject for the stories.</li> <li>• Students used writing organizers to develop a theme</li> </ul>	<ul style="list-style-type: none"> <li>• A written comparative theme analysis on at least two texts from unit 1</li> </ul>

	<p>statement and organize text evidence to draft a comparative theme analysis for at least two unit 1 readings.</p> <ul style="list-style-type: none"> <li>● Students wrote a comparative theme analysis.</li> </ul>	
Unit 1 Essay "Places We Call Home"	<ul style="list-style-type: none"> <li>● Students selected a place or places for their unit 1 essay focus.</li> <li>● Students worked through the writing process with writing organizers, teacher modeling, and examples to write a reflective expository on the place or places that have shaped who they are.</li> </ul>	<ul style="list-style-type: none"> <li>● Personal essay on the place(s) that has/ have shaped the writer</li> </ul>
Unit 1 "Places We Call Home" Socratic Seminar	<ul style="list-style-type: none"> <li>● Pre-discussion <ul style="list-style-type: none"> <li>○ The instructor reviewed the Socratic seminar format, preparation expectations, and criteria for success.</li> <li>○ Students used their notes to respond to Socratic seminar questions from the unit opener QFT activity.</li> </ul> </li> <li>● During discussion <ul style="list-style-type: none"> <li>○ Students used their notes to participate in a student-led Socratic</li> </ul> </li> <li>● Post-discussion</li> </ul>	<ul style="list-style-type: none"> <li>● Post-discussion self-evaluation and reflection</li> </ul>

# Social Studies

## 6th Grade US History I and II

<b>Content</b>	Human Geography/Physical Geography; Power and Perspective
<b>Unit 1</b>	Unit 1: Geography, Native Americans and European Explorers: Worlds Merge
<b>Pre-assessment</b>	Mini QFT: What is Going on in Cahokia?

<b>Content</b>	<b>Product</b>	<b>Process</b>
<p>Students will ...            Demonstrate skills for historical thinking, geographical analysis, economic decision making and responsible citizenship by</p> <ul style="list-style-type: none"> <li>● using evidence to draw conclusions and make generalizations</li> <li>● investigating and researching to develop products orally and in writing. (US1.1d, US1.1j).</li> <li>● analyzing and interpreting artifacts and primary and secondary sources to understand events in United States history (US1.1a).</li> <li>● Apply social science skills to understand               <ul style="list-style-type: none"> <li>○ how early cultures developed in North America by describing how archaeologists have recovered material evidence of ancient settlements, including Cactus Hill in Virginia (US1.3a).</li> <li>○ The student will apply social science skills to understand how early cultures developed in North America (US1.3)</li> <li>○ European exploration in North</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● DBQ: Cahokia: What Happened?</li>   <li>● Invaders from the East Project:               <ul style="list-style-type: none"> <li>○ Students choose</li> </ul> </li>   <li>● Be an Archaeologist</li>   <li>● RAFT Activity=Colonist= Yes or No Independence</li>   <li>● Seminar: Columbus Day</li> </ul>	<p>Students were given the option of choosing their own documents out of the 8 sources available.</p> <p>Students were given extension options of reading other texts.</p> <p>Students used clues related to geography and culture to identify the tribe which made each artifact.</p> <p>Students can choose roles within a group between four different roles.</p> <p>Students could also choose an additional Tribe to research that would require further individual un-scaffolded research.</p> <p>Goal: Reading outside of class- historical fiction, historical non-fiction            Brain Teaser Riddles- daily in class- historical thinking routine</p> <p>Extension Section on Canvas with different choice activities</p>

<ul style="list-style-type: none"> <li>○ America and West Africa (US1.4)</li> <li>○ the factors that shaped colonial America (US1.5)</li> <li>● The student will interpret maps, globes, photographs, pictures, or tables. (US1.2)</li> </ul>		
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## 7th Grade Intensified Civics and Economics

<b>Content</b>	Civics and Economics
<b>Unit 1</b>	Foundations and Early Documents
<b>Pre-assessment</b>	Unit 1 Pre-assessment from Five Ponds Press ebook Teacher Resources

<b>Content</b>	<b>Product</b>	<b>Process</b>
<p>Students will ...</p> <p>Construct an informed, evidence-based argument to describe what government is, what it does for them personally, and what it does for our community. (CE.2, CE.1e)</p> <p>Analyze primary and secondary sources to find the source of, and explain the meaning of, the founding principles of the United States: consent of the governed, limited government, rule of law, democracy, and representative government. (CE.2a, CE.2b, CE.1j)</p> <p>Make connections across time and place by providing examples of how the founding principles (consent of the governed, limited government, rule of</p>	<p><b>Nearpod Why Government</b> (civics) lesson This Nearpod lesson was facilitated live with student participation and whole-group input on the whiteboard.</p> <p><b>Document Analysis Tool:</b> <i>Meet the Document</i> Groups of three students used the document analysis tool to identify the type of primary and secondary documents and describe each, as if explaining to someone who couldn't view it.</p> <p><b>Canva infographic</b> Students created an infographic</p>	<p>Pre-assessment used to determine grouping.</p> <p>After introducing key key ideas using <b>TedED:</b> <i>What did democracy really mean in Athens</i>, students were provided vocabulary and an explanation of the Hexagonal Vocab to complete during class. They were encouraged to participate in the live lesson while responding through the platform.</p> <p><b>Project Zero Micro Lab:</b> Students in groups of three described the images they saw and what it brought to mind. Groups observed its parts and deciphered the authors' purpose as well as the document's impact on history. Students independently reflected on guiding questions from Essential question 2. In a triad or quad, each student listened to and</p>

law, democracy, & representative government) can be seen in the United States today. (CE.2, CE.1g, ID.6-8.1)	explaining what the founding principles look like in their lives or communities.	shared reflections. When everyone shared their reflections and processed, the conversation opened to all to <b>discuss</b> the Analysis Tool sheet and fill out all components.
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## 8th Grade World Geography

<b>Content</b>	How can geographic tools show information about the world and help with decision making?
<b>Unit 1-4</b>	Introduction to World Geography; Tools of Geography
<b>Pre-assessment</b>	Mapping Lab Pre-test

<b>Content</b>	<b>Product</b>	<b>Process</b>
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<p>Students will understand that...</p> <p>The Five Themes of Geography (Location, Place, Movement, Human Environmental Interaction and Regions) help us organize the way we learn about the world.</p> <p>The sense of place and identity can also become a part of our relationships to our community, or home country. People use maps to illustrate their perspectives of the world, maps and visual images may reflect changes in perspective over time. (WG.1e)</p> <p>People develop and refine their mental maps through both personal experience and learning. Mental maps help us carry out daily activities, give directions to others, and understand world events. (WG.3e)</p> <p>Regions are used to simplify the study and understanding of the world by organizing areas of the earth's surface that share unifying physical or cultural characteristics. Regional labels may reflect changes in people's perceptions. (WG.3)</p>	<ul style="list-style-type: none"> <li>● Mapping Lab Practice</li> <li>● Slides and presentation</li> <li>● Written Responses</li> <li>● Zombie Project</li> </ul>	<ul style="list-style-type: none"> <li>● Instead of answer all questions in the mapping lab practice students were assigned a variety of practice mapping lab questions with built in opportunities for extension</li> <li>● Students were able to analyze multiple patterns to identify trends and patterns across the maps</li> <li>● Students were able to visually represent their geographic knowledge through the extended response section on the mapping lab</li> <li>● Students analyzed several patterns and created a mind map in order to determine geographic patterns that would best support human settlement.</li> <li>● Students were able to use PAPER to receive differentiated and specific feedback for their 1st LAVC</li> </ul>
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# Science

## 6th Grade Science

<b>Content</b>	Location and Position
<b>Unit 1</b>	Our Solar System
<b>Pre-assessment</b>	Pre-Tests via Canvas

<b>Content</b>	<b>Product</b>	<b>Process</b>
<p>Students will ...</p> <ul style="list-style-type: none"> <li>Investigate and understand that the solar system is organized and the various bodies in the solar system interact. (SOL 6.2)</li> <li>Investigate and understand that there is a relationship between the sun, Earth, and the moon. (SOL 6.3)</li> <li>Investigate and understand that there are basic sources of energy and that energy can be transformed. (SOL 6.4)</li> </ul> <p>CRE-(Claim- Evidence-</p>	<p><b>QFT</b> - Tides rise and fall</p> <p><b>Performance Task:</b> Seasons and Earth's Tilt</p> <p><b>Scale Model:</b> Students research scale properties of the solar system and create a model representing the solar system according to scale.</p> <p><b>CRE-(Claim- Evidence- Reasoning)</b> Planet CER: Students write a CER response analyzing the properties of celestial bodies in the solar system.</p> <p><b>Crash Landing CER and Discussion:</b> Students write a CER response and discuss which planet from a list of landing sites is the most suitable for life.</p> <p><b>Gravity CER:</b> Students write a CER explaining how mass and distance affect the gravitational attraction between celestial bodies in the solar system, and</p>	<p>The Astronomy Unit is about understanding how life can exist on Earth by understanding the properties of Earth; and understanding the relative position and movement of the Earth, Sun and Moon.</p> <p><b>Scale Model:</b> Students research scale properties of the solar system in order to create a scale model.</p> <p><b>Planet Sort:</b> Students analyze cards of properties of the solar system, and identify patterns in celestial bodies.</p> <p><b>Planet Crash Landing:</b> Students simulate a crash landing and from a variety of landing sites with properties listed, select the planet that will best sustain life.</p> <p><b>Gravity Demonstrations:</b> students observe and discuss how mass and distance affect the gravitational attraction between celestial bodies in the solar system, and how smaller bodies revolve around larger bodies.</p> <p><b>Lunar Cycle Lab:</b> Students use their bodies to</p>

Reasoning) <ul style="list-style-type: none"> <li>• Can the Sun or moon disappear?</li> <li>• Why is it warmer in the summer and cooler in the winter?</li> </ul>	how smaller bodies revolve around larger bodies.  <b>CER:</b> Students write a CER explaining the cyclical patterns of the moon.  <b>Simulation:</b> Students use a simulation  <b>Microlab:</b> Student discussion in small groups	simulate the lunar cycle, and identify patterns in the waxing and waning of the moon.  <b>MicroLab:</b> Tides Students read an article on tides, then discussed questions in small groups.
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## 7th Grade Science

<b>Content</b>	Life Science
<b>Unit 1</b>	Cells
<b>Pre-assessment</b>	Cell organelle analogy

<b>Content</b>	<b>Product</b>	<b>Process</b>
Students will ...  Summarize the 8 characteristics of life and categorize things as living or nonliving.  Explain and illustrate the cell theory and scientist's important contributions.  Explain the levels of organization and compare and contrast unicellular and multicellular organisms.  Explain the functions and importance of certain cell organelles.	<b>&gt;&gt; Cell analogy poster</b> Students compared various organelles in a plant cell to a modern structure of the world. This enabled students to demonstrate their understanding of cell organelles and put their creative minds to work.  <b>&gt;&gt; Plant cell model creation-</b> students build a model of a plant cell detailing all the organelles by using construction paper	All students were encouraged to participate in the GMS science fair.  Academic vocabulary - Frayer models with diagrams were used to illustrate vocabulary.  <b>Extensions</b> - students who finish assignments early are given challenges to find out related information to push them to deeper understanding. (All units)  <b>Cheek Cell Lab</b> - Students used proper lab safety procedures as they extracted cells from their own cheeks and prepared them to view on slides. Intensified students compared the cells they saw with their cell models and identified organelles in the real cell.

## 8th Grade Science

<b>Content</b>	Physical Science - Energy
<b>Unit 1</b>	Energy Forms and Transformation
<b>Pre-assessment</b>	Scientific Investigation: Pretest 10-questions

<b>Content</b>	<b>Product</b>	<b>Process</b>
<p>Potential &amp; Kinetic Energy</p> <p>Forms of Energy</p> <p>Energy Causes and Change</p> <p>Goal Setting</p>	<p>Opportunities to extend learning through participation in the <b>Science Fair</b></p> <p><b>Lab: Create a Device to Prevent Thermal Energy Transfer</b></p> <p><b>Phet Skate Park Simulator and Forms of Energy Station Activities</b></p> <p><b>Roller Coaster lab</b></p> <p><b>SMART Goal worksheet</b> - students create a SMART Goal that they want to achieve for one of their classes this school year. The SMART Goal needs to be Specific, Measurable, Achievable, Relevant, and Timely. Students write potential obstacles and potential solutions to achieving their goals.</p>	<p>Pretest used to evaluate students' background knowledge about scientific investigation. Personalized learning options dependent on student needs - tiered levels in learning virtual simulations.</p> <p>Students worked in a team to build a device that would retain heat. They reflected on their building process and considered how they would improve their design for future iterations.</p> <p>Students were able to pursue their own inquiries about potential and kinetic energy through a simulation and lab activities</p> <p>Students explored potential and kinetic energy by building a 3D roller coaster using materials of their choosing. They explained their observations and learning through open ended questions.</p> <p>Self-paced Kahoot review Law of Conservation of Energy, Transformations, Energy Resources</p> <p>Throughout the unit, students considered how potential and kinetic energy comes into play in their everyday lives.</p>

# Mathematics

## Math 6

<b>Content</b>	Geometry & Data Analysis
<b>Unit 1</b>	Circle Graphs & Measures of Center
<b>Pre-assessment</b>	SOL performance analysis questions (5 questions)

Content	Product	Process									
<p>The student will use problem solving, mathematical communication, mathematical reasoning, connections, and representations to:</p> <ul style="list-style-type: none"> <li>• Represent the mean of a set of data graphically as the balance point represented in a line plot.</li> <li>• Determine the effect on measures of center when a single value of a data set is added, removed, or changed.</li> </ul>	<p><b>Independent work</b> creating circle graphs given data as percentages</p> <p><b>In pairs</b> - Create a circle graph based on personal data.</p> <p><b>Exit ticket</b> - 3 question check on mastery connect.</p> <p>Students show work on <b>individual white boards</b> during the mini lesson as the teacher observes and checks for understanding.</p> <p>Students complete varied level activities on a <b>choice board</b>. Activities include: Desmos, Quizziz, Gimkit, google slides, task cards, Dreambox, worksheets, and manipulatives.</p>	<p><b>Number Sense Routine:</b> Each day the class starts with a number talk exercise about a math concept.</p> <p><b>Frayer models</b> for building vocabulary background:</p> <table border="1" data-bbox="1104 711 1835 907"> <tr> <td>Mean</td> <td>Average</td> <td>Data set</td> </tr> <tr> <td>Median</td> <td>Range</td> <td>Measures of center</td> </tr> <tr> <td>Mode</td> <td>Balance point</td> <td>Line plot</td> </tr> </table> <p><b>Enrichment Activities</b> available on Canvas (May Do) and Dreambox..</p> <p>Students complete task cards to show their understanding in multiple formats of questions.</p> <p><b>Guided Notes</b> provided for students needing scaffolds and additional support. Those students working at a higher level have the option to watch a video lesson and work independently at a faster pace during the mini lesson.</p> <p><b>Workshop model</b> of teaching: students have choices of showing understanding and mastery.</p> <ol style="list-style-type: none"> <li>1. <b>Mini-lesson</b> - with the teacher or watch a video if needed.</li> </ol>	Mean	Average	Data set	Median	Range	Measures of center	Mode	Balance point	Line plot
Mean	Average	Data set									
Median	Range	Measures of center									
Mode	Balance point	Line plot									

		<p>2. <b>Independent Application</b> - students apply the skills with guidance from the notes.</p> <p>3. <b>Brain Break</b> - usually in pairs where students apply the skills in a tactile format (i.e. matching activity, manipulatives, or illustrations).</p> <p>4. <b>Collaboration</b> - In pairs, students analyze and determine multiple methods of applying their skills.</p> <p>5. <b>Exit ticket</b> - No more than 5 questions to assess students' understanding of the concepts for the lesson.</p> <p>Students showing mastery on the preassessment complete one lesson on Dreambox as an extension and choose 2 of the station activities with the Exit ticket.</p>
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## PreAlgebra 6

<b>Content</b>	Circle graphs, mean as a balance point, histograms, comparing data within graphs, box plots, and scatter plots
<b>Unit 1</b>	Data & Statistics
<b>Pre-assessment</b>	SOL performance analysis questions (5 questions)

<b>Content</b>	<b>Product</b>	<b>Process</b>
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The student will use problem solving, mathematical communication, mathematical reasoning, connections, and representations to ...

- Collect, organize and represent data in a circle graph, histogram, boxplots, and scatterplots.
- Make observations and inferences about data represented in a circle graph, histogram, boxplots, and scatterplots.
- Compare data represented in a circle graph with the same data represented in bar graphs, pictographs, and line plots. (6.11)
- Represent the mean of a set of data graphically as the balance point represented in a line plot.
- Determine the effect on measures of center when a single value of a data set is added, removed, or changed. (7.9)
- Compare data represented in histograms with the same data represented in line plots, circle graphs, and stem-and-leaf plots. (8.12)
- Given a data set represented in a boxplot, identify and describe the lower extreme (minimum), upper extreme (maximum), median, upper quartile, lower quartile,

**Extension Assignment -**

students were given assignments that involved finding missing values in a data set, given the mean, median, and/or mode of the data set. In a regular math 6 class, students are given the data sets and calculate the mean, median, mode, and range. (6th grade curriculum)

**MathLib** - scavenger hunt activity where students choose to work individually or work in pairs to answer questions posted around the classroom. The answers to the questions are used to complete a story.

Students had the opportunity to create their own scatter plots and boxplots from more complex data sets. (8th grade curriculum)

The **American Mathematics Competition (AMC 8)** as an extension.

**Continental Math League (CML)** - Students work through 6 challenging math questions (monthly).

**Number Sense Routine:** Each day the class starts with a number talk exercise about a math concept.

**Frayer models** for building vocabulary background:

Mean	Data set	Line plot	Extreme
Median	Average	Box Plot	Quartile
Mode	Balance point	Scatter Plot	Positive Linear Relationship
Range	Measures of center	Line of best fit	Negative Linear Relationship

**Enrichment Activities** available on Canvas (May Do) and Dreambox.

**Task Cards** - Students complete to show their understanding in multiple formats of questions.

**Guided Notes** provided for students needing scaffolds and additional support. Those students working at a higher level have the option to watch a video lesson and work independently at a faster pace during the mini lesson.

**Workshop model** of teaching: students have choices of showing understanding and mastery.

1. **Mini-lesson** - with the teacher or watch a video from Khan Academy if needed.
2. **Independent Application** - students apply the skills with guidance from the notes.
3. **Brain Break** - usually in pairs where students apply the

<p>range, and interquartile range.</p> <ul style="list-style-type: none"> <li>Compare and analyze two data sets represented in boxplots. (8.13)</li> </ul>	<p><b>Virginia Department of Education (VDOE) Algebra Readiness and Just in Time Quick Check</b> - practice SOL questions to show mastery of the standards.</p>	<p>skills in a tactile format (i.e. matching activity, manipulatives, or illustrations).</p> <p>4. <b>Collaboration</b> - In pairs, students analyze and determine multiple methods of applying their skills.</p> <p>5. <b>Exit ticket</b> - No more than 5 questions to assess students' understanding of the concepts for the lesson.</p> <p>Students showing mastery on the preassessment complete one lesson on Dreambox as an extension and choose 2 of the station activities with the Exit ticket.</p>
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## PreAlgebra 7

<b>Content</b>	Pre-Algebra 7/8
<b>Unit 1</b>	Probability, Data and Statistics
<b>Pre-assessment</b>	Pre-Assessment: 10 SOL-level questions

<b>Content</b>	<b>Product</b>	<b>Process</b>
<p><b>The student will use problem solving, mathematical communication, mathematical reasoning, connections, and representations to</b></p> <ul style="list-style-type: none"> <li>Determine the theoretical and experimental probability of an event. (a)</li> <li>Describe changes in the experimental probability as the number of trials increases. (b)</li> <li>Investigate and describe the difference between the probability of an event</li> </ul>	<p>Summatives: Mastery Connect Assessments; Printed assessments developed by teacher; IXL Quiz</p> <p>IXLs assigned for each concept to demonstrate understanding.</p> <p>Students participated in a variety of stations that reinforced each concept.</p> <ul style="list-style-type: none"> <li>Matching boxplots to data</li> <li>Online escape room covering scatterplots</li> <li>Quizzes on all concepts for the unit</li> </ul>	<p><b>Frayer model</b> for vocabulary:</p> <ul style="list-style-type: none"> <li>Probability of Independent Events</li> <li>Probability of Dependent Events</li> <li>Boxplots</li> <li>Scatterplots</li> <li>Positive Linear Relationship</li> <li>Negative Linear Relationship</li> <li>Extreme</li> <li>Quartile</li> <li>Line of best fit</li> </ul> <p>Enrichment Activities available on Canvas and Dreambox..</p> <p><b>Textbook</b> Companion workbook used to reinforce the skills of each lesson. Students have the option to use the</p>



<p>found through experiment or simulation versus the theoretical probability of that same event. (b)</p> <ul style="list-style-type: none"> <li>• Determine whether two events are independent or dependent. (a)</li> <li>• Compare and contrast the probability of independent and dependent events. (a)</li> <li>• Determine the probability of two independent/dependent events. (b)</li> </ul>	<ul style="list-style-type: none"> <li>• IXLs covering all concepts for the unit.</li> <li>• Puzzles finding line of best fit and positive/negative relationships</li> <li>• Worksheets covering all concepts</li> <li>• Solving Clues around the room involving probability</li> <li>• Solving riddles that cover all concepts.</li> </ul>	<p><b>workbook, MathXL, or IXL</b> for practice.</p> <p>Students complete <b>task cards</b> to show their understanding in multiple formats of questions.</p> <p><b>Guided Notes</b> provided for students needing scaffolds and additional support.</p> <p><b>Workshop model</b> of teaching: students have choices of showing understanding and mastery.</p> <ol style="list-style-type: none"> <li>1. Mini-lesson with the teacher</li> <li>2. IXL practice online</li> <li>3. Task card practice with a partner</li> <li>4. Workbook practice</li> <li>5. Worksheet with guided notes.</li> <li>6. Centers</li> </ol> <p><b>Thinking Routine: 3-2-1</b> as an exit ticket.</p>
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## PreAlgebra 8

<b>Content</b>	PreAlgebra 8
<b>Unit 1</b>	Real Number Sense and Consumer Applications
<b>Pre-assessment</b>	KWL chart Data; Pre-assessment provided by APS

<b>Content</b>	<b>Product</b>	<b>Process</b>
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*Students will...*

- Compare and order no more than five real numbers expressed as integers, fractions (proper or improper), decimals, mixed numbers, percents, numbers written in scientific notation, radicals, and  $\pi$ . Ordering may be in ascending or descending order. (8.1)
- Use rational approximations (to the nearest hundredth) of irrational numbers to compare and order, locating values on a number line.(8.1)
- Describe and illustrate the relationships among the subsets of the real number system by using representations (graphic organizers, number lines, etc.). (8.2)
- Describe each subset of the set of real numbers and include examples and non-examples. (8.2)
- Estimate and identify the two consecutive integers between which the positive or negative square root of a given number lies. (8.3a)
- Determine the positive or negative square root of a given perfect square from 1 to 400. (8.3b)

**Summatives:**

Mastery Connect Assessments; teacher created assessments; performance tasks.

Textbook Companion **workbook** used to assess the skills of each lesson. Students have the option to use the workbook, MathXL, or IXL for practice.

Students demonstrate understanding at the **white board**.

Students complete **task cards** to show their understanding in multiple formats of questions.

In-class activities include:

**Collaborative problem-solving and problem discussions.**

Questions are posted around the classroom for students to answer at their own pace.

Student Project -

1. Create a clock using rational number expressions for the numbers on the clock.
2. Create a poster of rational numbers in your everyday life (ie. percents, decimals, fractions).

**Frayer model** for vocabulary:

- amount of discount
- discount price (sale price)
- markup percent
- percent of change (rate of change)
- principal
- rate (interest rate, tax rate, unit rate)
- sales tax
- simple interest
- Tip
- Square root
- Rational number
- Natural number
- Whole number
- Irrational number
- Real number

Heads up - students describe mathematical terms for other students to guess the correct word .

**Enrichment Activities** available on Canvas and Dreambox..

Textbook Companion workbook used to reinforce the skills of each lesson. Students have the option to use the workbook, MathXL, or IXL for practice.

Students complete task cards to show their understanding in multiple formats of questions.

Guided Notes provided for students needing scaffolds and additional support.

**Workshop model** of teaching: students have choices of showing understanding and mastery.

1. Mini-lesson with the teacher
2. IXL practice online
3. Task card practice with a partner
4. Workbook practice

		5. Worksheet with guided notes.  Thinking Routine: 3-2-1 as an exit ticket.
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## Intensified Algebra

<b>Content</b>	Systems of Equations
<b>Unit 1</b>	Unit 4
<b>Pre-assessment</b>	Solving Equations and Graphing

<b>Content</b>	<b>Product</b>	<b>Process</b>
Students demonstrated their mastery by using Savvas adaptive practice and Savvas online videos to review content. Students who needed additional help sat with me in a small group setting to review concepts and I gave more instruction. "Problem of the Week" was given to students who finished their work earlier than others.	Students were tested on this unit using different types of tests and quizzes. Students were tested on Canvas, Savvas and paper based tests that have been created by me. Students was able to take monthly CMLs and some students competed in the AMC 8, as an extension to Algebra concepts	Each week there is a "Problem of the Week" to challenge students. Students are able to learn in a variety of ways using technology and using textbook/workbook examples for each unit. The workbook give real-world examples to help students apply the concepts conceptually

## Intensified Geometry

<b>Content</b>	Intensified Geometry
<b>Unit 1</b>	Geometry Basics & Logic
<b>Pre-assessment</b>	KWL Chart

Content	Product	Process
<p><b>Students will be able to:</b> use problem solving, mathematical communication, mathematical reasoning, connections, and representations to</p> <ul style="list-style-type: none"> <li>● Identify the converse, inverse, and contrapositive of a conditional statement. (a)</li> <li>● Translate verbal arguments into symbolic form using the symbols of formal logic. (b)</li> <li>● Determine the validity of a logical argument using valid forms of deductive reasoning. (c)</li> <li>● Determine that an argument is false using a counterexample. (c)</li> </ul>	<p><b>Summatives:</b> Mastery Connect Assessments; teacher created assessments; performance tasks.</p> <p><b>In-class activities include:</b> Collaborative problem-solving and problem discussions. Questions are posted around the classroom for students to answer at their own pace.</p> <p>Students was able to take monthly <b>CML's</b> and some students competed in the <b>AMC 8</b>, as an extension to Algebra concepts</p>	<p>Enrichment Activities available on Canvas.</p> <p>Textbook Companion workbook used to reinforce the skills of each lesson. Students have the option to use the workbook, the textbook, MathXL, or IXL for practice.</p>