

Englewood Public School District
Mathematics
Grade 7
Fourth Marking Period

Unit – Area, Volume and Statistics

Overview: During this unit, students will learn about circumference and area of a circle, surface area and volume of a prism, area of composite figures, statistics and probability.

Time Frame: Chapter 8 (8.1 & Online CC Additional Resources) – 14 days, Chapter 9 – 14 days,
Chapter 10 (& Online Common Core Additional Resources) - 14 days

Enduring Understandings:

The area of a polygon can be found by dividing it into smaller shapes, and then addition the areas of those shapes.

A circle is a geometric figure that has many useful applications in the real world.

Measures of central tendency and measures of variation are used to draw conclusions about populations.

Events happen around you every day, some more likely than others.

You can use probability to describe how likely an event is to occur.

Essential Questions:

How can the formulas for area and circumference of a circle be derived and used to solve problems?

How can the properties of angles be used to solve multi-step problems?

How can area, surface area, and volume be used to solve problems?

What two-dimensional figures be formed by slicing a three-dimensional figure?

How can random sampling be used to gain and generalize information about a population?

How does generating multiple random samples assist in drawing inferences about a population?

How can data distributions be used to measure variability?

How can the measures of center and variability be used to compare two populations?

How is the likelihood of an event expressed as a probability?

How can probability be used to approximate the frequency of a chance event?

How can probability be used to make predictions about uncertain events?

Standards	Topics and Objectives	Activities	Resources	Assessments
Chapter 8 (8.1 Only & Online CC Additional Resources)				
Note:	Topics	7.G.A.3 Cube Ninjas!	SE-7B: 120-132	Unit 4 Benchmark

It is recommended that additional lessons be taught for the following standards. The lessons are listed in the Resources column and are located in the Online Common Core Additional Resources.

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.

7.G.B.4. Know the formulas for the area and circumference of a circle and solve problems; give an informal derivation of the relationship between the circumference and area of a circle.

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.

Mathematical Practices
MP.3, MP.7, MP.8

- Area of composite figures.
- Radius, diameter and circumference of a circle.
- Area of a circle.
- Real-world problems involving area and circumference of circles, semicircles, quadrants and composite figures.
- Real-world problems involving surface area and volume of prisms.
- Recognizing cylinders, cones, spheres and pyramids.

Twenty-First Century Themes and Skills include:

- Creativity and Innovation
- Critical Thinking and Problem Solving
- Communication and Collaboration

Objectives

The students will be able to:

- Recognize that a plane figure is made up of polygons.
- Solve problems involving area of composite figures.
- Identify parts of a circle.
- Recognize that a circle's

7.G.B.4 Wedges of a Circle

7.G.B.4 Eight Circles

7.G.B.6, 7.RP.A.3 Sand under the Swing Set

Math Playground
<http://www.mathplayground.com/>

Math Fact Practice
<http://www.playkidsgames.com/games/mathfacts/mathFact.htm>

Grades 6-8 Math Fluency Support
<https://www.engageny.org/resource/mathematics-fluency-support-grades-6-8>

Brain Genie
<http://braingenie.ck12.org/>

Math Game Time
<http://www.mathgametime.com/>

Everything you need to know about math journals:
<https://thecornerstoneforteachers.com/math-journals/> (NJSLSA.R1,

Online Common Core Additional Resources for Course 2:
10.4 Area of Composite Figures

Online Common Core Additional Resources for Course 2:
11.1 Radius, Diameter, and Circumference of Circles

Online Common Core Additional Resources for Course 2:
11.2 Area of a Circle

Online CCSS Additional Resources for Course 2:
11.3 Real-World Problems: Circles

Online Common Core Additional Resources for Course 2:
12.4 Real-World Problems: Surface Area and Volume

Online Common Core Additional Resources for Course 2:
Chapter 10 Area of Polygons

Assessment:
Exact Path

Summative Assessments:

Math in Focus Assessments

Online Common Core Additional Resources for Course 2:
Assessments
Chapter 11
Test A, Items: 1–9;
Test B, Items: 1–9

Online Common Core Additional Resources for Course 2:
Chapter 12 Surface Area and Volume of Solids
Review/Test:
Items: 11–17

Online Common Core Additional Resources for Course 2:
Assessments
Chapter 12
Test A, Items: 6–9;
Test B, Items: 6–9

ExamView® Assessment Suite CD-ROM Course 2

Formative Assessments:
Math journal

<p>diameter is twice its radius.</p> <ul style="list-style-type: none"> • Use the formula for the circumference of a circle. • Identify semicircles and quarter circles and find the distance around them. • Use the formula to calculate the areas of circles, semicircles, and quadrants. • Solve real-world problems involving area and circumference of circles. • Solve real-world problems involving semicircles, quadrants and composite figures. • Solve problems involving surface area and volume of prisms. • Recognize cylinders, cones, and spheres. • Identify cross sections of solids. 	<p>NJSLSA.W2, NJSLSA.L1)</p> <p>Surface area and volume centers – 5 days of enrichment and/or remediation: https://betterlesson.com/lesson/443902/surface-area-and-volume-centers-5-days-of-enrichment-and-or-remediation (RH.6-8.7, CRP2, CRP8)</p> <p>Perimeter and area of composite shapes: https://betterlesson.com/lesson/441882/explore-perimeter-and-area-of-composite-shapes (CRP8)</p> <p>Surface area activities: https://www.teacherspayteachers.com/Browse/Search:surface%20area%20activity/Grade-Level/Seventh/Price-Range/Free (RH.6-8.7)</p> <p>Calculating surface area of 3-D shapes lesson and activities: https://www.scholastic.com/teachers/sponsored-content/unexpected-math/17-18/calculating-</p>	<p>Review/Test: Items: 9–11</p> <p>My HRW - Online access to all Math in Focus materials and Virtual Manipulatives</p> <p>Math in Focus Teacher Resource Tools</p> <p>Math in Focus Performance Task</p> <p>Technology Resources</p> <ul style="list-style-type: none"> • Math in Focus eBooks • Math in Focus Teacher Resources CD • Interactive Whiteboard lessons • Virtual Manipulatives • Online Professional Development Videos <p>North Carolina Dept of Ed. Wikispaces: http://maccss.ncdpi.wikispaces.net/Middle+School</p> <p>Math Goodies – Math Lessons http://www.mathgoodies.com/</p> <p>Standards Solution Lessons:</p> <ul style="list-style-type: none"> • PARCC Lesson 17: Practice Type I items – Geometry domain 	<p>(NJSLSA.R1, NJSLSA.W2, NJSLSA.L1)</p> <p>Exit Ticket Out the Door</p> <p>Multiple choice / short answer assessments (CRP8)</p> <p>Mini quizzes – assess just one topic, or what was done within 1 or 2 days (CRP8)</p> <p>Alternative Assessments: Learning centers: each learning center focuses on a different type of problem (CRP8)(9.2.8.B.3)</p> <p>Create posters illustrating the main objectives of the unit (RH.6-8.7)</p> <p>Create a dictionary defining and illustrating vocabulary terms (RH.6-8.7)</p>
--	---	---	---

surface-area-of-3d-shapes/
(RH.6-8.7)

Calculating volume of 3-D shapes:

<https://www.scholastic.com/teachers/sponsored-content/unexpected-math/17-18/calculating-volume-of-3d-shapes/>
(RH.6-8.7)

13 Rockin' volume of pyramids and prisms activities (includes descriptions of activities)
<https://ideagalaxyteacher.com/volume-of-pyramids-and-prisms-activities/>
(RH.6-8.7)

Additional texts:
www.newsela.com
www.readworks.org
www.commonlit.org

- **CCSS Lesson Plan:** Circular Thinking: Discovering the Area Formula for Circles
- **CCSS Lesson Plan:** Discovering pi
- **CCSS Prescriptive Lesson Plan:** Area and Circumference of a Circle
- **CCSS Prescriptive Lesson Plan:** Surface Area and Volume

7th grade assessments, interactive, videos, games, lessons, homework:
https://www.opened.com/search?area=mathematics&grade=7&offset=0&resource_type=interactive-assessment

(CRP2, CRP4, CRP8, 8.1.8.A.1)

7th grade worksheets, games, lessons, activities:
<https://www.education.com/resources/math/middle-school/>
(CRP2, CRP4, CRP8, 8.1.8.A.1)

7th grade common core worksheets:
<https://www.ixl.com/math/grade-7>
(CRP2, CRP4, CRP8)

Khan Academy – videos,
lessons, assessments
www.khanacademy.org
(8.1.8.A.1)

Chapter 9
(Skip 9.1 & 9.3)

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 support valid inferences.

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. *For example, estimate the mean word length in a book by randomly sampling words*

Topics

Statistics, stem and leaf plots, understanding random sampling methods, and making inferences about populations.

Twenty-First Century Themes and Skills include:

- Creativity and Innovation
- Critical Thinking and Problem Solving
- Communication and Collaboration

Objectives

- The students will be able to:
- Represent data in a stem-and-leaf plot.
 - Make conclusions and solve word problems involving stem-and-leaf plot.
 - Understand the concept of a population and

7.SP.A.1 Mr. Briggs Class Likes Math

7.SP.A.2 Valentine Marbles

7.SP.B.3,4 College Athletes

7.SP.B.3,4 Offensive Linemen

Math Playground
<http://www.mathplayground.com/>

Math Fact Practice
<http://www.playkidsgames.com/games/mathfact/mathFact.htm>

Grades 6-8 Math Fluency Support
<https://www.engageny.org/resource/mathematics-fluency-support-grades-6-8>

SE-7B: 178-181; 193-201;212-239

My HRW - Online access to all Math in Focus materials and Virtual Manipulatives

Math in Focus Teacher Resource Tools

Math in Focus Performance Task

Technology Resources

- Math in Focus eBooks
- Math in Focus Teacher Resources CD
- Interactive Whiteboard lessons
- Virtual Manipulatives
- Online Professional Development Videos

North Carolina Dept of Ed. Wikispaces:
<http://maccss.ncdpi.wikispaces.net/Middle+School>

Summative Assessments:

Math in Focus Assessments

SE/TE: pp. 235–239, Items: 1–3, 12–13

Assessments Course 2: Chapter 9

Test A pp. 128–131, Items: 6–9a;

Test B pp. 132–135, Items: 6, 9, 10a

ExamView® Assessment Suite CD-ROM Course 2

Formative Assessments:
Exit Ticket Out the Door

Math journal (NJLSA.R1, NJLSA.W2, NJLSA.L1)

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.

7.SP.B.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. *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 of heights is noticeable.*

7.SP.B.4. Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. *For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the*

- samples.
- Understand and apply different random sampling methods.
 - Simulate random sampling.
 - Make and use inferences about a population to estimate its population mean.
 - Make comparative inferences about two populations.
 - Reinforce, consolidate, and extend chapter skills and concepts.

Brain Genie
<http://braingenie.ck12.org/>

Math Game Time
<http://www.mathgametime.com/>

Everything you need to know about math journals:
<https://thecornerstoneforteachers.com/math-journals/>
(NJSLSA.R1, NJSLSA.W2, NJSLSA.L1)

Stem and leaf plots interactive lesson:
<http://www.shodor.org/interactivate/lessons/StemAndLeafPlots/>
(RH.6-8.7, 8.1.8.A.1)

Stem and leaf plot video:
<https://www.khanacademy.org/math/ap-statistics/quantitative-data-ap/histograms-stem-leaf/v/u08-l1-t2-we3-stem-and-leaf-plots>
(CRP2, CRP8)

Random sampling and estimation – lake Victoria:
<https://wvia.pbslearningmedia.org/resource/mgbh.m>

Math Goodies – Math Lessons
<http://www.mathgoodies.com/>

7th grade assessments, interactive, videos, games, lessons, homework:
https://www.opened.com/search?area=mathematics&grade=7&offset=0&resource_type=interactive-assessment

(CRP2, CRP4, CRP8, 8.1.8.A.1)

7th grade worksheets, games, lessons, activities:
<https://www.education.com/resources/math/middle-school/>
(CRP2, CRP4, CRP8, 8.1.8.A.1)

7th grade common core worksheets:
<https://www.ixl.com/math/grade-7>
(CRP2, CRP4, CRP8)

Khan Academy – videos, lessons, assessments
www.khanacademy.org
(8.1.8.A.1)

Multiple choice / short answer assessments (CRP8)

Mini quizzes – assess just one topic, or what was done within 1 or 2 days (CRP8)

Alternative Assessments:
Learning centers: each learning center focuses on a different type of problem (CRP8) (9.2.8.B.3)

Create posters illustrating the main objectives of the unit (RH.6-8.7)

Create a dictionary defining and illustrating vocabulary terms (RH.6-8.7)

words in a chapter of a fourth-grade science book.

Mathematical Practices
MP.1, MP.2, MP.3, MP.4,
MP.8

ath.sp.victoria/random-sampling-and-estimation-lake-victoria
(CRP6, CRP8)

Random sampling – how many fish?

<https://wvia.pbslearningmedia.org/resource/mgbh.math.sp.fishsample/random-sampling-how-many-fish>
(CRP6, CRP8)

Additional texts:

www.newsela.com
www.readworks.org
www.commonlit.org

Chapter 10

<p>Note: It is recommended that additional lessons be taught for the following standards. The lessons are listed in the Resources column and are located in the Online Common Core Additional Resources.</p> <p>7.SP.C.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</p>	<p>Topics</p> <p>Probability, defining outcomes, events, and sample space, finding probability of events, approximating probability and relative frequency and developing probability models.</p> <p>Twenty-First Century Themes and Skills include:</p> <ul style="list-style-type: none"> • Creativity and Innovation • Critical Thinking and Problem Solving • Communication and Collaboration 	<p>7.SP.C.6 Heads or Tails</p> <p>7.SP.C.7, 6 Rolling Dice</p> <p>7.SP.C.7a How Many Buttons</p> <p>7.SP.C.8 Tetrahedral Dice</p> <p>7.SP.C.8 Waiting Times</p> <p>Math Playground http://www.mathplayground.com/</p> <p>Math Fact Practice http://www.playkidsgames.com/games/mathfact/</p>	<p>SE-7B: 240-303</p> <p>Online Common Core Additional Resources for Course 2: 11.1 Compound Events</p> <p>Online Common Core Additional Resources for Course 2: 11.2 Probability of Compound Events</p> <p>Online Common Core Additional Resources for Course 2: 11.3 Independent</p>	<p>Summative Assessments:</p> <p>Math in Focus Assessments</p> <p>SE/TE: pp. 292–273, 294–297, 298–303</p> <p>Assessments Course 2: Chapter 10 Test A pp. 139–144; Test B pp. 145–149</p> <p>Assessments Course 2: End-of-Course Test A pp. 150–161; End-of-Course Test B pp. 162–172</p>
---	---	--	--	--

indicates an unlikely event, a probability around $\frac{1}{2}$ indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.

7.SP.C.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. *For example, when rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times.*

7.SP.C.7. Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy.
a. Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events. *For example, if a student is*

Objectives

The students will be able to:

- Understand the concepts of outcomes, events, and sample space, and apply them to everyday life.
- Find the probability of events.
- Use Venn diagrams to illustrate events and their relationships.
- Solve real-world problems involving probability.
- Find relative frequencies, interpret them as probabilities, and use them to make predictions.
- Compare relative frequencies to theoretical probabilities.
- Understand and apply uniform and non-uniform probability models, and use them to make predictions.
- Compare experimental probability with theoretical probability.
- Reinforce, consolidate, and extend chapter skills and concepts.

mathFact.htm

Grades 6-8 Math Fluency Support

<https://www.engageny.org/resource/mathematics-fluency-support-grades-6-8>

Brain Genie

<http://braingenie.ck12.org/>

Math Game Time

<http://www.mathgametime.com/>

Everything you need to know about math journals:

<https://thecornerstoneforteachers.com/math-journals/> (NJSLSA.R1, NJSLSA.W2, NJSLSA.L1)

Statistics and probability videos and activities:

<https://wvia.pbslearningmedia.org/collection/mathcore-sp> (8.1.8.A.1)

Using venn diagrams to solve problems activity:

<https://www.mathgames.com/skill/7.139-use-venn-diagrams-to-solve-problems>

Events

Online Common Core Additional Resources for Course 2:

11.4 Dependent Events

My HRW - Online access to all Math in Focus materials and Virtual Manipulatives

Math in Focus Teacher Resource Tools

Math in Focus Performance Task

Technology Resources

- Math in Focus eBooks
- Math in Focus Teacher Resources CD
- Interactive Whiteboard lessons
- Virtual Manipulatives
- Online Professional Development Videos

North Carolina Dept of Ed. Wikispaces:

<http://maccss.ncdpi.wikispaces.net/Middle+School>

Math Goodies – Math Lessons

<http://www.mathgoodies.com/>

ExamView® Assessment Suite CD-ROM Course 2

Formative Assessments:

Math journal (NJSLSA.R1, NJSLSA.W2, NJSLSA.L1)

Exit Ticket Out the Door

Multiple choice / short answer assessments (CRP8)

Mini quizzes – assess just one topic, or what was done within 1 or 2 days (CRP8)

Alternative Assessments:

Learning centers: each learning center focuses on a different type of problem (CRP8) (9.2.8.B.3)

Create posters illustrating the main objectives of the unit (RH.6-8.7)

Create a dictionary defining and illustrating vocabulary terms (RH.6-8.7)

selected at random from a class, find the probability that Jane will be selected and the probability that a girl will be selected.

b. Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. For example, find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies?

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

a. 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.

b. Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., “rolling

(RH.6-8.7)

Sets and Venn diagram lesson and activity:

<http://www.shodor.org/interactivate/lessons/SetsTheVennDiagram/>
(CRP2, RH.6-8.7)

Additional texts:

www.newsela.com
www.readworks.org
www.commonlit.org

Standards Solution

Lessons:

- **PARCC Lesson 18:**
Practice Type I items – Statistics and Probability domain
- **CCSS Lesson Plan:**
Likely or Unlikely
- **CCSS Lesson Plan:**
Test the Theory
- **CCSS Prescriptive Lesson Plan:** The Likelihood of Simple Events
- **CCSS Prescriptive Lesson Plan:** Large Scale Probability Outcomes
- **CCSS Prescriptive Lesson Plan:** Probabilities of Compound Events

7th grade assessments, interactive, videos, games, lessons, homework:

https://www.opened.com/search?area=mathematics&grade=7&offset=0&resource_type=interactive-assessment

(CRP2, CRP4, CRP8, 8.1.8.A.1)

7th grade worksheets, games, lessons, activities:

<https://www.education.com/resources/math/middle->

double sixes”), identify the outcomes in the sample space which compose the event.

c. Design and use a simulation to generate frequencies for compound events. For example, use random digits as a simulation tool to approximate the answer to the question: If 40% of donors have type A blood, what is the probability that it will take at least 4 donors to find one with type A blood?

Mathematical Practices
MP.1, MP.2, MP.3, MP.4,
MP.6, MP.7, MP.8

school/
(CRP2, CRP4, CRP8,
8.1.8.A.1)

7th grade common core worksheets:
<https://www.ixl.com/math/grade-7>
(CRP2, CRP4, CRP8)

Khan Academy – videos, lessons, assessments
www.khanacademy.org
(8.1.8.A.1)

Key Vocabulary:

Chapter 8:

Center, radius, radii, diameter, circumference, arc, semicircle, quadrant

Chapter 9 :

stem-and leaf plot, stem, leaf, population, sample, sample size, random sample, unbiased/biased, sample, simple random/stratified/systematic random sampling, inference

Chapter 10:

Outcome, sample space, event, probability, fair, biased, Venn diagram, mutually exclusive, complementary events, complement, relative frequency, observed frequency, experimental probability, theoretical probability, probability model, probability distribution, uniform probability model, non-uniform probability model,

NJ Learning Standards Vocabulary:

7.G.A. 3

Draw, construct, and describe geometrical figures and describe the relationships between them. scale drawing, dimensions, scale factor, plane sections, right rectangular prism, right rectangular pyramids, parallel, perpendicular, scalene triangle, obtuse

7.G.B.4 & 6

Solve real-life and mathematical problems involving angle measure, area, surface area, and volume inscribed, circumference, radius, diameter, pi, π , pyramids, face, base

7.SP.A.1 & 2

Use random sampling to draw inferences about a population.

random sampling, population, representative sample, inferences

7.SP.B.3 & 4

Draw informal comparative inferences about two populations.

variation/variability distribution, measures of center, measures of variability

7.SP.C.5, 6, 7, & 8

Investigate chance processes and develop, use, and evaluate probability models.

sample spaces

Accommodations and Modifications:

Students with special needs: Support staff will be available to aid students related to IEP specifications. 504 accommodations will also be attended to by all instructional leaders. Modifications, alternative assessments, and scaffolding strategies will be used to support this learning. The use of Universal Design for Learning (UDL) will be considered for all students as teaching strategies are considered. Additional staff should be included so all students can fully participate in the standards associated with this curriculum.

ELL/ESL students: Students will be supported according to the recommendations for “can do’s” as outlined by WIDA - https://www.wida.us/standards/CAN_DOs/

Students at risk of school failure: Formative and summative data will be used to monitor student success at first signs of failure. Student work will be reviewed to determine support. This may include parent consultation, basic skills review and differentiation strategies. With considerations to UDL, time may be a factor in overcoming developmental considerations. More time will be made available with a certified instructor to aid students in reaching the standards.

Gifted and Talented Students: Students excelling in mastery of standards will be challenged with complex, high level challenges.

English Language Learners:	Special Education:	At-Risk:	Gifted and Talented:
<ul style="list-style-type: none"> • Group similar problems together • Teaching modeling • Peer modeling • Word walls • Give directions in small steps and in as few words as possible • Provide visual aids • Group similar problems together • Repeat directions when necessary • Provide a vocabulary list with definitions • Use of alge-tiles when needed • Use of number line when needed 	<ul style="list-style-type: none"> • Create a math journal that they can use during class, on assignments and (if teacher allows) on assessments • Utilize modifications & accommodations delineated in the students' IEP • Work with paraprofessional • Work with a partner • Shorten assignments to focus on mastery or key concepts • Maintain adequate space between desks • Keep workspaces clear of unrelated materials • Provide fewer problems to attain passing grades • Tape a number line to the student's desk • Provide extra time to complete a task when needed • Provide definitions of different graphs / charts with illustrations • Allow tests to be taken in a separate room • Allow students to use a calculator when appropriate • Divide test into small sections of similar questions or problems 	<ul style="list-style-type: none"> • Create a math journal that they can use during class, on assignments and (if teacher allows) on assessments • Use visual demonstrations, illustrations and models • Give directions / instructions verbally and in simple written format • Peer support • Increased one – on – one time • Teachers may modify instructions by modeling what the student is expected to do • Instructions may be printed out in large print and hung up for the students to see during the time of the lesson • Review behavior expectations and make adjustments • Allow students to complete an independent project as an alternative test • Use of alge-tiles when needed • Use of number line when needed 	<ul style="list-style-type: none"> • Inquiry based instruction • Independent study • Higher order thinking skills • Adjusting the pace of the lessons • Real world scenarios • Student driven instruction • Allow students to complete an independent project as an alternative test

- Use of algebra tiles when needed
- Use of number line when needed

Interdisciplinary Connections: ELA

NJSLSA.R1. Read closely to determine what the text says explicitly and to make logical inferences and relevant connections from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

NJSLSA.W2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content

NJSLSA.L1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking

Integration of Technology Standards NJSLS:

8.1.8.A.1: Demonstrate knowledge of a real world problem using digital tools.

21st Century Standards

9.2.8.B.3: Evaluate communication, collaboration and leadership skills that can be developed through school, home, work, and extracurricular activities for use in a career.

Career Ready Practices:

CRP2: Apply appropriate academic and technical skills

CRP4: Communicate clearly and effectively and with reason

CRP6: Demonstrate creativity and innovation

CRP8: Utilize critical thinking to make sense of problems and persevere in solving them

History / Social Studies:

RH.6-8.7 Integrate visual information (e.g., in charts, graphs, photographs, videos or maps) with other information in print and digital texts

Major **Supporting** **Additional** (Identified by PARCC Model Content Frameworks)