

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics



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OCEAN ACADEMY CHARTER SCHOOL 6th Grade Math Curriculum	
<b>Content Area:</b> Mathematics	
<b>Course Title:</b> 6th Grade Mathematics	
<b>Grade Level:</b> 6th Grade Mathematics	
Unit Title	Pacing Guide in Days
<b><u>Unit Plan 1:</u></b> Operations and Reasoning About Ratios & Percents	65 Days
<b><u>Unit Plan 2:</u></b> Expressions, The Rational Number System, and Equations	65 Days
<b><u>Unit Plan 3:</u></b> 2D and 3D Geometry	20 Days
<b><u>Unit Plan 4:</u></b> Variability, Distribution, and Relationship Between Quantities	30 Days

OCEAN ACADEMY CHARTER SCHOOL Unit 1 Overview	
<b>Content Area:</b> Mathematics	
<b>Unit Title:</b> Operations and Reasoning About Ratios & Percents	<b>Duration:</b> 65 Days
<b>Target Course/Grade Level:</b> 6th Grade Mathematics	
<b>Introduction/Unit Focus:</b>	
In this unit, students will deepen their understanding of multiplication and division by applying these operations to divide fractions by fractions. They will build on prior knowledge to develop fluency in computing with multi-digit numbers and strengthen their ability to	

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

identify and use common factors and multiples. Students will also explore the concept of ratios, developing an understanding of how ratios represent relationships between quantities. Through real-world problem-solving, students will use ratio reasoning to analyze and compare rates, work with unit rates, and make conversions within measurement systems.

### Disciplinary Concepts for the Unit

#### Standard 9.1 Personal Financial Literacy

This standard outlines the important fiscal knowledge, habits, and skills that must be mastered in order for students to make informed decisions about personal finance. Financial literacy is an integral component of a student's college and career readiness, enabling students to achieve fulfilling, financially-secure, and successful careers.

#### Standard 9.2 Career Awareness, Exploration, Preparation and Training

This standard outlines the importance of being knowledgeable about one's interests and talents, and being well informed about postsecondary and career options, career planning, and career requirements.

#### Standard 9.4 Life Literacies and Key Skills

This standard outline key literacies and technical skills such as critical thinking, global and cultural awareness, and technology literacy\* that are critical for students to develop to live and work in an interconnected global economy.

#### Standard 8.1 Computer Science

Computer Science outlines a comprehensive set of concepts and skills, such as data and analysis, algorithms and programming, and computing systems.

#### Standard 8.2 Design Thinking

Technology, outlines the technological design concepts and skills essential for technological and engineering literacy. The framework design includes Engineering Design, Ethics and Culture, and the Effects of Technology on the Natural world among the disciplinary concepts

**Amistad Law: N.J.S.A. 18A 52:16A-88** Every board of education shall incorporate the information regarding the contributions of African-Americans to our country in an appropriate place in the curriculum of elementary and secondary school students.

**Holocaust Law: N.J.S.A. 18A:35-28** Every board of education shall include instruction on the Holocaust and genocide in an appropriate place in the curriculum of all elementary and secondary school pupils. The instruction shall further emphasize the personal responsibility that each citizen bears to fight racism and hatred whenever and wherever it happens.

**LGBT and Disabilities Law: N.J.S.A. 18A:35-4.35** A board of education shall include instruction on the political, economic, and social contributions of persons with disabilities and lesbian, gay, bisexual, and transgender people, in an appropriate place in the curriculum of middle school and high school students as part of the district's implementation of the New

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

Jersey Student Learning Standards (N.J.S.A.18A:35-4.36) A board of education shall have policies and procedures in place pertaining to the selection of instructional materials to implement the requirements of N.J.S.A. 18A:35-4.35.

**Diversity and Inclusion:** C.18A:35-4.36a Curriculum to include instruction on diversity and inclusion.

The instruction shall:

- (1) highlight and promote diversity, including economic diversity, equity, inclusion, tolerance, and belonging in connection with gender and sexual orientation, race and ethnicity, disabilities, and religious tolerance;
- (2) examine the impact that unconscious bias and economic disparities have at both an individual level and on society as a whole; and
- (3) encourage safe, welcoming, and inclusive environments for all students regardless of race or ethnicity, sexual and gender identities, mental and physical disabilities, and religious beliefs.

**Asian Americans and Pacific Islanders (AAPI)**

Ensures that the contributions, history, and heritage of Asian Americans and Pacific Islanders (AAPI) are included in the New Jersey Student Learning Standards (NJSLs) for Social Studies in kindergarten through Grade 12 (P.L.2021, c.416).

**21st Century Themes and Skills**

“Twenty-first century themes and skills” means themes such as global awareness; financial, economic, business, and entrepreneurial literacy; civic literacy; health literacy; learning and innovation skills, including creativity and innovation, critical thinking and problem solving, and communication and collaboration; information, media, and technology skills; and life and career skills, including flexibility. Career readiness, life literacies, and key skills education provides students with the necessary skills to make informed career and financial decisions, engage as responsible community members in a digital society, and to successfully meet the challenges and opportunities in an interconnected global economy.”

**Unit 1 Focus Standards (Major Standards) [New Jersey Student Learning Standards-Mathematics](#)**

**8 Mathematical Practices**

- MP1 - Make sense of problems and persevere in solving them.
- MP2 - Reason abstractly and quantitatively.
- MP3 - Construct viable arguments and critique the reasoning of others.
- MP4 - Model with mathematics.
- MP5 - Use appropriate tools strategically.
- MP6 - Attend to precision.
- MP7 - Look for and make use of structure.
- MP8 - Look for and express regularity in repeated reasoning.

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

Content Standards with Statement	iReady Resource	Suggested Mathematical Practices <u>Description of Mathematical Practices</u>	Critical Knowledge Concepts	Skills Objectives
<p><b>6.NS.A.1.</b> 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. For example, create a story context for <math>(2/3) \div (3/4)</math> and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that <math>(2/3) \div (3/4) = 8/9</math> because <math>3/4</math> of <math>8/9</math> is <math>2/3</math>. (In general, <math>(a/b) \div (c/d) = ad/bc</math>.) How much chocolate will each person get if 3 people share <math>1/2</math> lb of chocolate equally? How many <math>3/4</math>-cup servings are in <math>2/3</math> of a cup of yogurt? How wide is a rectangular strip of land with length</p>	<p>2.2 2.3</p>	<p>MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8</p>	<p>Concepts: No New Concept(s) introduced</p>	<p>Students are able to:</p> <ul style="list-style-type: none"> <li>➤ Divide a fraction by a fraction.</li> <li>➤ Represent division of fractions using visual models.</li> <li>➤ Interpret quotients of fractions in the context of the problem.</li> <li>➤ Compute quotients of fractions in order to solve word problems.</li> <li>➤ Write equations to solve word problems involving division of fraction by a fraction.</li> <li>➤ Use the relationship between multiplication and division to explain division of fractions.</li> </ul>
<p><b>6.NS.B.2.</b> With accuracy and efficiency, divide</p>	<p>2.6 2.7</p>	<p>MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8</p>	<p>Concepts:</p>	<p>Students are able to:</p> <ul style="list-style-type: none"> <li>➤ Use the standard algorithm to</li> </ul>

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

multi-digit numbers using the standard algorithm.			No New Concept(s) introduced	divide multi-digit numbers with speed and accuracy.
<b>6.RP.A.1.</b> Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. 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."	3.1 3.2 3.3 3.4 3.5 3.6	MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8	Concepts: A ratio shows relative sizes or values of two quantities	Students are able to: u ➤ Describe a ratio relationship between two quantities using ratio language.
<b>6.RP.A.2.</b> Understand the concept of a unit rate $a/b$ associated with a ratio $a:b$ with $b \neq 0$ , and use rate language in the context of a ratio relationship. For example, "This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is $3/4$ cup of flour for each cup of sugar." "We paid \$75 for 15 hamburgers, which is a rate of \$5 per hamburger."	3.5 3.6	MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8	Concepts: A rate is a ratio comparing two different types of quantities	Students are able to: ➤ Determine the unit rate given a ratio relationship. ➤ Describe a unit rate relationship between two quantities using rate language.
<b>6.RP.A.3.</b> Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double	3.1 3.2 3.3 3.4 3.5 3.6	MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8	Concepts: No New Concept(s) introduced	Students are able to: ➤ Use ratio and rate reasoning to create tables of equivalent ratios relating quantities with whole number

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

<p>number line diagrams, or equations. *(benchmarked)</p> <p><b>6.RP.A.3a.</b> 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.</p> <p><b>6.RP.A.3b.</b> Solve unit rate problems including those involving unit pricing and constant speed. 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> <p><b>6.RP.A.3c.</b> Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means <math>30/100</math> times the quantity); solve problems involving finding the whole, given a part and the percent.</p> <p><b>6.RP.A.3d.</b> Use ratio reasoning to convert measurement units; manipulate and transform units</p>				<p>measurements, find missing values in tables and plot pairs of values.</p> <ul style="list-style-type: none"> <li>➤ Compare ratios using tables of equivalent ratios.</li> <li>➤ Solve real world and mathematical problems involving unit rate (including unit price and constant speed).</li> <li>➤ Calculate a percent of a quantity and solve problems by finding the whole when given the part and the percent.</li> <li>➤ Convert measurement units using ratio reasoning.</li> <li>➤ Transform units appropriately when multiplying and dividing quantities.</li> </ul>
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Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

appropriately when multiplying or dividing quantities				
<b>6.NS.B.3.</b> With accuracy and efficiency add, subtract, multiply and divide multi-digit decimals using the standard algorithm for each operation.	2.4 2.5 2.7	MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8	Concepts: No New Concept(s) introduced	Students are able to: <ul style="list-style-type: none"> <li>➤ Add and subtract multi-digit decimals with accuracy and efficiency.</li> <li>➤ Multiply and divide multi-digit decimals with accuracy and efficiency</li> </ul>
<b>6.NS.B.4.</b> 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.	1.4 1.5	MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8	Concepts: No New Concept(s) introduced	Students are able to: <ul style="list-style-type: none"> <li>➤ Create lists of factors for two whole numbers less than or equal to 100; find the largest factor common to both lists.</li> <li>➤ Create lists of multiples for two whole numbers less than or equal to 12; find the smallest multiple common to both lists.</li> </ul>

**Unit 1 New Jersey Student Learning Standards: Interdisciplinary Connections  
New Jersey Student Learning Standards-ELA**

**RI.CR.6.1. (NJLSA.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.

**SL.PE.6.1. (SL.6.1)** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others’ ideas and expressing their own clearly.

**L.KL.6.2. (NJLSA.L6)** 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.

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

**W.AW.6.1. (NJSLSA.W6)** Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others

**Unit 1 New Jersey Student Learning Standards: Career Readiness, Life Literacies, and Key Skills**

**Disciplinary Concepts**  
Credit and Debt Management  
Credit Profile  
Financial Institutions  
Financial Psychology  
Planning and Budgeting  
Career Awareness and Planning  
Digital Citizenship  
Information and Media Literacy  
Technology Literacy

**Core Ideas**

**Performance Expectations (Identified with Standard Number and statement)**

Credit management includes making informed choices about sources of credit and requires an understanding of the cost of credit

There are strategies to build and maintain a good credit history.

There are a variety of factors that influence how well suited a financial institution and/or service will be in meeting an individual's financial needs.

An individual's values and emotions will influence the ability to modify financial behavior (when appropriate), which

9.1.8.CR.1: Compare and contrast the role of philanthropy, volunteer service, and charities in community development and the quality of life in a variety of cultures.

9.1.8.CDM.3: Compare and contrast loan management strategies, including interest charges and total principal repayment cost.

9.1.8.CP.1: Compare prices for the same goods or services

9.1.8.CP.2: Analyze how spending habits affect one's ability to save.

9.1.8.FI.4: Analyze the interest rates and fees associated with financial products

9.1.8.FP.1: Describe the impact of personal values on various financial scenarios.

9.1.8.FP.2: Evaluate the role of emotions, attitudes, and behavior (rational and irrational) in making financial decisions.

9.1.8.FP.3: Explain how self-regulation is important to managing money (e.g., delayed gratification, impulse buying, peer pressure, etc.).

9.1.8.FP.4: Analyze how familial and cultural values influence savings rates, spending, and other financial decisions.

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

<p>will impact one's financial well being.</p> <p>A budget aligned with an individual's financial goals can help prepare for life events.</p> <p>There are strategies to decrease and manage expenses</p> <p>An individual's strengths, lifestyle goals, choices, and interests affect employment and income.</p> <p>Early planning can provide more options to pay for post-secondary training and employment.</p> <p>Some digital tools are appropriate for gathering, organizing, analyzing, and presenting information, while other types of digital tools are appropriate for creating text, visualizations, models, and communicating with others.</p>	<p>9.1.8.FP.5: Determine how spending, investing, and using credit wisely contributes to financial well being.</p> <p>9.1.8.PB.2: Explain how different circumstances can affect one's personal budget</p> <p>9.1.8.PB.3: Explain how to create a budget that aligns with financial goals.</p> <p>9.1.8.PB.7: Brainstorm techniques that will help decrease expenses including comparison shopping, negotiating, and day-to-day expense management.</p> <p>9.2.8.CAP.3: Explain how career choices, educational choices, skills, economic conditions, and personal behavior affect income.</p> <p>9.2.8.CAP.6: Compare the costs of postsecondary education with the potential increase in income from a career of choice.</p> <p>9.4.8.TL.1: Construct a spreadsheet in order to analyze multiple data sets, identify relationships, and facilitate data based decision making.</p> <p>9.48.TL.2: Gather data and digitally represent information to communicate a real world problem.</p> <p>9.48.TL.3: Select appropriate tools to organize and present information digitally.</p>
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**Unit 1 New Jersey Student Learning Standards: [Computer Science and Design Thinking](#)**

**Disciplinary Concepts**  
[Computing Systems](#)  
[Data Analysis](#)  
[Engineering Design](#)

**Core Ideas**

**Performance Expectations (Identified with Standard Number and Statement)**

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

<p>The study of human-computer interaction can improve the design of devices and extend the abilities of humans</p> <p>People use digital devices and tools to automate the collection, use, and transformation of data.</p> <p>The manner in which data is collected and transformed is influenced by the type of digital device(s) available and the intended use of the data.</p> <p>Engineering design is a systematic, creative, and iterative process used to address local and global problems.</p> <p>The process includes generating ideas, choosing the best solution, and making, testing, and redesigning models or prototypes.</p>	<p>8.1.8.CS.1: Recommend improvements to computing devices in order to improve the ways users interact with devices</p> <p>8.1.8.DA.1: Organize and transform data collected using computational tools to make it usable for a specific purpose</p> <p>8.2.8.ED.2: Identify the steps in the design process that could be used to solve a problem</p>
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New Jersey Student Learning Standards: <a href="#">Climate Change Mandate</a>	
Core Ideas	Performance Expectations (Identified with Standard Number and Statement)
Multiple solutions often exist to solve a problem.	9.4.8.CT.1: Evaluate diverse solutions proposed by a variety of individuals, organizations, and/or agencies to a local or global problem, such as climate change and use critical thinking skills to predict which one(s) are likely to be effective.

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

	<p>9.4.8.CT.2: Develop multiple solutions to a problem and evaluate short- and long-term effects to determine the most plausible option (e.g., MS-ETS1-4, 6.1.8.CivicsDP.1).</p> <p>6.EE.B.7 Solve real-world and mathematical problems by writing and solving equations of the form <math>ax + b = c</math> and for cases in which <math>p</math>, <math>q</math> and <math>x</math> are all nonnegative rational numbers. Climate Change Example: Students may solve real-world problems by writing and solving one-variable equations related to deforestation and/or increasing livestock farming as contributors to climate change.</p> <p>6.EE.C.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. For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation to represent the relationship between distance and time. Climate Change Example: Students may analyze and use variables to represent the relationship between greenhouse emissions and livestock farming when representing relationships among contributors to climate change.</p> <p>6.SP.B.4 Display numerical data in plots on a number line, including dot plots, histograms, and box plots. Climate Change Example: Students may display numerical data related to deforestation and increasing livestock farming as contributors to climate change in plots on a number line, including dot plots, histograms, and box plots.</p>
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**Knowledge and Skills**

**Unit Learning Targets (Objectives):**

*Students will be able to...*

- Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithms
- Divide multi-digit whole numbers accurately using the standard division algorithm
- Find the greatest common factor (GCF) of two whole numbers ( $\leq 100$ )
- Determine the least common multiple (LCM) of two whole numbers ( $\leq 12$ )
- Compute quotients involving fractions and mixed numbers

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

- Use visual models to represent fraction division problems
- Explain fraction division using the relationship between multiplication and division
- Solve real-world problems involving the division of fractions and interpret solutions in context
- Describe the relationship between two quantities using ratio language
- Use rate language to describe and interpret unit rates in context
- Create and complete ratio tables to solve real-world and mathematical problems
- Solve unit rate and percent problems by applying ratio reasoning
- Find the percent of a quantity as a rate per 100
- Convert measurement units using ratio and rate reasoning
- Multiply or divide to transform units appropriately when solving problems

**Unit Enduring Understandings:**

*Students will know...*

- Powers represent repeated multiplication and can be evaluated and applied in expressions.
- The order of operations, including grouping symbols and exponents, ensures accurate evaluation of expressions.
- Real-world problems can be modeled using numerical expressions, including those with exponents.
- Factor pairs, prime and composite numbers, and prime factorization help analyze whole numbers.
- The greatest common factor (GCF) and least common multiple (LCM) can be found using factors and multiples.
- Visual models help represent and solve problems involving multiplication and division of fractions.
- Fraction operations, including with mixed numbers, support solving real-life and mathematical problems.
- Mixed-number expressions are evaluated using the order of operations.
- Decimal operations require understanding of place value and proper alignment of decimal points.
- Decimal multiplication and division involve place value and standard algorithms.
- Ratios describe relationships between quantities and can be represented in multiple forms.
- Tape diagrams, ratio tables, and graphs provide visual and numerical representations of ratio relationships.
- Unit rates are used to compare and solve real-world rate problems.
- Conversions between measurement units rely on unit rates, conversion factors, and ratio tables.
- Fractions, decimals, and percents are equivalent forms that can be compared and ordered.
- The movement of decimal points reflects multiplication or division by powers of ten.

**Unit Essential Questions:**

- Which operation best represents a real-world situation?
- Why is repeated multiplication written using exponents?
- Inserting parentheses into an expression affects which part of the problem?

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

- Divisibility without actual division depends on which number properties?
- Determining the greatest common factor involves which strategies?
- Least common multiples are identified using which patterns or methods?
- Fraction multiplication shows what part of a whole or group?
- Dividing by a fraction results in what kind of value or meaning?
- Division involving mixed numbers requires which steps or representations?
- Decimal addition and subtraction depend on which place value principles?
- Multiplying decimals follows which consistent rules or patterns?
- Decimal division is modeled using which strategies or visuals?
- Relationships between two values are shown in which forms?
- Equivalent ratios are represented in which ways?
- Real-life changes are described using which rates or units?
- Comparing two ratios reveals which similarities or differences?
- Ratios, fractions, and percents are connected through which relationships?
- Percent values are found using which number strategies?
- Length comparisons across systems depend on which measurement conversions?

**Instructional Plan**  
**Brief Narrative of the Progression of the Unit with Suggested Activities**

**Suggested Activities**

- Guided Notes
- iReady Interactive Platform
- Task Cards
- Scavenger Hunts
- Videos
- Gallery Walks
- Games
- Whiteboard Practice
- Record and Practice Journal

**Resources**

- iReady Math
- Nearpod
- EdPuzzle
- Desmos
- IXL
- Kahoot
- Blooket
- Linkit
- NJSLA Digital Library of Released Items

**Evidence of Student Learning**

**Formative Assessments:**

- Observation
- Do-Now/ Quick Check
- Homework
- Notebook/ journal
- Class participation
- Whiteboards
- Record and Practice Journals
- Exit passes
- Online platforms: Quizizz, Kahoot!, Quizlet, Quizalize
- IXL

**Summative Assessments:**

- Chapter Tests
- Quizzes
- Presentations
- Projects
- Final Exams
- National/State/District Wide Assessments

**Benchmark Assessments:**

- SGO Assessments
- Common Unit Assessments
- Linkit Benchmarks A<B<C

**Alternative Assessments:**

- Portfolio
- Project

**Performance Tasks:** (When appropriate) This type of task demonstrates students transfer of learning and application to a performance task. Think about what you want the students to be able to do at the end of the unit.

- iReady Resources - there are performance tasks for multiple standards
- Example Performance Assessment Tasks

**Suggested Options for Differentiation and Modifications**

**Special Education**

- Follow all IEP modifications.
- Use scaffolds, leveled texts, and differentiated assignments.
- Provide visuals, graphic organizers, and outlines.
- Pre-teach and review vocabulary/concepts.
- Offer summaries, study guides, and note-taking supports.
- Use small-group or one-on-one instruction as needed.
- Provide peer tutoring or partner support.
- Allow preferential seating.
- Give extra time on tests and assignments.
- Accept oral or dictated responses.
- Modify workload or number of questions when appropriate.
- Provide large-print, Braille, or digital text with audio tools.
- Allow access to scribes or communication devices.
- Use interactive/multimedia content to reinforce skills.

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**Students with 504 Plans**

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

- Follow the 504 plan.
  - Provide extended time for assignments/tests.
  - Offer small-group or quiet testing settings.
  - Accept oral or dictated responses.
  - Provide large-print, Braille, or digital text with assistive technology.
  - Allow use of scribes or communication devices.
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### **Students at Risk of School Failure**

- Use visuals, outlines, and step-by-step directions.
  - Pre-teach key vocabulary and provide real-world connections.
  - Offer small-group instruction and frequent check-ins.
  - Model problem-solving processes and think-alouds.
  - Assign peer support when appropriate.
  - Provide preferential seating and structured routines.
  - Break down multi-step tasks into smaller parts.
  - Provide feedback in manageable, frequent intervals.
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### **Gifted and Talented**

- Ask open-ended and higher-order questions (analyze, evaluate, create).
  - Provide opportunities for discovery and independent research.
  - Offer interest-based extensions and advanced texts.
  - Use flexible grouping for enrichment projects.
  - Provide choice in assignments and assessments.
  - Incorporate simulations, debates, and project-based learning.
  - Encourage cross-curricular connections and problem-solving challenges.
  - Provide opportunities for reflection and presentation.
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### **Multilingual Learners**

- Collaborate with ESL/MLL specialists.
  - Provide small-group instruction with language scaffolds.
  - Pre-teach and revisit vocabulary using visuals and cognates.
  - Use sentence frames, discussion stems, and guided writing supports.
  - Allow oral responses and extended time.
  - Provide bilingual glossaries and labeled visuals.
  - Use digital supports (translation tools, audio text, captioning).
  - Scaffold academic conversations with structured partner/group activities.
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### Diversity and Inclusion

- Respect and integrate cultural traditions and perspectives.
- Provide alternative assignment formats when needed.
- Use visuals, outlines, and clear academic language.
- Avoid slang and idioms; speak at an appropriate pace.
- Collaborate with cultural liaisons, language specialists, and support staff.
- Foster an inclusive classroom climate with routines and positive relationships.
- Build strong school-family connections.

### Supplemental Resources

- Instructional Materials
  - Guided Notes
  - iReady Interactive Platform
  - Record and Practice Journal
- Supplemental Materials
  - Task Cards
  - Scavenger Hunts
  - Gallery Walks
  - Interactive Google Activities
  - Desmos
- Intervention Materials
  - IXL
  - Videos
  - Translated Material
  - Linkit

### Social and Emotional Learning - New Jersey SEL

Competencies and Sub-Competencies Social and emotional learning (SEL) involves the process through which children and adults acquire and apply the knowledge, attitudes and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions. The purpose of the SEL competencies is to provide schools with guidelines for integrating SEL across grades and subject areas.

#### Self-Awareness

- Recognize one's feelings and thoughts
- Recognize the impact of one's feelings and thoughts on one's own behavior
- Recognize one's personal traits, strengths and limitations
- Recognize the importance of self-confidence in handling daily tasks and challenges

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

**Self-Management**

- Understand and practice strategies for managing one’s own emotions, thoughts and behaviors
- Recognize the skills needed to establish and achieve personal and educational goals
- Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one’s goals

**Social Awareness**

- Recognize and identify the thoughts, feelings and perspectives of others
- Demonstrate awareness of the differences among individuals, groups and others’ cultural backgrounds
- Demonstrate an understanding of the need for mutual respect when viewpoints differ
- Demonstrate an awareness of the expectations for social interactions in a variety of settings

**Responsible Decision-Making**

- Develop, implement and model effective problem solving and critical thinking skills
- Identify the consequences associated with one’s actions in order to make constructive choices
- Evaluate personal, ethical, safety and civic impact of decisions

**Relationship Skills**

- Establish and maintain healthy relationships
- Utilize positive communication and social skills to interact effectively with others
- Identify ways to resist inappropriate social pressure
- Demonstrate the ability to prevent and resolve interpersonal conflicts in constructive ways
- Identify who, when, where, or how to seek help for oneself or others when needed

**Teacher Notes**

**OCEAN ACADEMY CHARTER SCHOOL  
Unit 2 Overview**

**Content Area:** Mathematics

**Unit Title:** Expressions, The Rationale Number System, & Equations

**Duration:** 65 Days

**Target Course/Grade Level:** 6th Grade Mathematics

**Introduction/Unit 2 Focus:**

In this unit students will build on their understanding of arithmetic to develop fluency with algebraic expressions. They will learn how to write, interpret, and evaluate expressions involving variables, constants, and operations. By applying the properties of operations, students will generate equivalent expressions and begin to see the structure of mathematical relationships.

Students will also develop strategies for reasoning about and solving one-variable equations and inequalities. They will explore what it means for a value to be a solution, use substitution to test solutions, and solve equations using inverse operations. These skills will be applied in real-world problem-solving contexts.

In addition, students will expand their understanding of the number system to include rational numbers, including negative numbers and zero. They will learn to represent rational numbers on the number line, compare and order them, and apply their understanding to situations involving real-world quantities such as temperature, elevation, and financial gains or losses. Through these explorations, students will deepen their number sense and ability to reason with all rational numbers.

### **Disciplinary Concepts for the Unit**

#### **Standard 9.1 Personal Financial Literacy**

This standard outlines the important fiscal knowledge, habits, and skills that must be mastered in order for students to make informed decisions about personal finance. Financial literacy is an integral component of a student's college and career readiness, enabling students to achieve fulfilling, financially-secure, and successful careers.

#### **Standard 9.2 Career Awareness, Exploration, Preparation and Training**

This standard outlines the importance of being knowledgeable about one's interests and talents, and being well informed about postsecondary and career options, career planning, and career requirements.

#### **Standard 9.4 Life Literacies and Key Skills**

This standard outline key literacies and technical skills such as critical thinking, global and cultural awareness, and technology literacy\* that are critical for students to develop to live and work in an interconnected global economy.

#### **Standard 8.1 Computer Science**

Computer Science outlines a comprehensive set of concepts and skills, such as data and analysis, algorithms and programming, and computing systems.

#### **Standard 8.2 Design Thinking**

Technology, outlines the technological design concepts and skills essential for technological and engineering literacy. The framework design includes Engineering Design, Ethics and Culture, and the Effects of Technology on the Natural world among the disciplinary concepts

**Amistad Law: N.J.S.A. 18A 52:16A-88** Every board of education shall incorporate the information regarding the contributions of African-Americans to our country in an appropriate place in the curriculum of elementary and secondary school students.

**Holocaust Law: N.J.S.A. 18A:35-28** Every board of education shall include instruction on the Holocaust and genocide in an appropriate place in the curriculum of all elementary and secondary school pupils. The instruction shall further emphasize the personal responsibility that each citizen bears to fight racism and hatred whenever and wherever it happens.

**LGBT and Disabilities Law: N.J.S.A. 18A:35-4.35** A board of education shall include instruction on the political, economic, and social contributions of persons with disabilities and lesbian, gay, bisexual, and transgender people, in an appropriate place in the curriculum of middle school and high school students as part of the district's implementation of the New Jersey Student Learning Standards (N.J.S.A. 18A:35-4.36) A board of education shall have policies and procedures in place pertaining to the selection of instructional materials to implement the requirements of N.J.S.A. 18A:35-4.35.

**Diversity and Inclusion: C.18A:35-4.36a** Curriculum to include instruction on diversity and inclusion.

The instruction shall:

- (1) highlight and promote diversity, including economic diversity, equity, inclusion, tolerance, and belonging in connection with gender and sexual orientation, race and ethnicity, disabilities, and religious tolerance;
- (2) examine the impact that unconscious bias and economic disparities have at both an individual level and on society as a whole; and
- (3) encourage safe, welcoming, and inclusive environments for all students regardless of race or ethnicity, sexual and gender identities, mental and physical disabilities, and religious beliefs.

#### **Asian Americans and Pacific Islanders (AAPI)**

Ensures that the contributions, history, and heritage of Asian Americans and Pacific Islanders (AAPI) are included in the New Jersey Student Learning Standards (NJSLs) for Social Studies in kindergarten through Grade 12 (P.L.2021, c.416).

#### **21st Century Themes and Skills**

“Twenty-first century themes and skills” means themes such as global awareness; financial, economic, business, and entrepreneurial literacy; civic literacy; health literacy; learning and innovation skills, including creativity and innovation, critical thinking and problem solving, and communication and collaboration; information, media, and technology skills; and life and career skills, including flexibility. Career readiness, life literacies, and key skills education provides students with the necessary skills to make informed career and financial decisions, engage as responsible community members in a digital society, and to successfully meet the challenges and opportunities in an interconnected global economy.”

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

**Unit 2 Focus Standards (Major Standards) [New Jersey Student Learning Standards-Mathematics](#)**

**8 Mathematical Practices**

- MP1 - Make sense of problems and persevere in solving them.
- MP2 - Reason abstractly and quantitatively.
- MP3 - Construct viable arguments and critique the reasoning of others.
- MP4 - Model with mathematics.
- MP5 - Use appropriate tools strategically.
- MP6 - Attend to precision.
- MP7 - Look for and make use of structure.
- MP8 - Look for and express regularity in repeated reasoning.

Content Standards with Statement	iReady Resource	Suggested Mathematical Practices <a href="#">Description of Mathematical Practices</a>	Critical Knowledge Concepts	Skills Objectives
6.EE.A.1. Write and evaluate numerical expressions involving whole-number exponents	5.1	MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8	Concepts: No New Concept(s) introduced	Students are able to: <ul style="list-style-type: none"> <li>➤ Write numerical expressions (involving whole number exponents) from verbal descriptions.</li> <li>➤ Evaluate numerical expressions involving whole number exponents.</li> </ul>
and $A = 6s^2$ to find the volume and surface area of a cube with sides of length $s = 1/2$	5.1 5.2 5.3 5.4 5.5	MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8	Concepts: No New Concept(s) introduced	Students are able to: <ul style="list-style-type: none"> <li>➤ Write algebraic expressions from verbal descriptions.</li> <li>➤ Use mathematical</li> </ul>

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

				<p>terms (sum, term, product, factor, quotient, coefficient) to identify the parts of an expression.</p> <ul style="list-style-type: none"> <li>➤ Evaluate algebraic expressions and formulas, including those involving exponents.</li> </ul>
<p><b>6.EE.A.3.</b> Apply the properties of operations to generate equivalent expressions. For example, apply the distributive property to the expression <math>3(2 + x)</math> to produce the equivalent expression <math>6 + 3x</math>; apply the distributive property to the expression <math>24x + 18y</math> to produce the equivalent expression <math>6(4x + 3y)</math>; apply properties of operations to <math>y + y + y</math> to produce the equivalent expression <math>3y</math></p> <p><b>6.EE.A.4.</b> Identify when two expressions are equivalent (i.e., when the two expressions name the same number regardless of which value is substituted into them). For example, the expressions <math>y + y + y</math> and <math>3y</math> are equivalent because they name the</p>	<p>5.3 5.4 5.5</p>	<p>MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8</p>	<p>Concept(s): Properties of operations: distributive property, combining like terms</p>	<p>Students are able to:</p> <ul style="list-style-type: none"> <li>➤ Combine like terms to generate an equivalent expression.</li> <li>➤ Factor to generate an equivalent expression.</li> <li>➤ Multiply (apply the distributive property) to generate an equivalent expression.</li> </ul>

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

same number regardless of which number y stands for				
<b>6.EE.B.6.</b> 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.	6.1 6.2 6.3 6.4 8.7 8.8	MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8	Concept(s): A variable can represent an unknown number or any number in a set of numbers	Students are able to: <ul style="list-style-type: none"> <li>➤ Write expressions for solving real-world problems.</li> </ul>
<b>6.EE.B.5.</b> 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.	6.1 6.2 6.3 8.7 8.8	MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8	Concepts: Solving an equation or inequality is a process of answering the question: determine which values from a specified set, if any, make the equation or inequality true	Students are able to: <ul style="list-style-type: none"> <li>➤ Substitute a number into an equation to determine whether it makes an equation true.</li> <li>➤ Substitute a number into an inequality to determine whether it makes the inequality true.</li> </ul>
<b>6.EE.B.7.</b> 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.	6.1 6.2 6.3 6.4	MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8	Concepts: An equation is defined by two expressions that are equivalent to one another	Students are able to: <ul style="list-style-type: none"> <li>➤ Solve real world problems by writing and solving equations of the form <math>x + p = q</math> (<math>p</math>, <math>q</math>, and <math>x</math> are non-negative and rational).</li> <li>➤ Solve real world</li> </ul>

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

				problems by writing and solving equations of the form $px = q$ ( $p$ , $q$ , and $x$ are non-negative and rational)
<b>6.EE.B.8.</b> 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 solutions; represent solutions of such inequalities on number line diagrams	8.7 8.8	MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8	Concept(s): An inequality may represent a constraint (or a condition) in a real-world problem  Infinity ( $x > c$ and $x < c$ have an infinite number of solutions)	Students are able to: <ul style="list-style-type: none"> <li>➤ Represent real-world constraints or conditions by writing an inequality of the form <math>x &gt; c</math> or <math>x &lt; c</math>.</li> <li>➤ Graph inequalities of the form <math>x &gt; c</math> or <math>x &lt; c</math> on number lines</li> </ul>
<b>6.NS.C.5.</b> Understand that positive and negative numbers are used together to describe quantities having opposite directions or values (e.g., 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	8.1 8.2 8.3 8.4 8.5 8.7 8.8	MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8	Concept(s): Positive and negative numbers, used together, describe quantities having opposite directions or opposite values	Students are able to: <ul style="list-style-type: none"> <li>➤ represent quantities with positive and negative numbers in real-world contexts.</li> <li>➤ Interpret positive and negative numbers in real-world contexts.</li> <li>➤ Explain the meaning of zero, in context, in each</li> </ul>

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

meaning of 0 in each situation				real-world situation.
<p><b>6.NS.C.6.</b> 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.</p> <p><b>6.NS.C.6a.</b> Recognize opposite signs of numbers as 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, e.g., <math>-(-3) = 3</math>, and that 0 is its own opposite.</p> <p><b>6.NS.C.6b.</b> 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.</p>	<p>8.1 8.2 8.3 8.4 8.5 8.6 8.7 8.8</p>	<p>MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8</p>	<p>Concept(s):</p> <p>Opposite signs of numbers indicate locations on opposite sides of 0 on the number line.</p> <p>The opposite of the opposite of a number is the number itself (e.g. the opposite of three is -3. The opposite of the opposite of three, <math>-(-3)</math>, is equal to the original number, 3).</p> <p>Signs of numbers in ordered pairs indicate their locations in quadrants of the coordinate plane.</p> <p>When two ordered pairs differ only by signs, the locations of</p>	<p>Students are able to:</p> <ul style="list-style-type: none"> <li>➤ Position rational numbers on horizontal and vertical number lines.</li> <li>➤ Position pairs of rational numbers on a coordinate plane.</li> <li>➤ Explain the conditions for which pairs of points are reflections across an axes in the coordinate plane.</li> <li>➤ Locate numbers and their opposites on the number line and explain their relation to 0.</li> </ul>

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

<p><b>6.NS.C.6c.</b> Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane</p>			<p>the points are related by reflections across one or both axes.</p>	
<p><b>6.NS.C.7.</b> Understand ordering and absolute value of rational numbers.</p> <p><b>6.NS.C.7a.</b> Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. For example, interpret <math>-3 &gt; -7</math> as a statement that <math>-3</math> is located to the right of <math>-7</math> on a number line oriented from left to right.</p> <p><b>6.NS.C.7b.</b> Write, interpret, and explain statements of order for rational numbers in real-world contexts. For example, write <math>-3 &gt; -7</math> to express the fact that <math>-3</math> is warmer than <math>-7</math>.</p>	<p>8.2 8.3 8.4 8.7 8.8</p>	<p>MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8</p>	<p>Concept(s): The absolute value of a rational number is its distance from 0 on the number line.</p>	<p>Students are able to:</p> <ul style="list-style-type: none"> <li>➤ Given an inequality, determine the position of one rational number relative to another.</li> <li>➤ Write an inequality and explain statements of order for rational numbers in real world situations.</li> </ul>

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

<p><b>6.NS.C.7c.</b> 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. For example, for an account balance of -30 dollars, write <math> -30  = 30</math> to describe the size of the debt in dollars.</p>				
<p><b>6.NS.C.8.</b> 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>6.4 8.5 8.6</p>	<p>MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8</p>	<p>Concepts: No new concept(s) introduced</p>	<p>Students are able to:</p> <ul style="list-style-type: none"> <li>➤ Graph points in all four quadrants of the coordinate plane in order to solve realworld and mathematical problems.</li> <li>➤ Draw polygons in the coordinate plane.</li> <li>➤ Use absolute value to find distances between points with the same first coordinate or the same second coordinate.</li> <li>➤ Use coordinates to solve real-world distance, perimeter, and area problems.</li> </ul>

**Unit 2 New Jersey Student Learning Standards: Interdisciplinary Connections [New Jersey Student Learning Standards-ELA](#)**

- **RI.CR.6.1. (NJLSA.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.
- **SL.PE.6.1. (SL.6.1)** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others’ ideas and expressing their own clearly.
- **L.KL.6.2. (NJLSA.L6)** 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.
- **W.AW.6.1. (NJLSA.W6)** Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others

**Unit 2 New Jersey Student Learning Standards: [Career Readiness, Life Literacies, and Key Skills](#)**

**Disciplinary Concepts**  
Credit and Debt Management  
Career Awareness and Planning  
Digital Citizenship  
Information and Media Literacy  
Technology Literacy

**Core Ideas**

**Performance Expectations (Identified with Standard Number and statement)**

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>➤ There are strategies to increase your savings and limit debt.</li> <li>➤ An individual's strengths, lifestyle goals, choices, and interests affect employment and income.</li> <li>➤ Early planning can provide more options to pay for post-secondary</li> </ul> | <ul style="list-style-type: none"> <li>➤ 9.1.8.CR.1: Compare and contrast the role of philanthropy, volunteer service, and charities in community development and the quality of life in a variety of cultures.</li> <li>➤ 9.1.8.CDM.1: Compare and contrast the use of credit cards and debit cards for specific purchases and the advantages and disadvantages of using each.</li> <li>➤ 9.1.8.CDM.2: Demonstrate an understanding of the terminology associated with different types of credits (e.g., credit cards, installment loans, mortgages, lines of credit) and compare and calculate the interest rates associated with each</li> <li>➤ 9.2.8.CAP.3: Explain how career choices, educational choices, skills, economic conditions, and personal behavior affect income.</li> <li>➤ 9.2.8.CAP.6: Compare the costs of postsecondary education with the potential increase in income from a career of choice.</li> </ul> |
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Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

<p>training and employment.</p> <ul style="list-style-type: none"> <li>➤ Some digital tools are appropriate for gathering, organizing, analyzing, and presenting information, while other types of digital tools are appropriate for creating text, visualizations, models, and communicating with others.</li> </ul>	<ul style="list-style-type: none"> <li>➤ 9.4.8.TL.1: Construct a spreadsheet in order to analyze multiple data sets, identify relationships, and facilitate data based decision making.</li> <li>➤ 9.48.TL.2: Gather data and digitally represent information to communicate a real world problem.</li> <li>➤ 9.48.TL.3: Select appropriate tools to organize and present information digitally.</li> </ul>
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**Unit 2 New Jersey Student Learning Standards: [Computer Science and Design Thinking](#)**

**Disciplinary Concepts**  
 Computing Systems  
 Data Analysis  
 Engineering Design

<b>Core Ideas</b>	<b>Performance Expectations (Identified with Standard Number and Statement)</b>
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<ul style="list-style-type: none"> <li>➤ The study of human-computer interaction can improve the design of devices and extend the abilities of humans</li> <li>➤ People use digital devices and tools to automate the collection, use, and transformation of data.</li> <li>➤ The manner in which data is collected and transformed is influenced by the type of digital device(s)</li> </ul>	<ul style="list-style-type: none"> <li>➤ 8.1.8.CS.1: Recommend improvements to computing devices in order to improve the ways users interact with devices</li> <li>➤ 8.1.8.DA.1: Organize and transform data collected using computational tools to make it usable for a specific purpose</li> <li>➤ 8.2.8.ED.2: Identify the steps in the design process that could be used to solve a problem</li> </ul>
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Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

<p>available and the intended use of the data.</p> <ul style="list-style-type: none"> <li>➤ Engineering design is a systematic, creative, and iterative process used to address local and global problems.</li> <li>➤ The process includes generating ideas, choosing the best solution, and making, testing, and redesigning models or prototypes.</li> </ul>	
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<b>New Jersey Student Learning Standards: <a href="#">Climate Change Mandate</a></b>	
<b>Core Ideas</b>	<b>Performance Expectations (Identified with Standard Number and Statement)</b>
<ul style="list-style-type: none"> <li>➤ Multiple solutions often exist to solve a problem.</li> </ul>	<ul style="list-style-type: none"> <li>➤ 9.4.8.CT.1: Evaluate diverse solutions proposed by a variety of individuals, organizations, and/or agencies to a local or global problem, such as climate change and use critical thinking skills to predict which one(s) are likely to be effective.</li> <li>➤ 9.4.8.CT.2: Develop multiple solutions to a problem and evaluate short- and long-term effects to determine the most plausible option (e.g., MS-ETS1-4, 6.1.8.CivicsDP.1).</li> </ul>

<b>Unit 2 Knowledge and Skills</b>
<p><b>Unit 2 Learning Targets (Objectives):</b> <i>Students will be able to...</i></p> <ul style="list-style-type: none"> <li>➤ Write and evaluate numerical expressions involving whole number exponents.</li> <li>➤ Use mathematical language to identify parts of an expression.</li> <li>➤ Write and evaluate algebraic expressions involving exponents (include evaluating formulas)</li> <li>➤ Apply properties of operations (factor, distribute, and combine like terms) to generate equivalent expressions and to identify when two expressions are equivalent.</li> </ul>

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

- Use variables to represent numbers and write expressions when solving real world or mathematical problems.
- Use substitution to determine whether a given number makes an equation or inequality true.
- Solve real world problems by writing and solving equations of the form  $x + p = q$  and  $px = q$  ( $p$ ,  $q$ , and  $x$  are non negative rational numbers)
- Use positive and negative numbers to represent quantities in real-world situations, explaining the meaning of zero in the context of the real-world situation.
- Locate rational numbers and their opposites on horizontal and vertical number line; explain their relation of the opposites to zero.
- Plot pairs of positive and negative rational numbers in the coordinate plane; describe two ordered pairs that differ only by signs as reflections across one or both axes.
- Use statements of inequality to determine relative positions of two rational numbers on a number line; write and explain statements of order for rational numbers in real world contexts.
- Explain the meaning of absolute value of a rational number as distance from zero on the number line and as magnitude for a positive or negative quantity in real world situations.
- Write an inequality of the form  $x > c$  or  $x < c$  to represent a constraint or condition in a real world or mathematical problem to represent them on a number line
- Solve real world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Use the absolute value of the differences of their coordinates to find distances between points with the same first coordinate or same second coordinate.

**Unit 2 Enduring Understandings:**

*Students will know...*

- Representing percentages of numbers through equations, ratio tables, or models.
- Finding percentages of numbers and determining the whole when given a part and a percent.
- Identifying and evaluating parts of algebraic expressions with one or more variables and operations.
- Writing numerical and algebraic expressions that represent real-life problems.
- The meaning of equivalent expressions and generating them using properties of addition and multiplication.
- Applying the Distributive Property to simplify and factor numerical and algebraic expressions.
- Identifying the greatest common factor (GCF) of terms including variables.
- Interpreting factored expressions in real-world contexts.
- Recognizing key words and phrases indicating equality and writing word sentences as equations.
- Creating and solving equations representing real-life problems using addition, subtraction, multiplication, or division.
- Determining if a value or ordered pair is a solution to an equation.
- Distinguishing between independent and dependent variables and writing and graphing equations in two variables.
- Writing integers to represent real-life quantities and graphing them on a number line.

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

- Finding opposites, ordering integers and rational numbers, and using absolute value in problem-solving.
- Identifying and plotting ordered pairs in all four quadrants of the coordinate plane, including reflections across axes.
- Drawing polygons, finding side lengths, and solving problems using coordinate geometry.
- Writing, solving, and graphing inequalities, including those representing real-life scenarios, using algebraic properties and number lines.

**Unit 2 Essential Questions:**

- In what ways can expressions be written and evaluated to represent real-life situations?
- How can unknown quantities be represented using algebraic expressions?
- Does the order of operations affect the result of a calculation?
- What mental math strategies can be used to multiply numbers efficiently?
- How can numbers less than zero be represented and compared?
- How can number lines be used to order and compare integers, fractions, and decimals in real life?
- How can a number line describe distances, such as how far an object is from sea level?
- How can points with negative coordinates be graphed and located on a coordinate plane?
- How does rewriting a word problem improve understanding and solving?
- How can addition or subtraction be used to solve an equation?
- How can multiplication or division be used to solve an equation?
- How can an equation in two variables be written and interpreted?
- How can solutions of inequalities be represented and solved using number lines and algebraic operations?
- How can addition, subtraction, multiplication, or division be used to solve inequalities?

**Instructional Plan**  
**Brief Narrative of the Progression of the Unit with Suggested Activities**

**Suggested Activities**

- Guided Notes
- iReady Interactive Platform
- Task Cards
- Scavenger Hunts
- Videos
- Gallery Walks
- Games
- Whiteboard Practice
- Record and Practice Journal

**Resources**

- iReady Math
- Nearpod
- EdPuzzle
- Desmos
- IXL
- Kahoot
- Blooket
- Linkit
- NJSLA Digital Library of Released Items

**Evidence of Student Learning**

**Formative Assessments:**

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

- Observation
- Do-Now/ Quick Check
- Homework
- Notebook/journal
- Class participation
- Whiteboards
- Record and Practice Journals
- Exit passes
- Online platforms: Quizizz, Kahoot!, Quizlet, Quizalize
- IXL

**Summative Assessments:**

- Chapter Tests
- Quizzes
- Presentations
- Projects
- Final Exams
- National/State/District Wide Assessments

**Benchmark Assessments:**

- SGO Assessments
- Common Unit Assessments
- Linkit Benchmarks A<B<C

**Alternative Assessments:**

- Portfolio
- Project

**Performance Tasks:** (When appropriate) This type of task demonstrates students transfer of learning and application to a performance task. Think about what you want the students to be able to do at the end of the unit.

- iReady Resources - there are performance tasks for multiple standards
- Example Performance Assessment Tasks

**Suggested Options for Differentiation and Modifications**

**Special Education**

- Follow all IEP modifications.
- Use scaffolds, leveled texts, and differentiated assignments.
- Provide visuals, graphic organizers, and outlines.
- Pre-teach and review vocabulary/concepts.
- Offer summaries, study guides, and note-taking supports.
- Use small-group or one-on-one instruction as needed.
- Provide peer tutoring or partner support.
- Allow preferential seating.

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

- Give extra time on tests and assignments.
  - Accept oral or dictated responses.
  - Modify workload or number of questions when appropriate.
  - Provide large-print, Braille, or digital text with audio tools.
  - Allow access to scribes or communication devices.
  - Use interactive/multimedia content to reinforce skills.
- 

### **Students with 504 Plans**

- Follow the 504 plan.
  - Provide extended time for assignments/tests.
  - Offer small-group or quiet testing settings.
  - Accept oral or dictated responses.
  - Provide large-print, Braille, or digital text with assistive technology.
  - Allow use of scribes or communication devices.
- 

### **Students at Risk of School Failure**

- Use visuals, outlines, and step-by-step directions.
  - Pre-teach key vocabulary and provide real-world connections.
  - Offer small-group instruction and frequent check-ins.
  - Model problem-solving processes and think-alouds.
  - Assign peer support when appropriate.
  - Provide preferential seating and structured routines.
  - Break down multi-step tasks into smaller parts.
  - Provide feedback in manageable, frequent intervals.
- 

### **Gifted and Talented**

- Ask open-ended and higher-order questions (analyze, evaluate, create).
  - Provide opportunities for discovery and independent research.
  - Offer interest-based extensions and advanced texts.
  - Use flexible grouping for enrichment projects.
  - Provide choice in assignments and assessments.
  - Incorporate simulations, debates, and project-based learning.
  - Encourage cross-curricular connections and problem-solving challenges.
  - Provide opportunities for reflection and presentation.
- 

### **Multilingual Learners**

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

- Collaborate with ESL/MLL specialists.
  - Provide small-group instruction with language scaffolds.
  - Pre-teach and revisit vocabulary using visuals and cognates.
  - Use sentence frames, discussion stems, and guided writing supports.
  - Allow oral responses and extended time.
  - Provide bilingual glossaries and labeled visuals.
  - Use digital supports (translation tools, audio text, captioning).
  - Scaffold academic conversations with structured partner/group activities.
- 

### Diversity and Inclusion

- Respect and integrate cultural traditions and perspectives.
- Provide alternative assignment formats when needed.
- Use visuals, outlines, and clear academic language.
- Avoid slang and idioms; speak at an appropriate pace.
- Collaborate with cultural liaisons, language specialists, and support staff.
- Foster an inclusive classroom climate with routines and positive relationships.
- Build strong school-family connections.

### Supplemental Resources

- Instructional Materials
  - Guided Notes
  - iReady Interactive Platform
  - Record and Practice Journal
- Supplemental Materials
  - Task Cards
  - Scavenger Hunts
  - Gallery Walks
  - Interactive Google Activities
  - Desmos
- Intervention Materials
  - IXL
  - Videos
  - Translated Material
  - Linkit

### Social and Emotional Learning - New Jersey SEL

Competencies and Sub-Competencies Social and emotional learning (SEL) involves the process through which children and adults acquire and apply the knowledge, attitudes and skills

necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions. The purpose of the SEL competencies is to provide schools with guidelines for integrating SEL across grades and subject areas.

### **Self-Awareness**

- Recognize one's feelings and thoughts
- Recognize the impact of one's feelings and thoughts on one's own behavior
- Recognize one's personal traits, strengths and limitations
- Recognize the importance of self-confidence in handling daily tasks and challenges

### **Self-Management**

- Understand and practice strategies for managing one's own emotions, thoughts and behaviors
- Recognize the skills needed to establish and achieve personal and educational goals
- Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals

### **Social Awareness**

- Recognize and identify the thoughts, feelings and perspectives of others
- Demonstrate awareness of the differences among individuals, groups and others' cultural backgrounds
- Demonstrate an understanding of the need for mutual respect when viewpoints differ
- Demonstrate an awareness of the expectations for social interactions in a variety of settings

### **Responsible Decision-Making**

- Develop, implement and model effective problem solving and critical thinking skills
- Identify the consequences associated with one's actions in order to make constructive choices
- Evaluate personal, ethical, safety and civic impact of decisions

### **Relationship Skills**

- Establish and maintain healthy relationships
- Utilize positive communication and social skills to interact effectively with others
- Identify ways to resist inappropriate social pressure
- Demonstrate the ability to prevent and resolve interpersonal conflicts in constructive ways
- Identify who, when, where, or how to seek help for oneself or others when needed

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**OCEAN ACADEMY CHARTER SCHOOL**  
**Unit 3 Overview**

**Content Area:** Mathematics

**Unit 3 Title:** 2D and 3D Geometry

**Duration:** 20 Days

**Target Course/Grade Level:** 6th Grade Mathematics

**Introduction/Unit 3 Focus:**

In this unit, students will develop a deep understanding of geometric measurement by exploring concepts of area, surface area, and volume. They will learn to solve real-world and mathematical problems involving two-dimensional and three-dimensional shapes. Emphasis will be placed on connecting formulas and strategies to practical applications, enabling students to measure and calculate:

- Area – determining the amount of space inside various flat shapes such as rectangles, triangles, and composite figures.
- Surface Area – finding the total area covering the surfaces of three-dimensional solids like prisms, cylinders, and pyramids.
- Volume – calculating the amount of space inside three-dimensional objects, including cubes, rectangular prisms, and cylinders.

Students will use a variety of problem-solving strategies to apply these concepts in real-life contexts, such as packaging, construction, and design challenges. They will also build fluency with relevant formulas, use visual models, and interpret results to deepen their mathematical reasoning and spatial awareness.

**Disciplinary Concepts for the Unit**

**Standard 9.1 Personal Financial Literacy**

This standard outlines the important fiscal knowledge, habits, and skills that must be mastered in order for students to make informed decisions about personal finance. Financial literacy is an integral component of a student's college and career readiness, enabling students to achieve fulfilling, financially-secure, and successful careers.

**Standard 9.2 Career Awareness, Exploration, Preparation and Training**

This standard outlines the importance of being knowledgeable about one's interests and talents, and being well informed about postsecondary and career options, career planning, and career requirements.

**Standard 9.4 Life Literacies and Key Skills**

This standard outline key literacies and technical skills such as critical thinking, global and cultural awareness, and technology literacy\* that are critical for students to develop to live and work in an interconnected global economy.

#### Standard 8.1 Computer Science

Computer Science outlines a comprehensive set of concepts and skills, such as data and analysis, algorithms and programming, and computing systems.

#### Standard 8.2 Design Thinking

Technology, outlines the technological design concepts and skills essential for technological and engineering literacy. The framework design includes Engineering Design, Ethics and Culture, and the Effects of Technology on the Natural world among the disciplinary concepts

**Amistad Law: N.J.S.A. 18A 52:16A-88** Every board of education shall incorporate the information regarding the contributions of African-Americans to our country in an appropriate place in the curriculum of elementary and secondary school students.

**Holocaust Law: N.J.S.A. 18A:35-28** Every board of education shall include instruction on the Holocaust and genocide in an appropriate place in the curriculum of all elementary and secondary school pupils. The instruction shall further emphasize the personal responsibility that each citizen bears to fight racism and hatred whenever and wherever it happens.

**LGBT and Disabilities Law: N.J.S.A. 18A:35-4.35** A board of education shall include instruction on the political, economic, and social contributions of persons with disabilities and lesbian, gay, bisexual, and transgender people, in an appropriate place in the curriculum of middle school and high school students as part of the district's implementation of the New Jersey Student Learning Standards (N.J.S.A.18A:35-4.36) A board of education shall have policies and procedures in place pertaining to the selection of instructional materials to implement the requirements of N.J.S.A. 18A:35-4.35.

**Diversity and Inclusion: C.18A:35-4.36a** Curriculum to include instruction on diversity and inclusion.

The instruction shall:

- (1) highlight and promote diversity, including economic diversity, equity, inclusion, tolerance, and belonging in connection with gender and sexual orientation, race and ethnicity, disabilities, and religious tolerance;
- (2) examine the impact that unconscious bias and economic disparities have at both an individual level and on society as a whole; and
- (3) encourage safe, welcoming, and inclusive environments for all students regardless of race or ethnicity, sexual and gender identities, mental and physical disabilities, and religious beliefs.

#### **Asian Americans and Pacific Islanders (AAPI)**

Ensures that the contributions, history, and heritage of Asian Americans and Pacific Islanders

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

(AAPI) are included in the New Jersey Student Learning Standards (NJSLS) for Social Studies in kindergarten through Grade 12 (P.L.2021, c.416).

**21st Century Themes and Skills**

“Twenty-first century themes and skills” means themes such as global awareness; financial, economic, business, and entrepreneurial literacy; civic literacy; health literacy; learning and innovation skills, including creativity and innovation, critical thinking and problem solving, and communication and collaboration; information, media, and technology skills; and life and career skills, including flexibility. Career readiness, life literacies, and key skills education provides students with the necessary skills to make informed career and financial decisions, engage as responsible community members in a digital society, and to successfully meet the challenges and opportunities in an interconnected global economy.”

**Unit 3 Focus Standards (Major Standards) [New Jersey Student Learning Standards-Mathematics](#)**

**8 Mathematical Practices**

- **MP1 - Make sense of problems and persevere in solving them.**
- **MP2 - Reason abstractly and quantitatively.**
- **MP3 - Construct viable arguments and critique the reasoning of others.**
- **MP4 - Model with mathematics.**
- **MP5 - Use appropriate tools strategically.**
- **MP6 - Attend to precision.**
- **MP7 - Look for and make use of structure.**
- **MP8 - Look for and express regularity in repeated reasoning**

Content Standards with Statement	iReady Resource	Suggested Mathematical Practices <u>Description of Mathematical Practices</u>	Critical Knowledge Concepts	Skills Objectives
<b>6.G.A.1.</b> Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving	7.1 7.2 7.3 7.5 7.6	MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8	Concepts: No New Concept(s) introduced	Students are able to: <ul style="list-style-type: none"> <li>➤ Compose rectangles in order to find the area of triangles, special quadrilaterals and polygons.</li> <li>➤ Decompose</li> </ul>

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

<p>real-world and mathematical problems</p>				<p>triangles, special quadrilaterals , and polygons into triangles and other shapes in order to find their area.</p> <ul style="list-style-type: none"> <li>➤ Compose rectangles and decompose into triangles in order to solve real-world problems</li> </ul>
<p><b>6.G.A.3.</b> Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.</p>	<p style="text-align: center;">8.6</p>	<p>MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8</p>	<p>Concepts: No New Concept(s) introduced</p>	<p>Students are able to:</p> <ul style="list-style-type: none"> <li>➤ Draw polygons in the coordinate plane.</li> <li>➤ Use absolute value to find distances between points with the same first coordinate or the same second coordinate.</li> <li>➤ Use coordinates to solve real-world distance, perimeter, and area</li> </ul>

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

				problems.
<p><b>6.G.A.2.</b> 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 <math>V = l w h</math> and <math>V = B h</math> to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.</p>	7.7	MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8	Concepts: No New Concept(s) introduced	<p>Students are able to:</p> <ul style="list-style-type: none"> <li>➤ Pack a right rectangular prism with fractional edge lengths with unit fraction cubes.</li> <li>➤ Show that the volume found by packing is the same as would be found by multiplying the edge lengths of the prism.</li> <li>➤ Apply volume formulas, <math>V = l w h</math> and <math>V = b h</math>, to right rectangular prisms with fractional edge lengths.</li> </ul>
<p><b>6.G.A.4.</b> Represent three-dimensional figures (e.g., pyramid, triangular prism, rectangular prism) using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.</p>	7.5 7.6	MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8	Concepts: No New Concept(s) introduced	<p>Students are able to:</p> <ul style="list-style-type: none"> <li>➤ Represent three dimensional objects with nets made up of rectangles and triangles.</li> <li>➤ Find surface area of three-dimensional objects using nets.</li> <li>➤ Solve real world and mathematical</li> </ul>

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

				problems involving surface area using nets.
<b>Unit 3 New Jersey Student Learning Standards: Interdisciplinary Connections <a href="#">New Jersey Student Learning Standards-ELA</a></b>				
<ul style="list-style-type: none"> <li>➤ <b>RI.CR.6.1. (NJLSA.R1).</b> 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.</li> <li>➤ <b>SL.PE.6.1. (SL.6.1)</b> Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.</li> <li>➤ <b>L.KL.6.2. (NJLSA.L6)</b> 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.</li> <li>➤ <b>W.AW.6.1. (NJLSA.W6)</b> Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others</li> </ul>				
<b>Unit 3 New Jersey Student Learning Standards: <a href="#">Career Readiness, Life Literacies, and Key Skills</a></b>				
<b>Disciplinary Concepts</b> Career Awareness and Planning Digital Citizenship Information and Media Literacy Technology Literacy				
<b>Core Ideas</b>		<b>Performance Expectations (Identified with Standard Number and statement)</b>		
<ul style="list-style-type: none"> <li>➤ Philanthropic and charitable organizations play important roles in supporting the interest of individuals and local and global communities and the issues that affect them.</li> </ul>		<ul style="list-style-type: none"> <li>➤ 9.1.8.CR.1: Compare and contrast the role of philanthropy, volunteer service, and charities in community development and the quality of life in a variety of cultures.</li> <li>➤ 9.2.8.CAP.3: Explain how career choices, educational choices, skills, economic conditions, and personal behavior affect income.</li> <li>➤ 9.2.8.CAP.6: Compare the costs of postsecondary education with the potential increase in income from a career of choice.</li> <li>➤ 9.4.8.TL.1: Construct a spreadsheet in order to analyze multiple data sets, identify relationships, and facilitate data based decision making.</li> </ul>		

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

<ul style="list-style-type: none"> <li>➤ An individual’s strengths, lifestyle goals, choices, and interest affect employment and income</li> <li>➤ Early planning can provide more options to pay for post secondary training and employment.</li> <li>➤ Some digital tools are appropriate for gathering, organizing, analyzing, and presenting information, while other types of digital tools are appropriate for creating text, visualizations, models, and communicating with others.</li> </ul>	<ul style="list-style-type: none"> <li>➤ 9.48.TL.2: Gather data and digitally represent information to communicate a real world problem.</li> <li>➤ 9.48.TL.3: Select appropriate tools to organize and present information digitally.</li> </ul>
<p><b>Unit 3 New Jersey Student Learning Standards: <a href="#">Computer Science and Design Thinking</a></b></p>	
<p><b>Disciplinary Concepts</b>  <a href="#">Computing Systems</a>  <a href="#">Data Analysis</a>  <a href="#">Engineering Design</a></p>	
<p><b>Core Ideas</b></p>	<p><b>Performance Expectations (Identified with Standard Number and Statement)</b></p>
<ul style="list-style-type: none"> <li>➤ The study of human-computer interaction can improve the design of devices and extend the</li> </ul>	<ul style="list-style-type: none"> <li>➤ 8.1.8.CS.1: Recommend improvements to computing devices in order to improve the ways users interact with devices</li> <li>➤ 8.1.8.DA.1: Organize and transform data collected using computational tools to make it usable for a specific purpose</li> <li>➤ 8.2.8.ED.2: Identify the steps in the design process that could be used to solve a problem</li> </ul>

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

<p>abilities of humans</p> <ul style="list-style-type: none"> <li>➤ People use digital devices and tools to automate the collection, use, and transformation of data.</li> <li>➤ The manner in which data is collected and transformed is influenced by the type of digital device(s) available and the intended use of the data.</li> <li>➤ Engineering design is a systematic, creative, and iterative process used to address local and global problems.</li> <li>➤ The process includes generating ideas, choosing the best solution, and making, testing, and redesigning models or prototypes.</li> </ul>	
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<b>New Jersey Student Learning Standards: <a href="#">Climate Change Mandate</a></b>	
<b>Core Ideas</b>	<b>Performance Expectations (Identified with Standard Number and Statement)</b>

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

<p>Multiple solutions often exist to solve a problem.</p>	<ul style="list-style-type: none"><li>➤ 9.4.8.CT.1: Evaluate diverse solutions proposed by a variety of individuals, organizations, and/or agencies to a local or global problem, such as climate change and use critical thinking skills to predict which one(s) are likely to be effective.</li><li>➤ 9.4.8.CT.2: Develop multiple solutions to a problem and evaluate short- and long-term effects to determine the most plausible option (e.g., MS-ETS1-4, 6.1.8.CivicsDP.1).</li></ul>
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**Unit 3 Knowledge and Skills**

**Unit 3 Learning Targets (Objectives):**

*Students will be able to...*

- Find the volume of right rectangular prisms with fractional edge lengths by modeling with unit cubes and verify that the volume equals the product of the edge lengths.
- Apply volume formulas to calculate the volume of right rectangular prisms with fractional edge lengths.
- Represent three-dimensional figures using nets composed of rectangles and triangles.
- Use nets to calculate the surface area of three-dimensional figures to solve real-world and mathematical problems.
- Solve problems by graphing points in all four quadrants of the coordinate plane.
- Calculate distances between points that share the same x-coordinate or y-coordinate by using the absolute value of the difference in their coordinates.
- Find the area of right triangles, other triangles, special quadrilaterals, and polygons by decomposing shapes into triangles and rectangles or composing shapes into rectangles.
- Apply area strategies to solve real-world and mathematical problems involving various polygons.

**Unit 3 Enduring Understandings:**

*Students will know...*

- Explain how the area formula for a rectangle relates to finding the area of a parallelogram.
- Use the base and height to calculate the area of a parallelogram.
- Determine an unknown dimension of a parallelogram given its area and one dimension.
- Explain the relationship between the area of a parallelogram and the area of a triangle.
- Use the base and height to calculate the area of a triangle.
- Find an unknown dimension of a triangle when given its area and one dimension.
- Use decomposition strategies to find the area of complex figures by breaking them into simpler shapes.
- Explain how the area formula for a parallelogram helps in finding the area of a trapezoid.
- Decompose trapezoids and kites into smaller shapes to calculate area.
- Use the bases and height to find the area of a trapezoid.

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

- Identify and count the number of faces, edges, and vertices in three-dimensional figures.
- Draw prisms and pyramids accurately.
- Sketch front, side, and top views of three-dimensional figures.
- Create nets to represent prisms and use them to find surface area.
- Apply formulas to find the surface area of cubes and prisms and solve related real-life problems.
- Create nets for pyramids and use them to calculate surface area.
- Use formulas and nets to find the surface area of pyramids and apply this knowledge to real-world problems.
- Use formulas to calculate the volume of rectangular prisms and cubes.
- Find an unknown dimension of a rectangular prism when given volume and two dimensions.
- Apply volume formulas to solve real-life problems involving rectangular prisms.

**Unit 3 Essential Questions:**

- How can the formula for the area of a parallelogram be derived?
- How can the formula for the area of a triangle be derived?
- How can the formula for the area of a trapezoid be derived?
- How can you determine the lengths of line segments in the coordinate plane?
- What strategies help in drawing accurate three-dimensional figures?
- How can you find the total surface area of a prism?
- How can nets be used to find the surface area of a pyramid?
- How do you calculate the volume of a rectangular prism with fractional edge lengths?

**Instructional Plan**  
**Brief Narrative of the Progression of the Unit with Suggested Activities**

**Suggested Activities**

- Guided Notes
- iReady Interactive Platform
- Task Cards
- Scavenger Hunts
- Videos
- Gallery Walks
- Games
- Whiteboard Practice
- Record and Practice Journal

**Resources**

- iReady Math
- Nearpod
- EdPuzzle
- Desmos
- IXL
- Kahoot
- Blooket
- Linkit
- NJSLA Digital Library of Released Items

**Evidence of Student Learning**

**Formative Assessments:**

- Observation
- Do-Now/ Quick Check

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Curriculum Guide  
Grade 6 - Mathematics

- Homework
- Notebook/journal
- Class participation
- Whiteboards
- Record and Practice Journals
- Exit passes
- Online platforms: Quizizz, Kahoot!, Quizlet, Quizalize
- IXL

**Summative Assessments:**

- Chapter Tests
- Quizzes
- Presentations
- Projects
- Final Exams
- National/State/District Wide Assessments

**Benchmark Assessments:**

- SGO Assessments
- Common Unit Assessments
- Linkit Benchmarks A<B<C

**Alternative Assessments:**

- Portfolio
- Project

**Performance Tasks:** (When appropriate) This type of task demonstrates students transfer of learning and application to a performance task. Think about what you want the students to be able to do at the end of the unit.

- iReady Resources - there are performance tasks for multiple standards
- Example Performance Assessment Tasks

**Suggested Options for Differentiation and Modifications**

**Special Education**

- Follow all IEP modifications.
- Use scaffolds, leveled texts, and differentiated assignments.
- Provide visuals, graphic organizers, and outlines.
- Pre-teach and review vocabulary/concepts.
- Offer summaries, study guides, and note-taking supports.
- Use small-group or one-on-one instruction as needed.
- Provide peer tutoring or partner support.
- Allow preferential seating.
- Give extra time on tests and assignments.
- Accept oral or dictated responses.

**Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics**

- Modify workload or number of questions when appropriate.
  - Provide large-print, Braille, or digital text with audio tools.
  - Allow access to scribes or communication devices.
  - Use interactive/multimedia content to reinforce skills.
- 

**Students with 504 Plans**

- Follow the 504 plan.
  - Provide extended time for assignments/tests.
  - Offer small-group or quiet testing settings.
  - Accept oral or dictated responses.
  - Provide large-print, Braille, or digital text with assistive technology.
  - Allow use of scribes or communication devices.
- 

**Students at Risk of School Failure**

- Use visuals, outlines, and step-by-step directions.
  - Pre-teach key vocabulary and provide real-world connections.
  - Offer small-group instruction and frequent check-ins.
  - Model problem-solving processes and think-alouds.
  - Assign peer support when appropriate.
  - Provide preferential seating and structured routines.
  - Break down multi-step tasks into smaller parts.
  - Provide feedback in manageable, frequent intervals.
- 

**Gifted and Talented**

- Ask open-ended and higher-order questions (analyze, evaluate, create).
  - Provide opportunities for discovery and independent research.
  - Offer interest-based extensions and advanced texts.
  - Use flexible grouping for enrichment projects.
  - Provide choice in assignments and assessments.
  - Incorporate simulations, debates, and project-based learning.
  - Encourage cross-curricular connections and problem-solving challenges.
  - Provide opportunities for reflection and presentation.
- 

**Multilingual Learners**

- Collaborate with ESL/MLL specialists.

**Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics**

- Provide small-group instruction with language scaffolds.
  - Pre-teach and revisit vocabulary using visuals and cognates.
  - Use sentence frames, discussion stems, and guided writing supports.
  - Allow oral responses and extended time.
  - Provide bilingual glossaries and labeled visuals.
  - Use digital supports (translation tools, audio text, captioning).
  - Scaffold academic conversations with structured partner/group activities.
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**Diversity and Inclusion**

- Respect and integrate cultural traditions and perspectives.
- Provide alternative assignment formats when needed.
- Use visuals, outlines, and clear academic language.
- Avoid slang and idioms; speak at an appropriate pace.
- Collaborate with cultural liaisons, language specialists, and support staff.
- Foster an inclusive classroom climate with routines and positive relationships.
- Build strong school-family connections.

**Supplemental Resources**

- Instructional Materials
  - Guided Notes
  - iReady Interactive Platform
  - Record and Practice Journal
- Supplemental Materials
  - Task Cards
  - Scavenger Hunts
  - Gallery Walks
  - Interactive Google Activities
  - Desmos
- Intervention Materials
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  - Videos
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  - Linkit

**Social and Emotional Learning - New Jersey SEL**

Competencies and Sub-Competencies Social and emotional learning (SEL) involves the process through which children and adults acquire and apply the knowledge, attitudes and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show

empathy for others, establish and maintain positive relationships, and make responsible decisions. The purpose of the SEL competencies is to provide schools with guidelines for integrating SEL across grades and subject areas.

### **Self-Awareness**

- Recognize one's feelings and thoughts
- Recognize the impact of one's feelings and thoughts on one's own behavior
- Recognize one's personal traits, strengths and limitations
- Recognize the importance of self-confidence in handling daily tasks and challenges

### **Self-Management**

- Understand and practice strategies for managing one's own emotions, thoughts and behaviors
- Recognize the skills needed to establish and achieve personal and educational goals
- Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals

### **Social Awareness**

- Recognize and identify the thoughts, feelings and perspectives of others
- Demonstrate awareness of the differences among individuals, groups and others' cultural backgrounds
- Demonstrate an understanding of the need for mutual respect when viewpoints differ
- Demonstrate an awareness of the expectations for social interactions in a variety of settings

### **Responsible Decision-Making**

- Develop, implement and model effective problem solving and critical thinking skills
- Identify the consequences associated with one's actions in order to make constructive choices
- Evaluate personal, ethical, safety and civic impact of decisions

### **Relationship Skills**

- Establish and maintain healthy relationships
- Utilize positive communication and social skills to interact effectively with others
- Identify ways to resist inappropriate social pressure
- Demonstrate the ability to prevent and resolve interpersonal conflicts in constructive ways
- Identify who, when, where, or how to seek help for oneself or others when needed

## **Unit 3 Teacher Notes**

OCEAN ACADEMY CHARTER SCHOOL  
Unit 4 Overview

**Content Area:** Mathematics

**Unit 4 Title:** Variability, Distributions, and Relationship Between Quantities

**Duration:** 30 Days

**Target Course/Grade Level:** 6th Grade Mathematics

**Introduction/Unit Focus:**

This unit centers on developing students' ability to represent and analyze quantitative relationships, deepen their understanding of data variability, and extend their number sense to include rational numbers. Students will explore how dependent and independent variables interact in various contexts, using graphs and equations to model these relationships accurately.

Key components of the unit include:

- **Representing and analyzing relationships:**  
Students will learn to identify dependent and independent variables, analyze how changes in one affect the other, and use mathematical tools to represent these relationships accurately.
- **Developing statistical reasoning:**  
Students will gain an understanding of statistical variability by collecting, summarizing, and describing data distributions. They will learn to interpret measures of central tendency and spread to make informed conclusions about data sets.
- **Ratio and proportional reasoning:**  
Building on prior knowledge, students will deepen their understanding of ratios and use ratio reasoning to solve real-world and mathematical problems involving proportional relationships.
- **Extending number concepts to rational numbers:**  
Students will extend their understanding of whole numbers and fractions to include all rational numbers. They will work with positive and negative numbers, decimals, and fractions, developing fluency in operations and reasoning within this expanded number system.

Throughout this unit, students will engage in problem-solving tasks that integrate these concepts, fostering critical thinking and application skills essential for higher-level mathematics and everyday reasoning.

**Disciplinary Concepts for the Unit**

#### Standard 9.1 Personal Financial Literacy

This standard outlines the important fiscal knowledge, habits, and skills that must be mastered in order for students to make informed decisions about personal finance. Financial literacy is an integral component of a student's college and career readiness, enabling students to achieve fulfilling, financially-secure, and successful careers.

#### Standard 9.2 Career Awareness, Exploration, Preparation and Training

This standard outlines the importance of being knowledgeable about one's interests and talents, and being well informed about postsecondary and career options, career planning, and career requirements.

#### Standard 9.4 Life Literacies and Key Skills

This standard outline key literacies and technical skills such as critical thinking, global and cultural awareness, and technology literacy\* that are critical for students to develop to live and work in an interconnected global economy.

#### Standard 8.1 Computer Science

Computer Science outlines a comprehensive set of concepts and skills, such as data and analysis, algorithms and programming, and computing systems.

#### Standard 8.2 Design Thinking

Technology, outlines the technological design concepts and skills essential for technological and engineering literacy. The framework design includes Engineering Design, Ethics and Culture, and the Effects of Technology on the Natural world among the disciplinary concepts

**Amistad Law: N.J.S.A. 18A 52:16A-88** Every board of education shall incorporate the information regarding the contributions of African-Americans to our country in an appropriate place in the curriculum of elementary and secondary school students.

**Holocaust Law: N.J.S.A. 18A:35-28** Every board of education shall include instruction on the Holocaust and genocide in an appropriate place in the curriculum of all elementary and secondary school pupils. The instruction shall further emphasize the personal responsibility that each citizen bears to fight racism and hatred whenever and wherever it happens.

**LGBT and Disabilities Law: N.J.S.A. 18A:35-4.35** A board of education shall include instruction on the political, economic, and social contributions of persons with disabilities and lesbian, gay, bisexual, and transgender people, in an appropriate place in the curriculum of middle school and high school students as part of the district's implementation of the New Jersey Student Learning Standards (N.J.S.A.18A:35-4.36) A board of education shall have policies and procedures in place pertaining to the selection of instructional materials to implement the requirements of N.J.S.A. 18A:35-4.35.

**Diversity and Inclusion: C.18A:35-4.36a** Curriculum to include instruction on diversity and

inclusion.

The instruction shall:

- (1) highlight and promote diversity, including economic diversity, equity, inclusion, tolerance, and belonging in connection with gender and sexual orientation, race and ethnicity, disabilities, and religious tolerance;
- (2) examine the impact that unconscious bias and economic disparities have at both an individual level and on society as a whole; and
- (3) encourage safe, welcoming, and inclusive environments for all students regardless of race or ethnicity, sexual and gender identities, mental and physical disabilities, and religious beliefs.

**Asian Americans and Pacific Islanders (AAPI)**

Ensures that the contributions, history, and heritage of Asian Americans and Pacific Islanders (AAPI) are included in the New Jersey Student Learning Standards (NJSL) for Social Studies in kindergarten through Grade 12 (P.L.2021, c.416).

**21st Century Themes and Skills**

“Twenty-first century themes and skills” means themes such as global awareness; financial, economic, business, and entrepreneurial literacy; civic literacy; health literacy; learning and innovation skills, including creativity and innovation, critical thinking and problem solving, and communication and collaboration; information, media, and technology skills; and life and career skills, including flexibility. Career readiness, life literacies, and key skills education provides students with the necessary skills to make informed career and financial decisions, engage as responsible community members in a digital society, and to successfully meet the challenges and opportunities in an interconnected global economy.”

**Unit 4 Focus Standards (Major Standards) [New Jersey Student Learning Standards-Mathematics](#)**

Content Standards with Statement	iReady Resource	Suggested Mathematical Practices <u>Description of Mathematical Practices</u>	Critical Knowledge Concepts	Skills Objectives
6.EE.C.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,	6.4	MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8	Concept(s): Two quantities that change in relationship to one another may be represented with an equation in	Students are able to: ➤ Represent two quantities that are related to one another,

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

<p>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. For example, in a problem involving motion at constant speed, list and graph ordered pairs of distances and times, and write the equation <math>d = 65t</math> to represent the relationship between distance and time.</p>			<p>two variables, with a graph, and with a table of values</p>	<p>with variables.</p> <ul style="list-style-type: none"> <li>➤ Write an equation in two variables.</li> <li>➤ Distinguish the dependent variable from the independent variable.</li> <li>➤ Analyze a given graph and table of values, and relate them to the equation.</li> </ul>
<p><b>6.SP.A.1.</b> Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. 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>	<p>9.1 9.2 9.3 10.1 10.4</p>	<p>MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8</p>	<p>Concept(s): Variability/Variation</p> <p>A statistical question is one that anticipates variability in the data that is related to the question</p>	<p>Students are able to:</p> <ul style="list-style-type: none"> <li>➤ Distinguish questions that are statistical (anticipate variability in data) from those that are not.</li> </ul>
<p><b>6.SP.A.2.</b> Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center,</p>	<p>9.1 9.2 9.3 9.4 9.5 10.1</p>	<p>MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8</p>	<p>Concept(s): A data set has a distribution which can be described by its center,</p>	<p>Students are able to:</p> <ul style="list-style-type: none"> <li>➤ Distinguish center from variation.</li> <li>➤ Display</li> </ul>

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

spread, and overall shape.	10.3 10.4 10.5		<p>spread, and overall shape</p> <p>A measure of center summarizes, with a single number, the values of an entire data set</p> <p>A measure of variation describes, with a single number, how the values of a data set vary</p>	<p>numerical data in dot plots on a number line.</p> <ul style="list-style-type: none"> <li>➤ Display numerical data in histograms on a number line.</li> <li>➤ Display numerical data in box plots on a number line.</li> </ul>
<p><b>6.SP.A.3.</b> Recognize that a measure of center for a 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</p>	9.2 9.3 9.4 9.4 10.1 10.4 10.5	MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8	<p>Concept(s):</p> <p>A data set has a distribution which can be described by its center, spread, and overall shape</p> <p>A measure of center summarizes, with a single number, the values of an entire data set</p> <p>A measure of variation describes, with a single number, how the values of a data set vary</p>	<p>Students are able to:</p> <ul style="list-style-type: none"> <li>➤ Distinguish center from variation.</li> <li>➤ Display numerical data in dot plots on a number line.</li> <li>➤ Display numerical data in histograms on a number line.</li> <li>➤ Display numerical data in box plots on a number line.</li> </ul>
<p><b>6.SP.B.4.</b> Display numerical data in plots on a number line, including</p>	9.1 9.2 9.3	MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8	<p>Concept(s):</p> <p>A data set has a distribution</p>	<p>Students are able to:</p> <ul style="list-style-type: none"> <li>➤ Distinguish</li> </ul>

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

<p>dot plots, histograms, and box plots.</p>	<p>9.4 9.5 10.1 10.2 10.4 10.5</p>		<p>which can be described by its center, spread, and overall shape</p> <p>A measure of center summarizes, with a single number, the values of an entire data set</p> <p>A measure of variation describes, with a single number, how the values of a data set vary</p>	<p>center from variation.</p> <ul style="list-style-type: none"> <li>➤ Display numerical data in dot plots on a number line.</li> <li>➤ Display numerical data in histograms on a number line.</li> <li>➤ Display numerical data in box plots on a number line.</li> </ul>
<p><b>6.SP.B.5.</b> Summarize numerical data sets in relation to their context, such as by:</p> <p><b>6.SP.B.5a.</b> Reporting the number of observations.</p> <p><b>6.SP.B.5b.</b> Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.</p> <p><b>6.SP.B.5c.</b> 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</p>	<p>9.1 9.2 9.3 9.4 9.5 10.1 10.2 10.4 10.5</p>	<p>MP1, MP2, MP3, MP4, MP5, MP6, MP7, MP8</p>	<p>Concepts: No New Concept(s) introduced</p>	<ul style="list-style-type: none"> <li>➤ Determine the number of observations of a data set.</li> <li>➤ Describe the data in context, including how it was measured and the units of measurement</li> <li>•</li> <li>➤ Calculate measures of center, mean and median.</li> <li>➤ Calculate measures of spread, interquartile range and</li> </ul>

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

<p>reference to the context in which the data were gathered.</p> <p><b>6.SP.B.5d.</b> 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.</p>			<p>mean absolute deviation.</p> <ul style="list-style-type: none"> <li>➤ Describe the overall shape of a distribution (skewed left, skewed right, etc).</li> <li>➤ Identify striking deviations (outliers).</li> <li>➤ Choose measures of center and variability appropriate to the shape of the distribution and context.</li> </ul>
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**Unit 4 New Jersey Student Learning Standards: Interdisciplinary Connections [New Jersey Student Learning Standards-ELA](#)**

<ul style="list-style-type: none"> <li>➤ <b>RI.CR.6.1. (NJLSA.R1).</b> 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.</li> <li>➤ <b>SL.PE.6.1. (SL.6.1)</b> Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others’ ideas and expressing their own clearly.</li> <li>➤ <b>L.KL.6.2. (NJLSA.L6)</b> 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.</li> <li>➤ <b>W.AW.6.1. (NJLSA.W6)</b> Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others</li> </ul>
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**Unit 4 New Jersey Student Learning Standards: [Career Readiness, Life Literacies, and Key Skills](#)**

<p><b>Disciplinary Concepts</b> Career Awareness and Planning Digital Citizenship</p>
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Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

Information and Media Literacy Technology Literacy	
Core Ideas	Performance Expectations (Identified with Standard Number and statement)
<ul style="list-style-type: none"> <li>➤ Philanthropic and charitable organizations play important roles in supporting the interest of individuals and local and global communities and the issues that affect them.</li> <li>➤ An individual's strengths, lifestyle goals, choices, and interest affect employment and income</li> <li>➤ Early planning can provide more options to pay for post secondary training and employment.</li> <li>➤ Some digital tools are appropriate for gathering, organizing, analyzing, and presenting information, while other types of digital tools are appropriate for creating text, visualizations, models, and communicating with others.</li> </ul>	<ul style="list-style-type: none"> <li>➤ 9.1.8.CR.1: Compare and contrast the role of philanthropy, volunteer service, and charities in community development and the quality of life in a variety of cultures.</li> <li>➤ 9.2.8.CAP.3: Explain how career choices, educational choices, skills, economic conditions, and personal behavior affect income.</li> <li>➤ 9.2.8.CAP.6: Compare the costs of postsecondary education with the potential increase in income from a career of choice.</li> <li>➤ 9.4.8.TL.1: Construct a spreadsheet in order to analyze multiple data sets, identify relationships, and facilitate data based decision making.</li> <li>➤ 9.48.TL.2: Gather data and digitally represent information to communicate a real world problem.</li> <li>➤ 9.48.TL.3: Select appreciate tools to organize and present information digitally.</li> </ul>
<b>Unit 4 New Jersey Student Learning Standards: Computer Science and Design Thinking</b>	
<b>Disciplinary Concepts</b> Computing Systems Data Analysis Engineering Design	

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

Core Ideas	Performance Expectations (Identified with Standard Number and Statement)
<ul style="list-style-type: none"> <li>➤ The study of human-computer interaction can improve the design of devices and extend the abilities of humans</li> <li>➤ People use digital devices and tools to automate the collection, use, and transformation of data.</li> <li>➤ The manner in which data is collected and transformed is influenced by the type of digital device(s) available and the intended use of the data.</li> <li>➤ Engineering design is a systematic, creative, and iterative process used to address local and global problems.</li> <li>➤ The process includes generating ideas, choosing the best solution, and making, testing, and redesigning models or prototypes.</li> </ul>	<ul style="list-style-type: none"> <li>➤ 8.1.8.CS.1: Recommend improvements to computing devices in order to improve the ways users interact with devices</li> <li>➤ 8.1.8.DA.1: Organize and transform data collected using computational tools to make it usable for a specific purpose</li> <li>➤ 8.2.8.ED.2: Identify the steps in the design process that could be used to solve a problem</li> </ul>

New Jersey Student Learning Standards: [Climate Change Mandate](#)

Core Ideas	Performance Expectations (Identified with Standard Number and Statement)

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

<p>Multiple solutions often exist to solve a problem.</p>	<ul style="list-style-type: none"><li>➤ 9.4.8.CT.1: Evaluate diverse solutions proposed by a variety of individuals, organizations, and/or agencies to a local or global problem, such as climate change and use critical thinking skills to predict which one(s) are likely to be effective.</li><li>➤ 9.4.8.CT.2: Develop multiple solutions to a problem and evaluate short- and long-term effects to determine the most plausible option (e.g., MS-ETS1-4, 6.1.8.CivicsDP.1).</li></ul>
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**Unit 4 Knowledge and Skills**

**Unit Learning Targets (Objectives):**

*Students will be able to...*

- Differentiate between statistical questions, which involve data variability, and non-statistical questions.
- Summarize numerical data by identifying the number of observations and describing how the data was collected or measured.
- Display numerical data using plots on a number line, including dot plots, histograms, and box plots, and interpret these in context.
- Calculate and interpret measures of center (mean and median) and measures of variability (interquartile range and mean absolute deviation). Choose appropriate measures based on the shape of the data distribution and its context.
- Write equations with two variables to represent relationships between dependent and independent quantities in real-world problems.
- Analyze relationships between dependent and independent variables, and connect equations to their corresponding graphs and tables of values.
- Create and complete tables of equivalent ratios to solve real-world and mathematical problems involving ratio and rate reasoning, including unit rate problems and finding percentages as rates per 100.
- Use ratio and rate reasoning to convert measurement units and adjust units correctly when multiplying or dividing quantities.
- Solve problems by graphing points in all four quadrants of the coordinate plane.
- Find distances between points with the same x-coordinate or y-coordinate using the absolute value of the difference in their coordinates.

**Unit Enduring Understandings:**

*Students will know...*

- Recognize questions that anticipate a variety of possible answers and distinguish statistical questions from non-statistical ones.
- Construct, interpret, and analyze different types of data displays, including dot plots, stem-and-leaf plots, histograms, and box-and-whisker plots.

Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics

- Choose appropriate stems and leaves to organize data effectively in stem-and-leaf plots.
- Describe the distribution of data sets using graphical displays, including understanding skewness (left, right, symmetric) and shape.
- Use shapes of distributions to determine the most appropriate measures of center (mean, median, mode) and variability.
- Calculate and explain measures of center: mean, median, and mode, and understand how they summarize data with a single representative value.
- Understand how changes in data affect measures of center.
- Calculate and explain measures of variability, including range, interquartile range (IQR), and mean absolute deviation (MAD).
- Use interquartile range to identify outliers in data sets.
- Compare data sets by analyzing their measures of center, variability, and distribution shapes.
- Find and interpret the five-number summary and use it to create and explain box-and-whisker plots.
- Compare different data sets using box-and-whisker plots and other graphical representations.

**Unit Essential Questions:**

- How can you determine if a question is a statistical question?
- How can you find and describe the average value of a data set?
- In what different ways can averages of a data set be described and interpreted?
- How can the spread or variability of a data set be described?
- How can distances between each data value and the mean be used to measure variability?
- How can place values be used to organize and represent data graphically?
- How can intervals, tables, and graphs be used to organize and interpret data?
- How can the shape of a data distribution be described and compared?
- How can quartiles and the five-number summary be used to graphically represent and analyze data?

**Instructional Plan**  
**Brief Narrative of the Progression of the Unit with Suggested Activities**

**Suggested Activities**

- Guided Notes
- iReady Interactive Platform
- Task Cards
- Scavenger Hunts
- Videos
- Gallery Walks
- Games
- Whiteboard Practice
- Record and Practice Journal

**Resources**

- iReady Math
- Nearpod
- EdPuzzle
- Desmos
- IXL
- Kahoot
- Blooket
- Linkit
- NJSLA Digital Library of

**Evidence of Student Learning**

**Formative Assessments:**

- Observation
- Do-Now/ Quick Check
- Homework
- Notebook/journal
- Class participation
- Whiteboards
- Record and Practice Journals
- Exit passes
- Online platforms: Quizizz, Kahoot!, Quizlet, Quizalize
- IXL

**Summative Assessments:**

- Chapter Tests
- Quizzes
- Presentations
- Projects
- Final Exams
- National/State/District Wide Assessments

**Benchmark Assessments:**

- SGO Assessments
- Common Unit Assessments
- Linkit Benchmarks A<B<C

**Alternative Assessments:**

- Portfolio
- Project

**Performance Tasks:** (When appropriate) This type of task demonstrates students transfer of learning and application to a performance task. Think about what you want the students to be able to do at the end of the unit.

- iReady Resources - there are performance tasks for multiple standards
- Example Performance Assessment Tasks

**Suggested Options for Differentiation and Modifications**

**Special Education**

- Follow all IEP modifications.
- Use scaffolds, leveled texts, and differentiated assignments.
- Provide visuals, graphic organizers, and outlines.

**Ocean Academy Charter School  
Curriculum Guide  
Grade 6 - Mathematics**

- Pre-teach and review vocabulary/concepts.
  - Offer summaries, study guides, and note-taking supports.
  - Use small-group or one-on-one instruction as needed.
  - Provide peer tutoring or partner support.
  - Allow preferential seating.
  - Give extra time on tests and assignments.
  - Accept oral or dictated responses.
  - Modify workload or number of questions when appropriate.
  - Provide large-print, Braille, or digital text with audio tools.
  - Allow access to scribes or communication devices.
  - Use interactive/multimedia content to reinforce skills.
- 

### **Students with 504 Plans**

- Follow the 504 plan.
  - Provide extended time for assignments/tests.
  - Offer small-group or quiet testing settings.
  - Accept oral or dictated responses.
  - Provide large-print, Braille, or digital text with assistive technology.
  - Allow use of scribes or communication devices.
- 

### **Students at Risk of School Failure**

- Use visuals, outlines, and step-by-step directions.
  - Pre-teach key vocabulary and provide real-world connections.
  - Offer small-group instruction and frequent check-ins.
  - Model problem-solving processes and think-alouds.
  - Assign peer support when appropriate.
  - Provide preferential seating and structured routines.
  - Break down multi-step tasks into smaller parts.
  - Provide feedback in manageable, frequent intervals.
- 

### **Gifted and Talented**

- Ask open-ended and higher-order questions (analyze, evaluate, create).
- Provide opportunities for discovery and independent research.
- Offer interest-based extensions and advanced texts.
- Use flexible grouping for enrichment projects.
- Provide choice in assignments and assessments.
- Incorporate simulations, debates, and project-based learning.
- Encourage cross-curricular connections and problem-solving challenges.

- Provide opportunities for reflection and presentation.
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### **Multilingual Learners**

- Collaborate with ESL/MLL specialists.
  - Provide small-group instruction with language scaffolds.
  - Pre-teach and revisit vocabulary using visuals and cognates.
  - Use sentence frames, discussion stems, and guided writing supports.
  - Allow oral responses and extended time.
  - Provide bilingual glossaries and labeled visuals.
  - Use digital supports (translation tools, audio text, captioning).
  - Scaffold academic conversations with structured partner/group activities.
- 

### **Diversity and Inclusion**

- Respect and integrate cultural traditions and perspectives.
- Provide alternative assignment formats when needed.
- Use visuals, outlines, and clear academic language.
- Avoid slang and idioms; speak at an appropriate pace.
- Collaborate with cultural liaisons, language specialists, and support staff.
- Foster an inclusive classroom climate with routines and positive relationships.
- Build strong school-family connections.

## **Supplemental Resources**

- Instructional Materials
  - Guided Notes
  - iReady Interactive Platform
  - Record and Practice Journal
- Supplemental Materials
  - Task Cards
  - Scavenger Hunts
  - Gallery Walks
  - Interactive Google Activities
  - Desmos
- Intervention Materials
  - IXL
  - Videos
  - Translated Material
  - Linkit

## **Social and Emotional Learning - New Jersey SEL**

Competencies and Sub-Competencies Social and emotional learning (SEL) involves the process through which children and adults acquire and apply the knowledge, attitudes and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions. The purpose of the SEL competencies is to provide schools with guidelines for integrating SEL across grades and subject areas.

### **Self-Awareness**

- Recognize one's feelings and thoughts
- Recognize the impact of one's feelings and thoughts on one's own behavior
- Recognize one's personal traits, strengths and limitations
- Recognize the importance of self-confidence in handling daily tasks and challenges

### **Self-Management**

- Understand and practice strategies for managing one's own emotions, thoughts and behaviors
- Recognize the skills needed to establish and achieve personal and educational goals
- Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals

### **Social Awareness**

- Recognize and identify the thoughts, feelings and perspectives of others
- Demonstrate awareness of the differences among individuals, groups and others' cultural backgrounds
- Demonstrate an understanding of the need for mutual respect when viewpoints differ
- Demonstrate an awareness of the expectations for social interactions in a variety of settings

### **Responsible Decision-Making**

- Develop, implement and model effective problem solving and critical thinking skills
- Identify the consequences associated with one's actions in order to make constructive choices
- Evaluate personal, ethical, safety and civic impact of decisions

### **Relationship Skills**

- Establish and maintain healthy relationships
- Utilize positive communication and social skills to interact effectively with others
- Identify ways to resist inappropriate social pressure
- Demonstrate the ability to prevent and resolve interpersonal conflicts in constructive ways
- Identify who, when, where, or how to seek help for oneself or others when needed

**Unit 4 Teacher Notes**

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