

## McKinley's CJA Seventh Grade Curriculum



McKinley's curriculum framework builds on the strong foundation of gifted education in the SLPS elementary gifted programs and emphasizes a conceptually challenging, in-depth, and complex content within cognitive, affective, aesthetic, social, and leadership domains as recommended by National Association of Gifted Children (NAGC) *2010 Pre-K-Grade 12 Gifted Programming Standards*. Differentiation, content-based acceleration, and enrichment are interventions implemented for our high-ability learners. In addition to providing project/problem based learning experiences, McKinley uses concepts from *Capturing Kid's Hearts*, the FISH Philosophy and the Six Pillars of Character to build community amongst students, staff, and families.

### 7<sup>th</sup> Grade Curriculum at a Glance

#### Communication Arts

##### **Readings:**

*Anthem* by Ayn Rand

\*And other texts selected by students and teacher for literature circles and class discussions

#### **Textbook: SpringBoard Grade 7**

- **Reading Strategies-**

- Literary Text

- Draw conclusions, infer and analyze by citing several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
    - Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings using context, affixes, or reference materials. Interpret visual elements of a text and draw conclusions from them.
    - Using appropriate text, determine the theme(s) of a text and explain the relationship between the theme(s) and supporting evidence; summarize the text distinct from personal opinions.
    - Analyze how a text's form or overall structure contributes to meaning.
    - Analyze how an author develops and contrasts the points of view of different characters or narrators in a text.
    - Analyze how specific word choices contribute to meaning and tone.
    - Analyze how the setting, characters, and plot of a text affect each other and contribute to meaning.
    - Compare and contrast a written story, drama, or poem to its audio, filmed, staged, or multimedia version, analyzing how the techniques unique to each medium contribute to meaning.

- Compare and contrast a fictional portrayal of a time, place, or character with realistic accounts of the same subject matter.
- Explain how characters and settings reflect historical and/or cultural contexts.
- Read and comprehend literature, including stories, dramas and poems, independently and proficiently.

### Informational Text

- Draw conclusions, infer and analyze by citing several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
- Determine the meaning of words and phrases as they are used in the text, including figurative, connotative, and content-specific meanings using context, affixes, or reference materials.
- Interpret visual elements of a text including those from different media and draw conclusions from them (when applicable).
- Explain the central/main idea(s) of a text and explain the relationship between the central idea(s) and supporting evidence; summarize the text distinct from personal opinions.
- Analyze how a text's organization or overall structure contributes to meaning.
- Analyze how an author develops his/her point of view or purpose and distinguishes it from those of others.
- Analyze how word choice contributes to meaning and tone.
- Evaluate an author's argument, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.
- Compare and contrast information presented in different mediums and analyze how the techniques unique to each medium contribute to meaning.
- Compare and contrast how two or more authors writing about the same topic make decisions about craft and structure.
- Explain how the text reflects historical and/or cultural contexts. Read and comprehend informational text independently and proficiently

### ● **Writing and Research Skills-**

- Conduct research to answer a question; gather relevant sources, print and digital; integrate information using a standard citation system.
- Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.
- Follow a writing process to produce clear and coherent writing in which the development, organization, style, and voice are appropriate to the task, purpose and audience; develop writing with narrative, expository, and argumentative techniques.
  - (a) Narrative: Develop narratives including poems about real or imagined experiences, which establish and maintain a consistent point of view, and include clearly identified characters, well-structured event sequences, narrative techniques and relevant, descriptive details.
  - (b) Expository: Develop informative/explanatory writing to examine a topic with relevant facts, examples, and details; establish relationships between ideas and supporting evidence.
  - (c) Argumentative: Develop argumentative writing by introducing and supporting a claim with clear reasons and relevant evidence; acknowledging counterclaims; establishing relationships between claims and supporting evidence.

- Review, revise, and edit writing with consideration for the task, purpose, and audience.
- **Organization and Content:** Introduce the topic, maintain a clear focus throughout the text, and provide a conclusion that follows from the text. Add or delete content to clarify meaning.

Word choice, syntax, and style

- Choose appropriate precise language for the style, task and audience; convey the relationship among ideas through varied sentence structures.

Conventions of Standard English and usage

- Demonstrate a command of the conventions of standard English grammar and usage, including spelling and punctuation.
- Use effective transitions to clarify relationships and connect ideas, claims and signal time shifts.
- Use technology, including the Internet, to produce, publish writing and link to and cite sources as well as to interact and collaborate with others, including linking to and citing sources.
- **Listening and Speaking Skills-**
  - Follow rules for collegial discussions and decision making, track progress toward specific goals and deadlines, and define individual roles as needed.
  - Delineate a speaker’s argument and claims, evaluating reasoning in order to pose questions that elicit elaboration and respond to others' questions and comments with relevant observations and ideas that bring the discussion back on topic as needed.

**Mathematics (Note: Many students are accelerated based on a track record of math ability and placement tests. Seventh grade students may be placed in any of the following courses.)**

Seventh Grade Course 2

**Textbook:** Springboard Mathematics, Course 2

Seventh Grade Mathematics uses the Springboard Mathematics; Course 2 Curriculum designed by CollegeBoard, authors of the SAT test and the Advanced Placement (AP) Program, and is based on the Common Core State Standards for Mathematics.

This curriculum is a highly engaging and rigorous instructional program that applies mathematical thinking to solving real-world problems and develops a greater depth of understanding through an emphasis on mathematical modeling and reasoning.

Following is a break-down of content covered per learning strand:

- **Number Sense-** Operations on Positive Rational Numbers, Addition and Subtraction of Integers, Multiplication and Division of Integers, Operations on Rational Numbers, Budgeting and Money Management
- **Algebraic Reasoning-** Properties of Operations, Writing and Solving Equations, Solving and Graphing Inequalities, Ratios and Proportions, Proportional Reasoning, Proportional Relationships and Scale, Percent Problems
- **Geometric and Spatial Relations-** Angle Pairs, Triangle Measurements, Similar Figures, Circles: Circumference and Area, Composite Area, Sketching Solids, Volume: Prisms and Pyramids
- **Measurement-** Indirect Measurement Using Ratios
- **Data and Probability-** Making Predictions, Investigating Chance, Estimating Probability, Making Decisions, Likelihood of Outcomes, Theoretical Probability, Games of Probability, Estimating Probabilities using Simulation, Data Samples, Sampling Variability, Predictions and Conclusions

The curriculum includes investigative activities that correlate to the learning targets, for example, the time it takes to make paperclip chains to practice estimating and determining the reasonability of a solution,

determining proportional relationship between the number of pennies in a stack and their heights in millimeters, and constructing three dimensional solids to explore its properties.

The curriculum also includes multiple Embedded Assessments per unit which are constructed response-type assessments that have the unit content embedded within. These assessments give students an opportunity to apply their knowledge to real life problems and their work is scored by rubrics which are communicated to students prior to beginning the assessment so their expectations are clear.

### Eighth Grade Course 3

**Textbook:** Eighth Grade Mathematics uses the Springboard Mathematics, Course 3

Curriculum is designed by CollegeBoard, authors of the SAT test and the Advanced Placement (AP) Program, and is based on the Common Core State Standards for Mathematics. This curriculum is a highly engaging and rigorous instructional program that applies mathematical thinking to solving real-world problems and develops a greater depth of understanding through an emphasis on mathematical modeling and reasoning.

Following is a break-down of content covered per learning strand:

- **Number Sense-** Investigate patterns and sequences; perform operations with fractions; calculate powers and roots; compare rational number representations; estimate irrational numbers and compare to rational numbers; perform operations with exponents including scientific notation; calculate cost of borrowing and interest.
- **Algebraic Reasoning-** Use patterns to write and evaluate expressions; solve linear equations algebraically and with models; investigate linear equations and slope using multiple methods; compare slope of different lines using tables, graphs and equations; investigate proportional relationships; graph and solve systems of linear equations; identify, map, represent and analyze functions; determine rate of change.
- **Geometric and Spatial Relations-** Apply concepts of powers and roots to volume and area of cubes; investigate angle pair relationships including complementary and supplementary angles and angles formed by parallel lines; apply properties of interior and exterior angles to triangles and quadrilaterals; perform transformations and compositions of transformations; investigate similar triangles, applying the Pythagorean Theorem and its converse, calculating surface area and volume.
- **Measurement-** use a protractor to measure and draw angles
- **Data and Probability-** determine appropriate ways to collect data; analyze data using multiple methods including scatter plots, trend lines, median-median lines, and two-way tables; determine association of variables

The curriculum includes investigative activities that correlate to the learning targets, for example, measuring the water dripped from a punctured bottle to identify slope using tables and graphs, using a mirror to measure reflections and explore similarity, and measuring the beans required to fill a three dimensional solid to investigate linear and non-linear functions.

The curriculum also includes multiple Embedded Assessments per unit which are constructed response-type assessments that have the unit content embedded within. These assessments give students an opportunity to apply their knowledge to real life problems and their work is scored by rubrics which are communicated to students prior to beginning the assessment so their expectations are clear.

### Algebra 150

This for-credit high school course is a study of the language, concepts, and techniques of Algebra that will help students acquire an understanding of numbers and increased proficiency in mathematical operations and algebraic notations, and will encourage original critical thinking and problem solving. Skills taught in the course lay groundwork for upper level math and science courses and have practical uses.

Following is a break-down of content covered per learning strand:

### **Number and Quantity**

- The Real Number System
- Quantities

### **Algebra**

- Seeing Structure in Expressions
- Arithmetic with Polynomials and Rational Expressions
- Creating Equations
- Reasoning with Equations and Inequalities

### **Functions**

- Interpreting Functions
- Building Functions
- Linear, Quadratic, and Exponential Models

### **Statistics and Probability**

The curriculum is designed to cover the objectives tested by the State of Missouri's EOC (End of Course) Test for High School Algebra. Middle School Students taking the Algebra EOC will not take the regular grade level Math MAP assessment. Graphing Calculators will be used to integrate technology and apply mathematical concepts and it is recommended that students come to class with a calculator.

**Science**—Note that a new curriculum is being phased in for science.

#### **2016-2017**

Main Topics Covered— The course will include a study of the Tools and Processes of Science, Waves and Electromagnetic Energy, Forces and Interactions, Engineering Design, and Space Systems.

- Few of Next Generation Science Standards covered in the 7<sup>th</sup> grade integrated science:
  - MS-PS4—Waves and their Applications in Technologies for Information Transfer
  - MS-PS3--Energy
  - MS-PS2—Motion and Stability: Forces and Interactions
  - MS-ESS1—Earth's Place in the Universe

**Educational Resources:** *Physical Science* and SEPUP (Science Education for Public Understanding)

**Science Enrichment Activities:** Lab Experiments, Science Fair

#### **2017-2018**

Main Topics Covered— The course will include a study of the Tools and Processes of Science, Matter and Energy, Cells and Organisms, and Waves

Few of Next Generation Science Standards covered in the 7<sup>th</sup> grade integrated science:

- MS-PS1—Matter and its Interactions
- MS-LS1—From Molecules to Organisms: Structures and Processes
- MS-PS4—Waves and their Applications in Technologies for Information Transfer
- MS-PS3—Energy

**Educational Resources:** *Physical Science, Life Science* (Glencoe) and SEPUP (Science Education for Public Understanding)

**Science Enrichment Activities:** Lab Experiments, Science Fair

### **Social Studies**

Text: *Creating America (A history of the United States)*, McDougal Littell 2007

UNIT 1- Three Worlds Meet

UNIT 2- Creating a New Nation

UNIT 3- The Early Republic

UNIT 4- A Changing Nation

UNIT 5- Civil War to Modern America

**Educational Resources:** *Document Based Questions in American History* (2008), PBS crash-course videos

**Social Studies Enrichment Projects:** Family Culture Poster Unit 1, Game creation project Units 2-3 (Building a Nation), Film creation Unit 4 (Jefferson Era-National Growth), Stop motion video Unit 5 (Civil War)

### **Additional Enrichment Activities for Seventh Graders:**

- Kids Voting, Geography Bee, Spelling Bee, Math Club, Debate Club, Science Olympiad, Chess Club, Lego Robotics, Musical

We hope you are able to get an understanding of our values and academics at McKinley CJA. Should you have additional questions later, please visit our website (<http://www.slps.org/mckinleycja>) where you can find answers to many frequently asked questions.

***The Seventh Grade Core Teachers:***

***Rachael Weatherford, English Language Arts***

***Scott Deppong, Social Studies***

***Gerald Glenn, Brock Fierge, and Emily Scott, mathematics***

***Jill Anderson, Science***