



## Junior High

### Language Arts

*Over three years, students regularly engage in deep literary conversations, write short stories, discuss many poems, and craft formal essays on questions they want to explore in greater depth. Socratic Seminar is the primary means used to explore literature. Seminar involves serious and often lively conversation on thought-provoking questions. The seminar leader's role is not to guide students to a predetermined meaning or official interpretation of a text; rather, their role is to pose questions to help students clarify their own thinking as they use reason to make sense of challenging reading material. Students learn that not all opinions are equal, and that they must use textual evidence and reason to support their perspectives. To deepen their seminar experience, students write major essays throughout the year to explore personal questions inspired by the assigned readings. Students also learn how to craft an essay using a writing checklist to ensure MLA format is in place. Both the content and form of their writing is of paramount importance. Some favorite seminar novels include 1984, The Things They Carried, Ender's Game, War and Peace, The Brothers Karamazov, The Book Thief, The Joy Luck Club, and All the Light We Cannot See.*

#### **Reading: Literature**

##### Key Ideas and Details

- Examine characters at grade level text and their contribution to a text's meaning
- Identify themes in a grade level text
- Analyze how and why individuals, events, and ideas develop and interact over the course of a text
- Identify significant passages to unlock deeper meaning
- Demonstrate an understanding (main ideas) of nonfiction, fiction, drama, poetry, and articles

### Craft and Structure

- Identify metaphor and its contribution to meaning in a text
- Identify significant passages to unlock deeper meaning in a text
- Determine the meaning of words and phrases as they are used in a text; analyze the impact of a specific word choice on meaning and tone
- Analyze how a particular sentence, chapter, scene, or stanza fits into the overall structure of a text and contributes to the development of the theme, setting, or plot
- Identify multiple perspectives on an event, character, or interaction within a classic literary text
- Read at grade level text at appropriate rate and expression

### Range of Reading and Level of Text Complexity

- Read and comprehend literature, including stories, dramas, and poems at grade level

### Representative Texts

Text complexity increases during a student's time in Junior High

- Ernest Cline's *Ready Player One*
- Orson Scott Card's *Ender's Game*
- Amy Tan's *The Joy Luck Club*
- Colson Whitehead's *The Nickel Boys*
- George Orwell's *1984*
- Fyodor Dostoevsky's *The Brothers Karamazov*
- Kurt Vonnegut's "Harrison Bergeron"
- Flannery O'Connor's "Good Country People"
- Walt Whitman's "Song of Myself"

## Reading: Informational Texts (U.S. History and Science)

### Key Ideas and Details

- Cite textual evidence to support analysis of textual inferences as well as what the text says explicitly

### Integration of Knowledge and Ideas

- Integrate information presented in different media or formats as well as in words to develop an understanding of a topic or issue
- Use grade level nonfiction resources to access information

### Range of Reading and Level of Text Complexity

- By the end of the year, read and comprehend informational texts, including U.S. History and Science texts

## Speaking and Listening

- Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization and development of ideas
- Clearly articulate one's point of view using reason and evidence in multiple Socratic Seminars
- Restate the arguments of peers during Socratic Seminars
- Actively listen and respond to peers in multiple Socratic Seminars
- Without raising hands, navigate a conversation when two people try to speak at the same time

## Writing

- Write organized essays to support claims in an analysis of substantive topics and grade-appropriate texts, using valid reasoning and relevant and sufficient evidence
- Write a short story that has exposition, rising action, a climax, falling action, and a resolution
- Write a short story that has a clear conflict
- Use imagery in a poem
- Develop and strengthen writing as needed by planning, revising, editing, and rewriting
- Draw evidence from literary or informational texts to support analysis and reflection
- Summarize reading assignments
- Use freewriting to develop new insights on literature
- Create thought-provoking questions on reading assignments
- Use parenthetical citation correctly in essay writing
- Draw evidence from literary or informational texts to support analysis and reflection
- Create thought-provoking questions on reading assignments
- Use many pages of freewriting to discover new ways of thinking, pushing oneself beyond the standard and generic interpretations of literature

## Vocabulary

- Choose the language that expresses ideas precisely and concisely, recognizing and eliminating wordiness
- Use context as a clue to the meaning of a word or phrase
- Recognize and interpret figurative language, particularly extended metaphors in literature
- Develop new vocabulary while encountering difficult high school level texts

## Language

### 7th Grade

- Use commas correctly
- Use periods correctly
- Capitalize words correctly

### 8th Grade

- Use an ellipsis to indicate an omission
- Use a colon to introduce a list or quotation

### 9th Grade

- Use parallel structure
- Use semi-colons correctly
- Use the dash correctly

## Math

### Math 7

*In the middle school years (6-8 grades) we use the Holt McDougal Mathematics three-year course. We have chosen this course work because we feel it fits well with our school's philosophy of how students learn, with an emphasis on problem-solving, mental math, building on prior knowledge, spiraled concepts, and real-world math. The curriculum emphasizes process, differentiation, student engagement and concrete understanding. In 7th grade math, students work in a variety of groupings: individual, pairs, small groups and whole class. Students are challenged with a variety of math concepts and approaches, including hands-on projects, real-world applications, and algorithmic practice. Most days students review previous concepts, are introduced to new material, and then practice new skills. 7th grade math introduces students to the basic underpinnings of Pre-Algebra, Geometry, and Statistics.*

#### Numbers and Operations

- Add, subtract, multiply and divide integers
- Use and name associative, commutative, and distributive properties to solve equations
- Add, subtract, multiply, and divide fractions and decimals
- Apply rules of exponents and scientific notation
- Find ratios and probabilities

#### Understand Patterns, Relations, and Functions

- Represent and interpret linear relationships in words, tables, graphs, and equations, and make connections among the representations

## Represent and Analyze Mathematical Situations and Structures Using Algebraic Symbols

- Use proportions and equations to solve percentage problems
- Use of x- and y-intercept to solve linear equations
- Use of Pythagorean Theorem to solve problems
- Add, subtract, multiply, and divide monomials and polynomials

## Analyze Change in Various Contexts

- Solve equations with variables on both sides
- Find area, circumference, and volume of polygons and circles

## Statistics and Probability

- Select an appropriate measure of central tendency to describe data
- Make predictions and analyze trends in scatter plots
- Find the probabilities of independent and dependent events

## Math 8

*In the middle school years (6-8 grades), we use the Holt McDougal Mathematics three-year course. We have chosen this course work because we feel it fits well with our school's philosophy related to how students learn, with an emphasis on problem-solving, mental math, building on prior knowledge, spiraled concepts, and real-world math. The curriculum emphasizes process, differentiation, student engagement and concrete understanding. The Math 8 pre-algebra curriculum is specifically designed to help students solidify their understanding of algebraic concepts and procedures and prepare them for more complex algebraic problem-solving and reasoning. Each class typically begins with guided instruction and practice of new procedures and concepts followed by independent practice.*

## The Number System

- Know that there are numbers that are not rational and approximate them by using rational numbers
- Use approximations to locate irrational numbers on a number line
- Understand that every number has a decimal expansion

## Expressions and Equations

- Work with and simplify radical expressions and numbers with integer exponents
- Know and apply the properties of integer exponents
- Evaluate square roots of small perfect squares
- Perform operations with numbers in scientific notation
- Understand the connections between proportional relationships, lines, and linear equations

- Graph proportional relationships, interpreting the unit rate as the slope of the graph
- Derive a linear equation in slope-intercept form from data in a table and points on a coordinate plane
- Solve linear equations in one and two variables
- Set up and solve proportions for real-world contextualized and non-contextualized mathematical problems

#### Functions

- Understand that a function is a rule that assigns exactly one output to each input. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output
- Interpret the equation  $y = mx + b$  as defining a linear function whose graph is a straight line
- Use functions to model relationships between quantities

#### Geometry

- Understand congruence and similarity of geometric shapes
- Understand and apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and non-contextualized mathematical problems in two dimensions
- Apply the Pythagorean Theorem to find the distance between two points in a coordinate system
- Use the formulas for the volumes of cones, cylinders, and spheres to solve real-world and non-contextualized mathematical problems

#### Statistics and Probability

- Select an appropriate measure of central tendency to describe data
- Make predictions and analyze trends in scatter plots
- Find the probabilities of independent and dependent events

### **Integrated 1 Math**

This course is year one of a three-year high school mathematics sequence using the HMH Integrated Mathematics 1 curriculum. The program is designed to use patterns, modeling, and conjectures to build student understanding and competency in mathematics. The expectation is to develop and maintain a student's growth mindset and teach students how to learn math in a collaborative process, where multiple methods and representations are celebrated. Students will be expected to learn through collaboration, collection of data, and conjectures. The students will learn mathematical sense-making, make and test conjectures and justify conclusions, use mathematical models to represent real-world data, and be able to provide clear and concise answers.

## Algebra

### Number and Quantities

- Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays
- Define appropriate quantities for the purpose of descriptive modeling
- Choose a level of accuracy appropriate to limitations on measurement when reporting quantities

### Seeing Structure in Expression

- Interpret the structure of expressions
- Write expressions in equivalent forms to solve problems

### Creating Equations

- Create equations that describe numbers or relationships

### Reasoning With Equations and Inequalities

- Understand solving equations as a process of reasoning and explain the reasoning
- Solve equations and inequalities in one variable
- Solve systems of equations
- Represent and solve equations and inequalities graphically

### Functions

- Understand the concept of a function and use function notation
- Interpret functions that arise in applications in terms of the context
- Analyze functions using different representations

### Building Functions

- Build a function that models a relationship between two quantities
- Build new functions from existing functions

### Linear, Quadratic, and Exponential Models

- Construct and compare linear, quadratic, and exponential models and solve problems
- Interpret expressions for functions in terms of the situation they model

## Geometry

### Congruence

- Experiment with transformations in the plane
- Understand congruence in terms of rigid motions
- Prove geometric theorems
- Make geometric constructions

- Use coordinates to prove simple geometric theorems algebraically

## Statistics and Probability

### Interpreting Categorical and Quantitative Data

- Summarize, represent, and interpret data on a single count or measurement variable
- Summarize, represent, and interpret data on two categorical and quantitative variables
- Interpret linear models

## Integrated Math 2

This course is the second year of a three-year high school mathematics sequence using the HMH Integrated Mathematics 2 curriculum. The program is designed to use patterns, modeling and conjectures to build student understanding and competency in mathematics. The expectation is to develop and maintain a student's growth mindset and teach students how to learn math in a collaborative process, where multiple methods and representations are celebrated. Students will be expected to learn through collaboration, collection of data, and conjectures. Technology such as graphing calculators will also play a key role in learning. Students will learn mathematical sense-making, make and test conjectures, justify conclusions, use mathematical models to represent real-world data, and be able to provide clear and concise answers.

## Number and Quantity

### The Real Number System

- Extend the properties of exponents to rational exponents
- Use properties of rational and irrational numbers
- Reason quantitatively and use units to solve problems

### The Complex Number System

- Perform arithmetic operations with complex numbers
- Use complex numbers in polynomial identities and equations

## Algebra

### Seeing Structure in Expressions

- Interpret the structure of expressions
- Write expressions in equivalent forms to solve problems

### Arithmetic with Polynomials and Rational Expressions

- Perform arithmetic operations on polynomials

## Creating Equations

- Create equations that describe numbers or relationships

## Reasoning with Equations and Inequalities

- Solve equations and inequalities in one variable
- Solve systems of equations

## Functions

### Interpreting Functions

- Interpret functions that arise in applications in terms of the context
- Analyze functions using different representations

### Building Functions

- Build a function that models a relationship between two quantities
- Build new functions from existing functions

## Linear, Quadratic, and Exponential Models

- Construct and compare linear, quadratic, and exponential models and solve problems

## Trigonometric Functions

- Prove and apply trigonometric identities

## Geometry

### Congruence

- Prove geometric theorems

### Similarity, Right Triangles, and Trigonometry

- Understand similarity in terms of similarity transformations
- Prove theorems involving similarity

### Define trigonometric ratios and solve problems involving right triangles

- Understand that by similarity, side ratios in right triangles are properties of the angles in the triangle, leading to definitions of trigonometric ratios for acute angles

### Circles

- Understand and apply theorems about circles
- Find arc lengths and areas of sectors of circles

## Expressing Geometric Properties with Equations

- Translate between the geometric description and the equation for a conic section

- Use coordinates to prove simple geometric theorems algebraically

#### Geometric Measurement and Dimension

- Explain volume formulas and use them to solve problems

#### Statistics and Probability

##### Interpreting Categorical and Quantitative Data

- Summarize, represent, and interpret data on two categorical and quantitative variables

##### Conditional Probability and the Rules of Probability

- Understand independence and conditional probability and use them to interpret data
- Use the rules of probability to compute probabilities of compound events in a uniform probability model

##### Using Probability to Make Decisions

- Use probability to evaluate outcomes of decisions

## Music

*General Music: The goal for Junior High Music is to enable students to use critical thinking skills to study the musical concepts applicable to performance and nonperformance music courses. Students continue to develop skills in reading and understanding music notation and to explore the expression and organization of musical ideas. Exploration of music theory continues as students read and write increasingly complex music notation. Students compare and contrast the functions of music and investigate the impact of musicians, music consumers, and music advocates on the community. Through musical experiences, students demonstrate an understanding of the relationship of music to history, culture, technology, and other fields of knowledge.*

#### Performing Skills

- Perform a complex piece in an ensemble that includes: playing chords, advanced rhythm, harmony, melody and timbre
- Explore improvisation over chord progression using scales and chord tones

#### Tools and Knowledge

- Demonstrate their understanding of music structure by creating their own composition
- Identify and utilize major and minor scales and intervals
- Build chords using the major scale and its intervals

- Identify notes on their performance instrument
- Understand the Circle of Fifths
- Find and identify the key of a song
- Identify and perform basic harmonies on instrument or voice

### Historical and Cultural Context

- Distinguish between different contemporary genres and identify characteristics of those genres including: jazz, blues, rock, pop, country and classical
- Understand the importance of the blues and its foundations in contemporary western music
- Explore various careers in the music industry: performing, composing, producing, mixing, engineering, marketing and managing
- Understand how music varies among different cultures and identify those characteristics of music specific to various cultures

### Appraising Skills

- Reflect and communicate about their own musical working process using learned knowledge and tools
- Communicate their own musical progress using learned knowledge and tools

### Listening Skills

- Timbre: be able to identify different instruments in a composition
- Melody: be able to hear melody and understand its harmonic relation to song
- Structure: be able to identify intro, chorus, bridge, coda, refrain, pre chorus, camp, and interlude
- Rhythm: be able to identify and understand basic rhythm components in addition to advanced syncopation and polyrhythm
- Harmony: be able to listen for harmonic structure and distinguish major and minor keys
- Listen to and repeat sounds and melodies using either voice or instrument

## Performing Arts

*At the Jr High level, Performing Arts are designed to further develop each student's skills in acting and expressive movement. The program is guided by five categories of emphasis: pantomime, improvisation, theater makeup, storytelling, and dance. The final project will include a play and/or musical performance in front of an audience showcasing all that they have learned.*

## Create

- Students will imagine and explore multiple perspectives and solutions to staging challenges in a working theater
- Students will explore the impact of technology on design choices in a performing arts piece
- Students will develop a scripted or improvised character by articulating the character's inner thoughts, objectives, and motivations in a work of theater
- Students will examine and justify original ideas and artistic choices in a work of theater based on critical analysis, background knowledge and historical context
- Students will demonstrate mutual respect for themselves and others and their roles in preparing or devising a work of theater
- Students will investigate the collaborative nature of the actor, director, playwright, and designers, and explore their independent roles in a performance piece
- Students will use repetition and analysis in order to revise a devised or scripted performance piece
- Students will explore physical and vocal choices to develop a performance that is believable, authentic and relevant

## Performing

- Students will utilize mindfulness tools to find focus, calm and impulse control
- Students will participate in a variety of acting exercises and techniques that can be applied in a rehearsal or performance
- Students will present a performance using a creative process that shapes the production for a specific audience
- Students will integrate core subject areas to illuminate learning through performance
- Students will use performance etiquette and performance practices during class, rehearsal and performance. Students will accept notes from peers and teachers and apply improvements to future rehearsals and performances
- Students will integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest
- Students will adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate

## Responding

- Students will describe and record personal reactions to artistic choices in a performance piece
- Students will recognize and share artistic choices when participating in or observing a performance piece
- Students will analyze how cultural perspectives influence the evaluation of a performance piece

- Students will apply and justify personal aesthetic preferences and beliefs through participation in and observation of a performance piece
- Students will examine and respond to a performance piece using supporting evidence, personal aesthetics, and artistic criteria
- Students will formulate a deeper understanding and appreciation of a performance piece by considering its specific purpose or intended audience

#### Connecting

- Students will investigate how cultural perspectives, community ideas and personal beliefs impact a performance piece
- Students will explore how cultural, global and historical belief systems affect creative choices in a performance piece
- Students will investigate the time period and place of a performance piece to better understand the character and design choices

## Physical Education

*At the Jr High level, the physical education program is designed to develop each student's knowledge, skills, and values that support physical wellness, efficient and expressive movement, self-direction, and self-reliance. The program is guided by six specific categories of emphasis: physical activity, physical fitness, movement skills and knowledge, social development and interaction, positive self-image and self-realization, and individual excellence.*

- Lifetime Sports - Pickleball, volleyball, running, badminton, ping-pong, kickball, ultimate frisbee
- Sports - lacrosse, soccer, basketball
- Fitness - mile run, flexibility testing, muscular endurance testing, proper form
- Group Activities - team games that promote teamwork and fitness challenges at the same time; dodgeball, ultimate throw ball, relays, parachute games, individual challenges, scavenger running hunts, field day

#### Physical Education Goals

- To help students develop the strength, flexibility, vigor, endurance, and attitudes necessary for healthful living
- To provide opportunities for each individual to develop their physical skills to full potential
- To develop leadership, cooperation, and team play mainly through the medium of team sports
- To teach individual sports which will provide a healthy use of leisure time in adult life

- To provide adequately for individual differences
- To guide students toward the ability to judge right from wrong
- To present opportunities for students to lead and to follow in social situations
- To provide a release from nervous tension through vigorous and enjoyable activities
- To introduce and develop fundamental motor skills necessary for growth
- To develop proper attitudes toward others in competition

## Grade 7 Earth and Space Science

*Throughout earth and space science, students are encouraged to be curious about the universe. They explore questions that engage their curiosity as they learn how to organize and communicate what they learn to others. They develop their abilities to ask and research questions that lead to a deeper understanding of a subject. Experiments and projects are used to develop science practices and understand concepts that cut across topics and increase subject-level understanding. In Earth/Space Science, students explore the topics of space systems, the history of Earth, Earth's systems, weather and climate, and human impacts on the earth. Students regularly observe and experiment in the outside environment, while learning concepts through questions and projects.*

### Asking Questions and Defining Problems

- Ask questions that specify relationships between independent and dependent variables
- Ask questions to clarify and/or refine arguments, models or engineering problems
- Ask questions to frame a hypothesis
- Define a design problem that can be solved through the development of an object, tool, process or system and includes multiple criteria and constraints, including scientific knowledge that may limit possible solutions

### Developing and Using Models

- Develop, use, and revise a model to describe, test, and predict more abstract design systems
- Evaluate the limitations of a model
- Develop a model to describe unobservable mechanisms; use it to predict and/or describe phenomena

### Planning and Carrying Out Investigations

- Plan an investigation or test a design to produce data to serve as the basis for evidence as part of building and revising models, supporting explanations for phenomena, or testing solutions to problems
- Conduct an investigation individually and collaboratively to produce data to serve as the basis for evidence

### Analyzing and Interpreting Data

- Construct, analyze, and/or interpret graphical displays of data and/or large data sets to identify relationships
- Distinguish between correlation and causation in data
- Analyze and interpret data to provide evidence for phenomena
- Analyze data to define an optimal operational range for a proposed object or tool

### Using Mathematics and Computational Thinking

- Identify patterns in large data sets
- Apply mathematical concepts and/or processes (such as ratio, rate, percent, basic operations, and simple algebra) to scientific and engineering questions and problems
- Organize data to identify patterns and trends

### Constructing Explanations and Designing Solutions

- Construct explanations supported by multiple sources of evidence consistent with scientific ideas, principles, and theories
- Design solutions using experimentation, research of other solutions, and known scientific theories

### Engaging in Argument From Evidence

- Construct a convincing argument that supports or refutes claims for either explanations or solutions about the natural and designed world
- Use the format of supporting a claim with evidence and reasoning

### Obtaining, Evaluating, and Communicating Information

- Communicate information fully, in a clear and interesting way
- Read and summarize grade level science content
- Evaluate the merit and validity of others' ideas and methods

## Grade 8 Physical Science

*Throughout physical science, students are encouraged to be curious about the physical world around them. They explore questions that engage their curiosity while learning how to organize and communicate what they learn to others. They develop their abilities to ask and research questions that lead to a deeper understanding of science concepts. Experiments and projects are used to develop science practices, understand concepts that cut across topics and increase subject-level understanding. In Physical Science, the sub-topics explored are structures and properties of matter, chemical reactions, forces and interactions, energy, and waves and electromagnetic radiation. Students explore these topics through projects, research and lab experimentation.*

### Asking Questions and Defining Problems

- Ask questions that specify relationships between independent and dependent variables
- Ask questions to clarify and/or refine arguments, models or engineering problems
- Ask questions to frame a hypothesis
- Define a design problem that can be solved through the development of an object, tool, process or system and includes multiple criteria and constraints, including scientific knowledge that may limit possible solutions

### Developing and Using Models

- Develop, use, and revise a model to describe, test, and predict more abstract design systems
- Evaluate the limitations of a model
- Develop a model to describe unobservable mechanisms; use it to predict and/or describe phenomena

### Planning and Carrying Out Investigations

- Plan an investigation or test a design to produce data to serve as the basis for evidence as part of building and revising models, supporting explanations for phenomena, or testing solutions to problems
- Conduct an investigation individually and collaboratively to produce data to serve as the basis for evidence

### Analyzing and Interpreting Data

- Construct, analyze, and/or interpret graphical displays of data and/or large data sets to identify relationships
- Distinguish between correlation and causation in data
- Analyze and interpret data to provide evidence for phenomena

- Analyze data to define an optimal operational range for a proposed object or tool

#### Using Mathematics and Computational Thinking

- Identify patterns in large data sets
- Apply mathematical concepts and/or processes (such as ratio, rate, percent, basic operations, and simple algebra) to scientific and engineering questions and problems
- Organize data to identify patterns and trends

#### Constructing Explanations and Designing Solutions

- Construct explanations supported by multiple sources of evidence consistent with scientific ideas, principles, and theories
- Design solutions using experimentation, research of other solutions, and known scientific theories

#### Engaging in Argument From Evidence

- Construct a convincing argument that supports or refutes claims for either explanations or solutions about the natural and designed worlds
- Use the format of supporting a claim with evidence and reasoning

#### Obtaining, Evaluating, and Communicating Information

- Communicate information fully, in a clear and interesting way
- Read and summarize grade level science content
- Evaluate the merit and validity of others' ideas and methods

## Grade 9 Biology

*Biology is the study of life, its processes, and the natural world. In this course, students develop scientific skills they can use to investigate and understand the living world. The course is divided into units, each with curricular ties to the others. Students study life from its beginnings on Earth through biological evolution, which has given rise to the diversity and myriad of life forms both extinct and still living today. Students explore how life forms are organized and function at the cellular and organismal levels; the links between form and function; biological classification; genetics and evolution; traits and behaviors that help living organisms survive; and the importance of species interdependence. Laboratory investigations and project work are used to strengthen both student understanding and scientific process skills. Throughout the course, students have the opportunity to explore biology topics of personal interest, gathering*

*information needed to form understandings and opinions about controversial biological topics.*

#### Asking Questions and Defining Problems

- Ask questions that arise from careful observation, clarify and seek additional information, and determine relationships between variables
- Ask and evaluate questions that challenge the premise of an argument, the interpretation of a data set, or the suitability of a design
- Define a design problem that involves the development of a process or system with interacting components and criteria and constraints that may include social, technical, and environmental considerations

#### Developing and Using Models

- Evaluate merits and limitations of two different models of the same proposed tool, process, mechanism, or system in order to select or revise a model that best fits the evidence or design criteria
- Design a test of a model to ascertain its reliability
- Develop, revise, and use a model based on evidence to illustrate or predict the relationships between systems or between components of a system

#### Planning and Carrying Out Investigations

- Plan an investigation or test a design individually and collaboratively to produce data to serve as the basis for evidence as part of building and revising models, supporting explanations for phenomena, or testing solutions to problems
- Plan and conduct an investigation individually and collaboratively to produce data to serve as the basis for evidence, and in the design decide on types, how much, and accuracy of data needed to produce reliable measurements

#### Analyzing and Interpreting Data

- Analyze data using tools, technologies, or models in order to make valid and reliable scientific claims or determine an optimal design solution
- Consider limitations of data analysis when analyzing and interpreting data
- Evaluate the impact of new data on a working explanation and/or model of a proposed process or system
- Analyze data to identify design features or characteristics of the components of a proposed process or system to optimize it relative to criteria for success

#### Using Mathematics and Computational Thinking

- Create and/or revise a computational model or simulation of a phenomenon, designed device, process, or system

- Use mathematical, computational, and/or algorithmic representations of phenomena or design solutions to describe and/or support claims and/or explanations
- Apply techniques of algebra and functions to represent and solve scientific and engineering problems
- Apply ratios, rates, percentages, and unit conversions in the context of complicated measurement problems involving quantities with derived or compound units

#### Constructing Explanations and Designing Solutions

- Make a quantitative or qualitative claim regarding the relationship between dependent and independent variables
- Construct and revise an explanation based on valid and reliable evidence obtained from a variety of sources (including students' own investigations, models, theories, simulations, peer review) and the assumption that theories and laws that describe the natural world operate today as they did in the past and will continue to do so in the future
- Apply scientific ideas, principles, or evidence to provide an explanation of phenomena and solve design problems, taking into account possible unanticipated effects
- Apply scientific reasoning, theory, or models to link evidence to the claims to assess the extent to which the reasoning and data support the explanation or conclusion
- Design, evaluate, or refine a solution to a complex real-world problem, based on scientific knowledge, student-generated sources of evidence, prioritized criteria, and trade-off considerations

#### Engaging in Argument From Evidence

- Compare and evaluate competing arguments or design solutions in light of currently accepted explanations, new evidence, limitations, constraints, and ethical issues
- Respectfully provide and receive critiques on scientific arguments by probing reasoning and evidence and challenging ideas and conclusions, responding thoughtfully to diverse perspectives, and determining what additional information is required to resolve contradictions
- Make and defend a claim based on evidence about the natural world or the effectiveness of a design solution that reflects scientific knowledge and student-generated evidence

#### Obtaining, Evaluating, and Communicating Information

- Critically read scientific literature adapted for classroom use to determine the central ideas or conclusions or to obtain scientific or technical information to

summarize complex evidence, concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms

- Compare, integrate, and evaluate sources of information presented in different media or formats as well as in words in order to address a scientific question or solve a problem
- Communicate scientific or technical information or ideas in multiple formats

#### Representative Texts

- Modern Biology (textbook)
- *A Short History of Nearly Everything* - Bill Bryson
- “Embryo Experiments Reveal Earliest Human Development, But Stir Ethical Debate” by Rob Stein

## U.S. History

*Over the three years in Junior High, students study U.S. History in three parts: Beginnings to The Civil War; The Civil War to WWI; and WWI to the present day. Students build a solid base of knowledge of history: the who, what, where, and when. Next, they move on to the why and how--deeper critical thinking. Debate and discussion both play an important role in history class. Students participate in two or three debates each year; the debates are two versus two and follow a standard high school, timed format, which includes written opening statements, rebuttal time, and closing remarks. Students collaborate during the research process, so when the debate day arrives, they have an ample amount of information from which to draw. An important aspect of history class is seeing things from multiple perspectives. Was the American Revolution justified? Study both the American and British perspectives and then debate them. This process helps students develop an appreciation for the complexity of history, and encourages them not to rush to judgment regarding events. Current events topics also regularly appear in debate. Students also view documentaries, create art projects, and develop games based on what they study in class.*

#### Chronological Reasoning and Causation

- Articulate how events are related chronologically to one another in time and explain the ways in which earlier ideas and events may influence subsequent ideas and events
- Identify causes and effects using examples from current grade level content and historical ideas and events
- Identify, analyze, and evaluate the relationship between multiple causes and effects

- Distinguish between long-term and immediate causes and effects (time, continuity, and change)
- Recognize, analyze, and evaluate dynamics of historical continuity and change over periods of time
- Relate patterns of continuity and change to larger historical processes and themes

#### Comparison and Contextualization

- Identify and compare multiple perspectives on a given historical experience
- Identify similarities and differences between historical developments over time within a similar cultural and geographical context
- Describe, compare, and evaluate multiple historical developments (within societies; across and between societies; in various chronological and geographical contexts)
- Connect historical developments to specific circumstances of time and place and to broader regional, national, or global processes

#### Geographic Reasoning

- Ask geographic questions about where places are located and why their location is important
- Identify and describe the relationship between people, places, and the environment
- Recognize and analyze how place and region influence the social, cultural, and economic characteristics of civilizations
- Characterize and analyze changing interconnections among places and regions

#### Gathering, Using and Interpreting Evidence

- Define and frame questions about events and the world in which we live and use evidence to answer these questions
- Identify, describe, and evaluate evidence about events from diverse sources (including written documents, works of art, photographs, charts and graphs, artifacts, oral traditions, and other primary and secondary sources)
- Analyze evidence in terms of content, authorship, point of view, purpose, and format; identify bias; explain the role of bias and audience in presenting arguments or evidence
- Describe and analyze arguments of others
- Make inferences and draw conclusions from the evidence
- Recognize an argument and identify evidence that supports the argument; examine arguments related to a specific history topic from multiple perspectives

- Create meaningful and persuasive understandings of the past by fusing disparate and relevant evidence from primary and secondary sources

#### The Role of the Individual in Social and Political Participation

- Demonstrate respect for the rights of others in discussions and classroom; respectfully disagree with other viewpoints
- Participate in activities that focus on a classroom, school, community, state, or national issue or problem
- Explain differing philosophies of social and political participation and the role of the individual leading to group-driven philosophies
- Participate in persuading, negotiating, and compromising in the resolution of conflicts and differences; introduce and examine the elements of debate
- Identify situations in which social actions are required and determine an appropriate course of action
- Work to influence those in positions of power to strive for extensions of freedom, social justice, and human rights
- Fulfill social and political responsibilities associated with citizenship in a democratic society and interdependent global community by developing awareness and/or engaging in the political process

#### Representative Texts

- Selected Speeches by Frederick Douglass and Abraham Lincoln
- The Declaration of Independence
- *Gumption* by Nick Offerman
- *Voice's of a People's History of the United States* by Howard Zinn
- Selected Speeches by Martin Luther King, Jr.

## Spanish

*Over the course of three years, Foothills students work through all the learning objectives of high school Spanish 1 and Spanish 2. Students may earn up to four high school credits in 8th and 9th grades. Using ACTFL National Standards, "The World-Readiness Standards for Learning Languages create a roadmap to guide learners to develop competence to communicate effectively and interact with cultural competence to participate in multilingual communities at home and around the world." The five standards for foreign language (5 Cs - Communication, Cultures, Connections, Comparisons, and Communities) provide an important and useful framework. Foothills School follows the Boise School District performance objectives for Spanish 1 and Spanish 2 so that our graduates can transition into*

*Spanish 3 in 10th grade. The curriculum resources most commonly used are Realidades 1 and Realidades 2.*

#### Annual Cultural Studies

- Investigate el Día de los Muertos (November 1-2)
- Investigate any of the following cultural celebrations at the appropriate time of year – Independence Day of various Spanish speaking countries, Cinco de Mayo, La Navidad, La Semana Santa
- Engage in opportunities locally to experience authentic cultural activities
- Investigate the Quinceañera celebration

#### 7th Grade

- Recognize major geographical features of the Spanish speaking world
- Greet someone and respond to a greeting, including personal introductions
- Differentiate between the familiar you and formal you when using greetings
- Write a brief dialogue using greetings, farewells and introductions
- Respond appropriately to basic classroom expressions and directions
- Recognize and count numbers 0-100
- Recite calendar content including days, months, year, date, weather and season
- Ask and tell what time it is in both written and oral forms
- Build a base of vocabulary using cognates
- Ask and tell likes and dislikes of activities
- Memorize a variety of –ar, -er, -ir infinitives and vocabulary
- Memorize and use the 10 subject pronouns
- Conjugate and use the verb ser
- Memorize personality trait vocabulary
- Discuss the use of adjectives in Spanish, including the rules for gender and number agreement as well as adjective placement
- Use terms for physical characteristics to describe people
- Conjugate the verb tener
- Know how to talk about their age
- Demonstrate the ability to ask and tell where people are from

#### **8th Grade - High School Spanish 1**

*Students are eligible to earn one high school credit for each semester of Spanish 1 completed during 8th grade. The essential learning outcomes of Spanish are mastered at different rates. Students are evaluated on an individualized basis regarding which credits are transferred on their formal transcript upon completion of 9th grade.*

- Memorize classroom school-related vocabulary
- Use the idiom *hay* to identify quantity
- Recognize prepositions of location, *está* and *están* to identify where things are located
- Memorize vocabulary related to school schedules
- Use ordinal numbers
- Compare and contrast American culture in school with those in Spanish speaking countries
- Conjugate and use regular *-ar* verbs
- Describe how people are feeling
- Conjugate the verb *estar*
- Memorize the words used to express a feeling
- Discuss food and beverage choices for breakfast, lunch and dinner
- Memorize food and beverage vocabulary
- Discuss healthy and unhealthy lifestyles with regard to food and exercise
- Discuss cultural perspectives on meals
- Talk about one's activities using the days of the week, time expression and adverbs of frequency
- Memorize vocabulary about sports
- Use the structure *ir + a + infinitive* to express the future tense
- Use the idiom *tener + que + infinitive* to express what one has to do
- Memorize the terms used to talk about family members
- Compare family members explaining who is older and who is younger
- Talk about activities around the house

## **9th grade - High School Spanish 2**

*Boise School District performance objectives for Spanish 2 guide the essential learning outcomes for Spanish 2. 9th graders may earn one high school credit for each semester they complete for either Spanish 1 or Spanish 2, depending on pre-requisite experience.*

- Describe oneself and investigate activities and interests of classmates
- Ask and answer questions using a variety of *-ar*, *-er*, *-ir* and irregular verbs
- Use adverbs of frequency to discuss preferred activities
- Describe where people are and what they are doing at the present time (*estar + present progressive*)
- Explain where people go
- Memorize and use the classroom vocabulary
- Conjugate and use irregular verbs and stem-changing verbs
- Memorize extracurricular activities
- Conjugate and use the verbs *saber* and *conocer*
- Memorize and identify body parts

- Memorize common reflexive verbs and pronounce and practice correct usage
- Describe one's daily routine
- Describe common articles of clothing, accessories and gifts
- Demonstrate how to purchase clothing and other items
- Express opinions while shopping
- Role-play a problem in a shopping situation
- Describe a shopping experience in the past tense
- Discuss locations in the community
- Memorize common places and prepositions used to express location
- Recognize irregular forms of present progressive and describe things using the present progressive
- Conjugate the irregular verb ir
- Memorize the 8 direct object pronouns
- Describe one's childhood activities, personality traits and physical characteristics
- Conjugate the irregular verbs ser, ir and ver in the past imperfect tense
- Memorize and use reflexive verbs in the past tense
- Use indirect object pronouns to express for whom an action is intended and tell what happened at an event using the preterite
- Describe the symptoms of injuries and illness
- Use the verbs dolor and sentirse
- Memorize and use irregular verbs (dar, decir, poner, traer, venir and hubo) to talk about accidents and treatment
- Compare and contrast traditional foods from Spanish speaking countries
- Participate in conversations in a restaurant setting
- Memorize and use table setting, meal and restaurant vocabulary
- Read authentic menus
- Create a dialog that includes how to order food and drink, ask for the check and pay the bill
- Role-play scenarios with classmates using both present and past tense verbs
- Discover cultural destinations in the Spanish speaking world
- Prepare a travel brochure in Spanish to inform travelers of attractions and activities using affirmative tú commands and verb expressions (ir a, hay que, tener que, deber)

## Visual Arts

*Students in the visual art classes will gain a combination of technical skills and art appreciation strategies throughout their tenure at Foothills. They will be introduced to a variety of media and techniques, including drawing, painting, printmaking, ceramics, sculpture, textiles, and collage. While creating they will develop a vocabulary that they can use to describe the processes and tools of art-making. Students will be introduced to the elements and principles of design and use them in their own work. They will practice using their own ideas and concepts to create meaningful pieces of art. They will view artworks from a variety of sources to gain an appreciation for the role of art in culture and community. Students will take field trips to view art, including visits to the Boise Art Museum each year.*

Below is a list of skills and concepts Junior High students can expect to learn over the course of three years.

### Creating

Students will:

- Apply methods to overcome creative blocks
- Document early stages of the creative process visually and/or verbally
- Use multiple approaches to begin creative endeavors
- Develop criteria to guide making a work of art to meet an identified goal
- Shape an artistic investigation of an aspect of present-day life using a contemporary practice of art and design
- Demonstrate persistence in developing skills with various materials, methods, and approaches in creating works of art
- Demonstrate a willingness to experiment, innovate, and take risks to pursue ideas, forms, and meanings that emerge in the process of artmaking
- Demonstrate awareness of ethical responsibility to oneself and others when posting and sharing images and other materials through the Internet, social media, and other communication formats
- Demonstrate awareness of practices, issues, and ethics of appropriation, fair use, copyright, open-source, and creative commons as they apply to create works of art
- Demonstrate safe handling of materials, tools, and equipment
- Apply visual organizational strategies to design and produce a work of art that clearly communicates information or ideas
- Reflect on and explain important information about personal artwork in an artist statement or another format
- Apply relevant criteria to examine, reflect on, and plan revisions for a work of art or design in progress

## Presenting

- Compare and contrast how technologies have changed the way artwork is preserved, presented, and experienced
- Develop and apply criteria for evaluating a collection of artwork for presentation
- Analyze and evaluate the reasons and ways an exhibition is presented
- Compare and contrast viewing and experiencing collections and exhibitions in different venues
- Analyze why and how an exhibition or collection may influence ideas, beliefs, and experiences
- Analyze and describe the impact that an exhibition or collection has on personal awareness of social, cultural, or political beliefs and understandings

## Responding

- Explain how a person's aesthetic choices are influenced by culture and environment and impact the visual image that one conveys to others
- Analyze multiple ways that images influence specific audiences
- Analyze how one's understanding of the world is affected by experiencing visual imagery
- Interpret art by analyzing how the interaction of subject matter, characteristics of form and structure, use of media, artmaking approaches, and relevant contextual information contributes to understanding messages or ideas and mood conveyed
- Create a convincing and logical argument to support an evaluation of art

## Connecting

- Make art collaboratively to reflect on and reinforce positive aspects of group identity
- Analyze how the response to art is influenced by understanding the time and place in which it was created, the available resources, and cultural uses
- Distinguish different ways art is used to represent, establish, reinforce, and reflect group identity
- Describe how knowledge of culture, traditions, and history may influence personal responses to art