



Brookside School

Curriculum Guide
2019-2020

Dear Parents and Students,

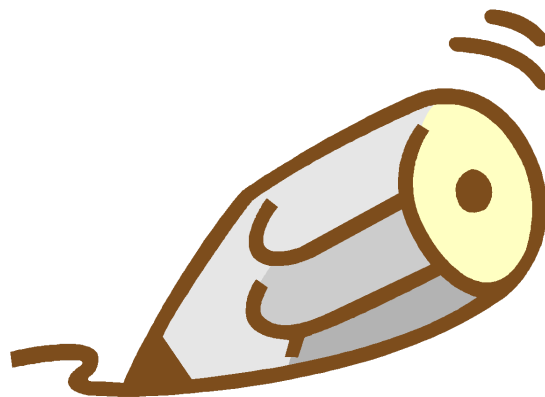
Welcome to the 2019-2020 school year. I am excited about the plans we have in place this year, and hope that it will be your best year ever at Brookside. For those of you who are new to Brookside, welcome!

This curriculum guide is designed to give you an overview of the courses here at Brookside. It will also help you understand the scope and sequence of the academic program, and how that fits in with the students' development.

If you have any questions about any of the programs or structures here at Brookside, please feel free to contact me or the guidance staff for clarification.

Bruce Winkelstein

Bruce Winkelstein
Principal



Grade 4

Program of Study

Fourth grade in Brookside School is run using an elementary structure. In general, students stay with their homeroom class for all subjects and work primarily with their homeroom teacher. Academically, students are mastering basic skills and processes and are focusing on skills utilizing reading, writing and mathematics.

One of the most exciting components of 4th grade is our week-long Kinetic Sculpture experience. During this week, students learn about science, art, engineering and creativity through guided experiences in creating a kinetic sculpture. The children culminate the week with a museum in which they build kinetic sculptures and explain the science and art elements that make them work.

Language Arts/Literacy

Reading

Using a Reader's Workshop model, instruction in the fourth grade focuses on skill refinement, fluency, and comprehension. Students will read short stories, essays, and novels in a variety of genres, including nonfiction, realistic fiction, and historical fiction. Through consistent formative assessment, the teacher will guide the students to read text that is on their level, and, through those texts, the students will learn and master reading skills and strategies to improve their literal and inferential reading skills. Writing is an important part of our reading program, and students are given many opportunities to use writing to respond to reading. Writing about reading will emphasize utilizing text-based support. Unit titles for the fourth grade are: *Building a Fourth Grade Community of Readers, Following Characters into Meaning, Fantasy Genre Study, Nonfiction Informational Reading, Narrative Nonfiction, Historical Fiction.*

Writing

While writing spans all curricular areas, in Writing Workshop, students are taught the writing process through several different forms of writing. Students engage in 4-6 week long units of study focused on the styles of narrative, opinion and informational writing. Instruction in grammar and mechanics is delivered through mini-lessons connected to these units of study. Unit titles for the fourth grade are: *Creating Memorable Characters: Realistic Fiction, Persuasive Essays, Historical Fiction, Expository Writing, Literary Essay.*

Spelling

Primary Text: Pearson - *Words Their Way*

Spelling instruction in the fourth grade follows a word study model. In this model, students learn to dissect words and make connections to new words using skills such as word patterns, roots and bases, affixes and traditional memorization. In a particular lesson, students in a class study the same rule, but utilize words aligned with their reading levels

Mathematics

Primary Text: McGraw Hill - *Everyday Math*

The fourth grade program is aligned with the New Jersey State Standards and employs the *Everyday Math* text as the basis for instruction. This program emphasizes a conceptual understanding for math; vital in the elementary grades for application at older levels. In addition to this resource, students will receive additional instruction in formal algorithms and basic facts. The major content in 4th grade includes whole number concepts, skills and problem-solving and an understanding of fractions.

Social Studies

The curriculum for social studies includes The American Dream, The Global Economy, Power and Change. Curriculum will be explored through literature, projects, group activities, and discussion. Students will engage in an interdisciplinary unit related around economics. A research project will also be completed during the course of the year.

Science

Science is a combination of hands-on activities and content material. Units of study include: *Energy, Structure, Function and Information Processing, Waves and Information, and Earth's Systems*. Students also engage in a week long *Kinetic Sculpture Unit* where they utilize hands-on activities to integrate creativity skills as they learn about properties of science.

Specials:

Spanish

This is an exploratory program during which students gain a basic understanding of some common Spanish words. Students will learn through primary sources such as children's literature (in Spanish), games and songs. This class is taught by a certified Spanish teacher.

Art

In fourth grade Art Class, students will continue to explore the elements of design (color, line, shape, form, value, texture, space) through both 2 and 3-dimensional art projects while also focusing on a variety of artists, masterpieces, and cultures.

Performing Arts

This is a performance and theory-based course. Students learn the basics of rhythm and note-reading, including quarter notes, half notes, whole notes and rests, and apply these skills to music reading and identification. Children sing songs in one and two-part harmonies, and develop dance and drama steps in correlation with the songs. Composition and music history are also introduced both vocally and through the introduction of guitar.

Physical Education

This course, which meets four times each ten-day cycle, is an introduction to sports and cooperative games with a focus on basic skills and movements. Units include world games, large and small group games, volleyball, basketball, physical fitness and movement education.

Health - Students will explore various aspects of fitness and healthy living in our fitness room. Concepts include healthy eating, wellness, and self awareness. Activities include: yoga, meditation, spin bikes, cardiovascular training and flexibility.

Robotics

Fourth graders work in pairs to learn the basics of coding and robotics by building and programming LEGO robots. Following the instructional phase of the class, students program their robot to navigate one of four courses.

Band

Band in the fourth grade is voluntary. Children are scheduled for lessons once every five school days on a rotating schedule. They have early morning band every Tuesday from 7:45 to 8:30. Children are expected to be at the early morning rehearsals and at the two band concerts, as well as to practice their instruments at home.

Grade 5

Program of Study

One of the primary goals of fifth grade is to bridge the transition between elementary and middle school. The fifth grade utilizes a departmental structure to scaffold this transition. Students will move from classroom to classroom for the different subjects. This allows the children to learn to organize their materials, and also allows teachers to focus on content areas for greater depth and sophistication of instruction. Children in fifth grade get to experience lockers for the first time as a means to hold jackets and lunches.

A big activity for the 5th grade is their Journey to Mars. This year-long theme finds a place in all of the content areas, and culminates in a museum in which the students show the elements of getting to and creating a sustainable colony on Mars.

Language Arts/Literacy

Reading

Reading instruction in the fifth grade is delivered using a Reading Workshop model. Students will read short stories, essays, and novels in a variety of genres, including non-fiction, science fiction, realistic fiction, and historical fiction. Through consistent formative assessment, the teacher will guide the student towards text that is on their level, and through those texts, students will refine reading skills and strategies to improve their literal and inferential reading skills. Students will do a considerable amount of writing in response to reading. They will learn how to keep a reading notebook and write a literary essay. When writing about reading, students will learn how to provide text-based support.

Writing

While writing is integrated throughout all of the core classes in fifth grade, Language Arts in the fifth grade is a separate program. Using a Writing Workshop model, students will engage in six units of study. They include: *Personal Narrative, Memoir, Research Based Argument, Science Fiction, Feature Article and Personal Essay*. Writing is focused on the styles of narrative, argument and informational writing. Through the use of mini-lessons, modeling, guided instruction and conferring, the teacher will work with the students to improve their skills in composition, revision and editing.

Spelling

Primary Text: Pearson - *Words Their Way*

Spelling instruction in the fifth grade continues from where students left off in the fourth grade. In the fifth grade, students move from spelling rules into more of a word attack approach through the study of root words. Within this work, students will break down words based on Greek and Latin roots, thereby giving them tools to ascertain new words.

Mathematics

Primary Text: McGraw Hill - *Everyday Math*
Pearson - *Connected Math*

Students use *Everyday Math* as the basis for instruction. *Everyday Math* emphasizes a conceptual understanding for math; vital in the intermediate grades for application at older levels. In addition to this resource, students will receive additional instruction in formal algorithms and basic facts. Students will also be introduced to the Connected Math Program, which is used in grades 6-8, for one unit on number theory. The major content in 5th grade focuses on concepts, skills and problem- solving related to whole numbers, decimals and fractions.

Social Studies

Fifth grade studies will focus on physical and human geography as well as the interactions between environment and humans. They then move into the area of ancient life, exploring ancient Egypt through the 5 themes of geography. Writing skills, research skills, and nonfiction reading are emphasized in this program.

Science

Fifth grade students will first investigate earth's structure, geologic history, and materials. Unit 1: Matter and Energy in Ecosystems - Hydroponics and Transfer Energy throughout Ecosystems. Unit 2: Structures and Properties of Matter. Unit 3: Earth's Systems-Hydrosphere, Biosphere, Geosphere and Atmosphere. Unit 4: Space Systems, Planets, Stars and Brightness.

Specials:

Spanish

As with the fourth grade program, this is an exploratory program during which students gain a basic understanding of some common Spanish words through primary sources such as children's literature (in Spanish), games and songs. This class is taught by a certified Spanish teacher.

Art

Students enjoy a more in-depth study of the elements of design through 2 and 3-D projects. The principles of design will be introduced and explored, including movement, balance, rhythm, emphasis, and contrast unity. Artists from various cultures will be introduced and analyzed.

Physical Education

An extension of the fourth grade course, this course meets twice during the five-day cycle and builds on sport skills through competitive and cooperative games. It places further emphasis on communication activities. Units include soccer, volleyball, basketball, hockey, physical fitness and movement education.

Health

Students will pick up where they left off in 4th grade Health. Activities will be a bit more challenging and will open their minds up to finding fitness activities for life. Health topics of food science and stress reduction will be integrated throughout the year. In addition, students will take part in the LEAD program for drug awareness. This is a cooperative activity with the Allendale Police Department.

Computers

Students will work on advanced features of the Google Apps suite, with a concentration on using Sheets for scheduling, charting, and data collection and analysis. Students will also create multimedia presentations using WeVideo and other digital storytelling platforms. This course also emphasizes digital citizenship through online tutorials and activities.

Performing Arts

A continuation of the fourth grade curriculum, students continue to learn the basics of rhythm and note-reading, and apply these skills to music reading and identification. Children sing songs in one and two-part harmonies, adding counter melodies to the music, and develop dance and drama steps in correlation with the songs. Composition and music history are also introduced.

Robotics

Fifth graders work in pairs to apply the basics of coding and robotics by building and programming LEGO robots and utilizing different sensors. Following the instructional phase of the class, students program their robot to use external sensors to compete in a robot wars competition.

Band

Band in the fifth grade is voluntary. Children are scheduled for lessons once every five school days on a rotating schedule. They have early morning band every Wednesday from 7:45 to 8:30 am. Children are expected to be at the early morning rehearsals and at the two band concerts, as well as to practice their instruments at home.

Grade 6

Program of Study

Sixth grade is the first year of a true departmental structure in Brookside School. Students rotate among the six core teachers for their main subjects, and are also given the responsibility to choose electives. The 6th grade team works closely with each other, the administrators, and the guidance counselor, to ensure supervision of each child's academic and social growth. A main focus of 6th grade is organization and study skills.

A highlight of the 6th grade year comes from our choice of experiential education trips. These trips run concurrently. Parents/students can choose to participate in a 3 day trip to Walt Disney world, or to take part in 3 local experiences. The Disney experience focuses on the applications of art, science and engineering, and marketing in their parks. The local experiences focus on how the brain works and how it can be fooled. Following the trips, the students use the specific content they learned on the trips to improve presentation skills and teach each other about the content exclusive to their own experience.

Language Arts/Literacy

The 6th grade Language Arts/Literacy Course involves reading, writing, speaking, listening, vocabulary and grammar. Using a Reading Workshop model, students will read a variety of genres for a variety of purposes. Book clubs, reading partners and whole class discussions will give students an opportunity to grow as a reader in a community of readers. Using a Writing Workshop approach, students will write in three main text types that the New Jersey State Standards focus on: Argument Writing, Informational/Explanatory Writing, and Narrative Writing. In Argument Writing Units, students will learn how to present a claim and defend their position with supporting evidence. In Informational Writing Units, students will learn how to share knowledge of information and convey information accurately. In Narrative Writing Units, students will refine their skills of developing a sequential piece of writing and learn new strategies of effective storytelling. Vocabulary instruction will focus on Greek and Latin root words to develop an ability to understand novel words in context and will be based off of the *Words Their Way* Program. Specific grammar instruction is infused into each unit and will be ongoing throughout the year. The focus on grammar is pragmatic application towards writing.

Mathematics

Primary Text: Pearson – *Connected Math 3*

Connected Math is a conceptually and algorithmically based program aligned with the New Jersey State Standards. In addition to traditional computational skills, students focus on pattern recognition, real world applications, collaboration, and perseverance in problem solving. Sixth grade is heterogeneous and student performance from this year will be used for placement in 7th grade. Sixth grade units include: Factors and Multiples, Ratios, Rational Numbers and Equivalence, Understanding Fraction Operations, Two-Dimensional Measurement, Computing with Decimals and Percents, Variables and Patterns, Statistics and Data Analysis.

Social Studies

In 6th grade, students will get a survey in early world history that includes studies of various regions, civilizations, and developments. There will be a specific focus on Ancient Greece and Rome, as well as civilizations in Asia, Africa, and Central America. The course is designed thematically for students to make connections between geographic, governmental, economic, and cultural factors across eras and regions. Writing skills, cause and effect, and content research skills are integrated into the curriculum from a historical viewpoint.

Science

Sixth grade science is a STEM based course. Students build on their fifth grade knowledge of laboratory investigation, including isolating controls, determining variables, collecting data, and drawing conclusions to create and support claims. Units include forces and interactions, types and relationships of energy, waves and their interactions, the Earth's system, and Earth's place in the Universe. Science and engineering practices, modeling, scientific research and argumentation, and application of science to the real world are all emphasized.

Spanish

Spanish 6 emphasizes vocabulary, culture and communications as well as an introduction to basic grammar. Primary units: 1 - Myself and My Family, 2-"At Home", 3-"Communication Through Art". Students will also research a Spanish speaking country and make a presentation to the class.

Academic Competition

Students participate in this course one day per week in lieu of PE. In this class, students review math and grammar skills in a fun competitive environment. Students work in teams throughout the course to earn points for their team. In math, teams practice together using Continental Math League questions, and then compete individually and in groups on this test. In LA, students practice grammar skills and compete by showing an understanding of the skills taught.

Cycle

Cycle is an activity-based program for all students. Students will rotate through the three courses listed below:

Art - Sixth graders meet every other day for one trimester. They will explore art elements and principles using a variety of 2D and 3D media. They will gain greater creative and fine motor skills in clay while making Mayan whistles. Their painting ability and hand-eye coordination will improve while creating giant portraits using acrylic paint. Other media and projects will also be explored. Art history is incorporated through a study of artists and time periods with each project.

Computers – The focus of this course is data collection and analysis using digital platforms. Students will explore the world of technology and digital citizenship by searching the web for reliable resources, and creating spreadsheets and graphs to analyze the data. Students will work through an online portal, Everfi, to discover and debate issues in technology today including texting and driving, cyberbullying, online safety, and creating informative digital publishing content. Using Google Sheets and Forms, students will collect, analyze and interpret this data. Results will be presented through digital presentations. Students will also engage in guided activities to become exposed to alpha-numeric spreadsheet functions.

STEM (Science, Technology, Engineering & Math) – Students will explore the field of engineering through the design process. Students will learn how to use technical language and drawings to express their ideas and designs. They will identify a problem and use scientific research/data to develop possible solutions to the problem. The focus activity for this grade level is the mechanical engineering project of a magnetic levitation car. A prototype will be constructed to be tested and evaluated. When the final presentation is made, students will explain what they would change in the redesign process from what they have learned.

Health/Physical Education

Health and Physical Education is a comprehensive wellness program. Modules include topics on physical fitness, sports, project adventure, drug awareness and human anatomy.

Gym activities - These activities take place on the fields or in the gym. They are primarily games and skill development for sports. Sports include, but are not limited to: basketball, badminton, football and handball. Children will have this rotation twice in a semester.

Physical Fitness - These activities will take place in the fitness room, and focus on lifelong fitness skills. Aerobic, strength and endurance skills will be taught. Children will have the opportunity to set goals and measure their growth towards these goals.

Health - This class focuses on healthy living, and includes personal growth and development, social and emotional development, basic puberty, hygiene, and stress management.

Project Adventure - Students work collaboratively to accomplish physically based challenges.

Electives - Sixth grade students choose one of the following electives for the year.

Band - Band 6 is a performance-based course. Students utilize the skills learned in fourth and fifth grade to perform concerts in both the fall and the spring. Students also receive small group lessons in order to improve their facility and technique with their instruments.

Chorus - Chorus 6 is a performance-based course. Students learn proper vocal technique and methodology for a three-part chorus, and also learn the basics of reading music. Students perform in concerts in both fall and spring.

Band/Chorus – This course allows students to participate in both band and chorus. Students are responsible to fulfill the obligations of both courses.

Music Explorations - In this course, students learn the history and fundamentals of music. Music types include, but are not limited to, the following: Classical, Jazz, Blues, Rock & Rap. Students also learn the technical aspects of music development, including composing original pieces.

Grade 7

Program of Study

As 7th graders, students at Brookside have developed experience with a departmental structure and are ready to take more responsibility in their own learning. To help them with their development, students are given more choices in their program and more responsibility for homework and class work. Teachers work closely with administrators and the guidance counselor to monitor development and to offer support when needed. Academically, the focus in 7th grade is moving away from basic skills and into the applications of skills and critical thinking.

New to the 7th grade is their integrated unit on Food. Students learn about foods from a science, sociological and nutrition perspective, and then create a presentation showing how the food impacts society and the individual.

Language Arts/Literacy

Language Arts/Literacy in 7th grade is an integrated course combining the skills of reading, writing, speaking and listening. Writing Workshop will give students the opportunity to write in a variety of forms, for a variety of purposes and for a variety of audiences. There will be a focus on essay structure, expository writing, narrative stories, and interpretive writing. Literature studies are thematic, and include the use of short stories, the novel, poetry and drama. Highlights of the curriculum are the Dystopian Literature Genre Study guided by Lois Lowry's novel *The Giver*, and a Suspense Unit of Study where students will both read and construct suspense/mystery stories. Through use of book clubs, students will discuss social issues as they are portrayed in literature and investigate how an author's view on social issues may influence, change or add to their view on an issue. Vocabulary will be infused into the class several times each week, and focuses on Greek and Latin root words to develop an ability to understand novel words in context. Specific grammar instruction is infused into each unit, and will be ongoing throughout the year. The focus on grammar is pragmatic application towards writing.

Mathematics

Primary Text: Pearson – *Connected Math 3*

Mathematics at the 7th grade level is grouped based on ability levels. Students are divided into two groups; Math 7 and Math 7A. Both levels utilize the same books in the *Connected Math* series, but the Math 7A class will incorporate higher level analysis and more pre-algebra concepts to prepare students for Algebra in 8th grade. Students in Math 7A will also complete one more unit than the students in Math 7. In addition to traditional computational skills, students focus on collaboration, pattern recognition, real world applications, and perseverance in problem solving. Seventh grade units include: *Two-Dimensional Geometry, Integers and Rational Numbers, Similarity, Ratio, Rates, Percents and Proportions, Linear Relationships, Probability, Three-Dimensional Measurement and Data Analysis.*

Social Studies: US History I

This course begins the study of United States history, focusing on the earliest migrations into and settlement on the North American Continent and on through Civil War and Reconstruction (prehistory – 1877). Students learn about the people, events, and ideas that forged the United States. Specific emphasis is placed on the founding of the U.S. Constitution and its key ideals and applications in society.

Science

Seventh grade science begins with a study of matter and its interactions. From here, students will learn about major topics in life science, including the function of cells, animal and plant reproduction, and photosynthesis. Students will also examine the life cycle and gain an introduction to genetics. The last unit will include studies of how waves are relevant to technology and information transfer. Science and engineering practices, modeling, scientific research and argumentation, and application of science to the real world are all emphasized.

Spanish

Following a brief review and reinforcement of material learned, students are introduced to a variety of new concepts and oral and written skills. Emphasis is placed on communication skills, both oral and written. Homework, tests, and quizzes are given at regular intervals. Units include food, music, social media, and soccer. Projects are part of the end of the unit assessment.

Academic Competition

Students participate in this course one day per week in lieu of PE. In this class, students review math and grammar skills in a fun, competitive environment. Students work in teams throughout the course to earn points for their team. In math, teams practice together using Continental Math League questions, and then compete individually and in groups on this test. In LA, students practice grammar skills and compete by showing an understanding of the skills taught.

Health/Physical Education

Children will take part in four rotations each semester. Those rotations are:

Project Adventure – Students work collaboratively to accomplish physically based challenges. Children will get the opportunity to use the climbing center located on the stage.

Gym Activities – These activities take place on the fields or in the gym. They are primarily games and skill development for sports. Sports include, but are not limited to, basketball, badminton, football, and handball. Children will have this rotation twice in a semester.

Physical Fitness – These activities will take place in the fitness room, and focus on lifelong fitness skills. Aerobic, strength and endurance skills will be taught. Children will have the opportunity to set fitness goals and measure their growth during this class,

Health – This class focuses on healthy living, and includes units on body image, male and female reproductive systems, nutrition, decision making and bullying.

Cycle

Cycle is an activity-based program for all students. Students will rotate through the three courses listed below:

Art - Students meet every other day for one trimester of the school year. Seventh graders explore advanced concepts utilizing the elements and principles of design. Students use all three hand building techniques in clay, that they learned and practiced through sixth grade, to create a ceramics work. The main 2D project of seventh grade is an acrylic canvas painting. They are hung in the locker hallway and front office for their 8th grade year. They are returned to the students after being displayed. Art history is incorporated in each project through a study of artists, methods and time periods.

Computers - This course is focused on exposing children to the basics of computer science. Students engage in series of basic coding activities to build a foundation of computational thinking. For the first part of the course, students will learn to code using *Code.org* and *Scratch*. For the second part of the course students will be programming a humanoid robot. Students will utilize the design process and their coding skills to investigate and solve a problem of their choice using the robot.

STEM (Science, Technology, Engineering & Math) – Students will explore the field of engineering through the design process. Students will learn how to use technical language and drawings to express their ideas and designs. The focus project in this unit is the development of a hydraulic arm. This encompasses mechanical and biomedical engineering ideas. When the final presentation is made, students will explain what they would change in the redesign process from what they have learned.

Electives

Band - Band 7 is a performance-based course. Students utilize the skills learned in previous grades to perform in combined 7th and 8th grade concerts in both fall and spring. Students also receive small group lessons on their instruments in order to improve their facility and technique with their instruments.

Chorus - Chorus 7 is performance-based. Students learn proper vocal technique and methodology for a three-part chorus, and also expand upon their ability to read music. Students perform in combined 7th and 8th grade concerts in both the fall and the spring.

Band/Chorus - Band/chorus is for students who play a band instrument and also enjoy singing. Students alternate classes in order to take part in both courses.

Integrated Arts/Digital Arts - In this class, students will create digital audio/visual productions. Some of these productions may be used for school functions or be shown on BTV.

Grade 8 Program of Study

A significant consideration for 8th grade is preparing the students for high school. With this in mind, teachers structure opportunities for students to practice independence and decision-making. Academically, the focus is on applying skills already learned and drawing conclusions from prior knowledge and research. A variety of social events and activities serve to bring a positive closure to the students' career in Brookside School.

8th graders have several highlight moments in their year. Two big ones are the BEST showcase and the Civics Showcase. In the BEST showcase, students show off what they learn in their extensive mechanical engineering unit, creating the most effective and efficient wind turbine model. The civics showcase provides the students an opportunity to both show off and educate the public about public participation in civics for a project important to the students.

And, of course, the end of the year includes activities specific to the 8th graders graduation from Brookside.

Language Arts/Literacy

The 8th grade Language Arts/Literacy Program uses a Reading and Writing Workshop Model. Students read fiction and non-fiction books based on units of study. There is an emphasis on critical reading and interpretation, and students are given many opportunities to discuss their ideas in book clubs or with reading partners. A highlight of the 8th grade curriculum is an Exploration of Fairness and Equality Unit where students explore this social issue through books, poetry, articles, and other texts. At the end of the year, students begin to bridge the gap between middle school and high school through a Classic Literature Unit of Study. Other units during the year include an independent research project, TED talks, and a narrative reading and writing unit. Writing units are based on the three types of writing outlined in the New Jersey State Standards: Narrative Writing, Informational Writing and Argument Writing. When writing in response to reading, students will refine their skill at providing text-based support. Vocabulary will be infused into the class several times each week, and focuses on Greek and Latin root words to develop an ability to understand novel words in context. This program is based off of *Vocabulary Their Way*. Specific grammar instruction is infused into each unit and will be ongoing throughout the year. The focus on grammar is pragmatic application towards writing.

Mathematics

Primary Text: Pearson – *Connected Math 3*

Mathematics at the 8th grade level is grouped based on ability levels. Students are divided into two groups; Math 8 and Algebra. Both levels utilize the *Connected Math* series, but the Algebra classes will have two additional units and will also receive additional instruction and practice on Algebra 1 material. In addition to traditional computational skills, students focus on collaboration, pattern recognition, real world applications, and perseverance in problem solving. Eighth grade units include: *Linear and Inverse Variation; The Pythagorean Theorem; Exponential Functions; Quadratic Functions (Algebra only); Symmetry and Transformations; Making Sense of Symbols; Systems of Linear Equations; Function Families (Algebra only).*

Social Studies

This course will be based in civics and citizenship education. Students will first explore the various roles and meanings of citizenship at the local, national, and global level. The course will then shift to studying various applications of government organization, law, and justice. Students will learn to identify key public issues, and they will engage in thorough research, deliberation, and analysis of contemporary issues relevant to their lives. There will be a social participation component to this course. Students will apply their civic knowledge to an experience outside of their classroom in a service learning project.

Science

Eighth grade science is organized thematically. Units include: Mechanical Engineering, Earth's History, Evolution, and Weather and Climate. A major activity includes the development of a model wind turbine during the Mechanical Engineering Unit. Science and engineering practices, modeling, scientific research and arguments, collaboration, and application of science to the real world are emphasized.

Spanish

Following a brief review and reinforcement of material, students are introduced to a variety of new concepts and oral and written skills. Emphasis is placed on communication skills. Homework, tests, and quizzes are given at regular intervals. Units include spending and saving, living as a foreign exchange student, the environment, and personal narrative.

Academic Competition

Students participate in this course one day per week in lieu of PE. In this class, students review math and grammar skills in a fun competitive environment. Students work in teams throughout the course to earn points for their team. In math, teams practice together using Continental Math League questions, and then compete individually and in groups on this test. In LA, students practice grammar skills and compete by showing an understanding of the skills taught.

Health/Physical Education

In 8th grade, children are given the opportunity to choose their PE units. Health is required. Students will provide input within the following areas of PE:

Gym activities (2 units) - These activities take place on the fields or in the gym. They are primarily games and skill development for sports. Sports include, but are not limited to: basketball, badminton, football, and handball. Children will have this rotation twice in a semester.

Physical Fitness - These activities will take place in the fitness room, and focus on lifelong fitness skills. Aerobic, strength and endurance skills will be taught. Children will have the opportunity to set goals and measure their growth during this class.

Health – This class focuses on healthy living, and includes units on drug prevention, values, teenage pregnancy, birth control and sexually transmitted diseases.

Electives

Students in 8th grade are encouraged to explore their particular interests by self-selecting their electives. Students select six units of electives. BTV is assigned to each child, and is one unit.

BTV - (1 unit) This course centers on producing the daily television show (BTV) used for announcements and general information about Brookside School. Students will employ cooperative learning, writing, public speaking, and performance, as well as utilizing technology and practice leadership skills. All 8th graders will be part of this show, and all students are on camera at least one time per section.

Band - (3 units) Band 8 is a performance-based course. Students utilize the skills learned in previous grades to perform combined 7th and 8th grade concerts in both the fall and the spring. Students also receive small group lessons on their instruments in order to improve their facility and technique with their instruments.

Chorus - (3 units) Chorus 8 is a performance-based course. Students learn proper vocal technique and methodology for a three-part chorus, and also expand upon their ability to read music. Students perform in combined 7th and 8th grade concerts in both the fall and the spring.

Band/Chorus - (3 units) Band/Chorus is for students who play a band instrument **and** enjoy singing. Students alternate classes in order to take part in both courses.

2D Art Studio - (1 unit) Students will explore two-dimensional media through a variety of art projects using media including pencil, charcoal, and paint. Emphasis will be on personal style and creativity.

Sculpture and Design - (1 unit) Students will focus on creative problem-solving while creating three-dimensional, design-inspired art projects. Emphasis is on elements of art, principles of design and composition as well as sculptural techniques and materials. Media may include, but is not limited to: clay, plaster, paper mache, wire and found objects.

Peer Leadership - (1 unit) Students have the opportunity to participate in activities that benefit both the school and the community by taking a leadership role. This class focuses on the benefits of being involved and being a part of making change happen.

Intro to Computer Science - (1 unit) This course is focused on exposing children to the basics of computer science. Students will explore careers in computer science and how it is embedded in their daily lives. Students will be creating their own apps using MIT App Builder. Students will follow the design process as they explore ideas for apps they would like to create.

Intro to Engineering - (1 unit) This course is for anyone who enjoys science and creating things. Students will use the design loop to create a project that meets specific criteria. This is a hands-on, project-based course.

8th Grade Project - (1 unit) In this elective, students will investigate a topic and create a project of their own choosing under the direction of the G&T teacher. This is the perfect class for students who want to do something not offered at Brookside.

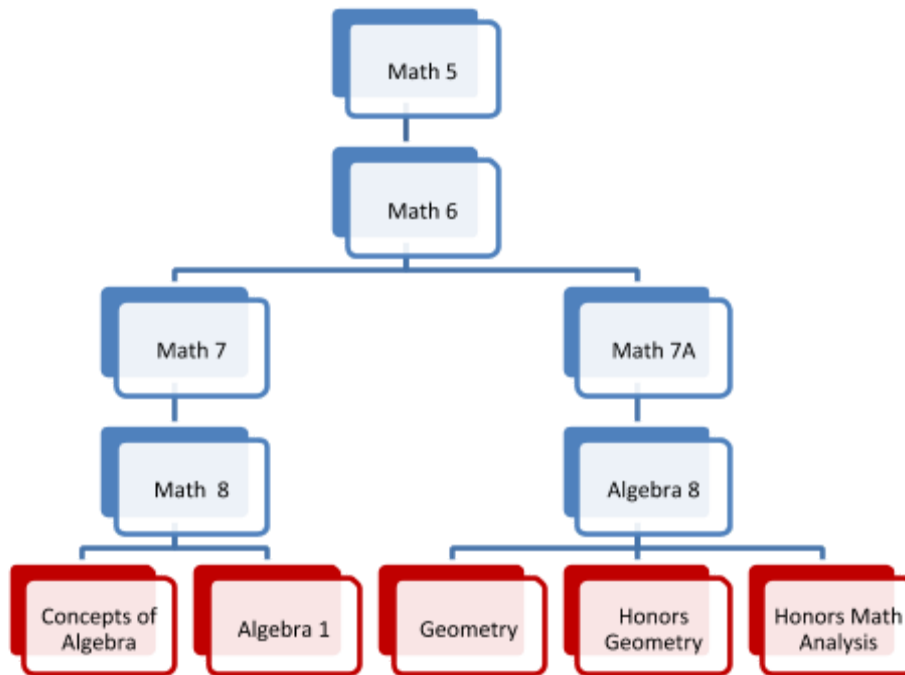
Digital Arts - This hands-on class uses Adobe Photoshop and Illustrator to allow children to create and manipulate digital images.

Video Productions - This class allows students to utilize video production tools, including WeVideo and Adobe Photoshop and Illustrator, to create short videos. Final products may be shown on BTV.

Audio Productions - Students will utilize GarageBand and Ableton Live to learn about audio production and mixing. Final products may be utilized on BTV.

Acting/Improv - (1 unit) Students will explore the concepts of improvisational acting in a fun and welcoming environment. In this activity-based class, students will study some of the following: pantomime, mime, voice and diction, and characterizations.

Brookside Middle School Math Scope and Sequence



*(Items in **RED** are for Northern Highlands)*

The guidelines for placement are intended to give a general outline of how we place students for math.

Placement for Grade 7

It is important to remember that Math 7 and Math 8 are on-level math classes, and the advanced classes are meant to be more rigorous and challenging. Students who earn a final grade of 90% or above in Math 6 will be placed in Math 7A. Students whose final grade is between an 80% and 89% will be reviewed using secondary criteria, including, but not limited to, 6th grade final exam score, 5th grade PARCC scores, STAR scores and teacher recommendation.

Placement for Grade 8

Math 8 is an introduction to Algebra course, while Algebra 8 is equivalent to an honors level high school math course.

Students in Math 7 generally will be placed into Math 8. However, students in Math 7 who score above a 95% may have the option to take the 7A final for acceptance to Algebra.

Students who are in Math 7A are assessed at the end of the year based on test grades, the final exam, and teacher recommendation. While the majority of these students will make the criteria for Algebra, we have intentionally given opportunities to some children to achieve, and as such, some of these students will go to Math 8.

Placement for Northern Highlands is based on Regional Placement Criteria.

Supplemental Program

Literacy Academic Support Program (Grades 4 and 5)

Academic Support is an intervention program that supports the classroom teacher's curriculum by utilizing a variety of strategies, and techniques. It is designed to provide additional instruction and practice in reading and writing to reinforce the necessary skills for learning. Extra assistance helps support the child within the classroom which helps establish a positive learning environment that promotes good study skills and a positive attitude towards learning. Students eligibility into the program is based on multiple criteria including standardized test scores, Teachers College Reading Benchmark Assessments, Fountas & Pinnell Reading Benchmark System, and the STAR scores. In the 4th and 5th grade reading program, students work on vocabulary, reading fluency, and reading comprehension which includes critical thinking skills.

Math Academic Support Program (Grades 4 and 5)

The Academic Support Math program supports the current math curriculum. It is designed to be flexible and affords additional support to all students in grades 4 and 5 on an as needed basis. Students work in small groups covering basic math facts and concepts. Students eligibility into the program is based on multiple criteria including standardized test scores, LINK IT scores, STAR scores, teacher referral and classroom observation.

Academic Support (Grades 6-8)

Academic Support is a general education program for children in grades 6, 7 and 8 who require additional support in the basic academic areas of reading or mathematics. Academic support has two tiers, and these tiers are not mutually exclusive. Tier 1 is designed for support in the classroom. If additional support is needed, then students will get Tier 2 support. This structure requires flexible scheduling. Tier 2 support is more intensive and is remedial in nature. This class meets once a week in lieu of PE. Entrance is based on multiple criteria, including standardized test scores, F&P assessments, TC assessments, Link-It assessments, and teacher recommendations. An ISIP (Individualized Student Improvement Plan) will be created for all Tier 2 ASP students.

Multi-Sensory Reading (Grades 4-8)

This is a support program for students who are identified as having significant decoding issues aligned with dyslexia. Instruction is provided by the District Reading Specialist in very small groups to address decoding deficits. Instruction includes a mix of methodologies shown to be effective in addressing decoding challenges.

Study Skills (Grades 6-8)

Study Skills is a special education course for students in grades 6-8. The course is taught by the grade level resource room teachers (who are also the in-class support teachers for special education students). The purpose of this course is to help children succeed in their core courses. Generally, this course takes the place of Spanish, but includes a cultural Spanish component. The teacher will work on helping the students to create study guides to help in preparation for tests in their core content areas. The teacher will also focus on reinforcing strategies that students should use when

preparing for tests at home and completing homework assignments. Emphasis will be placed on organizational skills, time management, and long-term planning for projects and assignments.

Resource Room (All grades)

The Resource Room is for classified students who require a substantially modified curriculum. This program is a special education program and is designed as part of the IEP. This class is taught by a special education teacher, and replaces the regular education class of the same name.

ELS (All grades)

English Language Services are designed for students whose primary language is other than English and who also require remediation to learn English. Students are assessed on a state test, and the program is designed to teach literal and figurative forms of English in writing and speaking. Students will also receive extra support for their core classes as part of this program. Students are admitted to this program based on their ACCESS (state test) scores.

Gifted and Talented Program (for qualified students)

The G&T Program in Allendale was developed to maximize creativity and independence while being cognizant of child development stages.

Exposure (Grades K-2): At a young age, all students should have opportunities to learn, expand, and experience education in each academic area, piquing intellectual curiosity and educational interests. A specialist will work closely with classroom teachers to provide enrichment opportunities within the general education classroom.

Exploration (Grades 3-4): Students in the intermediate elementary grades develop intellectual abilities and interests at varying degrees. Students identified as “gifted and talented” will experience enrichment education from a specialist outside of the general education classroom that cultivate important intellectual habits of inquiry, problem-solving, and independent thinking.

Divergence and Convergence (Grades 5-6): Building on exploration, students identified as “gifted and talented” will be guided by an enrichment specialist outside of the general education classroom. Instructional experiences will first foster divergent thinking in each academic area and then move toward convergence, involving peer dialogue and collaboration around a multitude of ideas explored.

Independence (Grades 7-8): Students identified as “gifted and talented” will engage in independent inquiries with support from an enrichment specialist. Accessing important habits of mind acquired earlier, these students can pursue, develop, and get feedback on their work through inquiries taking place in pullout classroom settings and/or credible online venues.