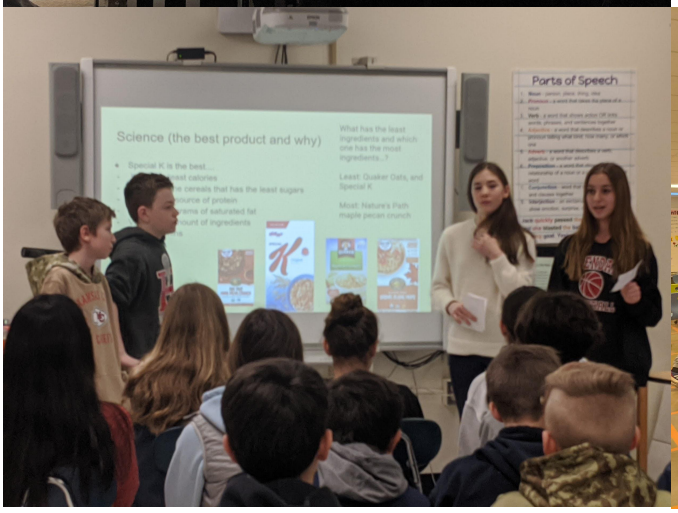
# Brookside School

## Curriculum Guide 2021-2022




Dear Parents and Students,

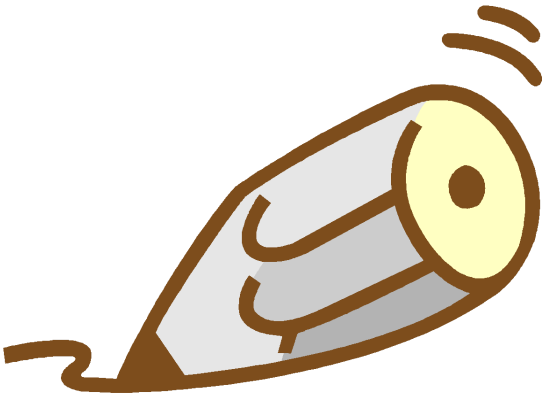
Welcome to the 2021-2022 school year. Last year was a tad unusual due to Covid-19 restrictions. The curriculum guide for 2021-2022 is an anticipatory overview of what we are planning for the upcoming school year based on information available today.  I am excited to share in the coming year you will see we have added some new electives for the middle school.

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

In this performance 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. Students 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. 4th graders participate in two required, evening concerts during the year.

**Physical Education**
This course provides 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 obstacle courses.

**Band**
Band in the fourth grade is voluntary. Students are scheduled for lessons once every five school days on a rotating schedule. Musicians will learn to collaborate during morning band every Tuesday from 7:45 to 8:30. Students 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 students to learn to organize their materials, and also allows teachers to focus on content areas for greater depth and sophistication of instruction. Students 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*

While reading and writing are integrated throughout all of the core classes in 5th grade, Reading instruction is set up as a separate class. 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 students 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. Units include: Tackling Trouble, a character unit, Science Fiction, Mars based research and Reading like a Fan.

### *Language Arts*

While reading and writing are integrated throughout all of the core classes in fifth grade, Language Arts is set up as a separate class. Using a Writing Workshop model, students will engage in six units of study. They include: *Personal Narrative, Science Fiction, Journalism and the Feature Article, Public Speaking, and Argument and Advocacy.* This class also includes formal grammar instruction, including sentence types, parts of speech, and punctuation for 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. Units include: Matter and Energy in Ecosystems, Structures and Properties of Matter, Earth's Systems and Space Systems. Many of these units tie directly into the Mars project, with students applying concepts and properties from Earth to the habitat on Mars.

## 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 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 with a focus of introducing 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. Students 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. 5th graders participate in two required, evening concerts during the year.

## 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. Students are scheduled for lessons once every five school days on a rotating schedule. Musicians will learn to collaborate at morning band every Wednesday from 7:45 to 8:30 am. Students 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 and 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 survey early world history that includes studies of various regions, civilizations, and developments. Students will learn world history from the fall of the Roman Empire in 476 CE through the fall of the MesoAmerican empires of the Aztecs and Incas. 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. Units include: Myself and My Family, "At Home", and "Communication Through Art". Students will also research a Spanish speaking country and make a presentation to the class.

## 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. Various media will be introduced through an array of projects with an emphasis on helping students learn to communicate through art. 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. Students 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. Students 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.

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**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, its key ideals and its 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.

**Health/Physical Education**

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

**Project Adventure –**Students work collaboratively to accomplish physically based challenges. Students 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. Students 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. Students 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. The main 2D project of seventh grade is an acrylic canvas painting. They are displayed in the hallways around the school and in the front office for their 8th grade year. They are returned to the students at the end of the year. In addition, students will explore media and ideas in art with a focus of communicating ideas through art. Art history is incorporated in each project through a study of artists, methods and time periods.

**Computers** - This course is focused on exposing students to the basics of computer science. Students engage in a 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**

In 8th-grade language arts, students explore the human condition by reading, discussing, and writing about a rich variety of fiction and nonfiction texts. Students begin the year reading young adult realistic fiction. By reading about teens who experience the same types of day-to-day struggles that students face, students are able to explore archetypes and stereotypes, internal conflicts, and universal themes. After a day-long writing workshop with author Todd Strasser, students spend several weeks crafting their own realistic fiction YA stories. Next, students learn to critically read and annotate nonfiction articles and book excerpts about issues highly relevant to their generation, including social media usage, censorship, and mental health. Through critical analysis of these texts, students gain the skills to conduct their own research on a topic about which they are deeply passionate. The highlight of the year is when students are able to present their findings through TED Talks. To bridge the gap between middle and high school, students read *The Crucible* by Arthur Miller. They "disrupt" this classic play by examining ways in which its relevance holds true in today's society with regard to modern witch hunts, groupthink, and mob mentality. *The Crucible* unit transitions into a unit about fairness and equality, which begins with reading Holocaust literature and ends with reading literature about modern-day social issues. Students then create their own thesis about fairness and equality in society. Reading, writing, grammar, and vocabulary instruction are woven throughout each unit for the duration of the year.

**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.

**BTV**

BTV produces the school newscast where you will tell stories using video, movie making software, and writing. The class will decide the stories that will most engage our school, its students and staff and learn how to tell them in a journalistic style. Students will learn how to conduct interviews, research, and write informative, newsworthy stories. This course will promote a positive school climate by delivering good news, conducting purposeful interviews, and producing quality content from around the school community to peers, parents and community members.

**Health/Physical Education**

In 8th grade, students 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. Students 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. Students 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 student, and is one unit.

**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.

**Art, Music and Change** - (1 unit) Throughout history, the Arts have been used for communication, raising awareness and positive change. In this class students will examine various time periods where the Arts have played a central role in awareness and change. You will choose causes you feel connected to and create a piece of Art to promote awareness. You will also arrange a musical score or create a playlist to accompany your art piece. The class will culminate with a public installation of art projects in the school and/or the community at large.

**World Cultures and Art** - (1 unit) World cultures around the globe will be examined through Art. You will create a portfolio of original artwork based on techniques from diverse locations across multiple continents. Projects may include media such as henna, paper cutting, various types of painting, Celtic knotwork, and sand art. The course emphasizes both the artistic techniques and the cultural significance of each project as it relates to students' own lives and cultures.

**Peer Leadership** - (1 unit) While participating in this course, students focus on what a leader is and how to become leaders in their school and community. You will acquire a "real life" understanding of leadership and the roles of leaders. You will hear from guest speakers who are currently involved in leadership roles within the school and the local community. You will practice your skills and begin to develop your own leadership style by assuming various leadership roles within the school and community.

**Making and Coding** - (1 unit) This course explores coding and computer science by way of making and design. The course is project-based with a maker philosophy that provides a context for learning coding through the act of making physical objects. Your projects may include wearable technology like a fitness tracker, watch, softball/baseball pitch counter, wearable clothing/shoe accessories, games toys and more.....

**MIT APP Builder** - (1 unit) This course is focused on exposing students 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.

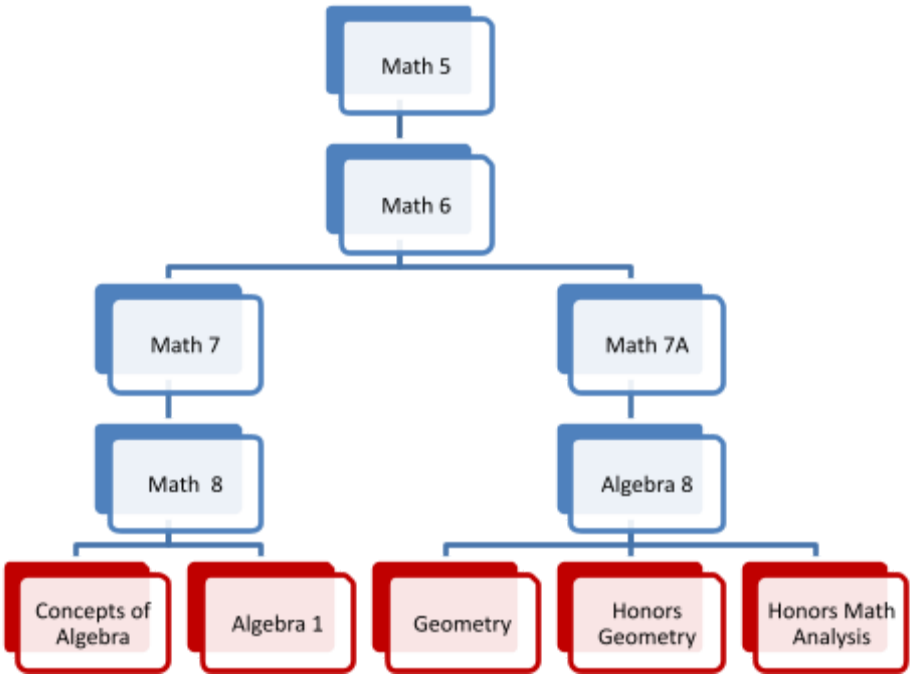
**Engineering and Design** - (1 unit) Students will draw on previous experience with the engineering design process from their STEM cycle in prior grades. This elective fosters critical thinking and creativity skills by providing students with an open-ended design challenge with many possible solutions. Through the use of an Engineer's notebook, you will design and construct a fully-functional miniature golf course according to design constraints. Concepts that will be addressed include circuitry, simple machines, technical drawing, and computer-aided design. This course provides access to the use of Innovation Lab tools, machinery, and resources in order to enable you to bring designs to fruition. The course culminates in a round of miniature golf.

**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 as a current elective at Brookside.

**The Stock Market Game and Personal Finance Management** - (1 unit) In this course you will learn about finance and how decisions you make early in life will have a great impact on your financial well being down the road. Topics include credits and debits, how credit cards work, types of savings and investments, budgeting, for bills, and debt management. You will also compete in the National Stock Market Game as you explore the world of Venture Capitalism! The goal is for you to have a plan and understanding how money grows over time

**Fantasy Sports** - (1 Unit). Do you like sports and statistics? In this course you will analyze and forecast players from professional sports. You will study their statistics, conduct an in-class player draft, and follow your fantasy team throughout the course. Students will look up box scores and compute their team's points earned every day, utilizing various math concepts.

# 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.

<u>Placement for Grade 7</u>

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 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.

<u>Placement for Grade 8</u>

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.