Britton Deerfield Schools
Grades 6-8 Curriculum & Course Descriptions

Math Curriculum

Math (6th Grade)

In Grade 6, instructional time should focus on four critical areas: (1) connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems; (2) completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers; (3) writing, interpreting, and using expressions and equations; and (4) developing understanding of statistical thinking. The district currently uses the McGraw Hill Glencoe Math Curriculum for students in grades 6-8.

(1) Students use reasoning about multiplication and division to solve ratio and rate problems about quantities. By viewing equivalent ratios and rates as deriving from, and extending, pairs of rows (or columns) in the multiplication table, and by analyzing simple drawings that indicate the relative size of quantities, students connect their understanding of multiplication and division with ratios and rates. Thus students expand the scope of problems for which they can use multiplication and division to solve problems, and they connect ratios and fractions. Students solve a wide variety of problems involving ratios and rates.

(2) Students use the meaning of fractions, the meanings of multiplication and division, and the relationship between multiplication and division to understand and explain why the procedures for dividing fractions make sense. Students use these operations to solve problems. Students extend their previous understandings of number and the ordering of numbers to the full system of rational numbers, which includes negative rational numbers, and in particular negative integers. They reason about the order and absolute value of rational numbers and about the location of points in all four quadrants of the coordinate plane.

(3) Students understand the use of variables in mathematical expressions. They write expressions and equations that correspond to given situations, evaluate expressions, and use expressions and formulas to solve problems. Students understand that expressions in different forms can be equivalent, and they use the properties of operations to rewrite expressions in equivalent forms. Students know that the solutions of an equation are the values of the variables that make the equation true. Students use properties of operations and the idea of maintaining the equality of both sides of an equation to solve simple one-step equations. Students construct and analyze tables, such as tables of quantities that are in equivalent ratios, and they use equations (such as $3x = y$) to describe relationships between quantities.

(4) Building on and reinforcing their understanding of number, students begin to develop their ability to think statistically. Students recognize that a data distribution may not have a definite center and that different ways to measure center yield different values. The median measures center in the sense that it is roughly the middle value. The mean measures center in the sense that it is the value that each data point would take on if the total of the data values were redistributed equally, and also in the sense that it is a balance point. Students recognize that a measure of variability (interquartile range or mean absolute deviation) can also be useful for summarizing data because two very different sets of data can have the same mean and Grade 6 | 39 median yet be distinguished by their variability. Students learn to describe and summarize numerical data sets, identifying clusters, peaks, gaps, and symmetry,

considering the context in which the data were collected. Students in Grade 6 also build on their work with area in elementary school by reasoning about relationships among shapes to determine area, surface area, and volume. They find areas of right triangles, other triangles, and special quadrilaterals by decomposing these shapes, rearranging or removing pieces, and relating the shapes to rectangles. Using these methods, students discuss, develop, and justify formulas for areas of triangles and parallelograms. Students find areas of polygons and surface areas of prisms and pyramids by decomposing them into pieces whose area they can determine. They reason about right rectangular prisms with fractional side lengths to extend formulas for the volume of a right rectangular prism to fractional side lengths. They prepare for work on scale drawings and constructions in Grade 7 by drawing polygons in the coordinate plane.

Math (7th Grade)

In Grade 7, instructional time should focus on four critical areas: (1) developing understanding of and applying proportional relationships; (2) developing understanding of operations with rational numbers and working with expressions and linear equations; (3) solving problems involving scale drawings and informal geometric constructions, and working with two- and three-dimensional shapes to solve problems involving area, surface area, and volume; and (4) drawing inferences about populations based on samples.

(1) Students extend their understanding of ratios and develop understanding of proportionality to solve single- and multi-step problems. Students use their understanding of ratios and proportionality to solve a wide variety of percent problems, including those involving discounts, interest, taxes, tips, and percent increase or decrease. Students solve problems about scale drawings by relating corresponding lengths between the objects or by using the fact that relationships of lengths within an object are preserved in similar objects. Students graph proportional relationships and understand the unit rate informally as a measure of the steepness of the related line, called the slope. They distinguish proportional relationships from other relationships.

(2) Students develop a unified understanding of number, recognizing fractions, decimals (that have a finite or a repeating decimal representation), and percent as different representations of rational numbers. Students extend addition, subtraction, multiplication, and division to all rational numbers, maintaining the properties of operations and the relationships between addition and subtraction, and multiplication and division. By applying these properties, and by viewing negative numbers in terms of everyday contexts (e.g., amounts owed or temperatures below zero), students explain and interpret the rules for adding, subtracting, multiplying, and dividing with negative numbers. They use the arithmetic of rational numbers as they formulate expressions and equations in one variable and use these equations to solve problems.

(3) Students continue their work with area from Grade 6, solving problems involving the area and circumference of a circle and surface area of three-dimensional objects. In preparation for work on congruence and similarity in Grade 8 they reason about relationships among two-dimensional figures using scale drawings and informal geometric constructions, and they gain familiarity with the relationships between angles formed by intersecting lines. Students work with three-dimensional figures, relating them to two-dimensional figures by examining cross-sections. They solve real-world and mathematical problems involving area, surface area, and volume of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes and right prisms.

(4) Students build on their previous work with single data distributions to compare two data distributions and address questions about differences between populations. They begin informal work with random sampling to generate data sets and learn about the importance of representative samples for drawing inferences.

Math **(8th Grade)**

In Grade 8, instructional time should focus on three critical areas: (1) formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation, and solving linear equations and systems of linear equations; (2) grasping the concept of a function and using functions to describe quantitative relationships; (3) analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem.

(1) Students use linear equations and systems of linear equations to represent, analyze, and solve a variety of problems. Students recognize equations for proportions ($y/x = m$ or $y = mx$) as special linear equations ($y = mx + b$), understanding that the constant of proportionality (m) is the slope, and the graphs are lines through the origin. They understand that the slope (m) of a line is a constant rate of change, so that if the input or x-coordinate changes by an amount A, the output or y-coordinate changes by the amount $m \cdot A$. Students also use a linear equation to describe the association between two quantities in bivariate data (such as arm span vs. height for students in a classroom). At this grade, fitting the model, and assessing its fit to the data are done informally. Interpreting the model in the context of the data requires students to express a relationship between the two quantities in question and to interpret components of the relationship (such as slope and y-intercept) in terms of the situation. Students strategically choose and efficiently implement procedures to solve linear equations in one variable, understanding that when they use the properties of equality and the concept of logical equivalence, they maintain the solutions of the original equation. Students solve systems of two linear equations in two variables and relate the systems to pairs of lines in the plane; these intersect, are parallel, or are the same line. Students use linear equations, systems of linear equations, linear functions, and their understanding of slope of a line to analyze situations and solve problems.

(2) Students grasp the concept of a function as a rule that assigns to each input exactly one output. They understand that functions describe situations where one quantity determines another. They can translate among representations and partial representations of functions (noting that tabular and graphical representations may be partial representations), and they describe how aspects of the function are reflected in the different representations.

(3) Students use ideas about distance and angles, how they behave under translations, rotations, reflections, and dilations, and ideas about congruence and similarity to describe and analyze two-dimensional figures and to solve problems. Students show that the sum of the angles in a triangle is the angle formed by a straight line, and that various configurations of lines give rise to similar triangles because of the angles created when a transversal cuts parallel lines. Students understand the statement of the Pythagorean Theorem and its converse, and can explain why the Pythagorean Theorem holds, for example, by decomposing a square in two different ways. They apply the Pythagorean Theorem to find distances between points on the coordinate plane, to find lengths, and to analyze polygons. Students complete their work on volume by solving problems involving cones, cylinders, and spheres.

Science Curriculum

The district currently uses The McGraw Hill Inspire Science Curriculum with students in Grades 6-8. *Inspire Science* sparks students' curiosity through fascinating real-world phenomena. Students investigate, problem-solve, argue, and discuss scientific phenomena to make sense of the world from their perspective. The Inspire Science experience is organized around the 5E Instructional Framework. The compelling resources housed in this familiar framework empower educators to provide equitable science experiences for all learners through flexible approaches and research-based best practices.

Science (6-8 Grades)

Inspire Science Grade 6 is built on the 5E instructional framework and integrates physics, chemistry, earth science, astronomy, and biology. Students will uncover preconceptions with formative assessment science probes. Cross-curricular connections are embedded throughout with quick and easy references to specific literacy, math, and engineering skills being reinforced through the science investigations. Inspire Science also offers collaboration kits and a variety of digital resources to engage students in collaborative hands-on learning.

Michigan's middle school science curriculum is based on the National Science standards—Next Generation Science Standards (NGSS). Grades 6–8 covers a variety of topics, including Earth science, life science, and physical science:

Earth Science (6th Grade)

Topics include the water and rock cycles, the atmosphere, plate tectonics, the Earth-Sun-Moon system, gravity and motions in space, and scale properties in the solar system

Life Science (7th Grade)

Topics include cells, body systems, animal classification, cell theory, cell parts and function, interacting body systems, and information processing

Physical Science (8th Grade)

topics include matter, structure and properties, atomic composition model, synthetic materials, thermal energy and particle motion, chemical properties and reactions, and forces and interactions

History

The Britton Deerfield district utilizes the TCI Social studies Alive Curriculum with students in Grades 6-8. This social studies curriculum helps teachers offer interactive, supportive learning environments. With a focus on student-led learning and immersive activities, our middle school social studies curriculum aligns to the College, Career, and Civic Life (C3) Framework for Social Studies, and helps prepare students to be engaged and thoughtful citizens as they explore social studies using the Inquiry Arc.

History 6 (6th Grade)

Sixth-grade students will explore the tools and mental constructs used by geographers as they study contemporary world geography. Contemporary civics/government and economics content is integrated throughout the year. As a capstone, the students will conduct an investigation of a global issue. Using knowledge, research, and inquiry, they will analyze an issue and propose a plan for the future, including a persuasive essay.

History 7 (7th Grade)

Seventh-grade students will review the tools and mental constructs used by historians and geographers. They will develop an understanding of World History, Eras 1–4. Geography, Civics/Government, and Economics content is integrated throughout the year. As a capstone, the students will conduct investigations about past and present global issues. Using significant content knowledge, research, and inquiry, they will analyze the issue and propose a plan for the future. As part of the inquiry, they will compose civic, persuasive essays using reasoned argument.

History 8 (8th Grade)

Eighth-grade students continue their study of U.S. history from the development of the Constitution through Reconstruction. Geographic, civics/government, and economics content is integrated within the historical context under study. Students should understand the relevancy and connections of this history to their lives. Students will use significant content knowledge, research skills, and inquiry practices to analyze issues and communicate conclusions.

History of Sports (6th-8th Grade)

A "History of Sports" course typically explores the evolution of sports and their connection to social, cultural, economic, and political forces, examining how sports have both reflected and shaped society throughout history.

English Language Arts

The standards for grades 6-8 offer a focus for instruction each year to help ensure that students gain adequate mastery of a range of skills and applications. Each year in their writing, students should demonstrate increasing sophistication in all aspects of language use, from vocabulary and syntax to the development and organization of ideas, and they should address increasingly demanding content and sources. Students advancing through the grades are expected to meet each year's grade-specific standards and retain or further develop skills and understandings mastered in preceding grades. The expected growth in student writing ability is reflected both in the standards themselves and in the collection of annotated student writing samples. Teachers also utilize district libraries, classroom libraries, NEWSELA, and other reading materials to supplement their engaging and exciting teaching pedagogy.

For the 2024-25 school year, students will be learning using the *myPerspectives®* English Language Arts Curriculum for grades 6–12. This is a research-based, comprehensive literacy solution designed to support all student learning. Purposeful activities foster student ownership of learning and reflect real-world scenarios with students working in large groups, in smaller teams, and independently.

As students read relevant and diverse texts, have thought-provoking discussions, collaborate with their peers, and hone their communication skills, they will use transferable strategies and develop lifelong learning habits that help them be successful wherever they go.

For all grade level information, including State standards and benchmarks, please visit the following link: https://www.michigan.gov/documents/mde/MDE_ELA_Standards_599599_7.pdf

Foreign Language

Spanish 1 (8 Grade)

An introduction to the language includes learning sounds, writing system, vocabulary and structure. Students will experience the four skills of speaking, listening, reading and writing in a practical scenario with individualized attention. Cultural business themes will be incorporated into instruction. At the conclusion of the Introductory course, students will be able to reproduce the sound system of the language and integrate these sounds into speaking, use vocabulary for everyday manners, participate in brief conversations asking and answering simple questions, write concise, logical sentences and comprehend simple written passages. Students will also be able to appreciate the culture. Students will explore cultural diversity by focusing on the 5 Cs: communication, cultures, communities, comparisons, and connections. Students will develop an understanding of and critically examine the complexity of elements important to another culture in relation to its history, values, politics, economy, beliefs, products, practices and perspectives.

This class is available for high school credit. Students must receive a Grade of C- or better to receive this credit in the 8th grade.

Electives

Music Appreciation

Music appreciation helps students develop their aesthetic awareness and musical proficiency by exploring music from a historical and cultural perspective. Students learn about music fundamentals, terminology, instrument families, tempo, rhythm, form, and meter. They also analyze and listen to music from different eras, researching the historical and cultural contexts of the time. Students may also explore the lives of composers and performers, and how music has changed throughout history.

Drama

This course is designed to build basic acting skills including activities such as pantomime, monologues, character analysis, and improvisation. The highlight of the course will be a culminating play/musical. This class will focus on building self-esteem, confidence, and creative expression. Some after school rehearsals may be required. All performances are mandatory! No experience is necessary!

Strength Training & Conditioning

Strength and conditioning classes use a variety of exercises to improve performance by developing skills like strength, endurance, power, speed, and agility. They can also help with flexibility, movement, and injury rehabilitation. Classes may include strength training, circuit training, cardio, body weight exercises, weightlifting and core training. Currently, this is offered as an earned opportunity for students during seminar. All students may not be eligible to participate and this is not a scheduled course offering.

Health

This class is designed to help you understand the concepts of health and how to live a healthy lifestyle. It will give you the information you need to make good healthy choices during your lifetime. Evaluation will be based on class discussions, homework, tests, oral presentations, research projects and tests/quizzes.

Physical Education

The physical education program for middle school students is designed to develop the skills and attitudes necessary to achieve and maintain lifelong health and fitness. Students will be encouraged to gain an active appreciation of the positive role of physical fitness in overall health and well-being and to develop socially useful participation skills. In keeping with this philosophy, the program seeks to provide for the equal participation of all students through a variety of experiences leading to the development of positive self-concept, creativity, and enthusiasm for participation. Performances will be assessed by a regime of written, fitness, skills assessments as well as participation and attitude.

Social Emotional Curriculum

Lions Quest has been used by schools and other organizations for over 30 years. Through a series of SEL curriculum lessons, the program promotes positive student behaviors that lead to greater academic success, a greater connection to school and improved school climate. The curriculum is based on CASEL's Five Core Competencies: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. The lessons in each unit include grade appropriate content that develops sequentially by topic. The curriculum offers cross-curricular activities, family and community connection activities, as well as reinforcement and enrichment activities. Britton Deerfield Schools is excited to implement this curriculum and to partner with the Lions Club throughout our endeavor.

Current Events

Current events courses can cover a variety of topics, including local and global issues, news resources, and political opinions. Some courses may also provide supplemental information about history, geography, and economics. This course focuses on current events, issues, and debates both nationally and worldwide. It features online news broadcasts and news magazines, and also provides supplemental information about U.S. History, Geography, Economics, and World History.

Math Lab

Math Lab is an elective class that helps students improve their basic math skills and gain a better understanding of math concepts. Math lab can also help students apply math to real-world situations. Math lab may include

activities that help students visualize, manipulate, and reason. For example, students might plot points and connect them with lines to create pictures. They might also do daily bell work to practice and apply concepts and receive feedback from their teacher.

Art

In General Art, students expand their knowledge of the visual arts. Students make meaningful connections between the arts and their own experiences through a series of instructional units that combine observing and creating, while reading, writing and speaking about, and reflecting upon the arts.

Band

A general band course can provide students with a broad understanding of music and how to play an instrument. It may also include learning about music history and culture, and how music can affect society. Some course objectives may include:

- Learning instrument techniques
  Students may learn how to produce a characteristic tone on their instrument and develop good practice habits. They may also learn about fingerings and positions, and how to care for their instrument.
- Learning music theory
  Students may learn about music notation, fundamental rhythms, and basic music theory.
- Learning about music history and culture
  Students may learn about the social and cultural influences on music, and how people in different cultures use and respond to music. They may also learn about the role of music in radio, television, and advertising.
- Performing
  Students may learn how to perform in an ensemble, and how to convey a composer's intent to an audience through their playing. They may also learn about expressive aspects of performance, such as dynamics, articulation, and phrasing.
- Listening to music
  Students may learn how to listen to and analyze different types of music, and evaluate the quality of musical performances. They may also learn how to make musical decisions based on their knowledge of different styles and genres.

Keyboarding/Writing

Keyboarding classes teach students how to type on a keyboard using the touch method, which involves typing without looking at the keyboard. The goal is to develop the skills to type quickly and accurately, and to use the keyboard to create documents for personal, educational, and professional use. Keyboarding classes may also cover topics such as:

- Keyboarding fundamentals: How to use the home keys, alpha keys, punctuation, and number keys
- Ergonomics: How to maintain proper posture to reduce fatigue and prevent carpal tunnel syndrome
- Proofreading: How to use proofreader's marks and spell check to correct spelling and punctuation
- Word processing: How to create, save, and edit documents
- Communication: How to use the keyboard to communicate in a business setting, such as by starting and exiting presentation software, formatting text, and selecting design layouts

This class will also work on the integration of writing through word processing. Students will take skills learned in ELA and make finished works using this technology.

Computer Applications

Computer applications courses teach students how to use common software applications and computing fundamentals. Some topics may include:

- Microsoft 365 applications: Students learn the features and benefits of MS Word, MS Excel, and MS PowerPoint, and apply their knowledge to problem-based activities.
- Keyboarding skills: Students learn how to operate personal computers and workstations.
- Database design and usage: Students learn how to use databases and spreadsheets.
- Interactive software programs: Students learn how to use interactive software programs for tasks like word processing, spreadsheets, and databases.

Students may also learn how to practice ethical and appropriate behavior for using technology, and how to apply critical thinking skills. They may use different programs and operating systems to practice their skills, such as Windows, macOS, and Linux.

Special Education

Resource Room

The Britton Deerfield Resource Room program fulfills state and federal special education laws by providing services to qualifying students. Individual Education Plans (IEP) are developed to meet each student's individual learning style and education needs. IEP team members include the student, parent/guardian, general education and special education teachers, support personnel, counselors and administrators.

Resource Room students with a current IEP may enroll in required and elective courses with the special education department, but final classroom placements are determined by the IEP. Students may also get daily or frequent direct support for general education courses from the resource room teacher during the school day. They type and amount of Resource Room support is based on the student's individual educational needs as defined in the IEP.

Resource Room teachers are in contact with general education teachers regarding progress of each student in general education courses. Feedback is provided to student from the Resource Room staff, as well as through their general education teachers.

Virtual (Online Learning)

Virtual

Virtual is a program of instruction designed to assist all students in meeting State Intermediate Standards for technology and on line learning. Certified teachers supervise this class where students will have the opportunity to choose which course they would like to take through Edgenuity. Students must complete each course with a passing score to count as credit. Middle School virtual classes are only allowed by approval of the middle school Principal and in extenuating circumstances. Virtual classes are not a part of normal scheduling at the middle school level.