

Brevard Middle School Curriculum Descriptions for 7th and 8th Grades Communication Skills, Mathematics, & Elective Rotations 2010-2011

Grade level curriculum for each grade's Communication Skills and Mathematics is rigorous. Below is a brief description of each set of courses.

MATH CURRICULUM

Middle School math curriculum builds upon concepts students have previously learned in earlier grades including connections to addition and subtraction of non-negative rational numbers; number properties; perimeter and area; median, mode, and range; and bar graphs and leaf plots. Major concepts/skills for these grades include:

- Computation with integers;
- Ratio, proportion, and percent, along with their applications;
- The comparison and ordering of rational numbers;
- Geometric transformations in the coordinate plane;
- Proportional relationships and similar figures;
- Volume, surface area
- Simple linear equations and inequalities;
- Compare and contrast histograms and bar graphs;
- Probability of independent events;
- The analysis of graphic representations of data
- Pythagorean Theorem

Algebra Concepts 7

This rigorous course is designed for students who passed their sixth grade math course with a well-developed grasp of Mathematical Concepts. Students will focus on solving relevant and authentic problems using appropriate technology, and applying algebraic concepts along with those math skills developed in earlier years.

Pre-Algebra 7

This course is designed for students who scored at a high-level III or IV (85th percentile or higher) on the 6th grade End of Grade math test while also maintaining higher level scores on classroom assignments. The content in this course includes all of the above and is delivered at a faster pace with frequent opportunities for enrichment activities and independent study of deeper Algebraic concepts. This course is the prerequisite for Algebra I and it is the intention that students taking this course will continue into Algebra I in 8th grade. Teacher recommendations are the primary basis of consideration with regard to placement in this course along with observations of an evident work ethic and a keen interest in the subject area.

Pre-Algebra 8

This course is designed for meeting the needs of those students who enter 8th grade with a mastery of general mathematical and algebraic concepts. Focus will be placed on grade level concepts leading to the undertaking of deeper Algebraic concepts including:

- conversions among fractions, decimals, and percents
- computation with rational numbers
- Pythagorean Theorem
- Surface area and volume
- Linear equations and inequalities
- Box plots and scatter plots
- Probability of independent and dependent events
- Theoretical probabilities and experimental results

This course is the prerequisite for Algebra I and it is the intention that students taking this course will continue into Algebra I in 9th grade.

Transitional Algebra

Considered an accelerated math course, Transitional Algebra is designed for students who show significant aptitude for higher level Algebraic concepts, but need additional support in the foundations of Algebra to succeed in Algebra I coursework. Students will focus primarily on Pre-Algebra concepts in the fall semester and begin the process of building stronger analytical and critical thinking skills as connected to Algebra I in the spring semester. These students are expected to take Algebra I in the first semester of high school.

Algebra I

This course is designed for students who successfully completed Pre-Algebra in the 7th grade and is appropriate for those students who scored at a high level III or a level IV (85th percentile or higher) on the 7th grade End-of-Grade math test. Other math test scores are also examined, including those achieved on the Iowa Test of Algebra Readiness (placement generally requires a 85th percentile or greater composite score). Focus will be on deeper extension of the North Carolina Standard Course of Study for Algebra I by developing within the student a greater knowledge and skill strategies in mathematics. Special emphasis will be placed on developing and/or refining the ability to use analytical and critical thinking skills in solving problems. Curriculum compacting and independent study opportunities further enhance the classroom experience. Students will be expected to perform successfully in all areas of the course and to pass the Algebra I End of Course Test. These students usually enter Geometry in the 9th grade. Teacher recommendations are the primary consideration with regard to placement in this course, but the content of this course also requires a display of accomplished work ethic, an interest in excelling in the subject area and the ability to work independently.

COMMUNICATION SKILLS CURRICULUM

The North Carolina SCOS curriculum expectations for language arts / reading is rigorous. Students will use oral language, written language, and media technology for expressive, informational, argumentative, critical, and literary purposes. Students will learn and reinforce these skills through novel study, word stems, and grammar review. This curriculum will also focus intently on how to speak effectively on connect to real-world situations and current events through the implementation of seminar based discussion techniques.

Communication Skills 7 and 8

While emphasis in the Communication Skills courses is placed on personal expression and extension of reading connection, students in this course will also:

- Interpret and synthesize information
- Express individual perspectives in response to personal, social, cultural, and historical issues;
- Develop an understanding of the foundations of an argument
- Critically analyze print and non-print communication
- Use effective sentence construction and edit for improvements in sentence formation, usage, mechanics, and spelling
- Interpret and evaluate a wide range of literature

The **majority** of middle school students will adapt well to the rigorous standards set in this course level.

English 6,7, and 8 Pre-AP

Pre-Advanced Placement (Pre-AP) Communication Skills

Pre-AP 6 (along with Pre-AP for grades 7 and 8) is an introductory course to teach students ***inquiry*** as a major part of the reading and comprehension process. This will be a **research-based course**, which will include the study of language and the undertaking of strategies necessary to build strengths in understanding and then connecting appropriate texts to other knowledge areas. Eighth grade will extend and refine the method of Socratic discussion and incorporate in-depth written reflection and connection(s) to real world situations. Students will be expected to participate in seminar-based learning used in Pre-AP/AP courses at the high school level. Students will demonstrate their comprehension of a variety of texts through writing and a variety of inter-curriculum and technological based projects. With print and non-print works, students will explore connections between significant literary works and other expressions of human aspiration. There will be required summer reading at all grade levels before entering the Pre-AP program. Work assignments, both for home and school, will be extensive in challenge level, amount and level of expectation.

Students may only be registered for the course through teacher recommendation and demonstration of required entrance criteria.

SOCIAL STUDIES AND SCIENCE CURRICULUM

Students will receive the North Carolina Standard Course of Study for both Social Studies and Science. Students are mixed heterogeneously in both these courses during middle school.

Science coursework in grades 6-8 is directed toward mastering content knowledge in the subject area, leading to success on the Grade 8 Science End-of-Grade Exam.

ELECTIVE / EXPLORATORY ROTATIONS

Students enjoy Physical Education as well as an additional elective class every day. This additional elective period will change each nine weeks, allowing most students to attend four different exploratory courses each year. Please note that P.E., Chorus and Band are all year long elective courses.

Brevard Middle School offers the following elective courses to enrich each student's educational experience:

BioTechnology General Music Spanish Art Computer Skills and Applications

Rotations are scheduled for each student according the following criteria:

Band *AND* *one opportunity to take one additional elective for a single nine week quarter.*

Choir (a full year elective offered at grades 6-8) ***AND*** *an opportunity to take one additional elective for a single nine week quarter.*

Exploratory Rotation (*for students in neither band nor choir*) In addition to PE, one elective will be taken in each of the four nine week quarters.

Choir and Band: This is a **limited option only for upper grade level students previously in choir and/or band**; these students, with approval, will do A/B rotations with PE for a full year, with no other options for exploratory rotations.