

COURSE DESCRIPTION GUIDE

2021-2022 SCHOOL YEAR



Newton Middle School

Newton Middle School
4401 E. Arapahoe Road
Centennial, Colorado 80122
Main Office: 303-347-7900
Office Hours: 8:30-4:30

Newton Knights' Discovery Mission

At Newton, our mission is to help ALL students grow and succeed by making important discoveries about academics, themselves and their community inside and outside of Newton.

MISSION STATEMENT

To educate students for the future by challenging every individual to continuously learn, achieve, and act with purpose and compassion.

Newton Middle School

Registration & Course Description Guide 2021 - 2022

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Important Dates for Student Registration

March 19	→Current 6 th and 7 th grade receive registration information for the 2020-2021 school year
March 19-April 2	→Current 6 th and 7 th graders complete online registration process
April 1	→ Newton administrators will host virtual 5th grade parent night
April 6, 8, 14	→ Current 5th Graders can attend an online math placement exam to possibly place into Advanced math (7th or 8th grade math)
May 17	→ 2021-22 Schedule and Fee Info POSTED ON WEBSITE
July 7	→Fee Payment opens online with credit card only
August 10	→Schedule available online (**ONLY after payment of fees)
August 12	→First day of school

Note about Immunizations: *All students should have their 2nd MMR and their HEP B series completed before entering the 7th grade.*

Newton Middle School
4001 E. Arapahoe Rd., Centennial, Colorado 80122

Dear Parents, Guardians and Students:

As we look forward to this fall we will be moving into a new building that will supplement and enhance our instruction and opportunities for our students. Our new building will be equipped with an indoor learning stair, an outdoor learning amphitheater, state of the art technology in all classrooms, a modern fitness lab, climbing wall, an indoor three lane running track and a greenhouse. The building is designed with three learning pods, one for each grade level that is specifically designed with that grade level in mind. All pods will have two science classrooms/labs, a common flex area that includes a maker space and the ability for teachers to collaborate and for students to work together. Our elective spaces were designed with specific instructional goals for each content area and with input and feedback by all of our elective teachers. These areas will be amazing!

Spring registration for fall classes is always an exciting time of the year, especially for our incoming sixth grade students. We hope this process goes smoothly for you and your student this year. We will be electronically sending course registration forms to all of our students this year which will explain the registration process, including the selection of electives for seventh and eighth grade students.

This fall all students will continue to receive a minimum of 80 minutes of instruction every day in Language Arts and Math. This is unique to Newton Middle School and we are fortunate to be able to offer this feature in our master schedule. We will continue to offer advanced classes in Math for all grade levels and advanced Language Arts for our seventh and eighth grade students, as well as classes in Social Studies and Science. Students in the seventh and eighth grade will be able to select elective classes in the areas of Spanish, Physical Education/Health, Band, Orchestra, Computers (7th grade), STEM, Art, Drama and Yearbook (seventh and eighth grade). Sixth graders will be placed into an elective wheel and have the opportunity to experience all of our electives during the school year.

Please pay attention to the grade level registration form that you will be completing for your student. Each grade level form will give explicit instructions as to how to select classes for the upcoming year. We will continue the format of the block schedule with time built in for interventions for students that are struggling and enrichment classes for all students. We will continue to ensure Newton's focus on inquiry-based educational opportunities for all students and develop students who inquire, seek knowledge, care about their community and strive for intercultural understanding and respect.

Our objective is to provide all students with a quality education while meeting their individual needs. We believe in making connections with both students and parents and forming an important partnership with you to meet our goals for your child. We wish your student the best in their middle school career here at Newton and look forward to the 2021-2022 school year. Please contact our administrative team if you have any questions regarding the registration process.

Respectfully,



James O'Tremba, Principal

MATH CURRICULUM & SEQUENCE

Math offered at Newton addresses the needs of all students regardless of level skill. Newton's math program offers this for our students:

1. All students will have Math every day for a minimum of 80 minutes.
2. All students on regular 6th grade academic track will be in **Math 6**.
3. All students placed on the Accelerated 6th grade academic track, or regular 7th grade track will be in **Math 7**.
4. All students placed in Double Accelerated 6th grade, Accelerated 7th grade or regular 8th grade academic track will be in **Math 8**.
5. Students who have successfully completed Math 8 will be recommended for placement in **Algebra 1 Honors**. Students will receive high school credit for Algebra 1 taken in the middle school if a grade of C or higher is earned. To demonstrate competency in algebra, the student will need to earn a B or higher.
6. Students who have successfully completed Algebra 1 will be recommended for placement in **Geometry Honors**. Students will receive high school credit for Geometry taken in the middle school if a grade of C or higher is earned. To demonstrate competency in geometry, the student will need to earn a B or higher.

6th GRADE CURRICULUM OVERVIEW

<u>Required Courses</u>	<u>Elective Wheel</u>
• Language Arts 6 • Math 6- or- Math 7*- or- Math 8** <i>**Placement based on CMAS/i-Ready scores, teacher recommendation, and placement exam given at the beginning of the year.</i> • Science 6 • Social Studies 6	• Band 6 or Orchestra (year long classes) • All students not in band or orchestra will be assigned the following courses for 9 weeks: ○ Art 6 ○ Performing Arts 6 ○ Introduction to Spanish ○ STEM 6 ○ PE ○ Health ○ Computers ○ Social Emotional Learning (Everyday Living)

As in all Littleton Public Middle Schools, all course offerings are subject to modifications or deletions based upon student enrollment figures and scheduling constraints.

6th Grade Required Course Descriptions

Language Arts 6

The framework of Language Arts 6 class allows students to read, write, listen, speak and work with the English language based on the Common Core State Standards. Students will also work with and practice 21st Century Skills of critical thinking and reasoning, information literacy, collaboration, invention and self-direction. Students will interact with various pieces of literature such as selections found in the Prentice Hall Literature textbook, novels, short story pieces, and non-fiction articles.

Math 6

In Math 6, instructional time will focus on four critical areas: (1) connection 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 expression and equations; and (4) developing understanding of statistical thinking. We are currently using Envision.

Math 7

Prerequisite: placement based on successful completion of Math 6, CMAS/i-Ready scores (one of which must be advanced), and teacher recommendation. In Math 7, instructional time will 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. We are currently using Envision.

Math 8

Prerequisite: placement based on successful completion of Math 7, CMAS/i-Ready scores (one of which must be advanced), an advanced score on Math 7 placement exam given at the beginning of the year, and teacher recommendation. In Math 8, instructional time will 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 sign functions to describe quantitative relationships; and (3) analyzing two- and three- dimensional space and figures using distance, angle, similarity and congruence, and understanding and applying the Pythagorean Theorem. We are currently using Envision.

Science 6

Students in Science 6 study atomic structure and are exposed to an organizational overview of the periodic table. Students are expected to master basic concepts related to ionic and covalent bonding. They will conduct laboratory investigations of mass, weight, volume and density, as well as study changes of state. Students will learn about ecological relationships such as food chains, biogeochemical cycles, biodiversity, perturbations of ecosystems, and the impacts of human population on growth of natural cycles. Included in their study of the earth systems are renewable and non-renewable resources, human consumption of resources and production of effluents, and the effect of both on earth's life support systems. *(There is a heavy emphasis throughout all grade levels on the nature of science (how science works). These concepts and appropriate laboratory investigations will be infused at appropriate points in the curricula of each grade level.)*

Social Studies 6

Students in Social Studies 6 review geography skills that emphasize the importance of location in understanding one's place in the world. Location helps develop an understanding of the culture and traditions associated with our world. Students are then introduced to major ancient civilizations in which students continue to examine the importance of geography in the development of these civilizations. Students examine the cultures, beliefs and values of these ancient societies and reflect upon how they are practiced today in the modern world. Students will develop an inter-cultural awareness, respect and understanding of the world around them.

6th Grade Elective Course Descriptions

Band 6

In 6th grade band, students are introduced to skills in the fundamental techniques of playing an instrument. Students need not have previous experience playing an instrument in order to benefit from this class. Students are introduced to skills in the fundamental techniques of playing an instrument. In addition, students are introduced to the skills necessary for ensemble performance. Band 6 is also suitable for students who have had previous playing experiences at the elementary school level and will continue to grow their musicianship skills. The course requires one or two after-school rehearsals and evening performances. The performing arts provide essential skills for communicating through music. ***Please check Mrs. Bransgrove's teacher page on Newton's website for instrument selection. Go to the "Instrument Music FAQ's" link and please complete the "Music Intent form" provided with your registration materials. The form is also available from Newton's website.***

Orchestra 6

Sixth grade introductory orchestra provides an introduction to instrumental arts. *Students need not have previous experience playing an instrument in order to benefit from this class.* Students are introduced to skills in the fundamental techniques of playing an instrument. In addition, students are introduced to the skills necessary for ensemble performance. The course requires one or two after-school rehearsals and evening performances. The performing arts provide essential skills for communicating through music. ***Please check Mrs. Bransgrove's teacher page on Newton's website for instrument selection. Go to the "Instrumental Music FAQ's" link and please complete the "Music Intent Form" provided with your registration materials. The form is also available from Newton's website.***

6th Grade Physical Education

Physical Education in the 6th grade will provide students the opportunity to learn and practice a variety of fundamental movement skills while participating in various games, team and individual/lifetime sports, as well as team building activities. Primary focus will be on skill development and application in games. Physical fitness will be emphasized through the teaching of the principles of health and skill-related fitness with the use of heart rate monitors for each student.

6th Grade Health

Topics selected for study are designed to give students a foundation in personal, mental, emotional and physical health. This includes building positive self-esteem, maintaining good mental health, using life skills and good decision making skills. Students will also learn about nutritional guidelines to help them make healthy food choices. The program will include:

- Health & wellness, including making healthy decisions, setting goals, and personal health care
- Aspects of healthy social relationships, emotional and mental health
- Nutrition
- Substance (alcohol, drugs, vaping/tobacco) abuse prevention
- Safety and Prevention
- Puberty (Going through changes in adolescence)
- Refusal Skills (Saying No)

Art 6

The Art 6 Visual Arts course covers an introduction to 2 and 3 dimensional theory, planning process, and evaluation in order for students to be able to participate in a choice based classroom. In this quarter long class students are given a solid foundation in the use and recognition of the elements of art as well as an introduction to various artists, styles, and mediums of art. In this self paced class, students will develop the skills and techniques to move easily into Art 7.

Performing Arts 6

Newton's 6th grade general performing arts class provides an introduction to both vocal music and theatre arts. Students are introduced to skills in the fundamental techniques of singing and acting. In addition, students are introduced to the skills necessary for ensemble performance and proper audience etiquette. This class requires one or two after-school rehearsals and evening performances, pending COVID -restrictions. Performing arts provides essential 21st Century learning skills in collaboration, self-direction and communication through music and drama.

Introduction to Spanish 6

Introduction Spanish 6 introduces students to both the language and culture of Spanish speaking countries. Some topics include: pronunciation, greetings, the date, weather, numbers, colors, and basic sentence structures. Culture topics include studying famous Hispanic and Spanish-speaking countries around the globe. This class is not a prerequisite to Spanish 1, but is strongly recommended!

Computers 6

Beginning with the basics of keyboarding, students will review the use of classroom technology tools for learning: Google Classroom functions, Google Calendar, Google Presentation & Google Sheets. Students will explore responsible digital citizenship and communication etiquette. Learners will have an opportunity to explore areas of Computer Science including but not limited to: problem solving, web lab, Interactive Animations, the Design Process & hands-on computer-based creation. This course is designed around learning modules for students to explore throughout their 9 week elective experience.

STEM 6

Newton Middle School's sTEem Center is a hands-on design-build experience. We will learn that science and math play an important role in Technology and Engineering as students sharpen those skills through hands-on project based learning. Our projects will utilize 21st century skills such as: collaboration, critical thinking and problem solving. We will utilize our Research and Design Lab together with our Woods and Metals Manufacturing Lab to design and build unique projects that students will cherish for years to come. This nine week class will give students a solid introduction to sTEem, so they can then elect to take sTEem in 7th and 8th grade.

Social Emotional Learning (AKA Everyday Living)

Social Emotional Learning enhances a student's ability to integrate skills and behaviors that will help them successfully navigate their world today. Students will learn about these different skills and behaviors to not only help them be successful in middle school but in life. The class will focus on the CASEL standards which are Self-awareness (identifying emotions and recognizing strengths), Self-management (impulse control and stress management), Social Awareness (perspective taking and empathy), Relationship Skills (communication and relationship building) and Responsible Decision Making (identifying problems and analyzing solutions).

7th GRADE CURRICULUM OVERVIEW

<u>Required Courses</u>	<u>Elective Courses</u>
● Language Arts 7- or- ● Accelerated Language Arts 7* *Placement based on CMAS/iReady scores, teacher recommendation and writing sample. ● Math 7- or- Math 8* - or- Algebra 1 Honors** *Placement based on teacher recommendation. **Placement based on placement exam, CMAS/iReady scores, and teacher recommendation. ● Science 7 ● Social Studies 7 ● PE/Health 7	● STEM 7 ● Band 7 (FULL YEAR COURSE) ● Orchestra (FULL YEAR COURSE) ● Art 7 ● Choir 7 (FULL YEAR COURSE) ● Drama 7 ● Computers 7 ● Spanish 1A (FULL YEAR COURSE) ● Additional Physical Education ● Additional semester of Art

In 7th grade, students will be taking the core academic classes listed and ranking their favorite Electives from #1 to #5.

As in all Littleton Public Middle Schools, all course offerings are subject to modifications or deletions based upon student enrollment figures and scheduling constraints.

7th Grade Required Class Descriptions

Language Arts 7

The Language Arts 7 course will be focused within the framework of the five curricular strands of reading, writing, listening, speaking, and viewing, based on the Common Core State Standards. Students will also work with and practice the 21st Century Skills of critical thinking and reasoning, information literacy, collaboration, invention and self-direction. Students will interact with various pieces of literature such as selections found in the Prentice Hall Literature textbook, novels, short story pieces, and non-fiction articles.

Accelerated Language Arts 7

Prerequisite: placement based on 6th grade teacher recommendation, CMAS literacy scores, iReady reading scores and a current writing sample placement exam. Students must submit a current writing sample in order to be considered for Accelerated Language Arts. Accelerated Language Arts 7 is a program designed for advanced and independent learners. Students are presented with a fast-paced curriculum and in-depth study. This course is designed for those students who need advanced academic programming beyond what is expected in the middle school classroom.

Math 7

Prerequisite: placement based on successful completion of Math 6, CMAS/iReady scores (one of which must be advanced), an advanced score on the Math 7 placement exam, and teacher recommendation. Students must take the placement exam to be considered for Math 7.

In Math 7, instructional time will 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.

Math 8*

Prerequisite: placement based on successful completion of Math 7, CMAS/iReady scores (one of which must be advanced), an advanced score on the Math 8 placement exam, and teacher recommendation. Students must take the placement exam to be considered for Math 8.

In Math 8, instructional time will focus on three critical areas: (1) formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation, 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.

Algebra 1 Honors**

Prerequisite: placement based on successful completion of Math 8, CMAS/iReady scores (one of which must be advanced), an advanced placement exam, and teacher recommendation.

The Algebra class is characterized by a faster pace and more complex problem solving than might be found in the general classroom. This is a 9th grade class being offered at Newton for qualified 7th graders. The goal of the program is that successful students will continue to Geometry in 8th grade. Students will receive high school credit for Algebra 1 taken in the middle school if a grade of C or higher is earned.

Science 7

The science 7 program involves the study of cellular basis of life (structure and function), photosynthesis and respiration, biodiversity, natural selection, and evolution. Students are expected to master basic concepts related to the physical properties of matter; specifically, boiling and melting points, solubility, density, and the laboratory separation of mixtures. An intensive study of geologic time, plate tectonics, and geologic processes, such as sedimentation, stratification, volcanism, erosion, uplifting, folding and faulting are concepts also included in Science 7. *(There is a heavy emphasis throughout the grade levels on the nature of science (how science works). These concepts and appropriate laboratory investigations will be incused at appropriate points in the curricula of each grade level.)*

Social Studies 7

The Social Studies 7 program combines historical knowledge, geographical knowledge, and an understanding of citizenship with the aim of providing students with the skills of life-long learners and participation required of a democratic society. Students will develop an inter-cultural awareness, respect and understanding of the world around them. Students grow in their understanding of World History from the fall of the Roman Empire through European Imperialism. The inquire approach to learning is used to help students understand both current events and issues facing their local, national and global communities.

PE/Health 7

Physical Education/Health 7 is focused on more than just participating in sports and games. Our primary aims are to encourage the development of “intelligent performers” and to encourage students to understand the importance of a balanced, healthy lifestyle. The aims of the teaching and study of physical education are to encourage and enable the student to develop:

- an appreciation and understanding of the value of physical education and its relationship to a healthy, balanced lifestyle
- an interest in the promotion of health and wellness
- the motivation to participate fully in all aspects of physical education
- their optimal level of physical fitness
- effective communication strategies, verbal, non-verbal and written
- the skills and understanding necessary to participate successfully in a variety of physical activities
- an understanding of international perspectives on physical activity, sport and health education
- a lifelong interest in and enjoyment of physical activities as a participant.

7th Grade Elective Course Descriptions

STEM 7

Newton Middle School's sTEM Center is 'a design-build experience'. We will spend this semester studying Technology and Engineering education, based on the International Technology and Engineering Educators Association's Standards for Technological Literacy. We will learn that science and math play an important role in our subject area as you sharpen your science and math skills through hands-on project based learning. Through a semester long course we will utilize our Research & Design Lab and our Manufacturing Lab, to incorporate 21st century skills such as; collaboration, critical thinking and problem solving. You will experience what it is to be a graphic designer, as you work with industry grade CAD software to design your personal logo which you will use to silk screen your very own designer t-shirt. You will also have the opportunity to design a new logo for this year's Run with the Knights shirt. Another "Design / Build" project this semester will combine the use of CAD software, CNC router, power tools and hand tools to create a one of a kind marble maze. Throughout the semester we will look at the necessity of why people need these technologies and how they are used in practical real world applications.

Band 7 (for experienced students only)

Seventh grade instrumental musicians must demonstrate playing ability at or near the intermediate level. Students acquire and extend skills in the technical aspects of their instrument. In addition, students acquire and extend skills necessary for ensemble performance. Each class requires two after-school rehearsals and two evening performances. The performing arts provide essential skills for communicating through music.

Orchestra (for experienced students only)

Orchestra allows *experienced* string instrument students in 6th, 7th, and 8th grades to continue to develop their talents as performing artists. Students build on the instrumental techniques they have already developed in order to achieve an advanced level of performance. Ensemble skills are refined as students perform more complex and sophisticated pieces of music. The focus in Advanced Orchestra is on preparing students for high school music programs, and is more heavily performance-oriented. Each class requires two after-school rehearsals and three or four evening performances, including district-wide music festivals. The performing arts provide essential skills for communicating through music.

Art 7

The Art 7 course covers the study of 2-dimensional and 3-dimensional theory, planning process, and evaluation. In Art 7 students continue with their understanding and use of the elements of art and are introduced to the principles of art. Students also begin the process of personal discovery while producing art work and are introduced to personalizing the creative process. The emphasis in this course is in the design and execution of various media, alternating between 2- and 3- dimensional works of art. Some examples of units are drawing and painting methods, printmaking, wire sculpture and clay.

Choir 7

In Choir 7 beginning students are welcome. You will be taught *how to sing*. Students will gain and grow in the technical aspects of the singing voice, as well as gain and grow in the skills necessary for ensemble (group) performing through a variety of music from various musical periods, genres, languages, and cultures. 7th grade choice provides essential 21st Century learning skills in collaboration, self-direction, and communication through music. Students also begin an important journey on the road to individual musicianship and musical understanding. To that end, all students will be required to purchase Alfred's *essential of Music Theory, Level 1 or 2* (\$6) through Ms. Andrews. Theory work and sight reading are major components at this level. This level requires an after-school rehearsal and an evening performance in both December and May.

Drama 7

7th grade Drama is an introduction to basic theater arts. Students will develop acting skills and build confidence in front of an audience through learning the basics of vocal control, movement, and characterization skills. A wide variety of activities such as improvisation, pantomime, reader's theater, directed theater games, and short scenes will be experienced. Assessments will primarily be based on in-class performances.

Spanish 1A

Spanish A is the first semester of high school Spanish. Students develop basic vocabulary, speaking, reading and writing skills. Grammar concepts are used so that students can communicate ideas in the present tense. Students continue to develop an understanding of and appreciation for cultural diversity through discussion of specific topics such as art, sports and celebrations. The successful completion of this class will prepare students for Spanish B.

Computers 7

Building on the Computers 6 experience, students will explore areas of Computer Science, creativity, and problem solving in a self-paced learning model. Using Design Thinking as the tool to plan learning experiences, students will take the lead to investigate coding, maker space, media, and computers. Students will also spend time learning about responsible social media use and their digital footprint. Prior experience in a Computers class is not required and computer literacy skills will continue to be developed at the pace of individual students' needs. In this project-based environment, students will have an opportunity to examine possible career choices and high school courses to continue their interests in Computers. Learners will have an opportunity to explore areas of Computer Science including but not limited to: problem solving, web lab, Interactive Animations, the Design Process, and hands-on computer-based creation. This is a semester course, with an emphasis on collaboration and self-direction.

Yearbook 7&8

The yearbook staff comes together for a common purpose: to design the best book ever! It takes a lot of planning to produce a fun yearbook that is full of creative ideas, so we need your help. Yearbook is a class during Knight Time and Homeroom. We design and create the entire Newton yearbook totally from scratch. If you enjoy writing, taking photos from interesting angles, & are comfortable with talking to other people - you should apply. You need to be an independent worker and also be able to cooperate with a team. We do have real deadlines to meet so we need to stay on top of our work, and it's all worth it because it's the ultimate project that MATTERS to hundreds of students. If you're going to be an 8th grader who would also like to do WEB, you can do both.

8th GRADE CURRICULUM OVERVIEW

<u>Required Courses</u>	<u>Elective Courses</u>
● Language Arts 8- or- ● Accelerated Language Arts 8* <i>*Placement based on CMAS/iReady scores, teacher recommendation and writing sample.</i> ● Math 8- or- Algebra Honors 1* - or- Geometry Honors** <i>*Placement based on teacher recommendation.</i> <i>**Placement based on placement exam, CMAS/iReady scores, and teacher recommendation.</i> ● Science 8 ● Social Studies 8 ● PE/Health 8	● Band 8 ● Orchestra ● STEM 8 ● Art 8 ● Choir 8 (<i>Knight Notes students must take Choir 8</i>) ● Drama 8 ● Spanish 1B (must have taken Spanish A in 7th Grade) ● Additional Physical Education

In 8th grade students will be taking the core academic classes listed and ranking their favorite electives from #1 to #5.

As in all Littleton Public Middle Schools, all course offerings are subject to modifications or deletions based upon student enrollment figures and scheduling constraints.

8th Grade Required Course Descriptions

Language Arts 8

The Language Arts 8 course will be focused within the framework of reading, writing, listening, speaking, and viewing the English language, as identified by the Common Core State Standards. Students will also work with and practice the 21st Century Skills of critical thinking and reasoning, information literacy, collaboration, invention and self-direction. Students will interact with various pieces of literature such as selections found in the Prentice Hall Literature textbook, novels, short story pieces, and non-fiction articles.

Accelerated Language Arts 8

Prerequisite: placement based on 7th grade teacher recommendation, CMAS literacy scores, iReady reading scores, and a current writing sample placement exam. Students must submit a current writing sample in order to be considered for Accelerated Language Arts.

Accelerated Language Arts 8 is a program designed for advanced and independent learners. Students are presented with a fast-paced curriculum and in-depth study. This course is designed for those students who need advanced academic programming beyond what is expected in the middle school classroom.

Math 8

Prerequisite: placement based on successful completion of Math 7, CMAS/iReady scores (one of which must be advanced), an advanced score on the Math 8 placement exam, and teacher recommendation. Students must take the placement exam to be considered for Math 8.

In Math 8, instructional time will focus on three critical areas: (1) formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation, 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.

Algebra 1 Honors

Prerequisite: placement based on successful completion of Math 8, CMAS/iReady scores (one of which must be advanced), an advanced placement exam, and teacher recommendation.

The Algebra class is characterized by a faster pace and more complex problem solving than might be found in the general classroom. This is a 9th grade class being offered at Newton for qualified 7th graders. The goal of the program is that successful students will continue to Geometry in 8th grade. Students will receive high school credit for Algebra 1 taken in the middle school if a grade of C or higher is earned.

Geometry Honors

Prerequisite: this is a sophomore level class and requires an advanced score on either or both of the CMAS or iReady, successful completion of Algebra 1 in 7th grade, and teacher recommendation.

Students examine properties of geometric shapes and figures in order to classify their characteristics and apply them to the physical world. Topics such as linear measurement, angle measurement, the Pythagorean Theorem, area, volume, and ratios and proportion are discussed. Additional topics from Probability and Statistics are included. A strong grasp of Algebra 1 is required. Students will receive high school credit for Geometry taken in the middle school if a grade of C or higher is earned.

Science 8

The Science 8 program includes the study of magnitudes and directions of forces related to motion (basic vector analysis). Newton's three laws of motion are keystones in the study of gravitational force, inertia, mass, velocity, acceleration, and projectile motion. Students are expected to master basic concepts related to sources of energy and their transformations. Laboratory investigations of physical and chemical changes are part of science 8, as is a comprehensive study of waves; water, sound, light and seismic. Meteorology and climatology, as well as basic astronomical principles, such as seasons, eclipses, planetary motion, and tides are taught in Science 8. Genetics (meiosis and mitosis, DNA & RNA, Punnett Squares, and Mendel's work) are reviewed. Finally, impacts of human population growth on ecosystems and biogeochemical cycles are studied and are compared to perturbations of ecosystems caused in the past by the overshoot of other species' populations. *(There is a heavy emphasis throughout the grade levels on the nature of science (how science works). These concepts and appropriate laboratory investigations will be used at appropriate points in the curricula of each grade level.)*

Social Studies 8

The Social Studies 8 program focuses on the history of the United States from Colonization through the Progressive Era and combines historical knowledge, geographical knowledge, and citizenship with the aim of preparing students with the skills of lifelong learners and participation required of a democratic society. The curriculum lends itself to engaging students intellectually, personally, emotionally, and socially. The inquiry approach to learning is used to help students understand both current events and issues facing their local, national and global communities.

PE/Health 8

Physical Education/Health is concerned with more than just participating in sports and games. Our primary aims are to encourage the development of "intelligent performers" and to encourage students to understand the importance of a balanced, healthy lifestyle. Students will develop knowledge, critical thinking and reflection skills, and a sense of responsibility, as well as interpersonal and self-motivational skills. This in turn encourages choices that will contribute to lifelong healthy living.

The aims of the teaching and study of physical education are to encourage and enable the student to develop:

- an appreciation and understanding of the value of physical education and its relationship to a healthy, balanced lifestyle
- an interest in the promotion of health and wellness
- the motivation to participate fully in all aspects of physical education
- their optimal level of physical fitness
- effective communication strategies, verbal, non-verbal and written
- the skills and understanding necessary to participate successfully in a variety of physical activities
- an understanding of international perspectives on physical activity, sport and health education
- a lifelong interest in and enjoyment of physical activities as a participant.

8th Grade Elective Course Descriptions

Band 8

Eighth grade band students must demonstrate playing ability at or near the advanced level. Students acquire and refine skills in the technical aspects of their instrument. In addition, students acquire and refine skills necessary for ensemble performance. The focus at Band 8 is on preparing students for high school music programs, and is more heavily performance-oriented. Each class requires two after-school rehearsals and three or four evening performances, including district-wide music festivals. The performing arts provide essential skills for communicating through music.

Orchestra 8

Advanced orchestra allows *experienced* string instrument students in 8th grade to continue to develop their talents as performing artists. Students build on the instrumental techniques they have already developed in order to achieve an advanced level of performance. Ensemble skills are refined as students perform more complex and sophisticated pieces of music. The focus in Orchestra 8 is on preparing students for high school music programs, and is more heavily performance-oriented. Each class requires two after-school rehearsals and three or four evening performances, including district-wide music festivals. The performing arts provide essential skills for communicating through music.

STEM 8

Newton Middle School's sTEem Center is 'a design-build experience'. We will spend this semester studying Technology and Engineering education, based on the International Technology and Engineering Educators Association's Standards for Technological Literacy. We will learn that science and math play an important role in our subject area as you sharpen your science and math skills through hands-on project based learning. Our projects will utilize 21st century skills such as; collaboration, critical thinking and problem solving. Our projects will encompass the areas of communication, transportation and manufacturing technology and engineering principles. You will use existing knowledge and new found knowledge to design, construct and test your very own CO2 powered car. You will start by learning the fundamentals of orthographic drafting in order to independently design your project using CAD (computer aided design) and simulation software. After the successful construction of your car, using hand and power tools you will take it to the paint booth where you will give it a custom paint job and perhaps even design your own vinyl decals to show off your car's unique personality! Prior to race day you will take your car to the Research and Design Lab (R&D Lab) where we will use our wind tunnel to test your car's aerodynamics. To culminate this transportation unit you will compete in a drag race against your classmates where cars have been clocked at over 47 MPH! We will then use our robotics unit to learn how and why robots are used in the real world, whether for manufacturing, medical or even vacuuming a home. You will learn how to program your robot or sharpen your existing programming skills using functions and sensors. We will also learn the necessity of why people need such technologies and how they are used in practical real world applications.

Art 8

The 8th grade art course covers the study of 2-dimensional and 3-dimensional theory, planning process, and evaluation. In this course students concretely use the elements of art and begin implementing the principles of art. Students further expand and use the process of personal discovery. With a sense of purpose, students develop and exhibit their own personal style in their artwork. The emphasis in this course is in the design and execution of various media, alternating between 2- and 3-dimensional works of art. This class will focus on students contributing to the design of the units. Units might include canvas painting, mixed media and clay.

Choir 8**

Eighth grade choir students must demonstrate singing ability at or near the advanced level. Beginning as well as experienced students are welcome. Students acquire and refine skills in the technical aspects of the singing voice. In addition, students acquire and refine skills necessary for ensemble performance. The focus in 8th grade choir is on preparing students for high school music programs, and is more heavily performance-oriented. Each class requires two after-school rehearsals and several evening performances, including district-wide music festivals. The performing arts provide essential skills for communicating through music. ****All Knight Notes members will be required to enroll in 8th grade choir.**

Drama 8 (*7th grade drama not a prerequisite*)

Theater basics will be reviewed and developed, including body and voice control and movement. Characterizations and script analysis will be emphasized. Students will focus on realistic acting, commanding audience attention, and developing a stage presence through in-class performances and directed theater games. A short history of theater will be presented. Assessments will primarily be based on in-class performances, with a culminating evening performance.

Spanish 1B

Prerequisite: successful completion of Spanish A and teacher recommendation.

Spanish B is the second semester of Level I high school Spanish. Students continue their development of vocabulary, speaking, reading and writing skills. Grammar concepts become more sophisticated so that students can use the near future tense and many irregular verbs. Successful completion and demonstration of competency of this class allows students to continue on to Spanish II in high school. Students will receive high school credit for Spanish 1 with successful completion of Spanish A & B if a grade of C or higher is earned. To show competency, a student must earn a grade of a B or higher.

Yearbook 7&8

The yearbook staff comes together for a common purpose: to design the best book ever! It takes a lot of planning to produce a fun yearbook that is full of creative ideas, so we need your help. Yearbook is a class during Knight Time and Homeroom. We design and create the entire Newton yearbook totally from scratch. If you enjoy writing, taking photos from interesting angles, & are comfortable with talking to other people - you should apply. You need to be an independent worker and also be able to cooperate with a team. We do have real deadlines to meet so we need to stay on top of our work, and it's all worth it because it's the ultimate project that MATTERS to hundreds of students. If you're going to be an 8th grader who would also like to do WEB, you can do both.

Athletics & Activities at Newton Middle School

Athletics

The four middle schools have created an Intramural /Interscholastic Athletic Program. This is available to all our students and has become an important educational tool that can be used to develop character, promote fitness, to foster life-long recreational habits, and to instill in the individual a sense of pride and confidence. Research has shown that students involved in extracurricular activities are more successful overall in their academic classes. It is open for everyone to participate regardless of skill level.

The important point to remember in being a student athlete is that the term “student” comes first. Academics are not put aside when a student chooses to participate in a sport. In fact, coaches require students to be passing all their classes, in order to play any game(s) scheduled for the week. Coaches will check eligibility at least 3 times during the season. Students are still allowed to practice even if they are ineligible for playing the game(s) for the week.

TRADITIONALLY, The sports offered throughout the year are:

- Fall – Boys’ & Girls’ Track; Boys’ Wrestling
- Winter – Girls’ Basketball; Boys’ Basketball
- Spring – Girls’ Volleyball

** We are hoping that we can offer sports next school year.

Activities

After-school activities at Newton are numerous and evolving. There is a club or activity happening just about every night. Please feel free to check Newton’s website for current offerings or, if there is something you would like to see offered, please suggest it. Specific information will be available at the beginning of the school year.

Fees

Fees for athletics and activities are being reviewed at this time and will be announced at a later date.

The Newton Knight's CODE

“Do you know the CODE?”

	Academic Areas (Classrooms, Library, Resource Room, Labs, Gym)	Hallways	Bathrooms & Locker Rooms	Cafeteria	Outside Areas (Playground, Fields, Parking Lots, Bus Area, Field Trips)
“C” Caring	• Be cooperative • Respect other's ideas and property • Be supportive	• Be considerate • Be helpful • Use positive language	• Clean up for the next person • Respect school property	• Speak kindly • Be polite • Be patient	• Watch out for each other • Play respectfully • Practice good sportsmanship
“O” Open-Minded	• Invite thoughts of others • Ask questions • Involve others	• Be courteous • Respect other's belongings • Take risks to lead others positively	• Respect other's belongings • Accept differences	• Include others • Encourage others to keep area clean	• Take risk to lead others in positive ways • Tolerate actions, behaviors, ideas of others
“D” Disciplined	• Take responsibility • Follow directions	• Be timely • Make room for others • Use quiet voices	• Wash hands • Flush toilets • Put waste where it belongs	• Sit at tables • Use good manners • Clean up your own mess	• Follow set rules at Newton and other facilities
“E” Engaged	• Be prepared • Be focused • Give your best effort	• Respect other's ideas • Respect school property	• Respect school property • Be timely	• Be polite • Interact positively with adults and peers	• Be appropriate • Invite others to join in