ABRAMS HEBREW ACADEMY SECULAR STUDIES CURRICULUM

Pre-School

The pre-school program is designed to ease the transition from home to school. Combining learning and play, children discover that school is a happy, loving and nurturing place. Learning projects are designed to enhance both cognitive and motor skill development, while developing a strong sense of identity and self-esteem. Promoting the social and emotional well being of each child is a major focus of the program.

Language Arts Students will:

- Develop a love of the spoken and written word
- Develop an appreciation of books
- Expand their vocabulary by storytelling, Show and Tell and dictating stories, labels and descriptions of their artwork
- Learn to distinguish sounds and rhyming words
- Learn to expand their knowledge of recall, classification, sequence and picture-word association
- Learn upper- and lower-case letters and sound recognition, along with writing and workbook skills

Mathematics Students will:

- Learn to perform manipulative activities while laying the ground work for symbolic understanding and problem solving skills
- Use hands-on activities to learn sorting, size, shape, sequence, position, primary and secondary color, numbers sets, one-to-one correspondence, greater and smaller patterns

Science Students will:

- Participate in hands-on experiences and experiments to develop an understanding of the scientific process
- Be introduced to weather, seasons, animals, hibernation, migration, insects, the senses, food and nutrition, seeds, plants, recycling, and conservation, textures, magnets, flotation, air, wind and water

Social Studies Students will:

- Gain rudimentary awareness of self-concept, manners, friendship, kindness, cooperation, body parts, similarities and differences and emotions
- Learn about families, community helpers, secular and Judaic holidays, fire safety and prevention

Kindergarten

The kindergarten students receive a challenging and high-quality education in an environment that is respectful and nurturing. The Kindergarten curriculum seeks to educate the whole child, and in doing so, recognizes the importance of encouraging creative expression and problem-solving abilities. The children will learn to think independently and analyze situations by examining possibilities and consequences. The students will learn to develop self-respect, pride and a positive self-image. The curriculum will foster creativity, curiosity and confidence.

Language Arts

- Students will be immersed in a literature-rich environment
- Students will develop oral, written, thinking, comprehension and listening skills with an appreciation of literature
- Students will recognize and print upper- and lower-case letters
- Students will use basic phonetic principles
- Students will identify story elements and communicate ideas through pictures and writing
- Students will learn to match spoken words to print
- Students will learn to distinguish between a letter, word and sentence
- Students will begin writing with inventive spelling and dictation

Mathematics

- Students will focus on counting, combining, sorting and comparing sets of objects
- Students will recognize and replicate simple patterns, identifying shapes and sizes of figures and objects
- Students will learn measuring and graphs
- Students will develop problem-solving skills
- Students will be able to identify numbers, and begin addition and subtraction along with counting by 2s, 5s and 10s to 100
- Students will be able to tell time by the hour
- Students will gain experience with pennies, nickels, dimes and quarters

Science

- Students will explore common materials, objects and living things.
- Students will develop skills in posing simple questions, measuring, sorting, classifying and communicating information about the natural world.
- Students will explore seasonal changes, animals, migration, hibernation, dinosaurs, the five senses, recycling and conservation, the solar system, freezing, thawing, evaporation, sun, clouds, rainbows, trees, seeds, plants and flowers

Social Studies

- Students will be introduced to the lives of many interesting people in history
- Students will learn about the following holidays: Columbus Day, President's Day, Martin Luther King, Jr. Day, and Thanksgiving.
- Students will learn basic map and globe skills to identify and locate places that have been discussed
- Students will learn citizenship and responsibility by following rules and respecting each other

First Grade

The primary goal of first grade is to actively engage students in the learning process as they acquire basic developmental and academic skills. Combining differentiated instruction and cooperative learning, students will be involved in daily activities that will provide the individual with academic skills. We create a learning environment that rewards curiosity, develops creativity, and encourages children to express themselves as well as master all academic concepts.

Mathematics- The program provides children the opportunity to experiment, explore and manipulate physical objects that enable students to apply problem-solving skills successfully in everyday math.

- Students will master addition, subtraction, patterns, and shapes.
- Students will gain a basic understanding of money, time, and fractions.

Language Arts- Reading, spelling, grammar, study skills, and handwriting each play an important role in developing the language skills necessary to become proficient readers and writers. A five-volume library, independent leveled readers, and activity workbooks are used to reinforce and expand literacy.

- Students will develop phonics and decoding skills and fine motor skills
- Students learn and use a variety of high frequency, word family and Dolch sight words as a backboard to reading and writing.
- Students will learn whole language, story structure and comprehension
- Students will be introduced to grammar and writing format
- Students will begin to recognize visual and auditory patterns and be able to apply spelling generalizations and rules

Science- By personally involving students through hands-on science experiments, observations and group discussions, we make science meaningful and relevant to their own experiences. The program consists of five units including:

- Students will learn and experiment with living things and their life cycles
- Students will monitor weather and seasons
- Students will discover how magnets interact and work
- Students will build models of earth's crust and understand its waterways

- Students will learn exercises and nutrition in correlation with keeping fit.

Social Studies- The social studies program focuses on helping students learn about their roles in their family and community. Students will engage in an interactive student notebook, problem solving group work, and visual discovery tools that will aid in daily interaction.

- Students will develop social interaction skills
- Students will understand the jobs of school employees
- Students will learn general map skills and direction
- Students will gain an understanding of needs and wants with in a family

Second Grade

In second grade students will strengthen basic foundational skills in the areas of reading, writing, mathematics, science and social studies. They will begin to develop critical and creative thinking skills, encouraging them to be independent thinkers who take risks in the process of learning.

Language Arts

- Students will acquire reading skills and strategies to comprehend and interpret a variety of literary texts by using a modified whole language approach including phonics, grammar and spelling skills. The language arts areas of listening, speaking, reading and writing will be integrated throughout the second grade curriculum.
- Students will use textual clues to aid comprehension and make predictions concerning content.
- Students will identify main idea and supporting details of stories, sequence of events and cause and effect.
- Students will identify the key elements of setting, plot, conflict and resolution.
- Students will develop grammatical and mechanical skills in written composition.
- Students will learn to use the steps of the writing process from brainstorming, outlining, pre-writing, rough draft, revisions, editing through final product.
- Students will develop an appreciation and understanding of the genres of literature.
- Students will master phonetic skills such as vowel blends, consonant diagrams and/or word analysis.

Mathematics

- Students will be motivated and engaged in the study of mathematics by linking concrete experiences to abstract representations. They will utilize a variety of strategies in the problem solving process and the computational process with the manipulatives, graphs and tables.

- Students will gain problem-solving skills starting with concrete materials leading to representational images and finally abstract concepts.
- Students will develop skills in adding and subtracting.
- Students will learn the basic properties, similarities and differences in simple geometric shapes.
- Students will learn the concept of time, counting money, and measuring length, weight and temperature
- Students will begin to develop skills in observing objects and events in order to organize and display them as simple graphs.

Social Studies

- Students will learn about regional, national and international communities. The emphasis is on families, traditions, citizenship and the interdependence of peoples. These concepts will be learned by reading, researching and other creative activities.
- Students will learn the various functions of family life past and present
- Students will develop an understanding of how different groups of people within the community take responsibility for the common good of all.
- Students will learn the history of American symbols.
- Students will learn the meaning of national holidays.
- Students will learn the characteristics and use of maps, globes and geographic tools

Science

The four major science strands of life, physical, earth and health sciences will be studied.

- The second grade students will develop and demonstrate a curiosity about the natural world through observation, teacher demonstration and readings.
- Students will learn about the natural world through observation, reading and experiments.
- Students will learn the basic needs of plants, organisms and animals and the features that enable them to live in different environments.
- Students will understand the structure and properties of matter.
- Students will learn about basic health and hygiene.
- Students will obtain an understanding of safety in the home and community.

Art

- Students will improve fine motor skills and eye-hand coordination, cutting, pasting, tracing and drawing using a variety of media with many different themes.
- Students will appreciate famous artists and begin to understand their art.
- Students will engage in creative hands-on projects.

Music

- Students will learn secular and Judaic songs.
- Students will engage in piano sing-alongs.
- Students will learn rhythm and movement.
- Students will play musical instruments.
- Students will perform songs for holidays.

Third Grade

Children will acquire knowledge and skills, working independently and cooperatively, using grade level and enriching materials. Children continue to master basic math, reading and writing skills, with greater emphasis on critical thinking, problem solving, and creative thought. Third grade students and teachers explore values necessary to co-exist in a friendly and respectful school environment.

Language Arts: The program encompasses reading, spelling, creative writing, writing mechanics and listening skills. The reading series provides a literature-based approach supplemented by phonics and grammar.

- Students will read, understand and respond to fiction and non-fiction materials presented. In the reading series and novels xxx
- Students will demonstrate comprehension of factual and inferential information in materials read.
- Students will learn and use proper grammar and spelling in written assignments.
- Students will practice good listening skills.
- Students will learn research techniques and be able to organize and report information.
- Students will learn and practice cursive handwriting.
- Students will expand their ideas in a written format.

Mathematics: The program focuses on building number sense through conceptual development of number operations and computation including estimation and mental math. The program builds an understanding through connections to prior knowledge and the real world.

- Students will complete graphs such as bar, line, and pictograph.
- Students will learn how to tell time and calculate time elapsed
- Students will learn about the use of money.
- Students will add and subtract whole numbers to 4 digits with regrouping.
- Students will memorize multiplication facts through the 10 x table and will multiply 1 digit by 3 digits.
- Students will divide 1 digit into 2 digits with remainders.
- Students will continue studying fractions – adding like fractions, mixed numbers
- Students will understand the concepts of probability and predictions
- Students will develop a number sense. For example: number order (greater than, less than) number patterns, problem solving strategies.

Social Studies: The structure and functions of the program emphasize social organizations including families, diverse communities and the world around them. A variety of lesson formats invite students to explore the geography, and social and economic aspects of their world.

- Students will gain an understanding of social issues which involve everyone.
- Students will learn about good citizenship.
- Students will be introduced to social and political systems in our government.
- Students will use map and globe skills and understand current events.

Science: The curriculum includes reading, experimentation and observation while exploring various areas of science and nature. Hands-on activities are used whenever possible and critical thinking is developed.

- Life Science: difference between living and non-living things.
- Physical Science: what is matter; forces of nature; energy sources.
- Earth Science: plants; water and water cycle and water conservation; weather; recycling.

Fourth grade

In fourth grade students will acquire greater independence while developing critical and creative thinking skills. They will also spend time becoming proficient in reading, writing, and mathematics. Cooperative learning and research projects will help students improve their ability to work with one another respectfully and to interact socially.

Language Arts: Reading is a modified whole language approach that is interwoven throughout the curriculum with a thematic approach to reading and writing.

- Pupils will identify the key elements of setting, plot, conflict, and resolution.
- Pupils will use active strategies of connecting, prediction, inferring, and sequencing.
- Pupils will read books from a variety of genre and create book reports.
- Pupils will be introduced to grammar and spelling skills and apply to written work.
- Pupils will refine their cursive skills.
- Pupils will develop skills in research and information gathering.

Mathematics: Math topics will be presented that meet NCTM standards while instilling an appreciation and proficiency in math skills appropriate for grade level. This will be accomplished with the use of charts, graphs, tables, and hands-on activities that will help the students understand concepts taught.

- Introduce numeration to millions.
- Introduce rounding and review addition and subtraction to 3 digit numbers.
- Review and solidify multiplication and division facts and learn the multiplication of 3, 4, and 5 digit numbers. Introduce two-digit division with remainders.
- Introduce and expand the use of fractions and decimals.

- Introduce circles, area, perimeter, and solid figures.
- Introduce many problem solving skills using pencil and mental math strategies

Social Studies: The students will be presented with an overview of the United States' major landforms, natural resources, and its people. The United States will be segmented into five separate areas to be studied. Each of these areas will be studied with interactive and cooperative learning.

- Identify the major landforms and learn globe and map skills.
- Identify the five regions of the United States and generate an understanding of the regional differences.
- Identify the regional similarities that weave us together as a nation.
- Make global connections between our country and the world with current events.
- Learn research skills to produce reports, presentations, and projects.

Science: Four major science strands consisting of life, physical, earth, and health sciences will be covered in the curriculum. Factual information and scientific processes will be emphasized. Appropriate lab work and hands-on activities will enable students to practice science skills and learn information through experimentation.

- To learn plant and animal behaviors and dependencies.
- To perform lab experiments to understand magnetism and electricity.
- To understand the earth and the need to preserve our natural resources
- To understand the skeletal and muscular system.
- To understand volcanoes and earthquakes.

Fifth Grade

In the fifth grade students will be encouraged to be critical and independent thinkers, active learners, and problem solvers. They will also spend time learning to be organized and work independently. It is a critical year for laying the foundation for a successful transition to Middle School.

Language Arts: Modified Whole Language is a program that encompasses reading, spelling, creative writing, writing mechanics, and listening skills. The student reads a novel and applies the above skills to the reading experience. Goals include:

- To enjoy and develop an appreciation for literature.
- To build vocabulary across the curriculum, to use words properly in the context of personal writing, and to develop strategies independently.
- To write creatively using proper grammar skills and mechanics.
- To develop listening skills for recall and inference.
- To develop research skills and computer skills.

Mathematics: The program focuses on building number sense through conceptual development of number operations and computation including mental math, estimation and problem solving. Students will make sense of mathematics in meaningful ways in a creative atmosphere. The program's content based on the NCTM Standards places a

strong emphasis on helping students become independent problem solvers. Goals include:

- To develop competency in all basic math skills including estimating.
- To understand whole number and decimal place values.
- To divide and multiply whole numbers and decimals.
- To use and understand fractions, decimals and percents.
- To explore ratio, probability, area, perimeter, solids, number patterns.

Social Studies: Students study about our nation's past and about the origins of the freedoms that led to the democratic system of government we have today. They also learn about the societies and history of our Northern American neighbors. Geography of the world and current events of today are intertwined into each of the units. Goals include:

- To develop skills to find places on a map or globe using a variety of strategies.
- To develop an understanding of the settlement of the western hemisphere.
- To understand the struggle for independence.
- To understand our northern and southern neighbors.
- To understand the current events of today as related to our studies.
- To learn research skills and apply them to a social studies topic.

Science: The program focuses on four major units, life, physical, earth, and health science. Each unit will involve students in the active process of reading, thinking, and learning through experimentation, doing labs and through life experiences. Goals include:

- To understand the classification of animals and plants in our environment.
- To understand the structure of matter.
- To understand our transport systems and how to keep them healthy.
- To identify sounds, how they are made and how they travel.
- To understand the complex interactions of our ecosystem.
- To apply the skills of research to a scientific topic.

MIDDLE SCHOOL

MIDDLE SCHOOL MATHEMATICS

The Middle School mathematics curriculum offers students opportunities to learn mathematical concepts and procedures with deep understanding. Courses are designed to prepare students for high school level mathematics by increasing proficiency in essential mathematics skills, exposing students to a wide variety of middle school math topics. The curriculum is designed to increase math confidence and develop proper study skills and work habits. Students are exposed to technology through the use of calculators, computers, and Smart Boards

GENERAL MATH - 6th grade

This course finalizes arithmetic studies and emphasizes the building blocks toward readiness for Algebra. This course covers decimals, data analysis, algebraic expressions, ratios, percentages, number theory, and fractions. Geometric terms and concepts are introduced.

PREALGEBRA 1 – 7th grade students and 6th grade students (by placement)

This class is the beginning process to bridge the gap between arithmetic and Algebra 1. This course is the study of integers and rational numbers, solving equations and inequalities, number theory, ratios, proportions, and percentages. This course strives to foster improvement in problem solving skills and independent thinking.

PREALGEBRA 2 – 8th grade students and 7th grade students (by placement)

In this course we complete the students' preparation for starting Algebra 1. This course involves extensive study of solving equations, graphing of linear functions, polynomials (simplifying and factoring), spatial thinking, area and volumes, right triangles, and data analysis and probability.

ALGEBRA 1 – 8th grade students (by placement)

This course is designed for highly motivated students who have demonstrated, by previous achievement, a high level of competency in computational mathematics, as well as a keen aptitude for problem solving and abstract concepts. This course includes the study of properties of real numbers, the solving, graphing, and writing of linear equations and inequalities, solving of systems of linear equations and inequalities, exponents and exponential functions, quadratic equations, polynomials and factoring, rational equations, radicals, and problem solving.

SCIENCE

SIXTH GRADE SCIENCE

Textbook: Prentice Hall Science Explorer Series- Physical

Students investigate the physical and chemical properties of matter as they explore relationships between mass, volume, density, and atomic structure. The students will also investigate energy and the different forms it can take. Forces do work to change energy from one form to another. Machines reduce the effort force needed to do work, and how forces change the motion of objects.

Physical Science
Develop students' understanding of the properties of matter.

- Matter is everything that takes up space and has mass.
- Atoms are composed of even smaller sub-atomic structures whose properties are measurable.
- Patterns repeat on the periodic table.
- Kinetic Molecular Theory explains the phases of matter.
- Elements form compounds - ionic and covalent bonding.

Develop students' understanding of properties of energy, machines, and motion.

- Energy can be converted from one form to another.
- Different forces exist and act on bodies in different ways.
- A battery consists of two separate metal electrodes immersed in an ionic solution.
- Batteries store a limited amount of energy and supply energy to operate a device.
- The electrical energy that a battery supplies is the result of chemical reactions between the electrodes and the electrolyte in the battery.
- Different devices use energy at different rates.
- Graphing is a tool that can be used to analyze data, show relationships, and can help formulate accurate predictions.
- Force is a push or a pull and is measured in defined units.
- Measuring the gravitational force on a object relates to weight; the amount of material in an object refers to mass.
- Friction is the force that resists motion between two surfaces in contact with each other.
- Work is a measurable product of a force times the distance over which the force acted.
- Energy transformations take place when forces do work on objects.
- Machines can decrease the magnitude of the effort force to do work by increasing the effort distance.
- The efficiency of a given machine varies according to how the machine is set up or used.
- The process of technological design can be used to identify, evaluate, and communicate solutions to problems based on human needs.
- Scientific experimentation is a process used to develop understanding of the natural world.
- The speed of an object changes when an unbalanced force acts on it.
- Energy is conserved in a closed system.

Learning Expectations:
Understand the atomic nature of matter.

- Design and conduct scientific investigations.
- Use appropriate tools and techniques to gather, analyze, and interpret data.
- Develop descriptions, explanations, predictions, and models using evidence.

- Think critically and logically to make connections between evidence and explanations.
- Communicate scientific procedures and explanations.
- Use mathematics in scientific inquiry.
- Understand that different kinds of questions suggest different kinds of scientific investigations; current knowledge guides scientific investigations; and mathematics and technology are important scientific tools.
- Explain concepts about the structure of matter.
- Understand that scientific explanations emphasize evidence.
- Record and graph data concretely, pictorially, and symbolically to discover relationships.
- Acquire the vocabulary associated with matter.
- Use scientific thinking processes to conduct investigations and build explanations: observing, communicating, organizing, relating and inferring.
- Work collaboratively and relate knowledge to new experiences.
- Understand science safety and follow safe practices.

Apply knowledge of scientific investigation or technological design in different contexts to make inferences to solve problems.

- Gain experience with the concepts of energy transformations and machines.
- Observe, describe, and hypothesize about physical phenomena produced.
- Build and describe what happens when a battery operates.
- Describe what makes up a battery.
- Identify the energy changes that take place when a battery is connected to different devices.
- Apply experimental design techniques to plan and conduct investigations.
- Evaluate design solutions.
- Make accurate predictions and draw conclusions based on data on tables and graphs.
- Describe the nature of forces and how they act on objects.
- Describe the relationship between mass and weight.
- Explore relationship between force and elasticity.
- Observe the properties of sliding friction.
- Gain experience with the concept of independent and dependent variables.
- Gain experience with the relationship with the arrangement of batteries as an energy source to the force/power available.
- Explore relationships that exist between the simple machines and force.
- Compare the efficiency of different systems.
- Explore motion of various objects with relation to speed, force, potential and kinetic energy, and friction.
- Use measurement in the context of scientific investigations.
- Apply mathematics in the context of science.
- Record and graph data concretely, pictorially, and symbolically to discover relationships.
- Acquire the vocabulary associated with energy, machines, and motions.

- Use scientific thinking processes to conduct investigations and build explanations: observing, communicating, organizing, relating and inferring.
- Work collaboratively and relate knowledge to new experiences.
- Understand science safety and follow safe practices.

Assessments:

- Lab experiments
- Performance assessments
- End of unit projects
- Participation
- Homework/Class work
- Teacher observations

SEVENTH GRADE SCIENCE

Textbook: Prentice Hall Science Explorer Series- Life Science

Students investigate ecosystems and the relationships of interdependency of organisms to each other and to their environment as well as the traits expressed by individual organisms. Incremental changes and genetic flexibility may allow populations to adjust to new conditions. Students will understand how ecosystems work and what they need to remain healthy.

Content: Life Science
Develop students' understanding of properties of populations and ecosystems.

- A population consists of all individuals of a species that occur together at a given place and time. All populations living together and the physical factors with which they interact compose an ecosystem.
- Populations of organisms can be categorized by the function they serve in an ecosystem. Plants and some microorganisms are producers – they make their own foods. All animals, including humans, are consumers, which obtain food by eating other organisms. Decomposers, primarily bacteria and fungi, are consumers that use waste materials and dead organisms for food. Food webs identify the relationships among producers, consumers, and decomposers in an ecosystem.
- For ecosystems, the major source of energy is sunlight. Producers use photosynthesis to transform energy entering ecosystems as sunlight into chemical energy. That energy then passes from organism to organism in food webs.
- The number of organisms an ecosystem can support depends on the resources available and abiotic factors, such as quantity of light and water, range of temperatures, and soil composition. Given adequate biotic and abiotic resources and no disease or predators, populations increase at rapid rates. Lack of resources and other factors, such as predation and climate, limit the growth of populations in specific niches in the ecosystems.

Develop students' understanding of reproduction and heredity.

- Reproduction is a characteristic of all systems; because no individual organism lives forever, reproduction is essential to the continuation of every species. Some organisms reproduce asexually while other organisms reproduce sexually.
- Every organism needs a set of instructions for specifying its traits. Heredity is the passage of these instructions from one generation to another.
- Hereditary information is contained in genes, located in the chromosomes of each cell.
- Each gene carries a single unit of information. An inherited trait of an individual can be determined by one or by many genes, and a single gene can influence more than one trait.
- The characteristics of an organism can be described in terms of a combination of traits. Some traits are inherited, and others result from interactions with the environment.

Develop students' understanding of diversity and adaptations of organisms.

- Biological evolution accounts for the diversity of species developed through gradual processes over many generations. Species acquire many of their unique characteristics through biological adaptation, which involves the selection of naturally occurring variation in populations. Biological adaptations include changes in structures, behaviors, and physiology that enhance survival and reproductive successes in a particular environment.

Learning Expectations:
Understand the diversity of life is a result of evolution.
Understand Earth's surface resources.
Understand the molecular importance of the interdependence of the flow of matter and energy in an ecosystem.
Understand Earth's materials and the processes that over time shape the surface.

- Design and conduct scientific investigations.
- Use appropriate tools and techniques to gather, analyze, and interpret data.
- Develop descriptions, explanations, predictions, and models using evidence.
- Think critically and logically to make connections between evidence and explanations.
- Explain the flows of energy and matter from organism to organism within an ecosystem and how they change overtime.
- Communicate scientific procedures and explanations.
- Use mathematics in scientific inquiry.
- Understand that different kinds of questions suggest different kinds of scientific investigations; current knowledge guides scientific investigations; and mathematics and technology are important scientific tools.
- Understand that scientific explanations emphasize evidence.

- Record and graph data concretely, pictorially, and symbolically to discover relationships.
- Acquire the vocabulary associated with planetary science.
- Use scientific thinking processes to conduct investigations and build explanations: observing, communicating, organizing, relating and inferring.
- Work collaboratively and relate knowledge to new experiences.
- Understand science safety and follow safe practices.

Assessments:

- Lab experiments
- Teacher created assessments
- End of unit projects
- Participation
- Homework/Class work
- Teacher observations

EIGHTH GRADE SCIENCE

Textbook: Prentice Hall Science Explorer Series- Earth Science

Students will investigate the Earth's surface resources and the environmental interactions that take place in the world.

Content: Earth Science
Develop students' understanding the earth's resources and man's effect on his environment.

- Humans rely on the environment for resources.
- The use of renewable and nonrenewable resources affects the environment.
- Materials can be recycled through different methods with varied costs and benefits.
- Various types of pollution can have an adverse effect on the environment.
- Develop students' understanding of the universe and its structures.
- Instruments are used to study and record data from space.
- Theories of the formation of the solar system and the universe have changed over time.
- Scientists study all forms of the electromagnetic spectrum.
- Stellar distance is determined by "red-shift".
- There are many structures in the universe.
- The Hertzsprung-Russell diagram describes the structure and life-cycle of a star.
- Fusion is the nuclear process responsible for the star's energy.
- Apparent and absolute magnitude is a way of measuring stellar distance.
- Constellations are a way of mapping the stars.

Learning Expectations:
Understand Earth's surface resources.
Understand the molecular importance of the interdependence of the flow of matter and energy in ecosystems.

- Design and conduct scientific investigations.
- Use appropriate tools and techniques to gather, analyze, and interpret data.
- Develop descriptions, explanations, predictions, and models using evidence.
- Think critically and logically to make connections between evidence and explanations.
- Know that raw materials come from natural resources.
- Examine the renewability of resources and the role of recycling.
- Describe how human actions affect the health of the environment.
- Communicate scientific procedures and explanations.
- Use mathematics in scientific inquiry.
- Understand that different kinds of questions suggest different kinds of scientific investigations; current knowledge guides scientific investigations; and mathematics and technology are important scientific tools.
- Understand that scientific explanations emphasize evidence.
- Record and graph data concretely, pictorially, and symbolically to discover relationships.
- Acquire the vocabulary associated with environmental science.
- Use scientific thinking processes to conduct investigations and build explanations: observing, communicating, organizing, relating and inferring.
- Work collaboratively and relate knowledge to new experiences.
- Understand science safety and follow safe practices.
- Identify questions that can be answered through scientific investigation.
- Design and conduct scientific investigations.
- Use appropriate tools and techniques to gather, analyze, and interpret data.
- Develop descriptions, explanations, predictions, and models using evidence.

Assessments:

- Lab experiments
- Performance assessments
- Participation
- Homework/Class work
- Teacher observations

SOCIAL STUDIES

6th Grade:

Our sixth grade course focuses on world civilizations and their cultures from the Paleolithic Era up until the time of European exploration of the New World. Our challenge will be to explore and investigate these societies while explaining how each has impacted our way of life in the modern world. In addition, the study of geography will lead us to appreciate the interaction of humanity and the physical environment. An ongoing examination of current events will help us to better understand how daily events influence the course of history. Sixth grade social studies students also work on note-taking proficiency and organizational skills.

7th Grade:

Our seventh grade course focuses on the early years of the United States beginning with the development of the colonies and continuing up until the Civil War. Much attention is given to the American Revolution, the Constitution and the expansion of the United States. In addition, geography skills will be developed to acquire knowledge about our country's features and to foster the ability to locate and identify political boundaries. An ongoing examination of current events will help us to see the effects of the decisions made by the Framers of the Constitution and the early leadership of our country which we study during this course.

8th Grade:

Our eighth grade course picks up the history of the United States from where seventh grade left off. Much attention will be given to the Civil War and to the Reconstruction Period that followed. An ongoing examination of current events will help us explore the theme of leadership which is a large part of this course. Eighth graders will work to develop the ability to recognize cause and effect relationships and to understand the importance of the use of primary sources.

ABRAMS HEBREW ACADEMY
MUSIC CURRICULUM

KINDERGARTEN – Students will:

- Develop an awareness of music and sounds in our environment
- Find a comfortable singing voice and begin to build a repertoire of Hebrew and English songs
- Learn to use simple percussion instruments
- Develop large muscle control in dance and movement
- Listen to an wide variety of music

FIRST GRADE – Students will:

- Develop ability to match tones
- Develop an awareness of tempo, dynamics and pitch

- Create stories to accompany music
- Continue to build a repertoire of Hebrew and English songs
- Learn good posture and breathing for singing and performing

SECOND GRADE – Students will:

- Learn to follow lyrics, music notation and terminology
- Dance to a variety of styles
- Expand their repertoire with partner songs
- Use a wide variety of rhythm instruments
- Develop an appreciation for composers

THIRD GRADE – Students will:

- Start singing two-part harmony
- Learn about orchestral instruments
- Study the recorder
- Expand their knowledge of music literature and composers
- Establish good listening habits and concert audience manners

FOURTH GRADE – Students will:

- Accompany repertoire with a variety of rhythm and percussive instruments
- Be encouraged to expand vocal range
- Develop awareness of music from other cultures
- Develop sensitivity to good musical tone quality
- Start composing simple rhythmic compositions

FIFTH GRADE – Students will:

- Develop the understanding that music reflects history
- Learn about the various periods of music history
- Have opportunities to compose
- Be challenged with more difficult repertoire
- Refine listening habits

INSTRUMENTAL MUSIC

Instrumental Music begins in the 3rd grade at Abrams Hebrew Academy. Each 3rd grader is given a soprano recorder and a music book. Children learn to play simple folks songs derived from American, European and Jewish Cultures. Children are taught to read musical notation. Many children continue in the Instrumental Music Program.

In the Instrumental Music Program, an elective enrichment program for students in grades 4 – 8, children learn to play a wind instrument of their choice. Instruction is

available on the flute, clarinet, alto saxophone, trumpet, trombone and baritone horn. A wide vista of musical experience is offered in which students:

- learn to play an instrument, independently, alone and in small groups and large ensembles
- participate in the Abrams Hebrew Academy Concert Band
- play their instruments accurately and expressively, with concern for dynamics, rhythm and tone quality
- play with a good embouchure, good posture and good breath control
- learn to read musical notation
- are able to perform music of diverse cultures including: world folk music, European music, American music (popular and classical) and music of the Jewish people (folk, liturgical and concert quality)
- understand music in relationship to culture (Jewish culture, American culture and other world cultures)
- play some simple melodies by ear
- use their instruments to compose simple melodies and to improvise
- learn about form in music
- develop criteria for evaluating their own performances and those of others
- understand the relationships between music, the other arts and disciplines outside the arts

RESOURCE ROOM

The resource room strategy is usually utilized for students with learning problems who are able to function in the regular classroom. A student will come to the resource center for remediation of a diagnosed difficulty. The goal of the resource room is to make each student able to work independently at grade level. The resource room teacher will employ techniques that are necessary to achieve this goal through individualization, remediation, and multi-sensory presentation of material. A child's success is measured by the goals reached and maintained for each individual learning style. The resource room teacher forges a bond with the mainstream teacher to help maximize potential for each student. This includes the resource room teacher attending mainstreamed classes with the student to help provide additional instruction and support. A very strong bond is formed with each individual student to help foster learning in the classroom and in the resource room. The resource room teacher may also work directly in the classroom when it is appropriate to do so.

Health/Physical Education

Grades K-8

Physical Education is required of all students. Our main focus is to encourage students to live a healthy lifestyle through physical activity and health education. We believe that a positive attitude toward an active lifestyle will contribute to the development of an optimum level of wellness. Our curriculum has been developed in accordance with the content of the National Standards of Physical Education.

The PE program will provide vigorous activities and opportunities for each child to explore, develop and master a range of movement skills. Basic skills are taught and are further developed at each grade level as the year progresses. Students will have the opportunity to experience both team and individual sports. These include fine and gross motor skills, sports, games, fitness activities, and team-building opportunities. Also, cooperation, positive sportsmanship, and fun are important components of the physical education program.

Health Education is required of all students in grades 6–8. The 3 main components of health, emotional, physical, social and mental, are addressed throughout each unit. Our goal is for students to learn how to make healthy choices throughout their lifetime. Some of the topics include peer pressure, self esteem, stress, drugs and alcohol, etc.

ABRAMS LIBRARY

- Fosters the love of reading
- Works to improve listening skills
- Introduces new and classic authors
- Hosts book discussions
- Offers a broad selection of current fiction and non-fiction books and periodicals for students and teachers
- Provides individualized attention to K-8 students