Maharishi School of the Age of Enlightenment

GRADES K-12 CURRICULUM MAP

MATHEMATICS

LANGUAGE ARTS

SANSKRIT

SOCIAL STUDIES

ART

SCIENCE OF CREATIVE INTELLIGENCE

MUSIC

COMPUTER SCIENCE

INFORMATION LITERACY

SCIENCE

PHYSICAL EDUCATION

2006

PHILOSOPHY OF MAHARISHI SCHOOL

Developing the Full Value of the Knower, Process of Knowing, and Known

Traditionally, education has focused primarily on what the students study—the objective aspect of knowledge—the known. Very little attention has been given to unfolding the full creative potential of the student—the knower—or to fully developing the processes of knowing, including enlivening the total creative potential of the teacher. In addition, the fragmented approach of modern education only provides partial knowledge of the known. This lack of development of the full value of the knower, the process of knowing, and the known inevitably results in widespread dissatisfaction with education amongst teachers, students, and parents.

In contrast, Consciousness-Based education enlivens complete knowledge of the knower, the processes of knowing, and the known. This is possible because at their foundation, all three fundamental components of education are expressions of one unified field, the Unified Field of Natural Law, which is a field of pure consciousness. This least excited state of human awareness is open to direct experience through the Transcendental Meditation program as the most settled state of everyone's mind, where consciousness is fully awake within itself. Hence, it is a state of consciousness knowing itself. This state of pure awareness is the unified foundation of knower, knowing, and known.

Ultimately the degree of success of education lies in how much it enlivens coherence in the field of pure consciousness both within the student and in the environment. Within the student, enlivenment of pure consciousness through the practice of the Transcendental Meditation and TM-Sidhi programs, including Yogic Flying, results in increased alertness, creativity, intelligence, improved health, improved social behavior, and greater organizing power. In the environment, rising coherence results in more positive social indicators, such as lower disease rates, and reduced crime and conflict.

Developing Total Knowledge

According to Maharishi Vedic Science, the self-referral state of Transcendental Consciousness knowing itself is the origin of the 40 aspects of Veda and Vedic Literature—the Laws of Nature responsible for the structure of human physiology and the whole manifest universe. Hence, Transcendental Consciousness is referred to as the field of Total Knowledge. This field of Total Knowledge has been identified by experts in quantum field theories of modern physics as the Unified Field of Natural Law, the home of all the Laws of Nature.

This discovery sheds light upon a fundamental principle of Consciousness-Based education: *Knowledge is Structured in Consciousness.* This expression represents the core of the educational philosophy of Maharishi School. Through Consciousness-Based education, every student, irrespective of gender, race, religion, or culture, can enliven the total potential of Natural Law—Total Knowledge—in their awareness, thereby unfolding their infinite creative potential.

The importance of this discovery for education is that the simple experience of the "home of all knowledge" within, during the practice of the Transcendental Meditation and TM-Sidhi programs, enlivens the whole brain physiology in a natural, effortless manner. This cultures the mind so profoundly that action becomes spontaneously in harmony with Natural Law, and the student gains the fruit of all knowledge—infinite creative potential and a fulfilling mistake-free life.

The School's mission and statement of philosophy are made available for parents and students in the *Student and Parent Handbook,* and for faculty and administrators in the *Faculty Handbook* and *Administrative Handbook.*

INTRODUCTION

This document represents the foundation for curriculum at Maharishi School. Each curriculum area has an overview followed by a description of concepts, skills, or processes to be learned at each grade level, as well as a section on assessment.

The purpose of this Curriculum Map is to give a clear picture of the unfoldment of knowledge from Kindergarten through Grade 12. It works like a road map to show teachers what students have learned in previous grades, what the students will be learning, and where the students are going by the time they graduate from Maharishi School. It provides a framework for planning lessons and units of instruction, yet allows a teacher the freedom to determine those classroom activities and tasks that would best support their teaching styles and the needs of their individual students.

In creating this Curriculum Map, teachers worked together to ensure that every stage of learning prepares students for the next stage, establishing balance among disciplines and among standard components of knowledge. In addition, faculty members researched subject areas, attended inservices, observed current "best" practices in other schools, and reported back to the entire faculty. Discussion on curriculum issues flowed back and forth between grade levels and across disciplines. Time was spent at weekly faculty meetings, at Saturday morning faculty development sessions, and at Academic Council. The end product of many hours of discussion, writing, and revising among faculty members is this Curriculum Map, a powerful tool that helps to deliver an effective curriculum.

Mission of Maharishi School

Maharishi School of the Age of Enlightenment was founded by His Holiness Maharishi Mahesh Yogi to provide Consciousness-Based℠ education for the preschool through secondary levels. The School's mission is to enliven the total brain physiology of every student, and thereby create successful individuals who radiate an influence of peace and harmony in the world.

This is accomplished by adding to the study of traditional academic disciplines, the Science of Creative Intelligence® (SCI). Together with its practical aspect, the Transcendental Meditation® and TM-Sidhi® programs, including Yogic Flying, SCI provides the knowledge and experience of Transcendental Consciousness, the unified field of Nature's creativity and intelligence at the source of thought. Only the regular experience of this field of "Total Knowledge" enlivens the total brain physiology.

Extensive scientific research has shown that Consciousness-Based education increases creativity and intelligence, improves health and social behavior, and creates a powerful influence of peace and harmony in the school and community. It is therefore the mission of Maharishi School to also support in every possible way the establishment of similar schools to ensure that every community and every nation enjoys peace on a permanent basis.

GOALS OF MAHARISHI SCHOOL

- To offer total knowledge to students by developing the full value of the knower, the process of knowing, and the known through Consciousness-Based education.
- To fulfill the highest ideals of education through the integration of the finest quality traditional knowledge with the development of the full creative genius of the student through Consciousness-Based education.
- To provide the systematic means to develop the students' intelligence, creativity, receptivity to knowledge, self-sufficiency, and ability to comprehend both broadly and deeply through the direct experience of the field of pure intelligence gained during the practice of the Transcendental Meditation and TM-Sidhi programs.
- To enable students to gain the fruit of all knowledge—life free from mistakes, with the ability to know anything, do anything, and accomplish anything.
- To connect the parts of knowledge to the wholeness of knowledge, and the wholeness of knowledge to pure consciousness, the deepest level of the student's experience, through the study of the Science of Creative Intelligence. Students come to recognize that all disciplines are modes of their own awareness, having their common source in the field of pure intelligence, pure consciousness.
- To enliven the five Fundamentals of Education: Receptivity, Intelligence, Knowledge, Experience, and Expression through the application of Maharishi's Principles of Ideal Teaching as the basis for teaching and learning that is effortless, joyful, successful, and fulfilling.
- To culture in the students the profound concept "The world is my family" and to appreciate, uphold, and understand different cultures, races, and genders as having the same infinite potential for creativity, happiness, and success in life.
- To create ideal citizens—individuals with the organizing power, wisdom, and self-sufficiency to achieve their desires while simultaneously promoting the well-being of society. Their actions are spontaneously in accord with Natural Law, bringing all good to themselves, their community, their nation, and the entire world family.
- To establish the School as a center of coherence and organizing power for the community through the group practice of the Transcendental Meditation and TM-Sidhi programs, including Yogic Flying, for students and teachers.
- To create a model of Consciousness-Based education from which other educators and parents worldwide can draw inspiration and practical knowledge.

MATHEMATICS

Lower School

The Lower School mathematics program is composed of two streams: Vedic Math and traditional math. In Vedic Math, students use Vedic *Sutras* to perform addition, subtraction, multiplication, and division. This unique approach to mathematical computation enlivens the whole brain physiology and creates the ability to compute math rapidly and precisely.

The traditional mathematics curriculum covers topics in geometry, estimating, problem solving, logic, telling time, measurement, etc. Teachers use manipulatives, games, cooperative learning projects, and printed materials to integrate information.

Due to the highly sequential nature of skill development in mathematics, after Grade 3, students are instructed by grade level, not in the multi-aged setting.

Kindergarten

Kindergarten students will:

- Develop an understanding of mathematical patterns through use of concrete materials.
- Enjoy free exploration of math manipulatives leading to sorting, comparing, classifying, sequencing, and increasing spatial relations.
- Practice one-to-one correspondence in counting.
- Practice estimation skills.
- Explore complements of numbers using math manipulatives. Learn complements of numbers 4 to 8 (or greater, if appropriate).
- Explore the concept of graphing using a graphing mat with objects, picture graphs, and simple surveys with graphs on paper.
- Learn numeral recognition up to 20 or higher. Learn formation of numbers on chalkboards and paper.
- Learn place value of ones, tens, and hundreds, counting straws for each school day. Celebrate days 50 and 100.
- Learn to count by ones and tens.
- Begin learning to count by twos and fives.
- Explore addition and subtraction with number stories, manipulatives, and games.
- Begin to understand concept of time to the hour.
- Become familiar with basic concepts of money.
- Learn to use a ruler and to identify basic measurements.

Assessment

Teacher observes students during math exploration to evaluate sorting, comparing, classifying, and sequencing skills. Students' skills are evaluated through individual testing by the teacher (2 to 3 times per year) using "Math Their Way" assessment. These include skills of one-to-one correspondence, counting aloud by ones, fives, and tens, number complements, estimation, and recognition of number 20 or higher.

Primary Grades

Primary grade students will:

- Develop number sense and place value sense, using a variety of materials.
- Recognize, describe, and extend a wide variety of patterns. Practice sorting and classifying.
- Learn to tell time to the five minutes.
- Practice recognizing coins and bills. Practice counting money.
- Explore linear measurement in inches and centimeters.
- Build addition and subtraction facts to ten. Practice facts using a wide variety of materials.
- Investigate fractions by using manipulatives. Recognize and read simple fractions.
- Develop competency through extensive practice of *Shudha* addition (Vedic math). Build problems with manipulatives and transition to mental computation, using Vedic math *Sutras* and Vedic check.
- Begin *Shudha* subtraction with Vedic check.

Assessment

Students will be pre-assessed at the beginning of each math unit, and will also be given a post-unit math assessment. Teachers will check daily papers of student work. Second grade students will be given an end-of-year math competency test.

Intermediate Grades

Intermediate grade students will:

Grade 3

- Review concepts of place value and learn to read large numbers to the millions.
- Investigate number patterns and skip-counting.
- Master basic facts of addition to 20 and their corresponding subtraction facts.
- Review and expand *Shudha* addition and subtraction to numbers in the thousands, including Vedic check.
- Learn to round off numbers to the nearest 10 and 100 and begin to apply rounding off to estimation techniques for addition and subtraction.
- Explore concepts of multiplication using manipulatives, pictures, dots, and symbols.
- Learn how to use a multiplication chart to find answers for multiplication and division problems.
- Memorize multiplication facts to 10x10 and begin to learn facts for the 11's and 12's.
- Investigate *Nikhilam* multiplication for 6 to 9 facts.
- Learn 1x2 and 1x3 *Urdhva* multiplication without and with carries, including Vedic check.
- Begin to memorize division facts to 100.
- Practice using addition, subtraction, multiplication, and division appropriately to solve word problems.
- Identify fractions in objects, models, pictures, and measurement and learn how to represent those using digits.
- Understand and apply basic concepts of money.
- Apply addition, subtraction, multiplication, and division to problems involving money, using dollar and cents signs appropriately.
- Review telling time and expand to telling time to the minute on analog clocks.
- Contrast digital time with analog time, learning how to write both.
- Explore linear measurement using standard and metric units to 1/4 inch and centimeter.
- Practice measuring capacity and weight using standard and metric units.
- Apply addition and multiplication techniques to the study of perimeter and area.
- Begin to learn basic concepts of geometry such as shape names, lines, angles, symmetry, and tessellation.
- Explore graphs, tables, time lines, and charts.
- Explore Roman numerals and write them from one to one hundred.
- Practice placing coordinates on a graph in games and pictures.
- Enjoy mental math by regularly applying it to all areas of study.
- Appreciate the abundance of math-related examples all around us.

Grade 4

- Review number concepts including place value, ordering, and rounding.
- Review and expand practice of *Shudha* addition, including multi-digit and column addition, adding money, mental math, estimation, and Vedic check.
- Review and practice *Shudha* subtraction, including facts to 20, multi-digit and Vedic check; expand and practice estimation and mental math skills.
- Review and practice multiplication facts, double-digit *Urdhva, Tiryagbhyam* technique, multiplication of multi-digits and single-digits, and Vedic check.
- Learn and practice triple-digit and multiplication of triple-digit and double-digit using *Urdhva Tiryagbhyam* technique.
- Begin to develop estimating and mental math skills for multi-digit multiplication and investigate *Anurupyena*, or "doubling and halving."
- Review division concepts and facts.
- Practice and expand skills in single-digit division, including remainders and Vedic check.
- Review and expand existing geometric concepts of shapes, lines, angles, and symmetry. For example, learn new terms to identify expanding concepts. Begin to understand concepts of volume. Apply and investigate knowledge of 3-dimensional figures in a final project.
- Review and expand time and measurement skills such as telling time, standard, and metric measurement scales, area, and perimeter. Begin to apply concepts of elapsed time.
- Explore problem-solving strategies and skills, using all four operations. Strategies include: identifying needed information and extraneous information for choosing the operation, logical reasoning, decision making, guess and check, solving simpler versions of the problem, solving multi-step problems, and using diagrams, tables and graphs.
- Review and expand concepts of fractions. Begin to add and subtract like fractions using Fraction Factory.

Assessment

Students are given beginning and end of year math competency tests and are pre-assessed before most units of study. Teachers and students check together daily work and homework assignments. Teachers use review quizzes and unit tests to monitor progress and note student competence and understanding through discussion and observation. Some timed tests are used for addition, subtraction, multiplication, and division facts.

Upper Elementary

Upper Elementary grade students will:

Grade 5

- Review, practice, and expand Vedic math computational skill from previous grades.
- Learn to identify place value to 100,000,000.
- Learn *Nikhilam* multiplication with different bases (Anurupyena multiplication) with both factors above and below the base.
- Introduce *Ekadhikena Purvena* multiplication.
- Work on mastering multiplication facts 2's through 12's.
- Show competency with *Urdhva* multiplication through 4x4 digits with Vedic check.
- Show competency with short division using single-digit divisor.
- Introduce and show competency with Vedic two-digit divisor *(Dhvajanka)* writing the remainder first as a remainder and then as a fraction.
- Practice doubling and halving *(Anurupyena)*.
- Introduce and study decimals conceptually: place values; ordering and comparing; rounding; equivalent decimals; addition, subtraction, and multiplication of decimals.
- Explore fractions, including: divisibility rules, converting to equivalents, comparing and ordering fractions, computing fractions of whole numbers, adding and subtracting like denominators, adding and subtracting mixed numbers (including renaming), using *Urdhva* to add and subtract unlike denominators, multiplying fractions (including whole numbers), converting improper fractions to mixed numbers, common factors, common multiples, and simplifying fractions.
- Develop adding and subtracting measurements using both customary and metric measurements.
- Review and show competency telling time to the minute on an analog clock.
- Practice adding and subtracting time using Vedic computation.
- Practice graphing, including circle graphs, line graphs, and bar graphs.
- Practice problem-solving.
- Review, practice, and expand geometry topics including: polygons (triangles, quadrilaterals, pentagons, hexagons, octagons); planes; points; lines; line segments; rays; right, obtuse, and acute angles; identify arc, circle, radius, diameter; identify similar figures, congruent figures, and symmetrical figures; measure perimeter and area.
- Review and expand mental math skills.
- Review and expand estimating skills.
- Appreciate and connect math-related areas to daily life.

Grade 6

- Review and practice computational skills from previous grades.
- Use *Urdhva* multiplication of whole numbers up to 4x4 digits with checking, and investigate patterns of *Urdhva* multiplication.
- Use *Dhvajank* 2-digit division with answers expressed as fractions and decimals and Vedic check.
- Study decimals conceptually, including ordering and comparing, addition, subtraction, multiplication, and division of decimals.
- Study fractions, including addition, subtraction, multiplication, and division. Change fractions to decimals and percents.
- Identify geometric figures, symmetry, congruence, flips, rotations, and types of angles and triangles. Use a protractor and a compass. Find the perimeter of polygons and area of rectangles, triangles, parallelograms, and circles.
- Master coordinate graphing. Create and read bar, line, and circle graphs.
- Master standard units of measurement, including adding and subtracting units of measurement. Begin learning the metric system.
- Add and subtract elapsed time.
- Explore Vedic Math techniques as follows:
  Anurupyena multiplication
  Anurupyena doubling and halving
  Echadacena Purvena
  Number splitting
  Exponents
  Vilokanam
  Nikhilam
- Practice mental math and problem-solving strategies. Develop awareness that problems can be solved in multiple ways.
- Teach spatial math using "Connected Math" book.

Assessment

Students are given beginning- and end-of-year math competency tests. Teachers and students check together daily work and homework assignments. Teachers use review quizzes and chapter tests to monitor progress and note student competence and understanding through discussion and observation. Student math notebooks are reviewed and morning math practice is observed.

MATHEMATICS

Middle and Upper School

Mathematics teaches students to identify, organize, and analyze quantitative information and relationships. In Grades 7 and 8 students build on and extend the mathematics they learned in Lower School and continue using Vedic *Sutras* for computation. In Grades 9 through 12 students extend their informal knowledge of data, shape, change, and chance by studying multiple strands—algebra and functions, geometry and trigonometry, statistics and probability, and discrete mathematics. This integrated curriculum is connected within and across units by common topics such as recursive thinking, and by the fundamental themes of data, representation, shape, and change.

Maharishi Vedic Mathematics, the mathematics of the self-interacting dynamics of pure consciousness, brings fulfillment to the mathematician by revealing within his own self-referral awareness the infinite organizing power of Natural Law, which simultaneously administers everything in the universe on the level of perfect order. The mathematician thus becomes aligned with this perfectly orderly functioning of Natural Law, and gains deep insights into the structure and mechanics of Natural Law as revealed by mathematics.

Grade 7

Grade 7 students will:

- Continue development of operations with whole numbers, fractions, and decimals using Vedic *Sutras*.
- Develop understanding of our number system and powers of ten.
- Introduce number theory and patterns, including whole number exponents, scientific notation, prime factorization, and Fibonacci sequence.
- Introduce mathematical properties and develop order of operations.
- Use geometric formulas of measurement; construct, identify, and measure angles; and master customary measurement.
- Identify uses of variables, translate word problems into equations, and solve simple equations.
- Use diverse problem-solving strategies, including logic grids, working backwards, constructing charts and diagrams, and recognizing patterns.
- Introduce ratio, proportion, and percent.
- Introduce constructing and interpreting graphs.

Assessment

- Observation of class work, group work, and discussion, which include the opportunity for each student to answer oral questions at a variety of levels of Bloom's Taxonomy.
- Written assignments, including homework, class work, and group work, giving attention to attempt, correctness, and depth.
- Summaries covering important knowledge and concepts for each unit.
- Paper/pencil quizzes and tests for each unit/topic.
- A project involving an individual or group presentation for some topics.
- Comprehensive final exams, one for basic skills acquired and to be maintained, and one for problem solving and concepts.

Grade 8

Grade 8 students will:

- Master basic operations with whole numbers, decimals, and fractions using Vedic *Sutras*.
- Develop concept and operations with integers and their applications, and introduce *Vinculum* numbers for Vedic computations.
- Master perfect squares and develop finding the square root using Vedic *Sutras*.
- Develop number theory and patterns including integer exponents, scientific notation, and prime factorization.
- Develop estimation and number sense skills.
- Explore the history of number systems and compare operations in a variety of number systems to understand our decimal place value system.
- Develop applications of ratio, proportion, and percent.
- Develop problem-solving skills by applying properties and principles of arithmetic to real-world problems.
- Extend knowledge of plane geometry to space geometry by studying area and volume.
- Explore and apply the Pythagorean Theorem.
- Develop constructing and interpreting graphs.
- Introduce modeling and application of linear equations.

Assessment

- Observation of class work, group work, and discussion, which include the opportunity for each student to answer oral questions at a variety of levels of Bloom's Taxonomy.
- Written assignments, including homework, class work, and group work, giving attention to attempt, correctness, and depth.
- Summaries covering important knowledge and concepts for each unit.
- Paper/pencil quizzes and tests for each unit/topic.
- A project involving an individual or group presentation for some topics.
- Comprehensive final exams, one for basic skills acquired and to be maintained, and one for problem solving and concepts.

Grade 9

Grade 9 students will:

- Develop the ability to make sense out of real-world data by using graphical displays and summary statistics.
- Continue using Vedic *Sutras* for computation, develop finding square roots, and introduce *Vinculum* division.
- Develop the ability to recognize important patterns of change among variables and to represent those patterns using tables of numerical data, coordinate graphs, verbal descriptions, and symbolic rules.
- Develop confidence and skill in using linear functions to model and solve problems in situations that exhibit constant rate of change or slope.
- Write the equation of a line using the Vedic *Sutra Urdhva*.
- Develop ability to use vertex-edge graphs to represent and analyze real-world situations involving relationships among a finite number of elements, including scheduling, managing conflicts, and finding efficient routes.
- Develop visualization skills and an understanding of the properties of special shapes including symmetry, area, and volume.
- Develop use of exponential functions to model and solve problems in situations that exhibit exponential growth or decay.

Assessment

- Observation of class work, group work and discussion, which include the opportunity for each student to answer oral questions at a variety of levels of Bloom's Taxonomy.
- Written assignments, including homework, class work, and group work, giving attention to attempt, correctness, and depth.
- Summaries covering important knowledge and concepts for each unit.
- Paper/pencil quizzes and tests for each unit/topic.
- A project involving an individual or group presentation for some topics.
- Comprehensive final exams, one for basic skills acquired and to be maintained, and one for problem solving and concepts.

Grade 10

Grade 10 students will:

- Develop confidence and skill in using simulation methods, particularly those involving the use of random numbers, to make sense of real-world situations involving chance.
- Apply matrices and matrix operations to represent and solve problems from a variety of real-world settings, while connecting important mathematical ideas from several strands.
- Master solving systems of equations using a variety of methods, including using the Vedic *Sutra Urdhva*.
- Develop understanding of coordinate methods for representing and analyzing relations among geometric shapes and for describing geometric transformation and patterns of location, shape, and size.
- Recognize data patterns that involve both direct and inverse power variation (Vedic *Sutra Anurupyena)* to construct and analyze those models and combinations such as quadratic functions and to apply those models to a variety of practical and scientific questions.
- Continue using Vedic *Sutras* for computation; master finding square roots.
- Extend ability to use vertex-edge graphs to represent and analyze real-world situations involving network optimization, including optimal spanning networks and shortest routes.

Assessment

- Observation of class work, group work, and discussion, which include the opportunity for each student to answer oral questions at a variety of levels of Bloom's Taxonomy.
- Written assignments, including homework, class work, and group work, giving attention to attempt, correctness, and depth.
- Summaries covering important knowledge and concepts for each unit.
- Paper/pencil quizzes and tests for each unit/topic.
- A project involving an individual or group presentation for some topics.
- Comprehensive final exams, one for basic skills acquired and to be maintained, and one for problem solving and concepts.

Grade 11

Grade 11 students will:

- Develop the ability to apply angular and linear velocity and right triangle trigonometry, and introduce the periodic functions of sine and cosine.
- Review basic properties of probability and develop the ability to apply geometric (waiting-time) distributions, expected value, and fair game.
- Develop the ability to construct and reason with linked quantitative variables and relations involving several variables and several constraints, including the Law of Sines and Cosines, and linear programming.
- Develop the understanding of how public opinion is measured and analyzed, particularly through voting methods, censuses, and surveys.
- Master the use of equivalent symbolic representations for linear and quadratic functions and the representation and reasoning about situations modeled by linear and quadratic functions.
- Introduce formal reasoning and deduction in geometric setting using relationships and properties of angles, triangles, and parallelograms.
- Extend understanding of linear, exponential, power, periodic, quadratic, square root, and absolute value functions and the contexts that lead to applying a particular model in a real-world situation by applying a variety of transformations that lead to different graphs of the same family.

Assessment

- Observation of class work, group work and discussion, which include the opportunity for each student to answer oral questions at a variety of levels of Bloom's Taxonomy.
- Written assignments, including homework, class work, and group work, giving attention to attempt, correctness, and depth.
- Summaries covering important knowledge and concepts for each unit.
- Paper/pencil quizzes and tests for each unit/topic.
- A project involving an individual or group presentation for some topics.
- Comprehensive final exams, one for basic skills acquired and to be maintained, and one for problem solving and concepts.

Grade 12

Grade 12 students will:

- Extend understanding of variation patterns of data and develop the ability to model variations in some types of data with normal distribution and apply that knowledge to statistical process control.
- Extend ability (using spreadsheets) to represent, analyze, and solve problems in situations involving sequential and recursive change (e.g., car loans, mortgages, and sequences and series).
- Develop understanding of inverse function and common logarithmic functions and their use in modeling and analyzing problem situations.
- Extend understanding of the binomial distribution, including its exact construction and the normal approximation to the binomial distribution, its use in statistical inference to test a single proportion, and compare two treatments in an experiment, as well as the characteristics of a well-designed experiment.
- Develop understanding of the mathematics of information process, focusing on the basic issues of access, security, and accuracy.

Assessment

- Observation of class work, group work, and discussion, which include the opportunity for each student to answer oral questions at a variety of levels of Bloom's Taxonomy.
- Written assignments, including homework, class work, and group work, giving attention to attempt, correctness, and depth.
- Summaries covering important knowledge and concepts for each unit.
- Paper/pencil quizzes and tests for each unit/topic.
- A project involving an individual or group presentation for some topics.
- Comprehensive final exams, one for basic skills acquired and to be maintained, and one for problem solving and concepts.

LANGUAGE ARTS

Lower School

The goal of the Lower School Language Arts program is for each student to find success and enjoyment in speaking, reading, writing, and listening. At each grade level, the curriculum provides increasingly challenging and detailed skills lessons, materials, and projects for building on earlier learning. As a result, students emerge as confident readers and skilled communicators.

In Kindergarten, students explore language through experiences with songs, poetry, and literature, and learn to connect sound to the printed word. As appreciation grows, Primary students connect sounds and letters to create words, thus applying meaning to language. Exploration of language continues as students practice reading, writing, listening, and speaking skills through journal writing and sharing, recognizing word families, acting out short plays, and engaging in literature groups.

In the Intermediate grades, greater precision in language conventions and usage is emphasized. Students read for pleasure and to gain information. As fluency and productivity increase, writing instruction expands to include a greater range of genres. In the Upper Elementary grades, students are expected to master basic writing conventions. Reading, writing, and oral presentation skills are used in increasingly sophisticated applications. By the end of Lower School, students have the ability to confidently express literature in terms of common universal themes.

Kindergarten

In Kindergarten, the approach to language development is based on whole language balanced with beginning phonics. Students develop oral language and listening skills, and written language and beginning reading skills.

Kindergarten students will:

Reading

- Read from self-illustrated books.
- "Read" daily board message with teacher.
- Listen for beginning, ending, and medial sounds in words.
- Discuss structure of a story: beginning, middle, and end.
- Learn to identify letters and their sounds.
- Work with alphabet puzzles and games to learn phonics skills.

Assessment

Teacher observes students playing phonics games and working with language materials to assess letter and sound recognition. Illustrated books are read aloud to give students the experience of early stages of reading. Students dictate stories indicating an understanding of the beginning, middle, and ending of a story.

Writing

- Illustrate poem books.
- Represent ideas with drawings.
- Dictate ideas and stories for teacher to record.
- Begin to express thoughts using temporary spelling in journal writing and book making.
- Learn the correct formation of letters through writing on mini-chalkboards and in handwriting books.

Assessment

Students describe their journal pictures and illustrations. Teacher works with students one-to-one during early stages of temporary spelling. Students are observed writing letters on small chalkboards and in handwriting books for proper formation of letters.

Speaking and Listening

- Listen to teacher-read stories.
- Memorize songs, poems, and fingerplays.
- Dramatize poems and fingerplays.
- Participate in regular Show and Tell sessions, sharing experiences, and listening to others.

Assessment

Teacher observes children's listening skills during dramatization and recitation of poems and fingerplays. These skills are assessed during lessons, stories, and sharing time activities. Students' speaking skills are evaluated during discussions, Show and Tell, and social interactions among students.

Primary Grades

Primary grade students will:

Reading

- Choose a new book each day, fiction or nonfiction.
- Read from graded bins of books with decreasing degrees of support.
- Have a mini-lesson with the teacher on any area of need the student has with the chosen text.
- Practice reading into Whisper Phones to increase fluency.
- Use multiple reading strategies that have been modeled by the teacher.
- Read with the teacher to verify comprehension and get help with challenging words.
- Choose reading games involving sight words, word building, reading, and listening.
- Learn to identify beginning and ending sounds.
- Learn and practice short vowel sounds.
- Learn and practice consonant diagraphs, blends, and phonograms.

Assessment

Students will be pre-assessed using the Jerry Johns program and Basic Reading Inventory. Teachers will read with students daily from leveled books, assessing fluency, phonics, and decoding and comprehension skills.

Writing

- Learn from writing modeled by the teacher.
- Practice invented spelling.
- Learn to add supportive details.
- Learn to use the thesaurus for different word choices.
- Write daily in journal, make greeting cards, and write poetry. Share writing with the class.
- Publish books, using writer's workshop publishing cycle.
- Work in spelling books.
- Learn and practice alphabet.

Assessment

Teacher will read student journals daily to assess ability to: put thoughts into words, write in complete sentences, use invented spelling, use correct spelling, and increase vocabulary. By using book reports from readers, teacher will assess ability to respond to written word. By daily review of spelling workbooks, teachers will assess ability to learn and follow spelling rules. By daily review of handwriting notebooks, teacher will assess fine motor abilities of student to reproduce manuscript letters.

Speaking and Listening

- Practice oral skills daily in class discussions, through Show and Tell, and in programs for parents.
- Practice and develop listening skills through respectful attention given to the speaker, and learning to follow oral directions from the teacher.

Assessment

Teacher will observe listening and speaking skills.

Intermediate Grades

During the two-year cycle in the Intermediate grades, the same language arts skills are consistently emphasized, but different curriculum areas and topics are integrated each year in order to accomplish this.

Intermediate grade students will:

Reading

- Read and comprehend nonfiction material and resources, e.g., information related to other areas of study, biographies, and current events newspapers, such as *Scholastic News*.
- Enjoy fiction selections, e.g., silent reading, partner reading, literature circles, and teacher read-alouds.
- Expand vocabulary, e.g., Word of the Day Program, dictionary work, word lists, cloze puzzles, and word games.

Assessment

Teacher will assess student work through class discussion, observation, performance tasks, projects, presentations, and teacher/student conferences. Teachers will assess students' reading response notebooks through discussion and feedback. Teacher will assess reading through read-alouds, Word of the Day presentations, and writing expansion over time. ITBS standardized tests and the Jerry Johns Reading Assessment will be used.

Writing

- Learn and develop cursive handwriting skills and maintain manuscript handwriting skills.
- Continue developing steps of writing process for both fiction and nonfiction writing.
- Use graphic organizers, webs, and various prewriting activities and tools.
- Expand and refine grammar skills, including language usage, rules for capitalization and punctuation, sentence structure, and paragraph form.
- Apply the above in areas such as: friendly letters, fiction stories, journals, note-taking skills, simple research reports, learning logs, poetry, and the Daily Oral Language Program.
- Learn and apply spelling patterns and rules using word practice, workbook activities, proofreading, and games.

Assessment

Teacher will assess student work through observation of assignments and writing workshop, as well as through grammar and usage quizzes. Teachers will observe graphic organizers and prewriting activities. Teachers will note correct usage in the context of student writing and will base mini-lessons on that information.

Speaking and Listening

- Practice oral skills, e.g., share ideas, present information, projects, and student writing to various audiences.
- Develop and refine listening skills, respectful attention, and recall of information and oral directions.

Assessment

Teachers will observe oral and listening skills.

Upper Elementary Grades

Upper Elementary grade students will:

Reading

- Explore a variety of literary genres, both fiction and nonfiction.

  Fiction: mystery, fantasy, classics, folk tales, historical fiction, etc.

  Nonfiction: biographies, newspapers, textbooks, poetry.
- Self-select outside reading and keep a reading journal.
- Learn analytic skills, such as identifying main points and supporting details, evaluating characters, appreciating cultural values, inferring, comparing and contrasting, etc.
- Appreciate multicultural values as the variety of literary genres is explored.
- Learn necessary skills for reading a textbook.
- Expand vocabulary through activities such as the Word of the Day Program and utilizing vocabulary words from content of curriculum.

Assessment

Teachers and peers will comment on oral book talks. Students will keep track of the minutes they read at home each quarter. Book reports are a key part of the reading program, and comprehension tests are given. ITBS tests serve as a guideline for teachers to assess student progress.

Writing

- Develop many forms of writing using the author cycle, including fiction, journal, expository, narrative, descriptive, new writing, report writing, and poetry.
- Expand and refine grammar skills, language usage, capitalization, punctuation, sentence structure, paragraphs, parts of speech, and use of grammar in formal writing.
- Master spelling skills, word lists, prefixes and suffixes, spelling rules and patterns, and use of correct spelling in formal writing.
- Master and use cursive handwriting.
- Use dictionary and reference skills. (See Information Literacy section.)

Assessment

Teacher will assess student work through observation, grading assignments, and writing portfolios. Grammar, spelling, and word usage quizzes will be given.

Speaking and Listening

- Develop and refine listening skills.
- Recall, question for clarification, follow directions, and listen with respect and appreciation.
- Refine speaking skills through oral reports, recitations, and extemporaneous speaking.

Assessment

Teachers will observe oral and listening skills.

Middle and Upper School

The highest purpose of speech and writing is to express the author's perception of truth and beauty in order to inform, inspire, and enlighten listeners and readers. The study of the language arts (reading, writing, speaking, listening, and viewing), along with the practice of our Transcendental Meditation and TM-Sidhi programs, develop the student's ability to think deeply and organize thinking so that it is expressed wisely, clearly, and effectively in any situation.

Students read and appreciate a wide range of literature to understand and appreciate what is representative of the periods studied, and what constitutes excellence in a literary work. The students gain practice in thinking deeply about the literature studied and also learn how to write

By emphasizing reading, writing, and verbal analysis, students will improve their ability to express themselves in writing and speech. Analyzing literature in an academic setting helps students become familiar with the patterns of scholarly thinking in literature.

The tools of analysis include the quest archetype and character archetypes. These patterns reveal universal patterns of story and character. Other tools used are theme, plot, point of view, character, and setting for prose; and figurative language, theme, and structure for poetry. All pieces are viewed within their social and historical context, and are analyzed in terms of theme to promote universal and personal understanding.

As a result, the students develop the skills to think deeply and organize their thinking in their own personal writing. As each literary tradition is introduced, it is related to the Science of Creative Intelligence, which connects what the student reads to the deepest levels of his or her Self.

Grade 7

Grade 7 students will:

- Participate in the writing process from prewriting to publishing through specific, structured writing assignments.
- Read 1) *Tom Sawyer,* 2) many novels on wilderness, ecology, and wolves with an interdisciplinary unit on wolves, and 3) myths and legends of the classical world.
- Develop comprehension skills, and knowledge of point of view, character development, plot, setting, and theme.
- Create more precise communication by studying grammar, punctuation, parts of speech, spelling, vocabulary, and proofreading through weekly instruction and exercises.
- Experience a powerful, subtle, and creative aspect of writing through the study and writing of various types of poetry.
- Write in a weekly journal to develop more ease with writing and to have time for personal writing.
- Play drama games focusing on group-dynamic skills to enhance group cooperation, self-confidence, and listening and speaking skills.

Assessment

- Ongoing assessment using a four-point rubric evaluating the six traits of writing: ideas, organization, voice, word choice, sentence fluency, conventions, and presentation.
- Teacher observations during classroom discussions and review of written answers to comprehension questions.
- Short creative writing assignments focusing on each attribute, one at a time.
- Short, daily grammar exercises and weekly spelling/vocabulary tests.
- Oral presentation of poetry and publishing of personal anthologies.
- Quarterly journal reports expressing self-referral observations of growth or increased self-awareness.

Grade 8

Grade 8 students will:

- Explore and culture appreciation of language and literature through an integrated approach to reading, writing, speaking, and listening.
- Partake in a one-semester read-a-thon during which they develop the ability to choose well-written, appropriate fiction and nonfiction literature for reading enjoyment.
- Learn and practice critical reading skills and techniques to improve reading speed and comprehension.
- Examine, practice, and refine their writing-process skills (prewriting, drafting, revising/editing, proofreading, and publishing) and have a variety of opportunities to publish their work, such as their holiday book projects, journals, and novel-study activities centered on the theme "Becoming Your Best Self."
- Develop and practice appropriate listening and speaking skills and etiquette for various situations such as cooperative learning groups and whole-class discussions, allowing students to gain poise and self-confidence when interacting with others.
- Deepen their understanding of and refine their skills in grammar, usage, and structure (sentence, paragraph, and essay), which are then practiced and reinforced throughout the year.
- Expand their vocabularies and further their mastery of spelling patterns and rules.
- Become proficient in using correct punctuation and capitalization.
- Study literary elements and devices (characterization, plot development, setting, foreshadowing, theme, and figurative language) in the context of whole-class short story, novel, and poetry study.
- Research, build and analyze structures and functions of "walls" to understand the concept of "theme."

Assessment

- Reading response journals.
- Artistic representations of literary elements and themes.
- Interviews and response letters to teacher.
- Book panels.
- Reading charts and logs.
- Written and oral defenses of answers to reading skill questions.
- Varied writing assignments, such as short stories and memoirs, assessed through rubric criteria, including ability to apply rules and skills.
- Conferencing.
- Oral presentations of writing.
- Quizzes and tests.
- Holiday book construction.
- Monitored audience behaviors, ability to use FOCUS group dynamics skills.
- Concept and plot mapping.
- Analysis of lists in relation to function and structure of walls.
- Thematic wall construction.

Grade 9

Grade 9 students will:

- Develop critical reading skills through exploration of poetry, novels, a play, essays, and short stories.
- Extend skills in analyzing and creating character, plot, and setting and examine the role and importance of structure.
- Discuss various writing skills and tools in relation to literature and apply them in related writing.
- Understand the structure and conventions of the formal research paper and apply them in the writing of a paper relating to Shakespearian Theater.
- Develop reflective personal reading and presentation skills through formal oral book reports.
- Develop discussion skills, both in analysis and synthesis, through formal Socratic Circle discussions and less formal cooperative groups, improving listening skills, confidence, poise, and social flexibility and responsibility.
- Systematically develop spelling and vocabulary through root-based exercises.
- Review and extend previous instruction in grammar through sentence diagramming and systematic editing exercises.
- Improve elegance of expression as well as correctness of usage.
- Apply the Science of Creative Intelligence, especially the process of transformation as described in the Vedic text of Nyaya, to their reading and writing, increasing their understanding of the nature of the Self as expressed both in literature and within their individual selves.

Assessment

- Oral book reports, class discussion, poetry presentation, and analytical papers.
- Short story, analytical papers, presentation of scene from *Twelfth Night*.
- Essays, poems, stories, papers, skits.
- Research paper, personal assessment.
- Oral book reports.
- Observation of formal and informal discussion groups, observation of classroom behavior, peer response groups.
- Homework, teacher made tests, ITED, evaluation of editing in written assignments.
- Class assignments, teacher made tests, individual conferences.
- All written and oral assignments, especially analysis of *Twelfth Night*.

Grade 10

American Literature

Grade 10 students will:

- Understand American life by reading classic American literature, including Anne Bradstreet, William Bradford, John Smith, Benjamin Franklin, Thomas Jefferson, Ralph Waldo Emerson, Henry David Thoreau, Walt Whitman, Frederick Douglass, Stephan Crane, Emily Dickinson, F. Scott Fitzgerald, and others.
- Appreciate the changes in American life by progressing chronologically through the Native American, Puritan, Revolutionary, Transcendentalist, Romantic, and contemporary times.
- Write in the expository and creative mode.
- Understand and create the various types of writing: poetry, drama, exposition, description, narration, and persuasion, as well as research papers.
- Analyze literature for its literal, symbolic, personal, and cultural meanings, becoming familiar with patterns of literary thinking.
- Find parallels between American literature and their ongoing study of the Science of Creative using the theme of the American dream.
- Penetrate to the finest level of meaning in a piece of literature, and see its applications in the time it was written, and today.

Assessment

- Three major papers in three quarters; analysis of characters and themes in terms of literature and American life.
- Questions from the text in written form about the individual piece and its context, and discussions in class.
- The three papers are academic; other writing includes creative pieces.
- Homework includes the analysis of content, structure, and context for each literary piece; tests are short answer and essay.
- Tests, projects, and discussion.
- Verbal presentations, papers, and tests.

Grade 11

British Literature

Grade 11 students will:

- Begin to understand the British view of life by reading distinguished British authors including Chaucer, Shakespeare, Marlowe, Sidney, Donne, Jonson, Milton, Dryden, Pope, Wordsworth, Coleridge, Keats, Byron, Shelley, Dickens, Tennyson, Conrad, Lessing, Shaw, and others.
- Begin to understand changes in the British view of life by chronological exposure to significant periods in British culture: the Anglo-Saxon, the Medieval, the English Renaissance, the Seventeenth Century, the Restoration, the Romantic Age, the Victorian Age, and the twentieth century.
- Explore various genres of literature: poetry, drama, exposition, description, narration, and persuasion, through reading and writing.
- Extend their skill in writing research papers.
- Analyze literature at the literal, symbolic, and personal level and the culture of the time.
- Relate British literature to their understanding of the concepts, structures, and processes of the Science of Creative Intelligence and apply their knowledge in their writing assignments.

Assessment

- Inclusion of social/philosophical component in papers and presentations, short essays, debate between representatives of different time periods, quizzes, and tests.
- Socratic circle discussion, debate between representatives of different time periods, background information in papers, quizzes, and tests.
- Papers, class presentations, dramatization, creative writing, and performance.
- Research papers on Beowulf and a Victorian novel.
- Science of Creative Intelligence components in all papers, formal and informal.

Grade 11

Writing

Grade 11 students will:

- Evaluate examples of writing in literature.
- Experience, practice, and refine the writing process.
- Learn what good writing entails and what to look for in the revision process.
- Write nine papers, each in a different structure, including description, narration, news, process analysis, extended definition, profile, cause and effect, and problem-solution.
- Create a PowerPoint presentation.
- Connect the art of writing with the Unified Field of all the Laws of Nature – our own Self – through the Science of Creative Intelligence and Maharishi's technologies of developing consciousness.

Assessment

- Class discussion, peer editing.
- 300- to 500-word paper written once a week.
- PowerPoint presentation converting one of their papers into this visual format.
- Class work, homework, peer edits, and papers.

Grade 12

World Literature

Grade 12 students will:

- Examine a number of writers of historical and global importance who have written in languages other than English, from the ancient Sumerian period to the 21st century.
- Study and analyze a broad selection of literary works, including works by Homer, Plato, Virgil, Dante, Jonathan Swift, Blaise Pascal, Nikolai Gogol, Leo Tolstoy, Herman Hesse, Karen Blixen, Lao Tzu, Basho, and others.
- Complete both written and oral assignments and write academic papers related to the literature they read.
- Study vocabulary, famous quotations, and grammar throughout the course.
- Appreciate writing both as a science and as an art requiring logic, precision, and discrimination, as well as imagination and inspiration.
- Write research papers using the Modern Language Association (MLA) style.
- Understand the value of rewriting and develop the critical detachment necessary for effective revision.
- Relate topics to the Science of Creative Intelligence, developing deeper levels of alertness—the awareness of the "totality" and the "part" at the same time.

Assessment

- Quizzes and tests.
- Class discussion.
- Homework and verbal presentations.
- Written assignments on vocabulary.
- Research papers.
- Academic papers and editing process.

Grade 12

Senior Thesis

Grade 12 students will:

- Research and write a paper on a great person who was significant to humanity as a whole.
- Research the life and contributions of a great person, and document it according to MLA style.
- Choose note-taking techniques to suit their need and style.
- Prioritize information to create a coherent flow of information.
- Write a long outline in MLA style.
- Correct and take corrections on the rough draft.
- Find meaningful correlations between the great person and principles of the Science of Creative Intelligence.
- Perfect a final draft.
- Give a verbal presentation on chosen person.
- See the abstract patterns of a great person's life after researching and becoming an expert on that life.
- Develop an original perspective that is shared in the writing of this paper.

Assessment

- 15- to 18-page research paper with MLA formatting.
- Presentation, class discussion, class work, and homework.
- Rough and final drafts.
- Two page outline.
- Peer editing.
- Final paper and presentation.
- Teacher evaluation using Track Changes from Word.
- 15- to 20-minute PowerPoint presentation.
- Final paper and presentation.

Grade 12

Bhagavad-Gita

Grade 12 students will:

- Understand our evolution to Unity Consciousness through the wisdom contained in the Bhagavad-Gita, thereby facilitating and stabilizing progress towards the supreme accomplishment of enlightenment.
- Relate personal experiences to the verses in chapters 4-6 of the Bhagavad-Gita.
- Participate in exercises demonstrating the practical value of the knowledge contained in Maharishi's commentary on the Bhagavad-Gita.
- Develop simple research skills in order to enjoy the Bhagavad-Gita more and apply its wisdom more effectively to their lives.
- Formulate a list of Maharishi's definitions of key terms and concepts.
- Gain skill in speaking out Maharishi's knowledge in precise, accurate terms.

Assessment

- Evaluate written and oral expressions of important points from the Bhagavad-Gita.
- Class discussion where the student connects and integrates concepts from the Bhagavad-Gita into a holistic understanding of life's processes and goals.
- Journal writing in which the student applies knowledge from the Bhagavad-Gita to personal concerns.
- Discussion and quizzes to evaluate understanding of key terms and concepts.

Grade 9-12

Speech

Speech is a two-quarter class that covers public speaking, drama, and dramatic character preparation in the first quarter, and preparation for the Iowa High Schools Speech Association (IHSSA) competition in the second.

Grade 9-12 students will:

- Prepare and give several genres of speeches, including persuasive, narrative, and informative.
- Understand the value of research and structure in creating a speech.
- Gain skill in using attention steps, transitions, humor, understatements, anecdotes, and the closing.
- Understand the history of drama.
- Be able to warm up for speech or acting using exercises, and appreciate the body as an instrument that must be developed and tuned.
- Understand and apply acting techniques like those of Uta Hagen and Stanislavsky.
- Prepare a monologue for IHSSA competition or historical speech for classroom presentation.
- Understand the principles of the Art of Speaking from Maharishi's book, *The Science of Being and Art of Living*.

Assessment

- Speeches with research and structure.
- Quizzes, tests, and class discussion.
- Exercises are practiced each day of class as a warm-up.
- Performance of five monologues.

The study of Sanskrit is considered a technique to accelerate the development of the full potential of consciousness of the student. Scientific research has shown that during the reading or recitation of Sanskrit, the functioning of the brain becomes highly orderly and coherent. Reading Sanskrit integrates inner silence with outer activity, helping to cultivate enlightenment. These benefits are derived purely from the "sound" value of reading. Therefore, to hasten mastery of oral skills, students at Maharishi School do not study Sanskrit grammar until the Grade 10.

In the elementary grades, students begin their study of Sanskrit by oral recitation of the alphabet, listening first to Vedic Pandits on audio tape. Individual letters and their sounds are introduced and learned, beginning with vowels and internal vowels, then consonants, conjunct consonants, words and phrases. As early as the Primary grades, many students are able to read from the Bhagavad-Gita in Devanagri script and begin to read and memorize select Vedic Expressions. In the early grades, Sanskrit study is predominately oral to allow for rapid progress in reading. Later on, when motor skills are more developed, written exercises develop handwriting ability without strain.

In the Middle and Upper Schools, each class day begins with ten minutes of reading the Vedic Literature in Sanskrit to enliven orderliness and coherence in brain functioning. This morning reading time is also an opportunity for refinement of pronunciation and reading fluency. Middle and Upper School students continue memorization of Vedic Expressions during their Science of Creative Intelligence classes. Students who are new to the school and any student who does not read at the level of their class are instructed in short, daily tutoring groups before the class day begins and quickly catch up with their classmates. When reading skills are firmly established, the study of grammar begins in Grade 10 and continues through Grade 11, using a standard Sanskrit grammar text.

Kindergarten

Kindergarten students will:

- Learn to recite the Sanskrit alphabet with correct points of articulation.
- Begin to memorize the letters out of order.
- Connect vowels with their internal vowel counterparts.
- Begin to learn conjunct consonants as a means to further develop letter recognition.
- Practice combining letters and reading simple words.

Primary Grades

Primary students will:

- Strengthen letter recognition and correct pronunciation through drills and games.
- Practice combining sounds, reading words, Vedic Expressions, and syllable by syllable from the Bhagavad-Gita.
- Read with correct rhythm and learn to recognize the "meter break" in the Bhavagad-Gita.
- Begin memorizing select Vedic Expressions (naturally and easily through repetition).

Intermediate Grades

Intermediate students will:

- Strengthen basic skills as well as develop more advanced reading skills.
- Form reading groups for small group practice and instruction.
- Read together as a class from the Bhagavad-Gita, comfortably and with relative fluency by the end of the intermediate years.
- Recite Vedic Expressions for the Intermediate grades regularly, with memorization coming naturally through repetition.

Upper Elementary Grades

Upper Elementary students will:

- Read aloud in a group for 10 minutes after the morning meditation program.
- Continue group instruction to develop skills.
- Regularly recite and memorize Vedic Expressions for the upper elementary grades.
- Be introduced to the 40 Aspects of the Veda and Vedic Literature in Devanagri script, and begin to read them aloud in unison.

Middle School

Middle School students will:

- Read aloud in a group for 10 minutes at the beginning of the morning homeroom class.
- Refine pronunciation and reading fluency through group practice.
- Memorize Vedic expressions for Middle School and continue memorizing the 40 Aspects of the Veda and Vedic Literature.
- Work periodically, as needed, with a Sanskrit instructor during the morning reading time.
- Attend daily tutoring groups, as needed, to ensure that everyone is reading comfortably at the level of the class.

Grades 10 and 11

Grades 10 and 11 students will:

- Read aloud in a group for 10 minutes at the beginning of the morning homeroom class.
- Refine pronunciation and reading in meter through group practice and instruction.
- Understand the basis of Sanskrit language in relation to the structure of the Veda.
- Review the major components of Sanskrit grammar with an emphasis on translating the Vedic texts.
- Expand their reading of the Vedic Literature.
- Memorize Vedic Expressions for Upper School and continue memorizing the 40 Aspects of the Veda and Vedic Literature.

Grade 12

Grade 12 students will:

- Read aloud in a group for 10 minutes at the beginning of the morning homeroom class.
- Refine correct pronunciation and reading in meter through group practice.
- Expand their reading of the Vedic Literature.
- Continue memorizing Vedic Expressions for Upper School and the 40 Aspects of the Veda and Vedic Literature.

Assessment

In the elementary grades, students are assessed on a daily basis through student/teacher interaction and participation in oral exercises. Reading exercises and games are short and designed to be flexible, so adjustments are made continually to better address student needs and strengthen weaknesses. As skills develop, students with greater proficiency are given time to work in pairs or small groups. Most students are proficient readers by the Grade 7, although assessment of skills and group instruction is continued on a limited, periodic basis during the 10 minutes of morning reading. At any point in the learning process, those with greater needs receive additional teacher attention in small tutoring groups to bring everyone up to the reading level of the class.

Formal grades are not given for Sanskrit at the Lower or Middle School levels; students are motivated to learn by the desire to read with their peers and the joy of success. In addition, the effect of reading Sanskrit as a group is both calming and enlivening—the whole class feels more coherent and settled as a result.

In Grades 10 and 11 during the periods of grammar instruction, assessment is based on written testing, reading fluency and pronunciation, translation skills, oral presentations, teacher observation, and monitoring of student participation. There is no need for assessment in Grade 12 as all students have a level of mastery that allows them to enjoy the many benefits of their years of study.

SCIENCE

Lower School

The science program is designed to allow the students' natural curiosity to flow through the development of process skills related to scientific inquiry. As students gain the ability to assess the world around them, they will also grow in their ability to cherish it. Students learn the skills of real scientists such as: making observations, posing questions, reviewing what is known, gathering, analyzing and interpreting data, making predictions and explanations, and communicating results. These skills help them to discover the validity of a hypothesis and to expand their knowledge of a particular content area. The ultimate goal of science education is to develop students who know intellectually the laws of nature and who have developed that holistic level of awareness whereby they gain the ability to function fully in accord with all the laws of nature.

Kindergarten

Kindergarten students will:

- Discover relationships in nature: observe and identify the parts and the whole.
- Explore sequence of growth and order in nature: lifecycles of caterpillar to butterfly, baby animals, and seeds to plants.
- Explore layers in nature: layers in the human body, the earth, trees, minerals, and ocean.
- Explore rest and activity: in students' daily routine, day and night, and the seasons.
- Explore action and reaction: in magnets, air and water, and behavior.
- Learn about animal tracks, birds, and pond and farm life.
- Learn about the rainforest, endangered animals, and caring for our planet during Earth Day month.
- Learn about space through a fantasy corner, books, manipulatives and play, and Star Lab.

Assessment

Teacher assesses students' understanding of science concepts during individual and group discussions. Students are also observed during hands-on exploration in the classroom and on outside field trips.

Primary Grades

Primary grade students will:

- Introduce the "inquiry process." Students learn to form a hypothesis, test one variable at a time, record data, and analyze their findings to discover the answers to their questions.
- Learn about sand, rocks, and silt by exploring and investigating the activities found in an inquiry science kit.
- Develop concepts of balance and motion by performing activities found in an inquiry science kit.
- Explore the principles of balls in motion by doing experiments using an inquiry science kit.
- Learn about the five senses by isolating and experimenting with each sense.
- Identify the basic concepts of sound with hands-on experiments involving pitch, sound in the environment, vibrations, and the ear.
- Learn to appreciate the growth of plants by participating in the gardening process.
- Learn the basic principles of magnetism, including uses for poles and magnetic fields.

Assessment

Teacher will observe students in science class. Teacher will check daily papers. Teacher will have students keep a science notebook.

Intermediate Grades

Intermediate grade students will:

Year One

- Study insects: characteristics, lifecycles, and impact on environment.
- Learn about our solar system, including the names, orbits, rotations, and properties of the planets, the sun, comets, meteors, asteroids, and stars.
- Examine three simple machines (lever, ramp, and pulley) with regard to lifting heavy objects.
- Study the five classes of vertebrates: fish, birds, amphibians, reptiles, and mammals; learn about their basic characteristics, habitats, and young.
- Explore the scientific method through programs such as "Scientist of the Week," during which students research, prepare, and perform an experiment for the class using the steps of the scientific method.

Year Two

- Study plant lifecycles and the basic parts of a plant, production of chlorophyll, growth, reproduction, seeds, and the uses and benefits of plants for human life.
- Learn about the invention process, including making an invention. Study inventors.
- Participate in the investigation of lenses: jeweler's loupes, investigation of patterns and similarities in everyday objects, telescopes (moon and moon's phases) and microscopes (basic structure of cells).
- Examine physical science doing a simple science project involving the scientific method.
- Learn, through brief lessons, about energy, heat, light, air, flight, and sound.

Assessment

Teachers observe small group interactions and assess text discussion questions. Science quizzes are given on a regular basis. Teachers observe students' participation in "Scientist of the Week" and evaluate unit projects and presentations. Students also do a self-evaluation.

Upper Elementary

Upper Elementary grade students will:

- Learn about Earth Science by studying Biomes of Earth, Geology, and Environmental Science.
- Learn about Physical Science by studying the science of experimentation using the Foss Kits, variables, building go-carts or hovercrafts, and learning about magnets and motors.
- Learn about Life Science by studying the human body and humans in space.
- Learn about Chemistry by studying mystery powders, density, and polymers.
- Learn about Engineering by studying bridges and constructing toothpick bridges.
- Learn about Life Science by studying the lifecycle of butterflies, corn, and beans using the Tops Program.
- Develop general abilities in systematic observation, making accurate measurements, and identifying and controlling variables.
- Develop the ability to clarify their own ideas and understand how these ideas compare with current scientific knowledge.
- Learn what constitutes evidence and judge the merits or the strength of the data they have collected.
- Develop the ability to communicate, critique, accept, and analyze their work and the work of other students.
- Formulate questions, design investigations, and propose alternative explanations to the investigations they conduct.
- Learn to keep a science journal.

Assessment

Teachers will assess student work by observation and by grading the science journals that students keep. Records of the experiments done in class and their data will be assessed for clarity and understanding. Quizzes and presentations are also part of the assessment process.

Middle School

In Middle School, students explore earth, physical, and biological sciences through hands-on inquiries, labs, and demonstrations. Through these numerous activities, they become active participants in gaining knowledge while mastering the skills, tools, and terminology of investigation. Students are encouraged to question and delve deeply and are required to synthesize and apply their findings to their own lives and to real-world situations.

Grade 7

Earth Science

Grade 7 students will:

- Explore the planet Earth and its place in the universe.
- Explore the processes of science through inquiry, hands-on activities, and researching scientific work.
- Review and practice, using the metric system to measure mass, volume, length, temperature, and density.
- Learn to explore the Earth using maps and compasses.
- Explore the science of geology. This includes studying the forces that cause earthquakes and volcanoes and studying the rock cycle. Discover that rocks are classified by how they are formed.
- Research the history of astronomy and evolution of scientific thought through observations of the heavens. Explore how the movements of the Earth, the moon, and planets are experienced by people on Earth. Collect data on the motion of stars and phases of the moon. Introduce the magnitude of the solar system, Milky Way galaxy, and the universe using kilometers, astronomical units, and light-years.
- Learn about the relationships in nature. Define commensalism, mutualism, and parasitism. Research specific examples.
- Discover types of soil and how the soil is created. Examine each type of soil using magnifiers and microscopes.
- Investigate the water cycle and how it creates our very rare drinking water. Explore weather and how it affects nature and people.
- Examine our personal responsibility and power to protect and improve our planet.
- Contribute in a significant way to a conservation project.

Assessment

- Homework, paper/pencil quizzes, and tests.
- Classroom observation during group work and labs.
- Real-world application activities, including orienteering, prairie restoration, organic gardening, wolf tracking, and measuring astronomical movement.

Grade 8

Physical Science

Grade 8 students will:

- Explore the fundamental properties and particles of matter, including mass, gravity, volume, density, states, molecules, atoms, subatomic particles, and chemical reactions through hands-on labs, demonstrations, and directed inquiries.
- Examine the properties and behavior of waves with an emphasis on speed, reflection, refraction, diffraction, and interference.
- Investigate the nature, behavior, and properties of sound, including frequency, the Doppler effect, resonance, timbre, interference and beats, sonar, and human and animal sense of hearing.
- Explore the electromagnetic spectrum and its uses and applications and develop an understanding of the properties and behavior of light through hands-on investigations of refraction, reflection, and diffractions and their uses in technologies such as mirrors, lenses, microscopes, telescopes, and lasers.
- Investigate the properties of magnetism and magnetic fields with an emphasis on both microscopic and macroscopic levels–from magnetism on the level of the atom to magnetism on the level of the solar system.
- Explore electric circuits, batteries, and motors to gain a working understanding of electric current in household circuits and appliances and the role of electromagnetism in motors and generators.
- Study laws and principles that govern motion, speed, velocity, and acceleration and develop an understanding of work, simple machines, and energy conversions.
- Investigate an original topic of students' choosing by researching, designing, and conducting a research project and presenting it at a regional science fair.

Assessment

- Lab reports, journals, short answer test, study guides, and oral response.
- Build working parallel and series circuits, electromagnets, lemon cell battery, DC motor.
- Build a working Rube Goldberg Machine incorporating 10 simple machines, 10 energy conversions, a chemical reaction, an electric circuit, and a magnet or electromagnet.
- Journal, paper, project board, and oral presentation.

Grade 9

Biology

- Grade 9 students will:
- Study cells, including cell structure, cellular energy, nucleic acids, photosynthesis, and cell growth and division.
- Explore genetics, including mitosis, meiosis, and heredity.
- Investigate keys to classifying all organisms and gain a frame of reference to understand the world around them.
- Explore human biology by doing investigations, projects, and presentations on the organ systems.
- Develop scientific thinking by encouraging the students to question the world around them and test their theories using correct procedures.

Assessment

- Laboratory note references, study guides, oral responses, and short answer tests.

Upper School

The Upper School science curriculum consists of chemistry, physics, geology, and physiology as an expression of consciousness. We begin in Grade 10 with chemistry, which explains the distinction between matter and energy and the role of the observer. Physics in Grade 11 uncovers the Unified Field-based laws of nature that govern matter and energy. In Grade 12, the focus revolves from the abstract to the concrete, from the cosmic to the individual. The students synthesize what they have learned through the study of the organic systems of the human physiology, the inorganic processes of the Earth, and the underlying intelligence that manages them both.

This knowledge of the relationship between science and consciousness, as well as the experience of pure consciousness—the Unified Field of all the Laws of Nature—cultures the students' ability to act in tune with their environment and live a mistake-free life.

Grade 10

Chemistry

Grade 10 students will:

- Study the history of chemistry as a science and its implications in the world around them. Also, explore the possibilities of chemistry as a science by researching the lives of great scientists, periods of time in history (to see the

SCIENCE

evolution of chemistry as a science to present-day lifestyle), and articles based on chemistry.

- Explore the fundamental properties and relationship of matter and energy, including mass, gravity, volume, density, states, and kinetic and potential energies through hands-on labs, demonstrations, and directed inquiries.
- Investigate the nature and structure of fundamental particles and the nexus between objectivity and subjectivity in quantum mechanics through hands-on labs, demonstrations, directed inquiries, and a field trip to the Fermi Laboratory in Chicago.
- Understand the periodicity of elements and the principle used in structuring the periodic table through exponential graphing technique. Explore and study the properties of elements and their relationships to one another through interactive games, videos, and Internet searches. Also study effects of hazardous elements on the environment and health.
- Examine chemical bonding and the reactions causing ionic and covalent compounds to form through demonstrations, experiments, and directed inquiries.
- Explore the laws governing the properties of gases through demonstrations, experiments, and directed inquiries.
- Express chemical reactions in scientific language and use that language in order to predict products of reactions and the amount of product the reactions yield. Perform demonstrations and experiments to understand chemical reactions.
- Understand acid/base reactions and their application in everyday life through lecture demonstrations, experiments, and inquiry-based learning, and testing soil acidity/alkalinity and its effect on crop production.
- Understand and research the building blocks of human physiology through lecture demonstrations, guest lectures, interactive Internet site activities, and lab experiments.
- This will include the properties of carbon, organic compounds, isomerism, hydrocarbons, amino acids and proteins, carbohydrates and fats explored through studying research papers, journals, and news articles.
- Study and understand the chemical structure and nature of DNA based on recent research. Visit the Genetic ID Lab to demonstrate recent techniques and industrial application of genetic engineering and the role of chemistry.

Assessment

- Notebook, short answer tests, quizzes, project–"History of Chemistry," lab techniques, study guides, and oral response.

Grade 11

Physics

Grade 11 students will:

- Introduce physics as a science and discuss its historical progression, highlighting key paradigm shifts.
- Structure a quantitative language for describing motion, both horizontal and vertical (with respect to Earth).
- Examine Newton's Laws and their implications, both conceptually and quantitatively.
- Explain gravity in light of the Newtonian model, as well as using Einstein's General Theory of Relativity.
- Study the conceptual and quantitative implications of the laws of conservation of momentum and energy.
- Introduce the balance of heat transfer and material expansion.
- Introduce Einstein's Special Theory of Relativity and explore the effects due to motion that approaches the speed of light.
- Learn about vibrations and waves in context of sound and light.
- Examine electricity and magnetism, first as static and separate forces, then as an interconnected and dynamic force field.
- Introduce theories of modern physics, including quantum mechanics and unified field theories.

Assessment

- Notebook, short answer tests, quizzes, lab techniques, study guides, and oral response.

Grade 12

Geology

Grade 12 students will:

- Understand the age, size, and structure of the Earth in comparison to humans and in light of the Science of Creative Intelligence.
- Understand the Plate Tectonics model, the evidence supporting it and its role in the rock cycle.
- Learn the classification, formation, and identification of minerals and igneous, sedimentary, and metamorphic rocks. Also learn about rock weathering, products we use from them, and geophysical exploration for them.
- Understand the relationship between evolution, creationism, and the Science of Creative Intelligence.
- Understand topographic maps, geologic maps, cross sections, and subsurface maps. Use them in exploring for petroleum.

Assessment

- Students create a scale diagram and a scale timeline of Earth and provide main points for relevant verses from Maharishi's translation and commentary on the Bhagavad-Gita as homework assignments.
- Diagrams of the Plate Tectonics model and the rock cycle are made in closed book quizzes.
- Twelve common minerals and twenty-four common rocks and fossils must be identified in a closed book test.
- A comprehensive open book test assesses understanding of Plate Tectonics, the rock cycle, formation and classification of rocks, and the creation, history, and scale of Earth.
- Two major classroom projects utilize and assess understanding of topographic maps, subsurface maps, and cross sections, as well as petroleum exploration.

Grade 12

Physiology

- Identify the function of major physiological systems and components as well as their basic anatomy. In each unit of study, students learn about the gross, subtle, and transcendental values of the particular topic covered in that unit.
- Develop student knowledge of the Self of every individual, the transcendental reality underlying manifest existence, including its unmanifest structure termed as Veda, the blueprint of the universe, as well as the related aspects of the physiology in DNA and holistic functioning.
- Understand the subjective values of life, including mind, heart, and breath and the related physiological systems—primarily the nervous, circulatory, and respiratory systems.
- Study the senses in terms of modern science and ancient Vedic science with emphasis on the special senses.
- Introduce the principle of the organs of action and examine some of the structuring, nourishing, and driving components of the organs of action found as the skeletal, digestive, and muscular systems.
- Synthesize a summary understanding of the physiology as a whole, as the totality of existence, Brahm, the Self of the universe.

Assessment

- Attendance at group practice of the Transcendental Meditation program.
- Homework, written and oral examinations, in-class integrative exercises, and written essays.

SOCIAL STUDIES

Lower School

The social studies curriculum begins with individual students' understanding of the world, and grows naturally to encompass wider fields of influence. In Kindergarten, students explore the relationship with those nearest to them—their family and friends. The social aspects of school life are given emphasis in the Primary grades and branches out to include the town and local occupations. During the Intermediate grades, the students begin to study the history of our country. The curriculum includes the study of Native Americans and moves to the settling of our land through westward expansion. Students also study the specific regions and states of our country. The Upper Elementary students study Iowa history in one cycle and cover U.S. history and government the following year. As the students progress through the Lower School, they gain an increasing familiarity with geographical terms and map skills. As the curriculum develops, the students become more aware of the meaning of the Vedic expression, "The World Is My Family."

Kindergarten

Kindergarten students will:

- Learn good citizenship through upholding classroom rules.
- Practice caring for self, others, and the classroom environment.
- Participate in lessons of grace and courtesy that can be applied in daily life.
- Begin to appreciate the idea, "The World Is My Family," celebrating differences and seeing the underlying sameness of all people.

Assessment

Teacher observes students' interactions during free choice and work time. Students demonstrate classroom responsibility through weekly clean-up jobs. Group discussions and role play reinforce good citizenship skills.

Primary Grades

Primary grade students will:

- Study the *Behavioral Rasayanas* found in the Maharishi Ayur-Veda℠ curriculum.
- Agree upon classroom rules and understand how they apply to maintaining order in a group environment.
- Explore the concepts of friendship, good citizenship, and being a member of a group. Through discussion, play, and learning activities, these concepts are integrated into daily lessons.
- Learn to recognize the qualities of good leadership by visiting with leaders of Fairfield and Maharishi Vedic City, as well as community helpers, such as members of the Fire Department.
- Study the lives of great people honored on our national holidays, e.g., George Washington, Abraham Lincoln, and Dr. Martin Luther King, Jr.

Assessment

Teacher will observe how students work and play with others. Teacher will observe how students follow classroom and school rules. Teacher will observe students' ability to recognize and discuss the life of a great person.

Intermediate Grades

Intermediate grade students will:

Year One

- Explore the early history of our country. Examine the first Americans, concentrating on native tribes from the northwest coast, southwest, and Great Plains regions.
- Study the colonization, exploration, and expansion of the United States, from pilgrims and colonists through pioneer life and expansion to the Pacific Coast.
- Examine the concept of greatness and research great people from all parts of our world family, both from history and the present day.
- Practice map skills and geography terms using the "Daily Geography" program.

Year Two

- Study U.S. regions in depth, including: geography, ethnicity, business and industry, customs, etc.
- Learn names and locations of all the states in the United States.
- Recognize state capitals and two-letter state abbreviations.
- Practice map skills and geography terms using the "Daily Geography" program.
- Examine the concept of greatness and research great people from all parts of our world family, from history and present day.

Assessment

Students are assessed through teacher observation of class discussion and small group interaction. Text discussion questions are given and daily geography is assessed for correctness. Through projects and presentations, teachers assess students' knowledge of each unit.

Upper Elementary Grades

Upper Elementary grade students will:

Year One

- Practice map skills and geography terms using the "Daily Geography" program.
- Study natural history and the formation of Iowa, integrated with a science unit on geology, including rocks, fossil records, and prairie ecology.
- Study Iowa history, including Native Americans, explorers, pioneers, statehood, and modern times.
- Study and observe multi-cultural holidays.
- Study the lives of great people who contributed to making Iowa a state.
- Utilize field trips to learn about the rich cultural history of Iowa.

Year Two

- Learn about the qualities of leadership and apply these qualities through school projects.
- Study the effect of climate and geography on the development of culture.
- Practice map skills and geography terms using the "Daily Geography" program.
- Learn about the Age of Exploration.
- Learn about the various cultures that contributed to creating a new country.
- Learn about the establishment of American colonies and examine their daily lives.
- Explore the process of gaining independence.
- Study the Constitution and Bill of Rights.
- Study lives of great people in U.S. history.
- Discuss Maharishi's plan for world peace.

Assessment

Teachers will assess students' work through class discussions, text questions, notebooks, projects, map making, and simulations.

Middle School

The Middle School social studies curriculum is designed to address the distinctive needs of early adolescent learners. Emphasis is placed on increasing and sharpening the fundamental skills necessary for the acquisition of knowledge in this discipline, including written and oral communication skills, critical thinking, and library and computer research proficiencies.

Grade 7 students compete in the National History Day program, followed by a quarter of Civics. In Grade 8, students study World Geography. Ninth graders examine American history and political trends as they reflect changing consciousness in our nation and the world.

Grade 7

National History Day

Grade 7 students will:

- Design, develop, and present a history project according to the National History Day (NHD) guidelines.
- Explore historical issues, ideas, people, and events with a connection to the yearly National History Day theme.
- Learn and practice decision-making, problem-solving, critical thinking, and research skills to use now and throughout their life.
- Develop an historical thesis and topic related to the NHD theme.
- Discover the meaning of historical context and perspective and apply it to their project.
- Learn how to write an annotated bibliography.
- Structure a presentation of their topic in one of the following categories: historical paper, exhibit, performance, or documentary.
- Refine their project through the various levels of competition from school History Day through the district, state, and national contests.

Assessment

- Class and homework assignments and discussions related to the current year's theme.
- Thinking skills charts.
- Library research and research notes.
- Written and oral presentations (individual and group).
- Tests.
- Brainstorm topics, select secondary research, and narrow topic.
- Oral and written demonstration of understanding.
- Write and rewrite several drafts.
- Outlines, rough drafts of projects, and final draft of project.
- Monitor progress and ability to incorporate judge's suggestions from each level of competition.

Grade 7

Introduction to Civics – Local and State Government

Grade 7 students will:

- Learn the structures and various supporting departments and organizations of the student's city/town, county, and state through lectures, readings, guest speakers, and field trips.
- Explore civic values, sharing respect for individual worth and human dignity.
- Develop an understanding of the personal responsibilities of citizens.
- Learn how to participate in civic affairs as an informed, thoughtful, and effective citizen.
- Design, implement, and present a service learning project that adds value to their community.

Assessment

- Summary paragraphs, written tests.
- Class participation and discussion.
- Field trip participation.
- Selected readings and questions and application on essay tests.
- Class or smaller group organizational meetings for service learning project.
- Performance at site of project, data gathering of before/after project and written and oral presentation of results.

Grade 8

World Geography

Grade 8 students will:

- Begin to structure a platform for students to see the wholeness of their world, the similarities and differences between the various continents, countries, and physical regions.
- Develop an understanding of geography as the study of not only the Earth's surface and the processes that shape it, but also the connections between places and the complex relationship of humans and their environment.
- Learn how the five themes of geography–location, place, movement, regions, and human-environment interaction–are the glasses through which geographers view the world.
- Examine maps as the basic way to represent a 3-dimensional world in a 2-dimensional format, their function as locator tools and as conveyers of information about the environment.
- Analyze world exploration in the light of the continuing search for fulfillment of individual and national aspirations.
- Explore each continent's physical geography (landforms, climate, water, and vegetation) and its influence on human geography (language, diet, dress, architecture, customs, religion, and government).

Assessment

- Class discussion participation.
- Notes on reading, film, or guest speaker.
- Twice monthly current events assignment.
- Map and essay tests.
- Creative research projects.
- Field trip etiquette and participation.

Grade 9

American History

Grade 9 students will:

- Develop an understanding of the rudiments of our American democracy and the people, places, and events that contributed to the nation we are today.
- Know, remember, and understand the key figures, places, and events of American history and relate them to principles of Vedic Science.
- Gain an understanding of the political heritage of the United States and the basic principles upon which our country was founded.
- Learn research, writing, and public speaking skills in pursuit of knowledge of American history in light of Vedic Science.
- Understand the developments in the economic, political, and social areas of American society.

Assessment

- Classroom discussion.
- Oral recitation of important dates, events, and people in American history.
- Exhibition of Unified Field Charts.
- Group discussion of principles, e.g., equality.
- Essay tests.
- Pivotal people, places, and events project.
- Current events assignment.

Upper School

Social Studies help us understand broad social, physical, and environmental forces that shape our collective destinies. Through investigating social studies we gain perspective on the overlapping roles of our community, state, and nation in the life of the world.

The United States Government course in Grade 11 investigates American democracy as "government of the people, by the people and for the people." Seniors study world history in order to comprehend the connections between climate, geography, and global cultures over time. Seniors also study economics, the social science concerned with the fulfillment of desires for goods and services, as a preparation for their emerging role as adults in our economically interdependent world.

Grade 11

American Government

Grade 11 students will:

- Develop deeper understanding and appreciation of students' rights and responsibilities both as American citizens and as citizens of the world.
- Foster clear, comprehensive understanding of the structure and functioning of national, state and local levels of American government in light of Vedic Science℠.
- Gain understanding of the political heritage of the United States and the basic principles upon which our country was founded.
- Examine the structure and activities of the three branches of American government–legislative, executive, and judicial–and identify parallels at the federal, state, and local levels of government.
- Analyze the Constitution of the United States and learn the rights it guarantees every American citizen.
- Examine current events to gain insight into the dynamics of government.
- Learn how government is financed at the national, state, and municipal levels.
- Discover how proposed legislation is enacted into law.
- Examine the privileges and responsibilities of United States citizenship.

Assessment

- Comprehensive short answer citizenship test from Immigration and Naturalization Service.
- Exhibition of Unified Field Charts.
- Text questions, group discussion.
- Internet research portfolio entries.
- Constitutional amendment presentations.
- Current events journals.
- Culminating project–"Creating My Own Federal Budget."
- Flow chart–"How a Bill Becomes a Law."
- Oral History project.

Grade 12

World History

Grade 12 students will:

- Examine world history in light of Maharishi's Absolute Theory of Cultural Integrity and World Harmony.
- Comprehend the connections between climate, geography, and culture, thereby establishing the natural necessity of cultural diversity.
- Remain grounded in our own culture while studying other cultures over time.
- Investigate Western Civilization as a significant source of our own culture.
- Develop a friendly understanding of several non-Western cultures, including China, India, Japan, Africa, and Mesoamerica.
- Gain an informed appreciation of the world's major religions in light of Maharishi's teaching regarding Natural Law and the evolutionary perspective of religious codes.
- Attain thorough understanding of the Maharishi Vedic Science and Technology℠ Chart for World Cultures.
- Refine critical thinking and communications skills while becoming familiar with the major streams of world history.

Assessment

- Class discussion, reading comprehension exercises.
- Internet research project.
- Oral presentations–"Linking Then with Now".
- Open response tests, text question writing.
- Personal presentations–"A Day in the Life of…."
- Quizzes, written analysis of scriptural passages, and class discussion.
- Exhibition of Unified Field Charts.
- Essay writing and oral presentations.

Grade 12

Economics

Grade 12 students will:

- Learn the basic concepts of economics that are central to understanding American and international economic systems (National Council on Economic Education).
- Gain initial understanding of theories and policy issues related to micro- and macroeconomics in the light of Maharishi Vedic Science and Technology.
- Practice using basic analytical skills and tools used by economists as they make reasoned, objective judgments about contemporary issues.
- Understand why economics is a social science and appreciate its contribution to our understanding of the world around us.
- Foster an understanding of the structure and function of the free enterprise economic system in the United States.
- Discover the relationships between the individual, the collective consciousness, and the economy.
- Gain a general knowledge of economics including banking, taxation, regulation, etc., as a context for personal financial decisions.
- Observe and chart the relationships between the economy and various indicators of economic health, including financial markets, indices, GNP data, and international economic data.
- Develop an intellectual understanding that fosters the possibility of integrating the spiritual and material aspects of life.

Assessment

- Through tests and essays, demonstrate knowledge of the fundamental concepts of economics.
- Create a fictitious investment portfolio through the quarter and then, from recorded observations, report on some of the factors in the economy which initiate changes in portfolio values.
- Use the Internet to gather economic data of various types.
- Demonstrate an ability to predict how supply and demand function together to generate a price or market equilibrium.
- Chart the Output-Expenditure Model of the economy first outlined by John M. Keynes.
- Participate in class discussions about the economic news of the day, including the effect of Federal Reserve decisions.

SCIENCE OF CREATIVE INTELLIGENCE (SCI) PROGRAM

Lower School

The foundation of the Science of Creative Intelligence for Lower School students is the development of their full creative potential through the daily practice of the Transcendental Meditation program, which is a required component of the SCI curriculum.

Beginning in Kindergarten, children practice the Word of Wisdom℠ technique for a few minutes at the beginning and end of each school day. This daily practice enhances the physiological and psychological development of young children. It strengthens their nervous system, develops greater orderliness and coherence in their thinking and behavior, and enhances their ability to focus attention. At the age of 10, students learn the Transcendental Mediation program, which they collectively practice at the beginning and end of each school day. During the practice of the Transcendental Meditation technique, students directly experience pure consciousness—the Unified Field of all the Laws of Nature—as the simplest form of their own awareness.

The purpose of the SCI curriculum is to enliven in young students the understanding that there is something deep within the surface of everything. The 16 Principles and Fundamentals of Creative Intelligence can be understood as impulses of intelligence, the Laws of Nature which uphold orderly progress and evolution in creation. Through concrete learning activities, students enjoy discovering these universal principles and fundamentals in their own daily activity, and in their community, their nation, and the world family.

It is through the integration of the Science of Creative Intelligence and its practical aspect, the Transcendental Meditation technique, into the student's daily academic curriculum, that they very naturally realize the entire field of knowledge and its infinite organizing power is centered in their own consciousness.

SCI K-2

At this level, children explore concrete expressions of the 16 Principles of Creative Intelligence in their own lives, in their families and community, in the lives of great people, and in nature. As a result, the children naturally become aware that they, and all of creation, are expressions of these laws of nature, and the home of all the laws of nature is deep inside their hearts and minds. Each of the 16 Principles is observed, discussed, and illustrated for two weeks of the school year.

SCI 3-6

In grades 3-6, the students gain an understanding of the universal nature of the principles of Creative Intelligence and begin to understand them as fundamental laws of nature underlying growth and progress everywhere. The children study the 16 Fundamentals of Creative Intelligence in their own lives, in their society and its traditions, and in the world of nature. Through daily practice of the Transcendental Meditation technique, children directly experience all of their activity, thinking, and feeling arises from the source of thought, which is a field of unbounded creativity and intelligence. They begin to understand that all of nature arises from this same source, which is their own Self.

Maharishi Vedic Approach to Health℠

Maharishi Vedic Approach to Health is a holistic approach to life. It is the science of life, the science of perfect health. Maharishi Vedic Approach to Health teaches students how to live in harmony with Natural Law by maintaining balance in all areas of life—in the body, mind, feeling, and behavior. Everything must be in perfect balance because balance is the natural state of life.

The students learn to restore balance to both the field of consciousness and the field of matter. From the field of consciousness, they restore balance through the daily practice of the Transcendental Meditation program. From the field of matter, they restore balance through Maharishi Ayur-Veda, (one of the 40 approaches of Maharishi Vedic Approach to Health) which includes nutrition, Maharishi Self-Pulse assessment, and ideal daily and seasonal routines that are in tune with Natural Law. With the study of Maharishi Ayur-Veda, students are learning how to use that infinite intelligence of Nature to grow in balance and bliss, creativity and intelligence, and strength and vitality.

The Maharishi Ayur-Veda curriculum is organized around eight themes. These themes are introduced each year in the Lower School with age-appropriate activities to enliven the experience in the student's awareness.

Theme 1: The Ocean of Consciousness Creates Three Streams of Natural Law

Theme 2: Vata, Pitta, Kapha: The Three Streams of Natural Law

Theme 3: Natural Law Builds Our Body: Vata, Pitta, and Kapha in Us

Theme 4: The Ideal Daily Routine: In Tune with Natural Law

Theme 5: Ideal Seasonal Routines: Living in Harmony with Natural Law

Theme 6: Eating for Perfect Balance

Theme 7: Exercise for Energy, Balance, and Bliss

Theme 8: Behavioral Rasayanas: Acting in Harmony with Natural Law

Middle School

In Grade 7, students expand their study of the Science of Creative Intelligence (SCI) from personal and family life to include school and community. They will discover in new ways that creative intelligence is functioning everywhere. In Grade 8, students will learn how the qualities and principles of creative intelligence are lively in tradition and culture, and explore their application to life in the town, countryside, nation, and world. In Grade 9, students will learn that creative intelligence is the "home of all knowledge," and see how its qualities are expressed in the stages of their own mental and physical development. Further study will reveal that these same universal qualities can be found in all fields of life, from ancient Vedic science to modern science, as well as the creative expression in all fields of art.

Grade 7

Creative Intelligence—Here, There, and Everywhere—The 16 Principles of Creative Intelligence Studied in the Students' Lives, Families, School, and Community.

Grade 7 students will:

- Appreciate their personal experience of the Transcendental Meditation program more fully, and begin to see the practical value of life in enlightenment.
- Recognize that consciousness is the essential nature of the mind, the basis of everything, and that the nature of pure consciousness is bliss.
- Begin to see the 16 Principles of SCI in deeper, more powerful ways.
- Locate the 40 qualities of consciousness in themselves.
- Learn about the layers of life from consciousness inside to the environment outside.
- Refine their study of the Sanskrit language and explore the significance of the expressions of the Veda in their own lives.
- Discover Vedic principles for living in their own family life.
- Understand and practice the fundamentals of the Maharishi Vedic Approach to Health.
- Appreciate the value of Consciousness-Based education and learn about the history of Maharishi School.
- Explore the purpose, goals, and benefits of community responsibility through the inspiration of great leaders in our community.
- Comprehend the significance of their own actions through the study of Vedic principles for ideal behavior and communication.
- Develop their understanding of SCI and the fundamentals of good writing through regular theme essays.

Assessment

- Student skits, class discussion, "Seek the Highest First" project, verification of correct meditation, and participation in the Transcendental Meditation program in the Hall of Bliss.
- *Veda Lila* project, "Three in One" art project, class discussion.
- Projects and presentations involving art, writing, research, movement, and song.
- "40 Aspects Book" project, class discussion, and interaction.
- "Layers of the Self" project and "Eight-Fold *Prakriti*" project.
- Sanskrit recitation, student writing, and class discussion.
- "Family Traditions" project.
- "Daily Routine Clocks," seasonal poems, creating doshic-specific menus, cooking, and tests.
- Interview project.
- Interview project and a class chosen project that benefits the community.
- "Behavioral *Rasayanas*" project and class discussion.
- Student writing in every unit with particular emphasis on strong paragraph and editing skills.

Grade 8

Creative Intelligence, Tradition, and Culture—the 16 Principles of Creative Intelligence Studied in the Town and Countryside, and in the Nation and the World.

Grade 8 students will:

- Understand the origin of culture and purpose of tradition in light of SCI.
- Appreciate the role of the Vedic tradition as the source of the knowledge of the Transcendental Meditation program and review the mechanics of correct meditation.
- Understand the special vocabulary of the Science of Creative Intelligence.
- Explore the 16 Principles of SCI as Vedic prescriptions for success in all fields of life.
- Explore the significance of the *Veda Lila*, the 40 Aspects of the Veda, and Vedic expressions.
- Experience the value of Maharishi Vedic Approach to Health through Vedic traditions for holistic health.
- Understand the mechanics of life in accord with Natural Law through the study of *Karma* (the law of action) and *Dharma* (action which upholds evolution).
- Understand the value of traditions for guidance in life and the mechanics of "spontaneous right action" in enlightenment.
- Develop an appreciation of the student's connection to the entire world family through the study of their own family tree and cultural heritage, and explore the 16 Principles of SCI in family, community, environment, nation, and world settings.
- Develop understanding of SCI and the fundamentals of good writing through regular theme essays.

Assessment

- Class discussion and interaction and concept map.
- Verification of correct meditation, parent interview, and student writing.
- SCI dictionary project, vocabulary games, presentations, and unit test.
- Student writing, projects, and presentations.
- *Veda Lila* performance, "Vedic Expression" mural, student writing, presentations, and Sanskrit recitation.
- Student writing, video summaries, skits, worksheets, projects, Ideal Daily Routine log, presentations, and unit test.
- Socratic Circles.
- Field trip summaries.
- Student writing, with particular emphasis on short essay and rewriting skills.

Grade 9

Creative Intelligence, the Home of All Knowledge—Studied in the Applied Arts and Sciences

- Grade 9 students will:
- Understand and experience the fundamentals of Maharishi Vedic Science.
- Explore the development of student's own consciousness through studying the mechanics of brain development, the seven states of consciousness, and the SCI theme "The World Is as We Are."
- Relate the qualities of the artist and the scientist to themselves and the lives of great men and women.
- Appreciate the mechanics of artistic creativity in expressing the finest levels of feeling.
- Discover the foundations of scientific advancement in the search for underlying principles.
- Explore the expressions of Creative Intelligence in art and science, using the 16 Principles of SCI.
- Develop understanding of SCI and the fundamentals of good writing through regular theme essays.

Assessment

- Verification of correct meditation, class discussion and interaction, student writing, worksheets, projects, Ideal Daily Routine log, presentations, oral Sanskrit recitation, and unit test.
- Socratic circles, guest speaker and video summaries, and skits/videos.
- Class debate.
- Audio/video summaries, student art journal, and writing.
- Field trip summaries, student writing, and presentations.
- Assessed through student writing in every unit with particular emphasis on short essay.

Upper School

Through the Science of Creative Intelligence students gain profound experience and understanding of the nature of life and the laws of nature governing all of creation. As their experience and understanding grow, students realize creative intelligence is everywhere and that its source is the same field of intelligence they contact during daily practice of the Transcendental Meditation and TM-Sidhi programs. Thus students confirm the fullness of life is both within and around them. The goal of the Upper School curriculum is to enable students to perceive (grade 10), develop (grade 11), and live (grade 12) the fullness of life as they grow to enlightenment.

Grade 10

Grade 10 students will:

- Review correct practice of the Transcendental Meditation technique.
- Learn and practice the Ayurvedic ideal daily routine for maximum development of consciousness.
- Learn and apply *Behavioral Rasayanas*—guidelines for happiness and success in life.
- Recite Vedic expressions—concise descriptions of experience of higher states of consciousness.
- Perform Veda Lila℠—dramatic expression of the nature of consciousness.
- Memorize and present "Fifty Qualities of Creative Intelligence"—aspects of growth found everywhere in the universe.
- Learn Maharishi Jyotish℠ concepts—basic theory and principles of Vedic astrology.
- Apply principles of Maharishi Jyotish to interpret birth charts.
- Read and discuss *The Science of Being and the Art of Living*—Maharishi's book on the understanding and application of the field of consciousness to daily life.

Assessment

- Class discussion.
- Student journals.
- Written report.
- Monitoring of coherent participation.
- Evaluation of student presentation according to rubric; written test of memorization.
- Written test.
- Evaluation of chart interpretation according to rubric.
- Monitoring of homework, class discussion, and final written test.

Grade 11

Grade 11 students will:

- Appreciate the personal experience of the Transcendental Meditation and TM-Sidhi programs more fully.
- Explore the creative process in individual lives, nature, and in all aspects of society, using the sixteen values of Creative Intelligence.
- Understand and apply the knowledge contained in the sixteen values.
- Apply knowledge of Ayurvedic ideal daily routine.
- Explore the first three chapters of the Bhagavad-Gita and Maharishi's commentary to discover truths about the functioning of Nature and the mechanics of evolution.
- Apply the knowledge gained from the study of the Bhagavad-Gita to personal experience.

Assessment

- Classroom discussions.
- Homework; tests.
- Bhagavad-Gita verse explication.
- Journals.

Grade 12

Grade 12 students will:

- Review correct practice of the Transcendental Meditation technique.
- Review and practice the Ayurvedic ideal daily routine for maximum development of consciousness.
- Review and apply behavioral *Rasayanas*, guidelines for happiness and success in life.
- Recite Vedic expressions—concise descriptions of experience of higher states of consciousness.
- Learn the history of the worldwide movement of the Transcendental Meditation program.
- Compare and contrast modern science and Vedic science—objective and subjective approaches to knowledge.
- Create "Unified Field Charts"—flow charts that show the structure of the profession/discipline from its source in the Unified Field.
- Discuss "How to Talk about Transcendental Meditation."
- Read and discuss the Bhagavad-Gita, Chapters 4–6.

Assessment

- Class discussion.
- Student journals.
- Written report.
- Monitoring of coherent participation.
- Homework, class discussion, and written test.
- Evaluation of student Unified Field Charts according to rubric.
- Student presentation to class.
- Class discussion and evaluation of student journals.

ART

Lower School

Art in the elementary grades awakens in the student a new language—the language of vision—that enlivens the ability to perceive, comprehend, and evaluate the visual world. Through a wide range of exercises, using a variety of materials, students explore formal visual organization, such as line, shape, pattern, and color. Students grow in self-confidence through the joy experienced in creating art, sharing works of art, and in their growing ability to recognize the organizing principles within a work of art. Although the structure of the curriculum remains the same for grades 1-4, students refine their understanding and expression of visual arts through repeated exposure to exercises based on fundamentals of design. Lower School art emphasizes process and exploration.

Kindergarten

Kindergarten students will:

- Practice drawing using a variety of media: crayons, markers, colored pencils, Craypas.
- Enjoy painting with watercolors and tempera paints.
- Enjoy working with clay.
- Begin to explore collage.

Primary and Intermediate Grades

Primary and Intermediate grade students will:

- Practice drawing, painting, 3-dimensional art, and collage.
- Learn to appreciate and accept the artwork they create and the artwork of others.
- Explore four different approaches to the basic art elements each month: drawing, painting, 3-D art, and collage or mixed media.
- Use nature as an inspiration; look at and draw nature objects.
- Share aloud their appreciation of other students' artwork.

Upper Elementary Grades

Upper Elementary grade students will:

- Review basic art elements, one per week.
- Learn about contour and sketch lines, including advanced drawing and design.
- Learn about the concept of illustration.
- Create a series of silhouette projects.
- Learn to use new materials, including oriental brushes, Conte crayons, and French pastels.

Assessment

Students are assessed on cooperative behavior, participation and enthusiasm, and creativity. In Lower School Art, no formal tests or finished products are required. Rather, the art teacher evaluates students through observation of the artistic process. Twice a year, students do a self-assessment, where they choose artwork from their own portfolio to be displayed during the Art Show. Also, at the end of each art session, students share and receive compliments on their artwork.

Middle School

The purpose of the art curriculum in the Middle School is to expand the basic art principles, skills and techniques introduced in the Lower School. The curriculum is based on developing in-depth working understanding and application of the principles of design. This approach is central to each course to ensure development of core concepts, techniques, and skill. Developing a deeper personal appreciation of the mechanics of creativity and self-referral is also the focus of each course taught. To help students develop a well-rounded knowledge base, the department offers on-going exposure to professional artists, career options, and exhibition opportunities regionally, nationally, and internationally.

The curriculum for grades 7-9 is a basic core foundation level that provides a developmental link between the Lower School and Upper School art programs. The courses are 'hands-on' and cultivate practical and technical skills learned in conjunction with the principles of design. Students are introduced to courses in ceramics, sculpture, photography, design, drawing, and printmaking. The students also participate in field trips and exhibitions to help prepare them for Upper School.

Grade 7

Ceramics

- Gain in-depth experience in traditional hand building ceramics methods.
- Expand understanding of clay, glaze, and firing procedures and technologies.
- Increase artistic sensibility through knowledge and application of the principles of design as they apply to ceramics.
- Gain exposure to the world of three-dimensionality and begin to understand the personality of form.
- Understand and practice ceramic studio health and safety procedures.
- Learn to work independently and in groups for studio assignments and general clean-up.
- Expand the understanding and experience of art that was provided to the students by the Lower School foundation program.

Assessment

- Classroom and studio forms and habits.
- Final portfolio and homework turned in on time.
- Demonstrable artistic growth as seen in increased mastery of technical skills and increased creativity and quality of work.

Grade 8

Photography

- Become skillful in ability to capture and embody principles of design in a two dimensional photograph.
- Develop understanding and mastery of principles of photography.
- Learn how to take photographs that are creative, dynamic, and holistic.
- Participate in state and international photographic competitions.
- Learn how to see, understand, and interpret visual information as a photographer.

Assessment

- Demonstrable growth in skill level, artistic sensibility, and quality in photographic work.
- Homework turned in on time.
- Final portfolio of work.
- Focused and coherent classroom and fieldwork behavior.

Grade 9

Spoon-making

- Plan, design, and create a hand-carved wooden spoon.
- Develop skills in proper use of woodworking hand tools.
- Develop technical skills in carving, filing, and sanding.
- Learn how to work one-pointedly on a long term creative project.

Assessment

- Demonstrable growth in skill level, artistic sensibility, and quality in Woodworking.
- Homework turned in on time.
- Final portfolio of work.
- Focused and coherent classroom, wood shop, and field trip behavior.

Upper School

The purpose of the art curriculum in the Upper School is to expand the basic art principles, skills and techniques introduced in the Middle School. The curriculum is based on developing in-depth working understanding and application of the principles of design. This approach is central to each course to ensure development of core concepts, techniques, and skill. Developing a deeper personal appreciation of the mechanics of creativity and self-referral is also the focus of each course taught. To help students develop a well-rounded knowledge base, the Department offers on-going exposure to professional artists, career options, and exhibition opportunities regionally, nationally, and internationally.

The curriculum for grades 10-12 teaches a series of foundation courses in sculpture, ceramics, printmaking, photography, drawing, painting, and art history. These courses develop in-depth knowledge, experience, and application of the principles of design through assignments taught in the different media. Students also have the opportunity to meet visiting artists and learn how to prepare art works for competitive exhibitions.

Grade 12

Art History

- Develop aesthetic skills, technical language, and analytical capacity to successfully communicate about art and creativity.
- Gain a deeper appreciation of the principles of design.
- Cultivate a discerning openness and sensitivity in the arts.
- Develop an overview of the history of art and the role of art in defining culture.
- Begin to see how art can provide glimpses of man's divine nature.
- Become more familiar with the mechanics of self-referral and how we can use our awareness to discover the artist's meaning and intentions.
- Discover how to appreciate, identify, and explain the different levels within a work of art: materials, composition, meaning, feeling, and universality.
- Have hands-on experience in creating a master copy to enliven deeper appreciation of artistic sensibility and intentions.

Assessment

- Journal.
- Slide presentation lecture.
- Master copy.
- Homework deadlines met.
- Classroom focus and participation.
- Museum fieldtrips.

Photography I

- Learn about the 35mm SLR camera, discovering the limits and capabilities of the camera (camera controls, lenses etc.) and related equipment.
- Learn about exposure - the relationship between light, film, and exposure.
- Study composition; explore the visual language of line, form, texture, patterns and how they enhance the subject matter.
- Learn about the darkroom, the equipment and basic film developing and image printing techniques.
- Go to Exhibits. Maharishi School sponsors the Photo Imaging Education Association International Traveling Exhibit, which travels to venues around the world for two years. The Fairfield venue enhances the photography program and enriches the community. In this show, students view their own award winning images along with award winning images from students and faculty around the world. Also, students will view other photography shows.
- Enter photography contests. Students are encouraged to enter their work into contests on the regional, state, national and international levels. Competition helps them to produce their best work and to compile a portfolio for college. Maharishi Upper School Photography enters 5 contests per year.
- Show work in galleries and shows. The student work will be on display in the Maharishi School Photography Gallery for the parents, students, and faculty at the school and will also be in the Maharishi School Art and Photography Show displayed in town for the community at the end of the year.

Assessment

- Assignments and homework.
- Short answer test.
- Verbal responses.
- Great Photographer Report.
- Technical Report.
- Critiques.
- Portfolio.

Photography II

- Learn about the 35 mm camera and refine technical skills with the 35mm SLR camera controls and related equipment.
- Learn about exposure and refine knowledge of the relationship between light, film, and exposure.
- Study composition and refine creative vision and consistency of the use of compositional skills.
- Learn about darkroom equipment and refine technical and creative skills in the darkroom, related to developing and printing techniques.
- Go to exhibits. Maharishi School sponsors the Photo Imaging Education Association International Traveling Exhibit. which travels to venues around the world for two years. The Fairfield venue enhances the photography program and enriches the community. In this show, students view their own award winning images along with award winning images from students and faculty around the world. Also, students will view other photography shows.
- Enter photography contests. Students are encouraged to enter their work into contests on the regional, state, national, and international levels. Competition helps them to produce their best work and to compile a portfolio for college. Maharishi Upper School Photography enters 5 contests per year.
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Assessment

- Assignments.
- Homework.
- Verbal responses.
- Critiques.
- Portfolio.

Art Project

- Plan, develop, and create an in-depth art project.
- Develop artistic and technical skills within chosen medium.
- Receive the necessary time and support to successfully complete a long range creative project.
- Develop appreciation of self-referral through individual exploration and creativity.

ART

- Understand how to prepare art works for exhibitions and competitions.
- Participate in state and/or national art competitions.
- Become more self-reliant, self-directed, and appreciative of the mechanics of the creative process.

Assessment
- Homework turned in on time.
- Final portfolio.
- Classroom focus and participation.
- Participation in art exhibition and or competition.
- Amount of artistic growth as seen in greater mastery of technical skill, increased creativity, and dynamic power and beauty expressed in student's work.

Sculpture I
- Gain hands-on experience of sculpture as a 3-dimensional expression of the principles of design.
- Receive exposure to concepts, tools, building methods, and equipment used in ceramic, plaster and mixed media sculpture.
- Develop awareness of safe methods of working in sculpture to eliminate hazards to oneself and others.
- Develop and refine ability to translate inner experience, i.e., inspiration, concepts, ideas, and feelings, into a 3-dimensional object.
- Gain a deeper working familiarity with artistic sensibility through personal journal writing, self-selected research topic, tracking of creative choices in creative process, and types of images created during class.

Assessment
- Journal.
- Master copy and presentation.
- Classroom and studio focus and habits.
- Final portfolio.
- Amount of artistic growth as seen in greater master of technical skills, increased creativity, and dynamic power and beauty expressed in student's work.
- Homework turned in on time.

Painting
- Develop skill in the 19th century French painting techniques.
- Explore painting through a systematic sequence of shape, tone, and color exercises.
- Develop technical and creative skills with oil and acrylic painting media and materials.
- Explore a series of painting exercises that help to expand and replace inappropriate visual and perceptual habits.
- Become more familiar with the mechanics of self-referral through class discussions, journal writing, creative process, and critiques.
- Become familiar and more skilled in using the design principles to enrich composition.

Assessment
- Focused classroom and studio habits.
- Journal.
- Homework assignments turned in on time
- Final portfolio.
- Commitment to learning and gaining master of painting skills.
- Demonstrable growth in skill level, artistic sensibility, and overall quality in the work.

Pen and Ink Drawing
- Creatively synthesize previous studio experience in painting, drawing and design.
- Understand the range of value, i.e., dark and light, through a series of exercises in fusion and contrast.
- Develop an appreciation of how pictorial space can be used as a metaphor of consciousness.
- Develop skills in various pen and ink drawing media.
- Develop mastery of the stipple drawing method to create smooth shading effects in pen and ink.
- Learn how to use the hand operated letter press and print an edition of professional quality prints.

Assessment
- Focused classroom and studio habits.
- Ability to work independently and in groups as is necessary during printing.
- Homework assignments turned in on time.
- Final portfolio
- Demonstrable growth in skill level, artistic sensibility, and overall quality of work.

Printmaking
- Creatively synthesize previous studio experience in painting, drawing, color, and two-dimensional design.
- Understand the range of value, i.e., dark and light, through a series of exercises for fusion and contrast.
- Develop an appreciation of how pictorial space can be used as a metaphor for consciousness.
- Develop skills for various pen and ink drawing media.
- Develop mastery of stipple drawing method to create smooth shading effects in pen and ink.
- Learn how to design and execute a drawing that will be used to make a relief print.
- Learn how to use the hand operated letter press and print an edition of professional quality prints.

Assessment
- Focused classroom and studio habits.
- Ability to work independently and in groups as necessary when printing.
- Homework assignments turned in on time.
- Final portfolio.
- Demonstrable growth in skill level, artistic sensibility, and overall quality of work.

Tone Drawing
- Understand how tone, shape, space and their interrelationships are the underlying structure of objects in nature.
- Learn how to analyze and locate different tones within an object.
- Develop the ability to maintain control of the drawing process through understanding the systematic stages of a drawing's development.
- Develop the ability to create maximum saturation of tone and the fullest expression of pictorial space.
- Learn how to use a range of drawing pencils from very hard (9H) to very soft (2B).
- Master the ability to develop tone drawings based upon direct observation and the understanding that life is found in layers.

Assessment
- Master copy.
- Homework turned in on time.
- Journal.
- Final portfolio; quality and growth expressed in work.
- Participation in critiques and discussions.
- Focused classroom studio work.

MUSIC

Lower School

The goal of music education in the Lower School is the creation of comfort and joy for the music students, as well as a love and appreciation for all aspects of musical creation—singing, composing, and making music. In addition to fostering a high regard for myriad kinds of music, students are instructed in music theory and mechanics. Notes, their values, and the structure of music are taught through singing, games, and hands-on activities.

The multi-cultural features of music are experienced through exposure to a variety of songs and instruments both from within our own rich and varied culture and from around the world, as well as through the study of famous men and women composers. This broad and diverse music curriculum fosters students who are comfortable with all aspects of the language of music. In keeping with the SCI Principle, "The Nature of Life Is to Grow," it is our desire that throughout their lives students will continue to study and to expand upon the understanding of and appreciation for the many facets of music that have been cultured through the elementary years.

Primary Grades

Primary grade students will:
- Learn basic concepts of music theory, continuing to foster an appreciation for group singing and instrumentation in accord with the SCI Principle, "Enjoy and Accomplish More."
- Learn beginning note values, i.e., whole, half, quarter, etc., and rest values.
- Recognize and perform various rhythms by clapping, singing, using rhythm sticks, and other small percussive instruments.
- "Compose" and write a simple rhythm.
- Participate in an introduction to sheet music, including singing verse and chorus, performing echo songs between two student groups, and the use of lyric sheets.
- Enjoy an introduction to the orchestra.

Intermediate Grades

Intermediate grade students will:
- Focus on the development of independence in reading and writing music, while enjoying the fulfillment of performing in accord with the SCI Principle, "Thought Leads to Action, Action Leads to Achievement, Achievement Leads to Fulfillment."
- Learn concepts of music theory, including note and rest values, musical terms and symbols (e.g., fortissimo—*ff*), and an introduction to the treble staff.
- Sing from sheet music, as well as in rounds and parts.
- Enhance their voices with the addition of instruments.
- Read a simple score.
- Play the keyboard.
- Study Native American music. An American Folk Music Unit and musical units about insects and animals are alternated to coincide with years in which the State and Animal reports are taught in the classroom.

Upper Elementary Grades

Upper Elementary grade students will:
- Gain an appreciation for all kinds of music and for musicians' skills, think about career opportunities in music, and find their own musical voice in accord with the SCI Principle, "The Whole Is More Than the Sum of Its Parts".
- Review music theory, including reading a musical score, noting parts (notes, rests, phrases, dynamics, tempo, time signature), and learning about key signature.
- Focus on sight-singing, as well as singing rounds and two-part harmony.
- Play percussive and tonal instruments, including the marimbas and the piano.
- In alternate years, students learn about the instruments in the orchestra and the mechanics of sound, the historical significance of famous men and women composers and opera.

Assessment

In Lower School music class, students are assessed in the following areas: listening and appreciation, participation and enthusiasm, and cooperative behavior. Because the music curriculum is strongly performance based, teacher observation is the main form of assessment.

COMPUTER SCIENCE

Lower School

The computer technology curriculum develops basic computer literacy. Students are taught computer skills that integrate and enhance classroom curriculum, as well as promote project development, problem solving, and logical reasoning solutions. Experience is provided with computer software applications and simulations, multimedia, the Internet, and telecommunications.

Primary Grades

Primary grade students will:

- Learn basic computer terminology.
- Be introduced to Kidspiration, webbing, and project development software.
- Utilize computer software that develops reading, writing, math, keyboarding, and graphic skills.

Intermediate Grades

Intermediate grade students will:

- Expand on previous years' experience.
- Continue with Kidspiration, webbing, and project development.
- Develop word processing skills through the use of desktop publishers.
- Through the use of computer-simulated software, enhance academic development in all subject areas: keyboarding, reading, writing, math, science, art, music, geography, and history.

Upper Elementary Grades

Upper Elementary grade students will:

- Refine keyboarding and word processing skills.
- Develop information literacy skills. Teacher introduces students to Inspiration software for project development.
- Continue to enhance academic development through subject-specific software, and through the expanded use of the Internet.
- Utilize integrated software (including database, spreadsheet, and PowerPoint) and develop and present multimedia projects in curriculum-related areas.

INFORMATION LITERACY

Lower School

Information Literacy instruction prepares students to be lifelong learners in an information-rich world. It provides a continuum of experiences with four kinds of information skills listed below. Because these goals overlap with other subject areas, collaboration is necessary between classroom teachers, computer teacher and media specialist.

Information Skills:

- Steps of the research process
- Knowledge of a variety of information sources
- Finding information within information sources
- Understanding rules for using information in an ethical way

Primary Grades

Primary grade students will:

- Begin to understand research as a cycle of asking questions and finding answers, as the research process is modeled in group activities.
- Learn how the library is organized. Use the computer catalog to look up books and then locate them on the shelves. Use age-appropriate books and videos to find answers.
- Learn to use the table of contents, index and visual cues to find information within a print information source.
- Identify author and illustrator.

Assessment

Students work in groups to find answers for specific questions and then display their findings in drawings, charts or simple sentences.

Intermediate Grades

Intermediate grade students will:

- Systematically learn and practice steps for doing research.
- Learn the kinds of information available in magazines, almanacs, encyclopedias and atlases. Continue to use print sources, but begin to utilize online databases and web sites chosen by the teacher.
- Learn how to navigate and search in print and online sources.
- Gain understanding of the concept of intellectual property, a person's right to control how their own intellectual work is used. This includes when to use quotation marks and how to record sources used in a bibliography.

Assessment

Students work individually on assigned research projects with strong guidance from their teachers. They present information through written reports, dioramas, posters and other formats.

Upper Elementary Grades

Upper Elementary grade students will:

- Learn an information processing model to begin to assume more responsibility for research projects. Steps include: understanding assignment, choosing the best information sources available, locating materials, finding and recording information, organizing information, and showing what has been learned in a variety of formats.
- Learn the difference between primary and secondary sources. Also learn how to do internet searches with age-appropriate search engines and evaluate the authority of information found. Learn about newspapers, radio and television as information sources.
- See examples of well-organized information sources to understand both how to use them and organize projects.
- Learn how to cite a wider variety of information sources in an approved bibliographical format. Also explore the concepts of plagiarism and intellectual property rights as it exists in American law.

Assessment

Students work on individual reports with more responsibility for choosing and narrowing their topic, using reliable sources, efficient note taking, organizing with outlines or graphic organizers, expressing information in their own words, and reflecting on their experience.

Lower School

The Physical Education activities are structured around the SCI principle, "We Are Here to Enjoy." The goal is for all students to have success and happiness, no matter what their developmental level. Each day, the focus is on playful activities that increase aerobic endurance, muscular strength, flexibility, and skills. Teachers strive to have the children moving most of the time during class.

The same daily format is used in all Lower School Physical Education classes. Learning the PE class protocol during a year long orientation in Kindergarten gives the students a basis in which to be comfortable throughout their Lower School PE classes. They know what to do, where to go, how to handle equipment, how to be a good sport, and when these things are appropriate. The routine is the same. The content changes by grade and developmental readiness. Each year, students participate in increasingly complex games and activities, which require higher skill levels, thought processes, developmental spatial awareness, strength, and aerobic conditioning. From first grade on, students participate in the President's Physical Fitness test in September and May. Special events include sledding several times a year, a spring bike ride on the city bike trails, and a "Junior Olympics" Field Day during the last week of school.

Before school in the morning, Lower School children can participate in the Enrichment Sports Program. It is an extracurricular program that is designed to provide the children with the opportunity to learn to play the competitive sports offered in Middle and Upper School. The sports of soccer, volleyball, basketball, and track/tennis/cross-training are offered seasonally beginning in third grade. The Upper School coaching methods are used, adapted in a playful way to the developmental level of younger children. This ensures a very smooth transition for the students moving on into higher levels of play in the upper grades.

Daily structure of K-6 PE classes:

- Warm-up: walk to the field or facility.
- Instant Activity: At the beginning of class, as shoes are being changed and coats are taken off, students join in a simple, playful running game that differs each day.
- Strengthening activities for a few minutes such as push-ups, sit-ups, and wall-sits.
- New skill introduced.
- Game played using that new skill.
- Class ends with a game for the purpose of always ending on a note of playfulness and happiness.
- Sun Salutation asanas for flexibility and cool-down.
- Cool-down continues on the walk back to school.

Kindergarten

Students are introduced to the basic Lower School Physical Education format in Kindergarten. The year is one of orientation to PE class protocols. All activities are geared toward students developing the skills of listening attentively to their teacher, reacting to her requests and instructions quickly, and relating properly to one's classmates during dynamic activity.

Kindergarten students will:

- Learn to move safely in a group.
- Acknowledge one's personal space.
- Develop being a kind and good sport.
- Begin ball handling.
- Practice basic locomotor movements.
- Gain awareness of floor lines and field boundaries.
- Be introduced to most PE activities listed below.
- Master proper use of PE equipment.

Primary and Intermediate Grades

The emphasis in the Primary and Intermediate grades is an advanced and refined version of the Kindergarten program. Since the students are very familiar with the class protocol and more developmentally ready, emphasis can be on learning new skills and participation in more complex games. Small-sided games and whole group activities are used rather than competitive two-sided games. Cooperation and sportsmanship are emphasized whenever possible. Students learn the basic format of games so they can be self-sufficient in changing roles as needed and resolving disputes. Various games are played daily to enhance physical education skills.

Primary and Intermediate grade students will:

- Learn basic skills used in the various sports and activities listed below.
- Increase their personal spatial awareness in relation to other students and the general play area during dynamic activity.
- Develop aerobic endurance, cutting, dodging, and balance.
- Practice good sportsmanship during various situations: gracefully accepting being tagged, volunteering for positions, and safe touch.
- Acquire the ability to be aware of several instructions at a time such as where to run, how to switch positions, how to get back in a game, and how to appropriately help classmates.

Upper Elementary Grades

The emphasis in the Upper Elementary grades begins to move more toward sports in larger-sided groups. Game play is more advanced and gradually moves closer to the actual rules by which the students will be playing in Middle School.

Upper Elementary grade students will:

- Learn to appreciate and enjoy playing in a more competitive environment.
- Learn to cooperate and play as a team.
- Increase ball and foot handling skills.
- Learn strategy and positions for team play.
- Understand the value of sport and exercise as an essential element to lifelong good health.

PE Activities and Sports used throughout PE program, taught in a developmentally appropriate and adapted way for each grade:

- Basketball
- Daily jogging/running in games and occasionally in laps for aerobic endurance
- Dance
- Flexibility activities
- Introductory basic gymnastics
- Heart rate and aerobic fitness education
- Jumping rope (long and short, cloth and plastic speed ropes, plus the jump stick)
- Kickball
- Noodle jockey and Noodle "Javelin"
- Parachute play
- Relays–all types, including water games on hot days
- Rhythmic activities
- Sledding
- Soccer
- Strengthening activities
- Tag games
- Tennis
- Track activities: jogging, low hurdles, long jump
- Volleyball

Assessment

Participation, sportsmanship, cooperation, listening to and following directions, and physical skills are the areas of assessment in Lower School PE. Teacher observation is our method of assessment as the PE curriculum is performance based.