Country Day School
Middle School Curriculum Guide

Mathematics Department Curriculum Guide Grades 6-8

Mathematics Department / Program Description:
Country Day School Mathematics Department consists of College Preparatory Math Curriculum (CPM) in grades 6 through 12. Our department philosophy, practice, standards and assessment are based on CPM's problem-based learning, study team collaboration, and spiral curriculum.

Mathematics Department Philosophy of teaching / learning:
On a daily basis, students use problem-solving strategies, questioning, investigating, analyzing critically, gathering and constructing evidence, and communicating rigorous arguments justifying their thinking. Under teacher guidance, students learn in collaboration with others while sharing information, expertise, and ideas.
The course is well balanced between procedural fluency (algorithms and basic skills), deep conceptual understanding, strategic competence (problem solving), and adaptive reasoning (extension and transference). The lessons in the course meet all of the content standards, including the "plus" standards, of Appendix A of the *Common Core State Standards for Mathematics*. The course embeds the CCSS Standards for Mathematical Practice as an integral part of the lessons in the course.

Mathematics Course Descriptions:
The curriculum embeds the CCSS Standards for Mathematical Practice as an integral part of the lessons in the courses.

Middle School Accelerated Pathway - MATH
The accelerated pathway option at Country Day School provides the opportunity for students to develop and apply concepts at a rapid pace. Students that successfully complete the accelerated pathway will be eligible to take Algebra 1 in 8th grade.

- **Math 6/7 Accelerated -** Math 6 Accelerated is the first course in the accelerated middle school mathematics pathway. This course incorporates the objectives for the grade 6 and a portion of the grade 7 courses.
- **Math 7 Accelerated -** Math 7 Accelerated is the second course in the accelerated middle school mathematics pathway. This course incorporates objectives for the grade 7 and grade 8 courses.
- **Algebra 1 -** Algebra 1 is the first course in a five-year sequence of college preparatory mathematics courses that starts with Algebra 1 and continues through Calculus. It aims to deepen and extend student understanding built in previous courses by focusing on developing fluency with solving linear equations, inequalities, and systems. These skills are extended to solving quadratic equations, exploring linear, quadratic, and exponential functions graphically, numerically, symbolically, and as sequences, and by using regression techniques to analyze the fit of models to distributions of data.

Mathematics Department Intended Learning Outcomes / Skills / Knowledge
Students should be able to use problem-solving strategies, questioning, investigating, analyzing critically, gathering and constructing evidence, and communicating rigorous arguments justifying their thinking.

Mathematics Practices
1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

English Language Department Curriculum Guide Grades 6-8

English Language Department Program Description:
The Country Day School Middle and High School English Department offers a student-centered, college preparatory learning experience dedicated to providing students the tools to become critical consumers of information and highly effective communicators. In the Middle School, the Teachers College Reading and Writing Project methodology and Units of Study are the primary guide for instruction. Supplementary materials for grammar, word study, and spelling are also employed. In High School, courses are aligned to Common Core ELA Standards and feature a thematic focus. The use of

conceptual Essential Questions allows High School students to engage in interdisciplinary, inquiry-based learning, and to build their critical reading, writing, public speaking, and research skills as they grapple with broader social, political, historical, philosophical issues related to the texts studied.

English Language Department Philosophy of teaching/learning:
The study of literature encourages students to examine the human condition in all its aspects and to effectively respond to the world around them in thoughtful and articulate ways. Country Day School provides a high-quality language arts education that emphasizes cultural literacy, human values, creativity, and critical thinking, which empowers students as listeners, readers, writers, and speakers. To achieve this goal, we employ the following methodologies:

- Direct Instruction for Knowledge Acquisition
- Project-based Learning
- Lucy Calkins Teachers College Reading and Writing Project Units of Study
- Standards-based Grading for Formative & Summative Assessment (Middle School)
- Formative & Summative Assessment with standards-based feedback (High School)
- Novel study
- Socratic Seminars & Student-led Discussions /Debates
- Book Clubs & Literature Circles
- Independent Reading
- Digital citizenship
- Kagan Structured Learning
- Grammar instruction using multiple digital resources
- Vocabulary instruction

English Language Department Intended Learning Outcomes/Skills/Knowledge
- Correctly employ conventions and language.
- Demonstrate comprehension of key ideas and their development in grade-level literary, informational, and scholarly texts.
- Conduct effective, independent, inquiry-based research by analyzing and synthesizing knowledge and ideas from multiple sources, taking into account source bias and reliability. Facilitate and engage in discussions, debates, and presentations on a variety of topics and issues while citing strong and thorough textual evidence.
- Compose informational, argumentative, and research-driven writing independently,citing strong and thorough textual evidence when needed.

Science Department Curriculum Guide Grades 6-8

Science Department/Program Description:
The Science department begins in middle school with an introduction to the basic studies of earth, life, and physical sciences following Next Generation Science Standards. Here, the students are introduced to the principles of scientific investigation, and they learn to test hypotheses and collect and analyze data along with applying research and lab report writing. Emphasis is placed on experiencial, authentic learning tasks as an effective means of discovering and retaining key scientific ideas. In the High School, this initial exposure to the core sciences is extended and deepened as biology, chemistry, physics and advanced placement science courses are offered. Following the Next Generation Science Standards,

students learn to work with scientific theories and evaluate experimental results in the light of these expectations using the key science practices. They incorporate mathematical routines and work with equations to apply scientific principles to the solution of word problems. Finally, students learn how to design and execute procedures designed to investigate scientific questions of their own.

Science Department Philosophy of Teaching/Learning:
Our philosophy of teaching science is to combine a clear representation of scientific theory with appropriate use of hands' on activities. Learning Science should be engaging, and we use a variety of teaching strategies with students that help spark their interest in the world that surrounds them. Our goal is for students to leave each of our courses with a positive view of each subject area so that they choose to pursue science after high school. Along the way, we work to instill in them the key elements of scientific methods and a scientific approach to discovery and problem solving.

Science Department Intended Learning Outcomes/Skills/Knowledge
- Students should apply mathematical routines to apply science concepts to the solution of word problems.
- Students should be able to think critically, and use scientific theories and data to evaluate claims.
- Students should be familiar with the use and care of laboratory equipment, and the important safety procedures for lab work.
- Students should be able to distinguish science from non-science, and evaluate the reliability of different sources of "scientific" information.
- Data Analysis: Collect, analyze and interpret scientific data at a grade appropriate level. Scientific Process: Use scientific methods to design, carry out, and analyze experiments at a grade appropriate level.
- Scientific Research: Apply and share scientific research in order to support findings in a lab report or project at a grade appropriate level.
- Scientific Discourse: Understand and implement relative scientific vocabulary both verbally in class discussion and on written on assessments at a grade appropriate level.
- Scientific Discipline: Understand and apply relative scientific content (Earth Science, Biology, Physics, Chemistry) at a grade appropriate level.

Social Studies Department Curriculum Guide Grades 6-8

Social Studies Department/Program Description:
The Social Studies Department curriculum is designed to meet local and international standards while preparing students for the rigor of AP and university courses. Successful completion of the CDS Social Studies curriculum lays the foundation for students to be critical, open minded, and innovative thinkers in a globalized society.

Social Studies Department Philosophy of teaching/learning:
We engage young adolescents through the use of historical disciplinary strategies while incorporating multiple historical sources. Discipline-specific strategies for critically exploring multiple historical text sources heighten middle level students' ability to participate in a community and culture while providing the students with curriculum that is challenging, exploratory, integrative, and relevant. Using

the context of history students will have the opportunity to walk in the shoes of the subjects they are studying in order to build empathy.Through these multiple learning and teaching approaches, both students and teachers are more engaged in active, purposeful learning.

Every student will learn the foundational skills in order to think and act like a historian, geographer, economist, and a political scientist to understand the world. The daily lessons and projects equip students to make informed opinions by using critical thinking, sound reasoning, questioning skills and real world application to formulate and articulate an argument. The philosophy of the Social Studies department is that every student should have the tools to formulate an argument with relevant historical evidence. We want students to shape their opinions of the world based on critical thinking and have the ability to question the information they receive.

Social Studies Departments Intended Learning Outcomes/Skills/Knowledge

The major learning outcomes of social studies include both a critical analysis of primary and secondary sources as well as critical thinking and problem solving. Students will develop an understanding of cause, effect, and consequences and also individual consciousness as part of a larger social responsibility.

Spanish Department Curriculum Guide Grades

Spanish Department/Program Description:

The Spanish department has two different programs, the Bachelor program for native Spanish-speakers that is established by MEP (Ministerio de Educación Pública de Costa Rica). Also, the SSL program (Spanish as a second language) for non-native speakers that follows the guidelines set by ACTFL (American Council on the Teaching of Foreign Languages)

Spanish as a Second Language (SSL) levels

Spanish 1, Spanish 2, Spanish 3, Spanish 4, Spanish 5, AP Language and AP Literature Standards for second language are established by ACTFL (American Council on Teaching Foreign Languages).

SSL Spanish 1

Prerequisite: None

Credit: 1.0

Spanish 1 aims to introduce students to the Spanish language and its culture. The course stresses language acquisition through the development of communicative skills, with a heavy emphasis placed on interpersonal speaking. Speaking, listening, reading, and writing are all addressed in this course. Grammar is introduced as needed to help students understand the structure of the language. By the end of this course, students should be able to carry on basic conversations, follow more complex conversations, read simple texts, and write short compositions about themselves and aspects of their life. The main topics of study are school, family and friends, free time activities, food, clothing, as well as basic phrases to facilitate communication in the target language in class.

SSL Spanish 2

Prerequisite: Successful completion of Spanish 1

Credit: 1.0

Spanish 2 continues to develop students' language to the intermediate low proficiency level while further exposing students to the Spanish language and its culture. The course stresses language

acquisition through the development of communicative skills, with a heavy emphasis placed on interpersonal speaking and expanded experiences in listening, reading, and writing. At the intermediate low proficiency level, students are able to use practiced vocabulary from a wide range of familiar themes and topics, show consistent control of present time frame and practiced structures, and begin to use past and future time frames. By the end of this course, students should be able to ask a variety of questions to continue conversations and extend their own responses with a range of details or descriptions. Cultural comparisons and traditions are explored throughout the year. The main topics of study are everyday life, taking care of myself, celebrations, at the mall, city and rural life, vacation and travel.

SSL Spanish 3
Prerequisite: Successful completion of Spanish 2
Credit: 1.0
Spanish 3 reinforces the proficiency-oriented approach, which focuses on communicative competence and performance at the intermediate low-level. The use of acquired structures and vocabulary is intensified and the creative process of language is emphasized, preparing the student to converse in Spanish in the present, past, and future tense and get in and out of daily situations without complication. Students at this proficiency level use a range of vocabulary from familiar themes, can speak to topics of personal interest, and recognize and use some culturally appropriate expressions and gestures in everyday interactions.

SSL Spanish 4
Prerequisite: Successful completion of Spanish 3
Credit: 1.0
In Spanish 4, students will improve their language skills through the five standards set by ACTFL: interpersonal communication, presentational speaking, reading, listening, writing, and reading. This level focuses on communicative competence and performance at the intermediate high-level. Students, at the end of this level, will distinguish the three different modes in Spanish (indicative, subjunctive and imperative), also they will talk in an organized way and with detail about events and experiences in various time frames.

SSL Spanish 5
Prerequisite: Successful completion of Spanish 3
Credit: 1.0
In Spanish 5, previous structures will be reviewed, and new structures will be learned in order to improve students' proficiency. Students will be able to express themselves more easily in conversational and formal Spanish. Listening skills will be enhanced and students will further develop the ability to understand native speakers at normal speeds. Students will be expected to read materials outside the coursebook and a variety of articles from Spanish press and literary texts will be made available to them. The course will help students prepare for the AP Spanish Language and Culture Course.

Spanish Department Philosophy of teaching/learning:
To create in the student body awareness of free, critical and self-critical human beings with an integral development, competent in the four linguistic skills (reading, listening, speaking and writing), according to the level to which they belong.

Spanish Department Intended Learning Outcomes/Skills/Knowledge:
Bachillerato
The major overarching learning outcomes, skills and knowledge students should be able to know and do within the Bachillerato track are: to communicate in different ways and in different contexts as a means of living together in national and global society, taking advantage of all kinds of resources. Besides, that they communicate in writing and in various ways what they think, feel and investigate; as well as being able to modify their message orally so that it adapts to different communicative contexts. Finally, understand and build new ideas, new knowledge and new worlds.
The major overarching learning outcomes, skills and knowledge students should be able to know and do within the Spanish as a Second Language track are: gain the ability to read, understand, analyze, interpret, messages and texts from all kinds of cultural aspects of the Hispanic world.

STEAM Department Curriculum Guide Grades 6-8

STEAM Department/Program Description:
The STEAM Program has been developed using the International Society for Technology in Education (ISTE) Standards. Coursework begins with required courses in Middle School to learn STEAM as a means for being an empowered learner, digital citizen, knowledge constructor, innovative designer, computational thinker, creative thinker, and global collaborator. In High School, elective courses offer a multidisciplinary approach to teaching the underlying principles of STEAM.

STEAM Department Philosophy of teaching/learning:
The Middle School STEAM coursework is informed each year by the MIT Challenges.
These challenges are designed to bring MIT culture to NAE schools and reflect leading thinking in STEAM education.
This can be summarized in seven key themes:

1. Interdisciplinary Learning: Today's most pressing problems cannot be solved by an engineer alone, nor a chemist, nor a physicist. Difficult questions benefit from bringing multiple perspectives together to examine the issue. We don't typically think of history, ethics, economics, sociology, and geology when we hear STEAM. Yet, integrating these disciplines into the challenges allows students to gain a more complete view of the issues, make connections between subjects, apply their knowledge and ultimately propose the best possible solutions. It is our hope that as many disciplines as possible are included in the MIT Challenges to reinforce this perspective.

2. Student-Driven Learning: Providing the space and mentorship for students to explore their own curiosity related to the themes is a critical element of the MIT challenges. While groups of students may ultimately settle on another area of mutual interest to pursue as part of their project, the individual and small group exploration and research of the topic is critical. What's more, students are encouraged to fail. MIT professors and students can often be heard talking about times they have failed. Yet the failure is only the beginning of the story; it is what we learn from failed attempts at a task that contributes to and solidifies our learning, incremental improvement and ultimately success. The MIT Challenges offer discreet opportunities for students to explore, experiment, and fail while providing teachers a chance to focus on the

process-over-product approach to teaching and learning especially when they integrate feedback and reflection into the process.

3. Collaborative Learning: Learning to work in teams is an important part of preparing students for college and employment. This is more than just a group project. True collaboration requires students to recognize individual strengths and weaknesses and take on roles that utilize each member's unique skills and areas of expertise.

4. Cross Phase Learning: School is virtually the only place where we group people based solely on age. In most other aspects of life we socialize, work, and play alongside others, often without knowledge of their age. We seek out those with specific expertise, common interests, diverse backgrounds, and different perspectives while we play, learn, and work together. The MIT Challenges are designed to provide opportunities for students of different ages to work together. This will look different in each school. Regardless of the model, we hope that students of all year groups have an opportunity to collaborate with, mentor, or consult both older and younger students within their school.

5. Project-based, and Authentic Problem-based, Learning: The MIT Challenges are authentic problem based projects designed to emphasize the process of learning over the 'end products' and provide students with opportunities to apply and test their knowledge. To help guide this process, project ideas highlighting a specific process (Explore, Research, Create or Explore, Build, Test) are included. There is no right or wrong approach and there is no specific product or submission required at the conclusion of each challenge. There is also no prescribed time line that is required to complete the project. The learning process, rather than the product, should be the emphasis of the challenges.

6. Hands-on Learning: Hands-on learning can take on different meanings depending upon the context. For some, it is about physically touching or building something as part of the learning process. For others, it means students actively engaging with the content in some way - discussion, debate, building, making decisions, etc. As far as the MIT Challenges are concerned, the hands-on component can take any or all of these forms but highlights the processes embedded in inquiry-driven, active, constructivist learning experiences.

7. All of this is underpinned by the desire to develop those fundamental skills to help all our young students to achieve success and be ambitious in the 21 st Century

STEAM Progression of Courses 6-12
- STEAM I
- STEAM II
- Design and Applied Technology
- Robotics and Introduction to Engineering

STEAM Departments Intended Learning Outcomes/Skills/Knowledge
The major learning outcomes for STEAM is to develop the 21 st Century Skills focused on critical thinking, creativity, communication, and collaboration in addition to technological literacy.

Computational Thinking Department Curriculum Guide Grades 6-8

Computational Thinking Department/Program Description:
The Computational Thinking Program has been developed using the Computer Science Teacher Association (CSTA) Standards. Coursework begins with required courses in Middle School to learn computer science as a means for problem-solving, communication, and personal expression. In High School, AP Computer Science AP using the AP Standards is offered as an elective course and has a multidisciplinary approach to teaching the underlying principles of computation.

Computational Thinking Department Philosophy of teaching/learning:
- *Lead Learner Philosophy* - The curriculum has been written with the idea that the instructor will act as the lead learner. As the lead learner, the teacher's role shifts from being the source of knowledge to being a leader in seeking knowledge. Modeling and teaching how to learn are the most important factors to consider in order to be successful with this style of teaching and learning.
- *Student Practices* - Students in Computational Thinking work in a wide array of contexts that are tied together by a core set of practices they develop throughout the courses. These student practices provide coherence and serve as helpful reminders of the high-level skills and dispositions they should be continually developing. Throughout the curriculum, you will find reminders of moments when students can reflect on this development, and all major projects include an opportunity for student reflection on their growth in each practice.
- *Problem Solving* - Use a structured problem-solving process to help address new problems, view challenges as solvable problems, break down larger problems into smaller components
- *Persistence* - Expect and value mistakes as a natural and productive part of problem-solving, continue working towards solutions in spite of setbacks, iterate and continue to improve partial solutions
- *Creativity* - Incorporate personal interests and ideas into activities and projects, experiment with new ideas and consider multiple possible approaches, extend or build upon the ideas and projects of others
- *Collaboration* - Work with others to develop solutions that incorporate all contributors, mediate disagreements and help teammates agree on a common solution, actively contribute to the success of group projects
- *Communication* - Structure work so that it can be easily understood by others, consider the perspective and background of your audience when presenting your work Provide and accept constructive feedback in order to improve your work

Computational Thinking Departments Intended Learning Outcomes/Skills/Knowledge
The major overarching learning outcomes of computational thinking coursework is to become better problem-solvers through the use of technology.

Arts Department Curriculum Guide Grades 6-8

Arts education benefits both student and society. It benefits the student because it cultivates the whole child, gradually building many kinds of literacy while developing intuition, reasoning, imagination, and dexterity into unique forms of expression and communication

Art Department/Program Description:
The Art department is divided into Elementary, Middle School and High School courses. Elementary Art is from 1st to 5th grade, Middle School is from 6th to 8th grade and High School is from 9th to 12th grade. The standards used in the Art Department is part of the National Visual Arts Standards. The courses are designed to contribute to the integral educational development of the student through the visual arts.

Department Philosophy of teaching/learning:
Our art curriculum puts creation, connection, and presentation at the heart of the students' learning. They learn to develop, organize, refine and complete artistic ideas and work. Students develop and refine artistic techniques and work for presentation to others. Finally, they synthesize and relate knowledge and personal experiences to make art.

- The arts play a vital role in cognitive development. They support students in learning how to learn.
- The arts define and are defined by human culture and
- society. They are essential to the study of history.
- They exist in connection with real-life experiences; they
- are not separate from them.
- Study and practice of the arts help develop skills useful to one's overall growth.
- These skills include: perception, critical thinking, decision
- making, self-discovery, interpretation, values clarification,
- organization, and collaboration.
- The arts develop independent thinkers with potential to contribute positively to our culture and to our society.
- The arts integrate body, mind, and spirit to engage the participant in constructive, individual expression.
- The arts offer access and opportunities for all people.
- The arts cross cultures and embrace differences
- The arts foster community building by removing cultural barriers, developing creative and productive individuals, and providing an accessible platform for performance that is receptive to diverse contributions

Courses are designed as project-based education focused on skill and knowledge attainment in subjects and tasks related to the visual arts. Individualized learning and development are practiced according to each student's needs.

Art Department Intended Learning Outcomes/Skills/Knowledge
1. *Technical Competence* - Demonstrates technical competence and skill with materials and media.

2. *Artistic Ideas* **-** Generates and conceptualizes artistic ideas and work.
3. *Organization* **-** Organizes and develops ideas and work.
4. *Refines and Completes Work* **-** Refines and completes artistic work.
5. *Interprets Work* - Interprets and shares artistic work.
6. *Art Meaning* - Understands and evaluates how art conveys meaning and relates artistic ideas with external context.
7. *Studio Practices* - Demonstrates appropriate studio practices.

Physical Education Department Curriculum Guide Grades 6-8

Physical Education Department Description:
Physical Education is focus to create a positive attitude toward physical activity, improve the student's overall fitness level and promote sportsmanship. Also, increase the acquisition of rules, movement concepts, principles, strategies and tactics as they apply to game the learning and performance of physical activities.
The standards used are:
- Demonstrates competency in a variety of motor skills and movement patterns.
- Applies knowledge of concepts, principles, strategies, and tactics related to movement and performance.
- Demonstrates the knowledge and skills to achieve and maintain a health-enhancing level of physical activity and fitness.
- Exhibits responsible personal and social behavior that respects self and others.
- Recognizes the value of physical activity for health, enjoyment, challenge, self-expression and social interaction.

Physical Education Department Philosophy of teaching/learning:
The PE department has designed the courses to progressively give the students the opportunity to learn and to use exercise and sports activities to attain an overall fitness level and to encourage a lifetime of fitness. Moreover, throughout the courses, students will develop various athletic skills and reach personal goals that can guide them through their lives. In courses 6-9, students will complete the Fitness test as part of the course.

Physical Education Department Intended Learning Outcomes/Skills/Knowledge:
Our overarching learning outcomes for students are for them to achieve basic sports skills and to develop exercise as part of their lives.

6th Grade Curriculum Guide

Math 6
The course helps students to develop multiple strategies to solve problems and to recognize the connections between concepts.
- Collect, organize, and display data in multiple ways.
- Analyze data using measures of central tendency.

- Represent data sets using various methods and analyze how changes in data impact the representation.
- Represent and compare quantities using manipulatives, diagrams, and number expressions.
- Represent multiplication using rectangular arrays.
- Represent integers on number lines and with manipulatives.
- Make sense of multiple representations of portions (decimal, fraction, percent) and convert from one form to the other.
- Compare fractions and generate equivalent fractions.
- Recognize ratios in tables and graphs and solve corresponding problems.
- Use ratios to describe relationships with similar plane figures and other situations.
- Use models and standard algorithms for computations with fractions and decimals.
- Simplify variable expressions by combining like terms and using the Distributive Property.
- Evaluate variable expressions and solve simple equations and inequalities.
- Solve distance, rate, and time problems.
- Solve percent problems including those with discounts, interest, and tips.
- Compute area, surface area, and volume of rectangular solids.
- Represent solids using nets.

English Language Arts 6

In Grade Six, students will read novels and books with a variety of styles and genres in order to analyze for a variety of purposes. Students will also learn to cite textual evidence in order to draw inferences, determine themes, describe the plot, characters' point of view, compare and contrast different genres and styles, and read using their senses of "seeing" and "hearing".

Students will write for a variety of purposes. They will write paragraphs and essays for the sake of supporting opinions with evidence, explaining texts through analysis, the storytelling of real imagined circumstances. Writing assignments will include timed responses, journal writing, essays, and critiques. Vocabulary, spelling, and grammar assignments will also be an important part of this class. Students will also write reflections to read or in response to a variety of prompts.

Earth Science

All 6th grade students complete this course to introduce Earth Science built on Next Generation Science Standards (NGSS). Students are introduced to geosciences through study of the history of Earth and Earth systems (rock, water, and energy cycles), astronomy in the study of space systems, weather and climate (along with the distribution of Earth's resources), and human impact on our Earth. Learning is achieved through lab work, projects, discourse, and written assessments. Students are encouraged to relate the topics they study to current events, and to explore solutions to mitigate hazards caused by human impact on Earth. Students are guided to research and apply research to their lab work and projects which they then present to, and discuss with their peers. This course provides a basic understanding in Earth Science to be built upon in Environmental Science.

Students are also introduced to scientific methods, outlining a foundation for lab writing and scientific inquiry and analysis which carries into all subsequent science courses. This structure is intended to provide a solid foundation on which to scaffold through 12th grade.

Ancient History Grade 6

Students in sixth grade will continue to expand their knowledge, skills, and understandings as they study the world from the beginning of human existence to the Middle Ages.

- Focus on the discipline of geography by using the themes of location, place, movement, human-environment interaction, and region to understand the emergence, expansion, and decline of civilizations
- Take a systematic look at the history and culture of various world regions including the development of economic, political and social systems
- Use the lens of change and continuity to identify both similarities and differences among ancient civilizations of Mesopotamia, Egypt, Africa, Indus River Valley, China, Greece, and Rome
- Recognize and interpret the "lessons of history;" those transferable understandings that are supported throughout time by recurring themes and issues

MEP Spanish 6

Prerequisite: Successful completion of the previous grade

This is the last level of primary school in Costa Rica, based on El Ministerio de Educación Pública *MEP* At the end of this course, students should be able to read, write, and speak effectively, and also master grammar, usage, and mechanics. On the other, we will be doing literary analysis as suggested by Costa Rica Education Board.

STEAM Explorations

Mixed Grade 6,7 & 8

Our courses are built on Nord Anglia Education's belief in the benefits of project-based interdisciplinary learning, and our partnership with the world's leading STEAM institution, the Massachusetts Institute of Technology (MIT). Our aim is to support every student to develop their creativity, curiosity, and innovation through providing hands-on, practical problem-solving learning experiences to help them thrive in the 21st century. We seek to break down the barriers between subjects and develop a more collaborative and problem-based approach to learning, inspired by the MIT ethos & mind-set.

Computational Thinking I

Mixed Grade 6, 7 & 8

Course 1 - Exploration and Expression

The first course introduces students to computer science as a vehicle for problem-solving, communication, and personal expression. As a whole, this semester focuses on the visible aspects of computing and computer science and encourages students to see where computer science exists around them and how they can engage with it as a tool for exploration and expression.

Computational Thinking II

Mixed Grade 6, 7 & 8

Course 2 - Innovation and Impact

Where the first course centers on the immediately observable and personally applicable elements of computer science, the second course asks students to look outward and explore the impact of computer science on society. Students will see how a thorough user-centered design process produces a better application, how data is used to address problems that affect large numbers of people, and how physical computing with circuit boards allows computers to collect input and return output in a variety of ways.

Art 6
One year course.
Students apply their creative potential by introducing different art forms like design, painting, drawing, and sculpture. They will also work with 3D printing and animation.

Physical Education Grade 6
Physical education grade 6 the students will demonstrate competence in fundamental motor skills and selected combinations of skills; use basic movement concepts and small-sided practice tasks; identify basic health-related fitness concepts; exhibit acceptance of self and others in physical activities; and identify the benefits of a physically active lifestyle.

7th Grade Curriculum Guide

Math 7
The course helps students to develop multiple strategies to solve problems and to recognize the connections between concepts.
- Use integers and complete operations with integers and rational numbers, including using the Order of Operations.
- Use diagrams and equal ratios to represent part-whole relationships.
- Use percents and scale factors to determine percent increase or decrease, discounts, and markups.
- Use variable expressions to represent quantities in contextual problems.
- Simplify variable expressions by combining like terms and using the Distributive Property. Solve linear equations, including those with fractional coefficients and those with no solutions or infinitely many solutions.
- Solve and graph one-variable inequalities.
- Compare experimental and theoretical probabilities.
- Distinguish between dependent and independent events and calculate the probability of compound independent events.
- Represent probabilities of multiple events using systemic lists, area models, or tree diagrams. Design, conduct, and analyze surveys.
- Collect and compare data and describe the distribution of sets of data.
- Solve distance, rate, and time problems.
- Compare ratios and calculate unit rates.
- Recognize and solve problems involving proportional relationships.
- Recognize and use the properties of similar figures and scale factors to solve problems. Describe angles, angle pairs, and their measures.
- Compute area and perimeter of standard and compound shapes.
- Compute the volume of a variety of solids.

English Language Arts 7
In Grade Seven, students will be introduced to a variety of literary genres as well as an in-depth study of information, narrative, and argument writing using the Lucy Calkins Teachers College Reading and Writing Units of Study as a resource. There will be an emphasis on grammar, language usage, and

spelling, and students will be expected to read at least 30 minutes a night. Possible texts include: *The Alchemist*, *The Hobbit*, non-fiction books clubs, *The Outsiders*, *The House of the Scorpion*, dystopian book clubs, poetry, short stories, and *The Odyssey*.

Life Science
All 7th grade students complete this course to introduce Life Science built on Next Generation Science Standards (NGSS). Students are introduced to life sciences through the study of cells (plant and animal), human body systems, reproduction, introductory genetics, evolution, as well as ecosystems and human interaction. Learning is achieved through lab work, projects, discourse, and written assessments. Students are encouraged to relate the topics they study to current events, and to explore solutions to mitigate hazards caused by human impact on Earth. Students are emboldened to research and apply research to their lab work and projects which they then present to, and discuss with their peers.

Students continue to build on their understanding of scientific methods, scaffolding upon a foundation for lab writing and scientific inquiry and analysis which carries into all subsequent science courses. This structure will continue to scaffold through 12th grade.

Medieval World History Grade 7
Students in seventh grade will explore different Medieval World societies using historical inquiry to describe how history has shaped the modern world.
- Seek and evaluate multiple historical sources with different points of view to investigate a historical question and to formulate and defend a thesis with relevant evidence
- Understand how geography, demographic trends, and environmental conditions shape modern societies and regions
- Analyze the structure, and functions of governments and their impacts on societies and citizens
- Draw conclusions about the Medieval World's society, culture, economy, government, and geography to state how it has shaped the modern world.
- This course will guide students through patterns of change and continuity with a focus on conflict and cooperation, economic development, population shifts, political thought and organization, cultural values and beliefs and the impact of environment over time.

Units include: Fall and Legacy of the Roman Empire, Medieval Europe, Muslim Empires, Imperial China, Feudal Japan, and Mesoamerica.

MEP Spanish 7
Prerequisite: Successful completion of the previous grade
This course is the first level of Secondary School in Costa Rica, based on El Ministerio de Educación Pública *MEP*
Students in Spanish 7 increase their knowledge and skills in Literature, Grammar, Speaking, Listening and Writing. They speak, read, write and understand Spanish, and also summarize and analyze several texts of authors from Costa Rica, Latin America, Spain, and U.S.A.
Students at this level will develop the skills to write and express themselves in a comprehensible manner and follow the correct use of grammar and writing rules.

STEAM Explorations

Mixed Grade 6,7 & 8

Our courses are built on Nord Anglia Education's belief in the benefits of project-based interdisciplinary learning, and our partnership with the world's leading STEAM institution, the Massachusetts Institute of Technology (MIT). Our aim is to support every student to develop their creativity, curiosity, and innovation through providing hands-on, practical problem-solving learning experiences to help them thrive in the 21st century. We seek to break down the barriers between subjects and develop a more collaborative and problem-based approach to learning, inspired by the MIT ethos & mind-set.

Computational Thinking I

Mixed Grade 6, 7 & 8
Course 1 - Exploration and Expression

The first course introduces students to computer science as a vehicle for problem-solving, communication, and personal expression. As a whole, this semester focuses on the visible aspects of computing and computer science and encourages students to see where computer science exists around them and how they can engage with it as a tool for exploration and expression.

Computational Thinking II

Mixed Grade 6, 7 & 8
Course 2 - Innovation and Impact

Where the first course centers on the immediately observable and personally applicable elements of computer science, the second course asks students to look outward and explore the impact of computer science on society. Students will see how a thorough user-centered design process produces a better application, how data is used to address problems that affect large numbers of people, and how physical computing with circuit boards allows computers to collect input and return output in a variety of ways.

Art 7/8

One year course.

Students apply their creative potential by experimenting with different art forms like painting, drawing, photography, and sculpture. They will also work with new media in 3D printing and modeling, animation, and video.

Physical Education Grade 7

Physical education grade 7 the students will demonstrate competency in motor skills and selected combinations of skills; use movement concepts, rules, strategies and practice tasks; review basic knowledge of health-related fitness concepts and begin applying them; exhibit acceptance of self and others in physical activities; and know the benefits of a physically active lifestyle.

8ᵗʰ Grade Curriculum Guide

Math 8

The course helps students to develop multiple strategies to solve problems and to recognize the connections between concepts. Upon completion of this course, students should be able to:

- Represent a linear function with a graph, table, rule, and context and create any representation when provided one of the others.
- Solve systems of equations by using tables and graphs.
- Symbolically manipulate expressions to solve problems including those with fractional coefficients.
- Solve contextual word problems using multiple strategies, including making tables, looking for patterns, drawing diagrams, and creating a table of guesses to assist with writing and solving a variable equation.
- Describe various geometric transformations on a coordinate grid.
- Represent data using scatterplots and describe associations.
- Collect and analyze data and make predictions based on the trend of the data.
- Compare ratios and calculate unit rates and slope ratios.
- Analyze the slope of a line graphically, numerically, and contextually.
- Recognize and solve problems involving proportional relationships.
- Graph and analyze non-linear functions.
- Recognize and use the properties of similar figures to solve problems.
- Use the Pythagorean Theorem and its converse to solve problems in two and three dimensions.
- Use square roots and cube roots.
- Represent and simplify expressions using positive and negative exponents.
- Represent and compare large and small numbers using standard and scientific notation. Perform operations with numbers represented in scientific notation.
- Use the relationships between angles created by parallel lines with transversals and the Triangle Angle Sum Theorem to solve problems.
- Compute the volume of a variety of solids.

English Language Arts 8
In Grade Eight, students will grow as readers, writers, speakers, and thinkers. In literature units, students will read, comprehend, and discuss various genres of text: realistic fiction; historical fiction; dystopian fiction; poetry; memoir; and non-fiction. In writing units, students will further their understanding of the structure of the English Language and broaden their vocabulary. They will practice those skills by writing in a variety of styles, including literary analysis essays, narratives, poems, research-based essays, and memoirs. These units of study will prepare students for success in high school and beyond.

By the end of Eighth Grade English, students will be able to independently comprehend, analyze, and discuss a Ninth Grade level text using appropriate literary terms. They will also be able to brainstorm, organize, draft, edit, and revise a five (or more) paragraph literary, personal, or research-based essay.

Physical Science
All 8th grade students complete this course to introduce Physics and Chemistry built on Next Generation Science Standards (NGSS). Students are introduced to these two areas of science through the topics of structure and properties of matter, chemical reactions, energy, waves, light and sound, and forces and interactions. Learning is achieved through lab work, projects, discourse, and written assessments. Students are encouraged to relate the topics they study to current events, and to explore solutions and technology that might enrich our knowledge of said topics. Students are expected to

research and apply research to their lab work and projects which they then present to, and discuss with their peers.

Student understanding of the use of scientific methods is deepened in preparation for upcoming education in high school. The foundation and scaffolding established earlier in middle school continues to be improved upon through more independently planned and executed projects and labs.

Early United States History Grade 8
8th grade students focus on the origins of the United States from the earliest human migrations and European settlement all the way to the transformation of the nation during the Civil War, Reconstruction, and immigration at Ellis Island. This course focuses on the analysis of primary and secondary sources to guide instruction. Students gain empathy and evaluate multiple perspectives between various groups in U.S. history from African-Americans, women, Native Americans, immigrants, and settlers. This course challenges them to look within and question the values and influence of the United States from its founding documents and trace it to modern day.

Units include: Early Settlement and Colonization, Historical Skills, The American Revolution, The Constitution: Power, Authority, and Rights, Manifest Destiny and Westward Expansion, A Nation Dividing and Civil War, Reconstruction, The Rise of Industry and Immigration

MEP Spanish 8
Prerequisite: Successful completion of the previous grade
This course is based on the programs established by El Ministerio de Educación Pública *MEP* with some necessary or complementary adaptations. It is aimed at native or non-native speakers who are fluent in Spanish and have received previous courses in first language.

The subjects of grammar, spelling, grammatical and written expression will be covered. Literature is distributed according to literary genres and writers recommended for the level year course.
In literary works with critical thinking where the student will be allowed to interpret and analyze in a dynamic and critical objective way.

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Art 7/8
One year course.
Students apply their creative potential by experimenting with different art forms like painting, drawing, photography, and sculpture. They will also work with new media in 3D printing and modeling, animation, and video.

Physical Education Grade 8
Physical Education grade 8 students will apply tactics and strategies to modified gameplay; demonstrate fundamental movement skills in a variety of contexts; design and implement a health-enhancing fitness program; participate in self-selected physical activity; cooperate with and encourage classmates; accept individual differences and demonstrate inclusive behaviors; and engage in physical activity for enjoyment and self-expression.