



Hill Castle Course Catalog

KG-Grade 12



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LANGUAGE ARTS

LANGUAGE ARTS K A & B

This Kindergarten Language Arts course will teach students to identify and write all letters, produce letter sounds and also frequently used phonograms. Students will also master weekly sight words and reading and comprehension strategies to grow as readers. All Common Core K LA standards are met in this course.

Course Requirements

Grade Level - Kindergarten Duration - 2

Semesters

*Materials listed in Appendix A

LANGUAGE ARTS 1 A & B

This First Grade Language Arts course will teach students to identify and write all letters, produce letter sounds and also frequently used phonograms.

Students will also master weekly sight words and reading and comprehension strategies to grow as readers. All Common Core 1 LA standards are met in this course.

Course Requirements

Grade Level - Kindergarten - 1st Grade

Duration - 2 Semesters

*Materials listed in Appendix A

LANGUAGE ARTS 2 A & B

The Second Grade Language Arts course will teach students to spell and write vocabulary, read more fluently, apply grammar concepts, and participate in handwriting and writing activities through thematic units. Students will also continue to master weekly sight words and reading and comprehension strategies to grow as readers. All Common Core 2 LA standards are met in this course.

Course Requirements

Grade Level - 2nd Grade Duration - 2

Semesters

*Materials listed in Appendix A

LANGUAGE ARTS 3 A & B

Semester A

During the first semester students will continue to build their vocabulary through the study of folktales, fables, myths, informational text, dramas, poems, and stories. They will recount stories and ask and answer questions to demonstrate their knowledge of text. They will compare and contrast themes, setting and plots and distinguish their own point of view from that of the author of the text. Students will also gain information from illustrations and describe logical connections between sentence and paragraphs. They will also be introduced to writing in cursive.

Semester B

During the second semester students will continue to apply phonics and grammar concepts with a focus on special vowel sounds, prefixes, and suffixes. Students will continue to build writing skills by responding to reading and utilizing a broadened vocabulary in authentic writing activities where they compare and contrast stories and use process writing to compose original work. They will read with accuracy and fluency to support comprehension as they solidify their understanding within context of the stories they read. By the end of the year, our third-grade student will read and comprehend informational texts, including history/social studies, science, and technical texts independently and proficiently. Students will report on a topic using descriptive details and speaking clearly and in complete sentences.

Course Requirements

Grade Level - 3rd Grade Duration - 2

Semesters

*Materials listed in Appendix A

LANGUAGE ARTS 4 A & B

Semester A

The 4th grade Language Arts curriculum integrates reading, writing, speaking, listening, and the study of vocabulary and grammar in a way that engages today's learners and supports them in building a broad and diverse set of literacy skills. Students study classic literature as well as more contemporary forms, including media and multimedia products. Writing assignments in semester A focus on narrative and persuasive modes and emphasize the use of reasoning and details to support opinions.

Each writing assignment spans several lessons and guides students through a writing process that begins with prewriting and ends by emphasizing one or more aspects of conventions of standard written English. Students also learn how to participate in collaborative discussion and peer review sessions. In each lesson, engaging and relevant models and step-by-step instruction guide students toward mastery and appreciation of 21st century communication in all its forms and functions.

Semester B

Like semester A, semester B provides an integrated curriculum. Whereas the first semester focuses on skills needed to read fiction and other literary prose, semester B teaches specific skills for reading poetry, drama, informational text. Students learn how informational text differs from literary text and how different forms of information text differ from each other.

Writing assignments emphasize expository writing and guide students through research projects. Near the end of the semester, students learn how to present information orally and using multimedia.

Course Requirements

Grade Level - 4th Grade Duration - 2

Semesters

*Materials and Reading list detailed in Appendix A

LANGUAGE ARTS 5 A & B

Semester A

The 5th grade Language Arts curriculum integrates reading, writing, speaking, listening, and the study of vocabulary and grammar in a way that engages today's learners and supports them in building a broad and diverse set of literacy skills. Students study classic literature as well as more contemporary forms, including media and multimedia products. Writing assignments in semester A focus on narrative and persuasive modes and emphasize the use of reasoning and details to support opinions. Each writing assignment spans several lessons and guides students through a writing process that begins with prewriting and ends by emphasizing one or more aspects of conventions of standard written English.

Students also learn how to participate in collaborative discussion and peer review sessions. In each lesson, engaging and relevant models and step-by-step instruction guide students toward mastery and appreciation of 21st century communication in all its forms and functions.

Semester B

Like semester A, semester B provides an integrated curriculum. Whereas the first semester focuses on skills needed to literary text, semester B focuses on skills for reading and analysing informational text. In the second semester of the course, students learn how informational text differs from literary text and how different forms of information text differ from each other. Writing assignments emphasize expository writing and guide students through research projects. Near the end of the semester, students learn how to present information orally and using multimedia.

Course Requirements

Grade Level - 5th Grade Duration - 2

Semesters

*Materials and Reading list detailed in Appendix A

MATH

MATH K A & B

Semester A

During the first semester students will learn foundational math facts. They will learn to count to 12, how to compare sizes, ordinal numbers putting items in order, what a number line is and its uses, basic measurements such as inches and feet, and how to tell time on digital and analog clocks. Students will have many opportunities to practice these new concepts by interacting with online confirmation exercises and filling out worksheets offline. A special emphasis this semester is for students to have fun with numbers, finding success with concepts such as bigger and smaller and being comfortable in an online environment.

Semester B

Students learn to count to twenty. They work with comparing objects using the terms tall, longer, and shorter as well as comparing two objects using the terms lighter and heavier. They will continue their exploration of basic geometric shapes such as cones and spheres. They will work with the concept of first, middle, and last. Arranging and sorting receive special emphasis this semester. Students will also work on writing numbers with 3, 4, and 5 given special attention. Students will learn the concepts of left and right. Coins are also a focus as students will count pennies, nickels and dimes. Finally, the number 7 is studied using the colours of the rainbow.

Course Requirements

Grade Level - Kindergarten Duration - 2

Semesters

*Materials listed in Appendix A

MATH 1 A & B

Semester A

During the first semester students will build fluency with basic math facts. They will learn to count to 100, basic addition and subtraction facts, and how to add double-digit numbers. Students will be introduced to such new concepts as word problems, Venn diagrams, and basic geometric concepts. There is an emphasis on learning practical skills such as reading thermometers, looking at maps, and understanding the value of coins. Students will have multiple opportunities to practice new skills and knowledge through using integrated online practice problems.

Semester B

During the second semester students will begin counting by twos, fives, and tens. They will learn both vertical addition and subtraction. Students are introduced to multiplication and division and the signs used in those operations. They will also study even and odd numbers. Students continue their exploration of geometric shapes through drawing and apply what they learn about shapes by sorting various figures in Venn diagrams. They will also use a balance beam to understand the concept of weight

– lighter versus heavier. As in semester A, students will have multiple opportunities to practice new skills and knowledge through using integrated online practice problems.

Course Requirements

Grade Level - Kindergarten - 1st Grade Duration - 2

Semesters

*Materials listed in Appendix A

MATH 2 A & B

Semester A

During the first semester students will build fluency with basic math facts and add and subtract within 100 to solve word problems using strategic methods. Students will also manipulate numbers to 1000 using knowledge of hundreds, tens, and ones. Lastly, students will demonstrate arrays with repeated addition.

Semester B

During the second semester students will use place value to add and subtract up to 1000. They will use place value to estimate and solve word problems to demonstrate skills. Students will measure and compare length and represent it on a number line. They will work with money and time to compare value. Students will collect data and represented on graphs to discuss it. They will recognize common 2 dimensional and 3 dimensional shapes by specific characteristics.

Course Requirements

Grade Level - 2nd Grade Duration - 2

Semesters

*Materials listed in Appendix A

MATH 3 A & B

Semester A

During the first semester, students will build flexibility with numbers as they master addition and subtraction facts as well as multiplication and division facts. Students will understand relationships between addition and subtraction, multiplication and addition and multiplication and division as they learn to borrow, carry, and regroup in order to find sums and differences of two whole numbers up to 10,000. Students will also comprehend the place value of base ten numbers up to 1,000,000 in order to find patterns and make estimations. They will implement a 4-step approach to solving problems and express numbers differently including translating them into Roman Numerals or expressing them as ordinal numbers.

Semester B

During the second semester, students will explore concepts of measurement including linear measurement, weight, volume, temperature, and time. They will also recognize, compare, and convert fractions.

Students will write amounts of money and make change using as few coins as possible. Lastly, students will examine lines, polygons, and solid figures as they are introduced to basic concepts of geometry.

Course Requirements

Grade Level - 3rd Grade Duration - 2

Semesters

*Materials listed in Appendix A

MATH 4 A & B

Semester A

Grade 4 math uses a varied amount of instructional material to reinforce and teach new math skills to the 4th grade learners. Instruction includes creative videos, mathematical storytelling, practical math applications and repetition to reinforce skills throughout the course. Three areas are focused on and students will finish the course with a strong knowledge in these content areas. The first is developing an understanding and fluency with multi-digit multiplication and developing the understanding of dividing to find quotients involving multi-digit dividends. The second is developing an understanding of fraction equivalence, addition, and subtraction of fractions with like denominators, and multiplication of fractions with whole numbers. The third will be addressed in semester B.

Semester B

Semester B of Grade 4 Math has learners continuing to work with fractions. They will learn to multiply fractions and convert them to decimals. Students will also begin to learn to equivalent measurements of length, weight, mass, and capacity. They will also learn helpful skills in understanding time, distance, and money. Students will develop an understanding that geometric figures can be analysed and classified based on their properties, such as having parallel sides, perpendicular sides, particular angle measures, and symmetry. Lessons on rectangles, line plots, angles, figure drawing, polygons, and symmetry will be taught. Semester B continues to use varied forms of instruction that allow students to learn these skills in a practical manner.

Course Requirements

Grade Level - 4th Grade Duration - 2

Semesters

*Materials listed in Appendix A

MATH 5 A & B

Semester A

Students will learn math topics outlined in this course drawing from a variety of sources, including hands-on activities, interactive lessons, and practical math applications. Students will focus on several critical areas including but not limited to developing fluency with addition, subtraction, multiplication, and division of fractions.

They will also learn to extend division to

2-digit divisors, integrate decimal fractions into the place value system, and increase an understanding of operations with decimals to hundredths. They will develop a fluency with whole numbers and decimal operations. The semester begins with operations and expressions, moves into decimals and money, and ends with more work on fractions. Learners will gain valuable skills as they carry out activities that model real life situations like grocery shopping throughout the semester.

Semester B

Begins with students continuing to work with fractions. The first lesson focuses on ratios and challenges students to solve word problems using fractions and ratios in practical life situations. Learners continue to strengthen their math skills by studying mixed and fraction products, and fraction application, models, and division. Students will develop concepts in measurement of length, weight, and volume. They will find perimeter by adding fractions and mixed numbers using real-life examples. Learners will end the course with a focus on geometry. Varied types of instruction are used to enhance their learning, including video and real-life applications, activities, and creative projects.

Course Requirements

Grade Level - 5th Grade Duration - 2

Semesters

*Materials listed in Appendix A

SCIENCE

SCIENCE K A & B

Semester A

In Kindergarten Science, students in this course will use their senses to explore their world. Students experience nature walks, gardening, and imitative games by exploring varying concepts.

Semester B

Students in this course will continue using their senses to explore their world. Students experience nature walks, gardening, and imitative games by exploring varying concepts.

Course Requirements

Grade Level - Kindergarten

Duration - 2 Semesters

*Materials listed in Appendix A

SCIENCE 1 A & B

Semester A

In First Grade Science, students in this course will complete projects that are designed to allow for exploration and discovery. Students observe their surroundings and through observations of the natural world conduct inquiries into topics related to their healthy development.

Semester B

Students in this course will complete projects that are designed to allow for exploration and discovery.

Students observe their surroundings and through observations of the natural world conduct inquiries into topics related to their healthy development.

Course Requirements

Grade Level - 1st Grade Duration - 2

Semesters

*Materials listed in Appendix A

SCIENCE 2 A & B

Semester A

Second Grade Science introduces students to the process of observation and how important it is to the study of science. Learners will identify their five senses and why they are critical to observation. Students will use these observation skills throughout the course as they examine many different types of animals and their environments. Students begin by observing ants in their own environments and continue onto learning the different types of birds. Students will come to understand plant and animal rhythms and will perform small experiments with plants. Stories will be used to teach the students about nature and interactions that humans have with nature. They will continue to learn about animals and their characteristics habitats and needs.

Students will learn through video, audio stories, hands-on participation and observation with nature. The teachers will conduct live assessments for the topics that had been covered throughout the week's lessons. Grade 2 Science provides students with the opportunity to expand their minds and see for themselves the way that animals and nature are a part of their everyday lives.

Semester B

Semester B of Second Grade Science begins with the students learning the characteristics of the Weaverbird and Swiftlet bird. Learners will come to understand the different groupings of animals including those with vertebrates, invertebrates and warm and cold blooded animals, carnivores, herbivores and omnivores. Learners will be asked to recall the five senses that they discussed at the beginning of the course and compare them to the senses of animals. They will also learn how animals communicate and the relationship between animals and humans. The course ends with the students taking a closer look at the characteristics of reptiles, insects, birds of prey, and fish. At the close of the course students will have a deeper understanding and appreciation of animals and their habitats.

Course Requirements

Grade Level - 2nd Grade Duration - 2

Semesters

*Materials listed in Appendix A

SCIENCE 3 A & B

Semester A

Third Grade Science introduces students to experimentation as they journey through the earth and its many miracles. They will begin by learning about the earth, the sun and the moon. By participating in simple experiments students will explore the water cycle, gravity, the weather and its patterns, various types of terrain, and the role of plants in the production of oxygen and their importance to human survival. Learners will expand their knowledge through video, pictures, short readings, projects, and hands on experiments.

Learners will understand that experiments require the use of instruments, observation, recording, and drawing evidence-based conclusions. Grade 3 science provides students with the opportunity to expand their minds and see for themselves the way that science is a part of their everyday lives.

Semester B

Semester B of Third Grade Science begins with the students writing a poem about the seasonal cycles. The learners continue with root formation, the interdependence of plants and humans, biomes of land and sea, extreme weather, rocks, vertebrates and invertebrates, as well as extinction. All of these lessons are taught using video, projects, and experimentation.

Semester B asks learners to look a bit deeper into things they encounter such as the ocean and weather.

Course Requirements

Grade Level - 3rd Grade

Duration - 2 Semesters

*Materials listed in Appendix A

SCIENCE 4 A & B

Semester A

Fourth Grade Science includes the three main domains of science which are physical, life, and earth and space science. Learners will use various kinds of experimenting, including field studies, systematic observations, models, and controlled experiences. The course begins with the explanation of the scientific method which the students continue to use and build upon throughout the course. The big picture of the earth is examined as students review the life on planet earth, salt and fresh water, and fast and slow changes that occur on the planet. Students go beyond planet earth, though, as they study galaxies, the solar system and other planets. Students examine the ways in which forces and motion can be measured and the concept that a single kind of matter can exist as a solid, liquid or gas. Grade 4 Science uses many modes of instruction including video presentations, enrichment activities, and hands-on experimentation.

Semester B

Semester B of Grade 4 Science focuses on the relationship between heat, light, sound, and electrical energy and the way they can be transferred between each other. Learners distinguish between natural objects and objects made by humans as they examine technology and the role it plays in science. Students also look at life cycles of animals, plants, and humans and how they interact with each other. The course ends by looking at the ways that humans interact with the environment.

Students will use research skills, watch videos, and get their hands dirty in order to learn broader lessons that have to do with helping the environment.

Course Requirements

Grade Level - 4th Grade Duration - 2

Semesters

*Materials listed in Appendix A

SCIENCE 5 A & B

Semester A

Grade 5 Science continues to build on the science skills that have been obtained in years previous. There will be an emphasis on earth and space science, life science, and physical science. Students will begin the course by focusing on earth and space science by looking at the solar system and planets. Students will come to an understanding of the concept of the earth as a sphere and the earth's place in the solar system. The course continues with a focus on physical science and the different tools that can measure force, time, and distance. They will also grow in their understanding of how light and sound travel and interact with each other as well as the different types of energy. The semester concludes with a look into life science and the ways that organisms are interconnected. Instruction will include real life application, hands-on projects and assessments, and video and short research projects.

Semester B

Semester B puts great emphasis on life science and begins by focusing on the many ecosystems of the earth and the way that all parts of ecosystems depend on each other. Students will learn the different types of ecosystems that exist. They will learn that ecosystems change and how the changes affect their ability to support their populations. Learners will examine plants; that they have different structures and how those structures allow them to respond to different needs.

Students will also grow in their understanding of the importance of good nutrition to all living organisms. The course concludes with a look into the scientific process and the importance of investigations and conclusions in the study of science.

Instruction will include real life application, hands-on projects and assessments, and video and short research projects.

Course Requirements

Grade Level - 5th Grade Duration - 2

Semesters

*Materials listed in Appendix A

SOCIAL

SOCIAL STUDIES K A & B

Semester A

This course introduces students to their place in the community and the responsibilities of being a member of society. Great figures of U.S. history such as Pocahontas, George Washington and Abraham Lincoln are a focus of learning in this semester. Students will also learn about everyday heroes, the responsibilities of pet ownership, the importance of rules, table manners, and eating well. Students will practice the skill of retelling stories by recording audio, retelling the stories orally, or writing their observations. They will learn how to use details and basics of narratives. Projects will help students think about what pets need and defining emotions.

Semester B

In the second semester students are introduced to map reading skills. They will be taught to read maps of the U.S. and the world. From learning about location to how water is represented to floor plans, students are introduced to map skills that will last a lifetime. Students will also learn about symbols of the U.S. such as the American flag and the eagle. From there students learn about holiday, with a particular focus on Thanksgiving. Another focus is on currency. Learners will be introduced to what money is, how money can be spent, the power of buying locally and the difference between wants and needs.

Course Requirements

Grade Level - Kindergarten

Duration - 2 Semesters

*Materials listed in Appendix A

SOCIAL STUDIES 1 A & B

Semester A

In this semester, students begin to explore basic fundamentals of social studies including map skills, cardinal directions, and will begin to examine maps of the U.S. and the globe. Students will also be introduced to important figures from American history.

A skill that students will practice throughout the semester is retelling stories. Students may do this by recording audio, retelling the stories orally, or writing their observations. They will learn how to use details and basics of narratives. Students will also make maps of their homes, neighbourhoods, as well as a personal timeline.

Semester B

The second semester has a focus on introductory economics. They will study bartering, goods and services, jobs in the community, and how the marketplace works. Another focus is on positive character traits such as honesty, what the aspects of personal responsibility are, and how to help and respect others. Historic figures such as Clara Barton and characters from fiction and folklore are used as models for teaching positive traits. Students will continue practicing their five-finger retelling skill with assignments on Martin Alonso and George Washington.

Projects will help students think about thoughtful words, showing respect, and being honest. Learners will write, draw, and perform in these projects.

Course Requirements

Grade Level - 1st Grade Duration - 2

Semesters

*Materials listed in Appendix A

SOCIAL STUDIES 2 A & B

Semester A

In second grade, students in this course will begin to explore the basic fundamentals of social studies including culture, geography, and economics. Students will explore the Ancient Cultures of China, Africa, and the Celts. Students will explore these cultures through ancient folk tales and fables. Learners will create a photo book that describes the significant events in their own life. They will also examine the importance of geography and direction. Students will learn how to locate boundaries while using a world map. Students will identify the places that were discussed in the previous lessons including Africa, China, and the British Isles. They will develop a rudimentary understanding of map symbols as they locate continents, the equator, and oceans. Students will also learn to identify on a road map where they live, rivers, mountain ranges and lakes nearby their homes. Learners will follow a step-by-step approach for successfully completing each lesson, which includes storytelling, repetition, projects, arts and crafts, and videos.

Semester B

The second semester begins by introducing learners to economics and the role that money plays in every civilization. They will take a closer look at the economy of the Celtic people. Students learn difference between natural, human, and capital resources. Learners will begin to understand the exchange of money for goods and services. They will gain a basic understanding of what scarcity is and why it is good that we do not always get everything that we want. Students will understand these concepts by drawing upon their understanding of the desires/wishes in their own lives. Students will also learn about desirable human qualities through the use of fables such as "The Boy Who Cried Wolf." Learners will look at individuals who have made a Difference in the greater community such as Rosa Parks and Susan B. Anthony. The end of the course asks learners to examine the diversity of the community they live in. Students should gain an appreciation for the differences around them, and how having respect for others will contribute to society as a whole.

Course Requirements

Grade Level - 2nd Grade Duration - 2

Semesters

*Materials listed in Appendix A

SOCIAL STUDIES 3 A & B

Semester A

In third grade, social studies students will begin to explore the basic fundamentals of social studies including geography, civics, and economics. Learners will begin by looking at the beginning of civilization and examining the ancient Hebrew civilization, the Phoenicians, and the Kush tribe of ancient Africa. They will then move on to examining the Native American tribes of the Cherokee, Sioux, and Hopi.

Students will also look at the first explorers of the Americas and learn about the beginning of the United States. In the first semester students will learn important geographical factors in the ancient civilizations, Native American tribes and in the developing United States. Students will increase their skills by creating maps and looking at the landscapes. They will take a close look at their own personal heritage by mapping their ancestry. Learners will follow a step-by-step approach for successfully completing each lesson, which includes storytelling, repetition, projects, arts and crafts, and videos

Semester B

The second semester begins with introducing learners to economics and the role that money plays in every civilization. Students learn the difference between natural, human, and capital resources. They also examine the production of goods, trade, specialization, and interdependence, and come to understand the importance that each individual plays in a society's economy. Learners are introduced to Civics by discussing the governmental structure of the Ancient Hebrews and Phoenicians. The purpose and importance of laws and how they are enacted as well as the establishment of government are shown through stories of the Ancient Phoenicians and Native Americans. The course ends by discussing the purpose and nature of government as it relates to the United States. Students will continue practicing their five-finger retelling skill with assignments on Martin Alonso and George Washington.

Projects will help students think about thoughtful words, showing respect, and being honest. Learners will write, draw, and perform in these projects.

Course Requirements

Grade Level - 3rd Grade Duration - 2

Semesters

*Materials listed in Appendix A

SOCIAL STUDIES 4 A & B

Semester A

In grade 4 Social Studies learners will use their understanding of social studies skills to explore their local states and communities. They will begin the course by learning the topography of their particular area.

Students will do this by creating a detailed landscape model. This project will be hands-on and require students to do research of their communities. Learners will also research local animals and gain an understanding of local Native American ground in their part of the country. This course walks students through the research and report writing steps that will be vital to their continuation of social studies. They will continue to focus on their individual states as they do projects based on local geography, state capitols, as well as nearby natural wonders and landforms. The semester concludes with an introduction to Colonial history. The course uses video, enrichment activities, and project-based learning to enhance the student's social studies skills.

Semester B

Semester B of grade 4 Social Studies picks up where semester A left off by looking further into frontier life of the early American settlers. Students examine the difficulties that early settlers faced when reaching America.

They apply knowledge of historical thinking, chronology, turning points, individuals, and themes of local and United States history in order to understand how history has shaped the present and will shape the future. They will continue the focus of local history by doing research projects on settlers from their particular states and on how their state became a part of the Union. The transition from the pony express to the transcontinental railroad is a major theme that shows how quickly the United States developed. Students end by creating a time capsule that demonstrates what was important to early settlers from their particular states.

Course Requirements

Grade Level - 4th Grade Duration - 2

Semesters

*Materials listed in Appendix A

SOCIAL STUDIES 5 A & B

Semester A

Grade 5 Social Studies combines the study of United States History through the Civil War with a geographical exploration of the United States and what it has to offer. Students will use their understanding of social studies skills and concepts as they study the development of the United States. The first semester begins with early settlements of North America and allows learners to take an in-depth look into what life was like for colonists and Native Americans. Students will come to understand the causes of the Revolutionary War and the people that played a significant role in it. The semester ends with students examining the new nation and what life was like for European immigrants and those on the frontier.

Students will learn through the use of video, journaling, and varied types of creative instruction.

Semester B

Semester B begins with an exploration of the west and what life was like for those looking to find gold. Learners will then look at slavery and what led to the Civil War. The course then takes a departure from American history and takes a more in-depth look into cultures, people, and the geography of the United States from past to present. Learners will have the opportunity to explore the country region by region and come to appreciate all that it has to offer.

Students will conclude the course by planning and describing a trip they would like to take to a particular place within the United States. Students will take a hands-on approach as they get to know the geography, climate and culture of their country. Video, creative projects involving technology, journaling, and varied assessments will be used throughout the course.

Course Requirements

Grade Level - 5th Grade Duration - 2

Semesters

*Materials listed in Appendix A

ELECTIVES

ARTS & CRAFTS K A & B

Semester A

This course provides a foundation for children's inherent artistic imagination and creativity by sharing the basics of art and making art. Students are introduced to lines, circles, recognizing and using shapes, creating a collage and concepts such as symmetry. Young artists will also explore a variety of media such as pastels, watercolours, crayons, tempera, and pencil drawing. A particular emphasis is on creating works of art. In this semester students will work with clay, draw with pastels, make fingerprint flowers, draw barns and animals using shapes and recognizing lines using the student's name.

Semester B

Emphasis in the second semester will be placed on applying what the students have learned to make more detailed works of art. This semester, students will be creating a bird feeder, making puppets, crafting paper flowers, making potpourri, a heart collage, constructing a wind chime, and pressing flowers.

Course Requirements

Grade Level - Kindergarten Duration -

2 Semesters

*Materials listed in Appendix A

ARTS & CRAFTS 1 A & B

Semester A

This course provides a foundation for children's inherent artistic imagination and creativity by sharing the basics of art and making art. Students are introduced to primary colours, the colour wheel, shapes such as lines and circles, and concepts such as symmetry. Young artists will also explore a variety of media such as pastels, watercolours, crayons, tempera, and pencil drawing. A particular emphasis on this course is on creating works of art. In this semester students will work create a water colour tree, use a printing block, produce weather painting, and produce a watercolour painting.

Semester B

Emphasis in the second semester students will be placed on applying what the students have learned to make more detailed works of art. In this semester students will be creating colourful calendars, stencilling, fashioning intricate flower drawings, revisiting symmetrical objects, and mixing colours. This course will provide students with opportunities to experience many different forms of arts and to express their imagination while learning valuable skills.

Course Requirements

Grade Level - 1st Grade Duration - 2

Semesters

*Materials listed in Appendix A

ARTS & CRAFTS 2 A & B

Semester A

The student will see the artistic expressions and inventions from cultures around the world that are part of the history of mankind and development. Modern media provides many opportunities to the student. However, the student has the benefit to experience it more closely in art classes.

Repetition, important for young children, is evident in these lessons. Repetition is provided at different age levels while using various tools and mediums. Home, family and friends, pets, and toys are the young student's world. The student will begin with their personal world as they think they know it, and discover so much more about it. These lessons provide a deeper awareness of the world immediately around them, and eventually their journey will grow from there.

Each student is an individual with unique ideas and talents. Our goal is to provide each student an opportunity for personal growth for themselves and the world in which we live.

Semester B

In semester B of Arts and Crafts, students will continue to explore their creativity while also learning ways that art can be functional and add to objects and materials that we use on an everyday basis. Students will begin the semester by creating a 12-month calendar. The students will focus on new month each week. They will also be able to pick a different clay project each week from The Book of Nature Crafts and/or Clay Fun. Once students have completed the calendar project they will begin to work on form drawing and make a seasonal chart using objects familiar with each of the four seasons. The course concludes with students working with wet crayons and wet paper. This course will provide students with opportunities to experience many different forms of arts and to express their imagination.

Course Requirements

Grade Level - 2nd Grade Duration - 2

Semesters

*Materials listed in Appendix A

ART LEVEL 3*

Semester A

The Art program provides an opportunity for children to develop the use of their senses directly and encourages the student to further develop their personal source of knowledge and creativity. Art offers the student the opportunity to experience a connection between the verbal and visual; logic and emotions; imagination and reality. The student is guided and encouraged to express feelings and emotions in their drawings and with colour while promoting self-esteem and self-awareness in

personal fulfilment. The imagination in children is encouraged in art. However, it will assist them in their other studies as well. This program provides an opportunity for self-discipline through instruction and cooperation while providing the student with an opportunity for self-expression by using imaginative thinking for creative solutions. The student is introduced to some of the artistic expressions and techniques from cultures around the world. Modern technology provides opportunities for the student to observe this history. The art student will use some of these elements themselves in their own artwork. Repetition, important for children, is provided at different age levels while using various tools and mediums. Home, family, traditions, friends, pets, and toys are the young student's world. The student will explore what they know of their world. These lessons provide a deeper awareness of the world immediately around them where their journey is just beginning.

Course Requirements

Grade Level - 3rd Grade Duration

- 1 Semester

*Materials listed in Appendix A

ART LEVEL 4*

The Art program provides an opportunity for children to develop the use of their senses directly and encourages the student to further develop their personal source of knowledge and creativity. Art offers the student the opportunity to experience a connection between the verbal and visual; logic and emotions; imagination and reality. The student is guided and encouraged to express feelings and emotions in their drawings and with colour while promoting self-esteem and self-awareness in personal fulfilment. The imagination in children is encouraged in art. However, it will assist them in their other studies as well. This program provides an opportunity for self-discipline through instruction and cooperation while providing the student with an opportunity for self-expression by using imaginative thinking for creative solutions. The student is introduced to some of the artistic expressions and techniques from cultures around the world. Modern technology provides opportunities for the student to observe this history. The art student will use some of these elements themselves in their own artwork. Repetition, important for children, is provided at different age levels while using various tools and mediums. Home, family, traditions, friends, pets, and toys are the young student's world. The student will explore what they know of their world. These lessons provide a deeper awareness of the world immediately around them where their journey is just beginning.

Course Requirements

Grade Level - 4th Grade Duration

- 1 Semester

*Materials listed in Appendix A

HEALTH K-1 A & B

Elementary Health K-1 helps young learners establish a basic understanding of the aspects of health. Students focus on the various aspects of their health and how they can make healthy choices. Topics of study include personal safety, healthy behaviours, nutrition, communication, disease prevention, basic anatomy and physiology, and values of cooperation and teamwork.

Course Requirements

Grade Level - Kindergarten - 1st Grade

Duration - 2 Semesters

*Materials listed in Appendix A

HEALTH 2-3 A & B

Elementary Health 2-3 helps young learners establish a basic understanding of the aspects of health. Students focus on the various aspects of their health and how they can make healthy choices. Topics of study include personal safety, healthy behaviours, nutrition, disease prevention, conflict resolution, basic anatomy and physiology, and the values of respect and cooperation.

Course Requirements

Grade Level - 2nd - 3rd Grade Duration - 2

Semesters

*Materials listed in Appendix A

KEYBOARDING*

The Keyboarding curriculum introduces new keys by rows, whereby students first learn the middle row, then the top row and the bottom row of the keyboard. The content is designed with a strong focus on sight and high frequency words. This course assumes no keyboarding experience and will guide students through efficiently using keyboard.

Course Requirements

Grade Level - 3rd - 5th Grade

Duration - 1 Semester Materials -

None

Tech Requirements - Students will need a Computer or Laptop for this course. Tablets are not sufficient.

RECORDERS LEVEL 1*

This course combines music and performing arts. Students will experience and learn new songs and perform them using self-expression and physical movement. In addition, the student will begin learning how to play the recorder.

Course Requirements

Grade Level - Kindergarten - 3rd Grade Duration - 1

Semester

Materials - Recorder

SCRATCH CODING*

Scratch coding is a program developed by MIT teaching students the basics of how computers think. This course will introduce students to real coding programs and allow them to drag and drop coding blocks creating a fully functional program. The simple user interface and tutorials allow students to quickly create and run their code to see its results. This course assumes no prior computer coding knowledge and includes self-graded multiple-choice tests and quizzes.

Course Requirements

Grade Level - 3rd – 5th Grade

Duration - 1 Semester Materials -

None

Tech Requirements - Students will need a Computer or Laptop for this course. Tablets are not sufficient.

ELECTIVES - WORLD LANGUAGES

INTRODUCTION TO SPANISH A & B

The Elementary Spanish Introductory Level allows students to explore the basics of the Spanish language. Students will learn about the culture of Mexico. They will also learn basic vocabulary through interactive games, videos, and different forms of practice activities.

Course Requirements

Grade Level – Kindergarten Grade

Duration - 2 Semesters Materials -

None

SPANISH LEVEL 1 A & B

In Spanish 1, students will continue to learn the basics of Spanish including greetings and introductions, numbers 11-20, days of the week, clothing, Spanish culture, flamenco, and weather. They will expand basic vocabulary and learn common phrases and questions.

Course Requirements

Grade Level – 1st Grade Duration - 2

Semesters Materials – None

SPANISH LEVEL 2 A & B

The Elementary Spanish Level Two course allows students to learn new Spanish vocabulary. The course also begins to teach letter sounds and syllables in the target language. Students will explore the culture and traditions of Peru. They will also learn new vocabulary and more about the Peruvian culture through interactive games and different forms of practice activities.

Course Requirements

Grade Level – 2nd Grade Duration - 2

Semesters Materials - None

SPANISH LEVEL 3 A & B

The Elementary Spanish Level Three course dives deeper into the Spanish language. Students will explore the culture of the Caribbean Islands. They will begin to learn about letter combinations/blends and their syllables as well as new vocabulary. Students will be introduced to basic Spanish grammar rules. They will also be focusing on asking and answering questions in the target language. They will be able to participate in interactive games and activities.

Course Requirements

Grade Level - 3rd Grade Duration - 2

Semesters Materials – None

SPANISH LEVEL 4 A & B

The Elementary Spanish Level Four course goes deeper into learning the Spanish language. Students will build their Spanish vocabulary and learn grammar rules that apply to the target language. They will explore countries in South America, along with their cultures and traditions. Students will learn about seasons and how seasons are opposite in Patagonia. They will be engaged in learning the Spanish culture and language through interactive games and activities.

Course Requirements

Grade Level – 4th Grade Duration - 2

Semesters Materials - None

SPANISH LEVEL 5 A & B

The Elementary Spanish Level Five course takes students on a journey to countries in Central America. Students will be immersed in the Central American culture and language. Students will dive deeper into grammar rules that apply in the target language. They will learn to write simple sentences in Spanish. Students will enjoy learning the language through interactive games and activities.

Course Requirements

Grade Level - 5th Grade Duration - 2

Semesters Materials - None



COURSE LIST

LOWER SCHOOL

LANGUAGE ARTS
Language Arts K A & B
Language Arts 1 A & B
Language Arts 2 A & B
Language Arts 3 A & B
Language Arts 4 A & B
Language Arts 5 A & B
MATH
Math K A & B
Math 1 A & B
Math 2 A & B
Math 3 A & B
Math 4 A & B
Math 5 A & B
SCIENCE
Science K A & B
Science 1 A & B
Science 2 A & B
Science 3 A & B
Science 4 A & B
Science 5 A & B
SOCIAL STUDIES
Social Studies K A & B
Social Studies 1 A & B
Social Studies 2 A & B
Social Studies 3 A & B
Social Studies 4 A & B
Social Studies 5 A & B

ELECTIVES
Arts & Crafts K A & B
Arts & Crafts 1 A & B
Arts & Crafts 2 A & B
Art Level - 3*
Art Level - 4*
Health K - 1 A & B
Health 2 - 3 A & B
Keyboarding*
Recorders Level 1*
Scratch Coding*
ELECTIVES - WORLD LANGUAGES
Introduction to Spanish A & B
Spanish Level 1 A & B
Spanish Level 2 A & B
Spanish Level 3 A & B
Spanish Level 4 A & B
Spanish Level 5 A & B
KHDA COURSES (UAE STUDENTS ONLY)
UAE Social Studies
UAE Moral Education
Non-Native/ Native Islamic Studies
Non-Native/ Native Arabic



LANGUAGE ARTS

LANGUAGE ARTS 6 A & B

Semester A

English 6 is divided into two main categories: Storytelling and Heroes. Assignments include writing a narrative essay and completing a book report.

Semester B

Semester B of English 6 covers the main topics of Myth and Poetry. Student assignments include writing an original fairy tale and composing a poem.

Course Requirements

Grade Level - 6th Grade Duration - 2

Semesters Materials - None

LANGUAGE ARTS 7 A & B

Semester A

Students explore informational texts, including biographies, personal accounts of events, presidential speeches, persuasive letters, and differences between types of musical genres. Readings include texts about historical figures, such as *The Story of My Life* by Helen Keller, *Jane Goodall*, and *Zora Neale Hurston* to demonstrate concepts such as explicit and implicit information, central ideas and key details, and claims and arguments.

Semester B

Students analyse literary texts from novels, short stories, fairy tales, poems, and plays. Readings include *Alice's Adventures in Wonderland* by Lewis Carroll, excerpts from *Black Beauty*, and poetry by Emily Dickinson, Robert Frost, William Wordsworth to demonstrate concepts such as comparing how written texts are portrayed in film or audio and ways to understand explicit and implicit information, theme, characters, plot, poetic and dramatic techniques, and figurative language.

Course Requirements

Grade Level - 7th Grade Duration - 2

Semesters Materials - None

Semester A

In this exciting course, students will master the subtle and complex art of the Standard American English writing style, allowing them to express their ideas more clearly and effectively than ever before. As students become experts on sentence structure, verb tenses and punctuation, they'll learn not only what the grammar rules are, but the logic behind them. Alongside this rigorous language instruction, students will analyse the poetry of legendary writers such as Seamus Heaney, Robert Frost, and Jane Kenyon. In addition, they will practice effective research techniques and prepare complete and polished reports and essays. Their work will also cover formal letter writing, biographical essays, and creating a bibliography. Students will use strategies such as the Sign and Design Mind and Clustering to help form their ideas and develop stories and arguments. Entertaining videos and diverse reading selections provide a wealth of information. Peer discussions and teacher feedback also contribute to help students learn the processes needed to become more effective writers.

Semester B

Students explore literary and informational texts, including novels, short stories, poems, articles, and political speeches. Readings include excerpts from the novels *Fahrenheit 451*, *Hatchet*, and *Black Beauty*, informational texts about topics such as global warming, fast food, the widespread presence of corn in food, and how sleep affects learning ability, infographics, and videos to demonstrate concepts such as explicit and implicit information, theme, central idea, figurative language, grammar, usage, punctuation. Writings include informational and argument.

Course Requirements

Grade Level - 8th Grade Duration - 2

Semesters Materials - None

INTENSIVE READING*

This course explores foundational reading skills for middle-school students to remediate gaps in reading fluency, comprehension, vocabulary and vocabulary skills, grammar skills, and writing fluency through responses to a variety of literary and informational texts.

Course Requirements

Grade Level - 6 - 8

Duration - 1 Semester

Materials - None

MATH

MATH 6 A & B

Semester A

Students build on previously learned concepts such as adding, subtracting, multiplying, and dividing and deepening knowledge of arithmetic with fractions, decimals, and negative numbers to solve real-world problems. Topics include: statistics, ratios, unit conversions, geometry, writing and evaluating expressions with variables and exponents, and working with equations.

Semester B

Students build on concepts such as positive and negative integers and fractions to learn about rational numbers and how to compare them. Topics include: finding the distance between points on the number line and in the coordinate plane, solving geometry problems, relationships between variables and how to represent them, ratios and unit rates, solving real-world problems, data and how to display and mathematically describe data.

Course Requirements

Grade Level - 6 Duration - 2

Semesters Materials - None

MATH 7 A & B

Semester A

Students explore adding and multiplying rational numbers by using number lines, rules, and properties. Topics include how to solve problems by finding and comparing unit rates, writing expressions using properties, writing and solving simple linear equations using different methods, probability and statistics to interpret and calculate simple probabilities and learn about populations and samples. Geometry topics include solving problems involving scale drawings, circles, and angle relationships.

Semester B

Students explore subtracting and dividing rational numbers by using different methods to perform four operations. Topics include: interpreting proportional relationships and equivalent expressions, writing and solving linear equations and inequalities to solve real-world problems, comparing two data sets of random samples using center values and variability measures to make conclusions about populations. Geometry topics include solving problems that involve the area, surface area, volume, and cross-sections of two- or three-dimensional objects.

Course Requirements

Grade Level - 7 Duration - 2

Semesters Materials - None

MATH 8 A & B

Semester A

Students explore rational and irrational numbers, solving linear equations from contextual situations, and analysing properties of functions with a focus on linear functions, and scientific notation. Geometric topics include rigid transformations on figures and proving congruence of figures through a series of rigid transformations.

Semester B

Students explore multi-step equations and proportions, applies knowledge of proportional relationships to geometry to perform transformations on figures, and prove similarity of figures through a series of transformations. Topics included: analysing linear relationships and functions, solving systems of linear equations using different methods, application of algebraic skills to statistics, analyse and interpret patterns in bivariate data, and finding volumes of circular three-dimensional objects.

Course Requirements

Grade Level - 8 Duration - 2

Semesters Materials - None

PRE-ALGEBRA*

Pre-Algebra is a one-semester math course to build an algebraic foundation to prepare students for Algebra I. Topics included: reviewing integers and rational numbers, properties of numbers and working with exponents and roots, mastering the order of operations, variables, how to simplify expressions and solve

multi-step equations, lines and linear equations, ordered pairs, the coordinate plane, and graphs.

Course Requirements

Grade Level - 8 Duration - 1

Semester Materials - None

SCIENCE

SCIENCE 6 A & B

Semester A

Students investigate the interaction between systems and what factors affect their growth, and the life cycles of plants and animals to find out how they reproduce plants and animals. Topics include: cells, the hierarchy of organization, covering tissues, organs, and organ systems.

Semester B

Students explore topics through many creative and interactive assets, including virtual labs and review games to immerse themselves in 21st-century online learning. Topics include: energy and its transformation, matter, natural cycles, the effect of the sun on ocean and air currents, different types of pollution, and the effects of greenhouse gases on the Earth's climate.

Course Requirements

Grade Level - 6 Duration - 2

Semesters

*Materials listed in Appendix A

SCIENCE 7 A & B

Semester A

Students examine concepts from the fields of chemistry, biology, and ecology. The relationship between matter, energy, and chemical reactions is explored to understand cellular respiration and photosynthesis, while synthetic materials are analysed to see how they impact society.

Semester B

Students investigate concepts from ecology and geology to explore the interactions between and among organisms in an ecosystem. Topics include types of rocks, the rock cycle, and Earth's resources to explore how Earth's processes can lead to natural hazard events and severe weather, and then discover how technology can help during disasters, as well as other benefits of technology.

Course Requirements

Grade Level - 7 Duration - 2

Semesters

*Materials listed in Appendix A

SCIENCE 8 A & B

Semester A

Students examine life science concepts from biology, ecology, environmental sciences, and explores scientific process to investigate the questions of ecology and genetic technology.

Semester B

Students examine physical science, such as physics and space science, and the history of science to highlight influential scientists.

Course Requirements

Grade Level - 8 Duration - 2

Semesters

*Materials listed in Appendix A

SOCIAL STUDIES

SOCIAL STUDIES 6

Semester A

Students explore the geographical, social, economic, and political foundations of early civilizations in Mesopotamia, Egypt, Ancient Israel, and India as they shift from nomadic societies to agricultural societies. The study of these civilizations includes the impact of geography, early history, cultural development, and economic change. The geographic focus includes the study of physical and political features, economic development and resources, and migration patterns.

Semester B

Students explore the geographic, political, economic, and cultural development of ancient Greece, Rome, and China and applies historical thinking skills to understand implications of ancient literature, art, and philosophy on later Western culture. The course examines the birth and spread of Judaism, Christianity, Taoism, and Confucianism

Course Requirements

Grade Level - 6 Duration - 2

Semesters Materials – None

SOCIAL STUDIES 7

Semester A

Students explore the social, cultural, and technological developments occurring concurrently in Europe, Africa, and Asia in the years AD 500–1789. They also examine how archaeologists and historians uncover the past.

Semester B

Students explore the growing economic interaction among civilizations during the Renaissance, Reformation, the Age of Exploration, and how the Enlightenment gave rise to democratic ideas that still resonate today. Topics include: the exchange of ideas, beliefs, technologies, and commodities inspire the Enlightenment philosophy and the interest in reason and authority, natural rights of human beings, the divine right of kings, experimentalism in science, and the dogma of belief.

Course Requirements

Grade Level - 7 Duration - 2

Semesters Materials – None

SOCIAL STUDIES 8

Semester A

Students explore early American history from pre-Columbian era and closely examine the evolution from the British Colonies to the creation of the United States. A close look at the ideology of the framing documents and nature of the American republic set against the backdrop of the challenges of growth and sectional divisions and conflict.

Semester B

Students explore westward expansion, early Spanish missions in western North America through to Reconstruction, the Second Industrial Revolution, and connect these events to how policies and cultures are shaped.

Topics include: causes and effects of the Texas Revolution and the Mexican American War; the California gold rush; American Civil War, Indian Wars of the 19th Century.

Course Requirements

Grade Level - 8 Duration – 2

Semesters Materials – None

ELECTIVES

WORLD LANGUAGES

MS FRENCH 1 A & B

French 1 focuses on developing listening skills by repeated exposure to the spoken language. Speaking skills are encouraged through recommended assignments using voice tools. Reading and writing skills, as well as language structures, are practiced through meaningful, real-life contexts. The use of technology enhances and reinforces authentic language development and fosters cultural understandings through exposure to native speakers and their daily routines.

Course Requirements

Grade Level - 6 - 8 Duration - 2

Semesters Materials - None

MS FRENCH 2 A & B

Semester A

Semester A focuses on the continuation and enhancement of language skills presented in Level 1. Vocabulary and grammar structures are revisited and expanded to provide students an opportunity to move towards an intermediate comprehension level. Speaking and listening skills are enhanced through recommended real-life voice activities. Listening skills are honed through online dialogues. Reading and writing skills are developed through access to completion of meaningful

activities, reading of culturally-related articles of interest and responding to reading in the target language. The use of technology enhances and reinforces authentic language development and fosters cultural understandings through exposure to native speakers and their daily routines.

Semester B

Semester B continues the enhancement of language skills. Vocabulary and grammar structures are revisited and expanded as students explore other

French-speaking areas. Speaking and listening skills are enhanced through recommended real-life voice activities. Listening skills are honed through online dialogues. Reading and writing skills are developed through access to completion of meaningful activities related to travel, to the Olympics, to natural disasters, and to the space program. Reading of culturally related articles of interest and responding to reading in the target language, along with the use of technology, reinforces authentic language development and fosters cultural understanding through exposure to native speakers and their daily routines.

Course Requirements

Grade Level – 6 - 8 Duration - 2

Semesters

Materials - Semester B only - Joie De lire! Intermediate Reader

Level 2. July 19, 2002 By Rinehart and Winston Holt

Prerequisites - French 1

MS GERMAN 1 A & B

Semester A

The German 1 course is an introductory course teaching basic comprehension and communication in German. It coordinates the study of language with culture through the use of video, audio and media production. This course assumes no prior knowledge of the German language. It introduces the fundamentals of conversational and grammatical patterns of the German language with presentations to show the material.

Students who complete the course successfully will begin to develop a functional competency in the four primary language areas: speaking, reading, listening, and writing, while establishing a solid grammatical base and exploration into German culture.

Semester B

The second semester course will expand on the knowledge gained from German 1A and further develop their skills in pronunciation, grammar skills, grammar structures and vocabulary. Oral practice (via Voice Tools), homework assignments, games, songs, watching videos, quizzes, tests, projects, and other activities such as writing wikis and journal entries, will be emphasized to accomplish this goal. The different cultures of the German-speaking world are emphasized through readings, videos, and other activities. Taking the time to learn another language is a mind-expanding activity that can open up a world of opportunities and advantages.

Course Requirements

Grade Level - 6 - 8 Duration - 2

Semesters Materials – None

MS GERMAN 2 A & B

Semester A

In this course, students build on grammar and language skills that they acquired during their German 1 course. While reviewing basic grammar skills, (present and past tenses), students learn and study stem-changing verb conjugation and explore cultural themes regarding current events, famous German people, music, and famous festivals.

Semester B

In the second semester course, students increase their proficiency in being able to communicate by forming more complex German sentences in a variety of tenses using all four cases (Nominative, Accusative, Dative and Genitive). The variety of topics increases also, from exploring different careers to discussing relationships. Cultural themes are entwined throughout this course related to going shopping, to going to the zoo and also to travel throughout the German-speaking world.

Course Requirements

Grade Level – 6 - 8 Duration - 2

Semesters Materials - None

Prerequisites - German 1

MS SPANISH 1 A & B

Semester A

This course introduces students to the beauty of the Spanish language and the richness of its diverse cultures. In the Spanish 1 course, students will learn beginning grammar and vocabulary skills to help build basic fluency and language proficiency. They will explore the culture of Spanish-speaking countries through engaging interactive games, videos, and audio recordings and apply their learning through written practice, listening, and speaking exercises.

Semester B

Students explore how to discuss school subjects, professions, and daily routines, as well as illness and injury, shopping, and money through reading, writing, listening, and speaking. The course also explores cultures of some Spanish-speaking countries, such as Venezuela, Chile, Ecuador, Guatemala, and Cuba.

Course Requirements

Grade Level - 6 - 8 Duration - 2

Semesters Materials – None

MS SPANISH 2 A & B

Semester A

In Spanish 2, students continue learning grammar and vocabulary skills to help build basic fluency and language proficiency. They will explore more of the culture of Spanish-speaking countries through engaging interactive games, videos, and audio recordings and apply their learning through written practice, listening, and speaking exercises. Topics include family traditions in Spanish-speaking countries; likes and dislikes; sports and pastimes, and travel. Students will learn more about conjugating verbs, as well as using prepositions and infinitives.

Semester B

Students continue to build reading, writing, listening, and speaking skills in order to discuss transportation, extracurricular interests, professions, cuisine, clothing, health, and technology. Topics included: present, past, future, and conditional tenses, present subjunctive mood, explores cultures of some Spanish-speaking countries, such as the Dominican Republic, Equatorial Guinea, Honduras, Uruguay, and Panama.

Course Requirements

Grade Level – 6 - 8 Duration - 2

Semesters Materials - None

Prerequisites - Spanish 1

ELECTIVES

MS 2D STUDIO ART*

Do you like to draw, paint, or take pictures? Whatever medium you prefer, this course will teach you the design elements and principles needed to create a work of art and explore your artistic inspirations. You'll also travel back in time to look at art in different cultures and learn about the art of critiquing. Let's turn your creative dreams into reality!

Course Requirements

Grade Level – 6 - 8 Duration - 1

Semester Materials - None

MS CAREER EXPLORATION*

How do you pick a career path when you're not sure what's even out there? This course allows you to begin exploring options in fields such as teaching, business, government, hospitality, health science, IT, and more! You'll align your interests, wants, and needs to career possibilities, including the required education for each. Let's find a pathway that works for you.

Course Requirements

Grade Level - 6 - 8 Duration - 1

Semester Materials – None

MS EXPLORING MUSIC*

What comes to mind when you hear the word 'music'? Do you think about your favourite band or artist? In this course, you'll learn about how we hear music; how music affects our lives; essential elements of music like rhythm, pitch, and harmony; different musical genres; singing and your voice; various instruments; music composition; and the history and culture of music over the years.

Course Requirements

Grade Level - 6 - 8 Duration - 1

Semester Materials – None

MS HEALTH*

This course explores how behavioural choices, such as nutrition and physical activity, affect health, then provides information to make healthy choices. Topics include: nutrition and physical activity; growth, development, and sexual health; safety and injury prevention; alcohol, tobacco, and other drugs; mental, emotional, and social health; and personal and community health.

Course Requirements

Grade Level - 6 - 8 Duration - 1

Semester Materials - None

MS PHOTOGRAPHY*

Students explore proper use of photography equipment, how to build a portfolio of work, and describes the steps to starting a career in this field. Topics include: the habits and etiquette of the profession.

Photography equipment is not needed. Practice is offered through digital simulations.

Course Requirements

Grade Level - 6 - 8 Duration - 1

Semester

Materials - digital camera or smartphone with apps

MS PHYSICAL EDUCATION*

Students explore the importance of physical activity. Topics include: sports and recreation, sportsmanship, leadership, and inclusivity, safety while being active, and developing lifelong healthy habits, such as daily activity.

Course Requirements

Grade Level - 6 - 8 Duration - 1

Semester Materials - None



COURSE LIST MIDDLE SCHOOL

LANGUAGE ARTS

Language Arts 6 A & B

Language Arts 7 A & B

Language Arts 8 A & B

Intensive Reading*

MATH

Math 6 A & B

Math 7 A & B

Math 8 A & B

Pre-Algebra*

SCIENCE

Science 6 A & B

Science 7 A & B

Science 8 A & B

SOCIAL STUDIES

Social Studies 6 A & B

Social Studies 7 A & B

Social Studies 8 A & B

ELECTIVES - WORLD LANGUAGES

MS French 1 A & B

MS French 2 A & B

MS German 1 A & B

MS German 2 A & B

MS Spanish 1 A & B

MS Spanish 2 A & B

ELECTIVES

MS 2D Studio Art*

MS Career Exploration*

MS Exploring Music*

MS Health*

MS Photography*

MS Physical Education*

KHDA COURSES (UAE STUDENTS ONLY)

UAE Social Studies

UAE Moral Education

Non-Native/ Native Islamic Studies

Non-Native/ Native Arabic



HIGH SCHOOL

9-12

To graduate and receive a High School diploma, students must earn 24 credits in the following subjects. A student must be FULL-TIME for their senior year (the two last semesters of a student's senior year must be consecutive) to be eligible for a diploma.

Subjects	Credits
English	4 credits
Math	4 credits (Algebra 1 and higher)
Science	4 credits (must include 2 Lab Science credit)
History and Social Science	4 credits
World Language	2 credits (must be 2 credits of the same language, non-English language course)
Physical Education	0.5 credits
Health	0.5 credits
Electives	5 credits
Total	24 Credits

*Students enrolled in ISBerne should contact the registrar for current graduation requirements.

LANGUAGE ARTS

LANGUAGE ARTS 9 A & B

Semester A

Students explore reading, writing, and analysis using both informational and literary texts, as well as comparison of texts in different mediums. Readings include *The Princess and the Goblin* by George MacDonald, among others, to demonstrate understanding of textual evidence, themes, central ideas, inferences, word choice, and figurative and connotative language, and grammar and usage. Writings include a personal narrative (memoir) and a literary analysis.

Semester B

Students explore reading, writing, and analysis using both informational and literary texts. Readings include *Anthem* by Ayn Rand, among other texts of varying time periods to demonstrate concepts such as textual evidence, themes, central ideas, characters, inferences, rhetorical techniques, structure and style, and arguments and claims. Writing topics include grammar, usage, punctuation, spelling, style manuals, phrases, and clauses, culminating in an informational essay and an argument essay.

Course Requirements

Grade Level - 9 Duration - 2

Semesters Materials - None

LANGUAGE ARTS 10 A & B

Semester A

Students examine reading, writing, and analysis of informational texts, argument texts, and videos to demonstrate understanding of explicit and inferred meaning, textual evidence, central ideas, arguments and claims, organizational structures, figurative and rhetorical language, and the effect of word choice on tone. Skill building focuses on spelling, grammar, usage, punctuation, domain-specific vocabulary, context clues, and affixes. Writing topics include an informational essay and an argument essay.

Semester B

Students explore reading, writing, and analysis of literary texts from around the world and across history. Readings include *Antigone* by Sophocles, among others, to demonstrate understanding of textual evidence, themes, inferences, characterization, figurative language, figures of speech, and literary devices, as well as building about foundational knowledge of context clues, word nuances, affixes, phrases, clauses, and parallel construction. Writing topics include a literary analysis essay and a personal narrative essay.

Course Requirements

Grade Level - 10 Duration - 2

Semesters

Prerequisites - Language Arts 9 or equivalent Materials - None

LANGUAGE ARTS 11 A & B

Semester A

Students examine reading, writing, and analysis using both informational and argument texts. Readings include seminal US texts such as "What to the Slave Is the Fourth of July?" by Frederick Douglass, speeches, court documents, and scientific articles to explore textual evidence, central ideas, inferences, word choice, figurative language, spelling, hyphens, contest-ed usage, figures of speech, and reference materials. Writing topics include a researched informational essay and a researched argument essay.

Semester B

Students examine reading, writing, and analysis using both informational and argument texts. Readings include seminal US texts such as "What to the Slave Is the Fourth of July?" by Frederick Douglass, speeches, court documents, and scientific articles to explore textual evidence, central ideas, inferences, word choice, figurative language, spelling, hyphens, contest-ed usage, figures of speech, and reference materials. Writing topics include a researched informational essay and a researched argument essay.

Course Requirements

Grade Level - 11 Duration - 2

Semesters

Prerequisites - Language Arts 10 or equivalent Materials - None

LANGUAGE ARTS 12 A & B

Semester A

Students explore analysis of informational and argument texts. Readings include seminal US texts such as the Declaration of Independence, presidential speeches, court documents, and articles related to innovative technology to demonstrate rhetoric, figurative language, theme, purpose, specialized vocabulary, text structure, word nuances, inferences, research, evidence, and reference sources. In addition, students learn about context clues, contested usage, and syntax errors.

Writings include a researched informational essay and a researched argument essay.

Semester B

Students analyse narrative texts from British literature—from the Middle Ages through modern times. Demonstrated skills include explicit and implicit meanings, figurative language, literary devices, central ideas, themes, and narrative and structural elements. Writings include a fictional narrative in the style of Gothic Romanticism and a literary analysis comparing and contrasting two British literature texts of different eras.

Course Requirements

Grade Level - 12 Duration - 2

Semesters

Prerequisites - Language Arts 11 or equivalent Materials - None

HONORS LANGUAGE ARTS

HONORS ENGLISH 9 A & B

Semester A

Students explore reading, writing, and analysis using both informational and literary texts, as well as comparison of texts in different mediums. Readings include *The Princess and the Goblin* by George MacDonald, among others, to demonstrate understanding of textual evidence, themes, central ideas, inferences, word choice, and figurative and connotative language, and grammar and usage. Writings include a personal narrative (memoir) and a literary analysis. Honors includes additional examples and practice for students.

Semester B

Students explore reading, writing, and analysis using both informational and literary texts. Readings include *Anthem* by Ayn Rand, among other texts of varying time periods to demonstrate concepts such as textual evidence, themes, central ideas, characters, inferences, rhetorical techniques, structure and style, and arguments and claims. Writing topics include grammar, usage, punctuation, spelling, style manuals, phrases, and clauses, culminating in an informational essay and an

Course Requirements

Grade Level - 9 Duration - 2

Semesters Materials - None

HONORS ENGLISH 10 A & B

Semester A

Students investigate the writing and discourse processes while supplementing them with the reading and grammar strategies necessary to comprehend and compose nonfiction texts. Exploration of language skills in writing topics include researching, organizing, and developing descriptive, persuasive narrative, and expository compositions. Honors includes additional examples and practice for students.

Semester B

This semester explores literature from multiple eras and cultures. Readings include epic poetry, folktales, ancient verses, Greek tragedy such as *Antigone* by Sophocles, short stories, and excerpts from novels to examine language, ideas, characters, and literary elements.

Exploration of evidence, context clues, symbolism, affixes, and denotative and connotative meanings are provided in short research and writing projects. Writing topics also include a character analysis and a personal narrative. Honors includes additional examples and practice for students.

Course Requirements

Grade Level - 10 Duration - 2

Semesters

Prerequisites - Language Arts 9 or equivalent Materials - None

HONORS ENGLISH 11 A & B

Semester A

Students examine seminal US documents ranging from Thomas Paine's *Common Sense* through contemporary speeches by the President, among other texts to demonstrate knowledge of the use of rhetorical devices, inference, symbolism, bias, and the drawing of conclusions. The course focuses on argument and persuasion through formal speaking and writing.

Honors includes additional examples and practice for students.

Semester B

Students examine seminal US documents ranging from Thomas Paine's *Common Sense* through contemporary speeches by the President, among other texts to demonstrate knowledge of the use of rhetorical devices, inference, symbolism, bias, and the drawing of conclusions. The course focuses on argument and persuasion through formal speaking and writing.

Honors includes additional examples and practice for students.

Course Requirements

Grade Level - 11 Duration - 2

Semesters

Prerequisites - Language Arts 10 or equivalent Materials - None

HONORS ENGLISH 12 A & B

Semester A

Students explore rhetoric using informational texts, including seminal US documents that shaped legal and social policy to examine reasoning that includes the chain of legal reasoning. Honors includes additional examples and practice for students.

Semester B

Students synthesize knowledge and use critical thinking to analyse narrative texts from British literature across different eras—from the Middle Ages through modern times. Students read *Frankenstein* by Mary Shelley along with works by British writers such as Shakespeare and Tolkien. These reading selections demonstrate concepts such as narrative elements and structures, literary devices such as symbolism and sarcasm, and inference. Topic include: vocabulary, context clues, word choice, and affixes. In addition, students write a fictional narrative and a literary analysis. Honors includes additional examples and practice for students.

Course Requirements

Grade Level - 12 Duration - 2

Semesters

Prerequisites - Language Arts 11 or equivalent Materials - None

MATH

ALGEBRA 1 A & B

Semester A

Students explore the application of properties to simplify expressions with exponents and radicals, relationships between rational and irrational numbers, solving linear equations and inequalities, applying knowledge of linear equations and inequalities to solve and graph systems of linear equations and inequalities, applying operations on polynomials, factoring quadratic expressions, and solving quadratic equations using different methods.

Semester B

Students explore the analysis of different types of functions presented as equations, graphs, tables, verbal descriptions, identifying key features applied to real-world problems, using key features to compare different types of functions, transformations of functions, statistics, interpreting and analysing data sets, as well as causation and correlation.

Course Requirements

Grade Level - 9 - 12 Duration -

2 Semesters Materials – None

GEOMETRY A & B

Semester A

Students explore writing formal proofs and constructing geometric figures. Topics include: transformations to explain the concepts of congruent and similar figures with a focus on the properties of congruent and similar triangles. Properties are proved with postulates, theorems, and formal proofs, as well as trigonometric ratios and their applications to real-world situations.

Semester B

Students explore writing formal proofs and constructing geometric figures. Topics include: slopes, midpoints, distance formula with a focus on their applications in coordinate proofs, theorems about circles as well as concepts related to circles, and two- and three-dimensional figures and probability.

Course Requirements

Grade Level - 9 - 12 Duration - 2

Semesters Materials - None

Prerequisites - Algebra 1

ALGEBRA 2 A & B

Semester A

Students explore solving quadratic equations with complex solutions and perform operations on polynomials, uses polynomial identities to solve problems, analyses polynomial functions using different representations, and solves polynomial equations graphically, works with rational functions, and performing arithmetic operations on rational functions to graph them.

Semester B

Students explore radical equations, rewriting expressions involving radicals, and graphing and solving radical equations. Concepts of trigonometry include ratios and using the unit circle to understand them, graph sine, cosine, and tangent functions, and explore key features to prove and apply trigonometric identities.

Course Requirements

Grade Level - 9 - 12 Duration - 2

Semesters Materials - None

Prerequisites - Geometry

INTEGRATED MATH 1 A & B

In Integrated Math 1, students use arithmetic properties of subsets of integers and rational, irrational and real numbers by simplifying expressions, solving linear equations and inequalities, graphing equations, finding the equation of a line, working with monomials and polynomials, and factoring and completing the square.

Students use properties of the number system to judge the validity of results, justifying each step of the procedure to prove or disprove statements. Students compute perimeter, circumference, area, volume and surface area of geometric figures. Students also use basic trigonometric functions defined by the angles of a right triangle.

Course Requirements

Grade Level - 9 - 12 Duration - 2

Semesters Materials - None

INTEGRATED MATH 2 A & B

Students in Integrated Math will focus on pulling together and applying the accumulation of learning that they have acquired from their previous math courses.

They will apply methods from probability and statistics; expand their repertoire of functions to include polynomial, rational, and radical functions; and expand their study of right triangle trigonometry. In addition, they will bring together all their experience with functions and geometry to create models and solve contextual problems.

Course Requirements

Grade Level - 10 - 12 Duration -

2 Semesters Materials - None

Prerequisites - Integrated Math 1 or equivalent

PRE-CALCULUS A & B

Semester A

In this course, students will understand and apply concepts, graphs and applications of a variety of families of functions, including polynomial, exponential, logarithmic, logistic and trigonometric. An emphasis will be placed on use of appropriate functions to model real world situations and solve problems that arise from those situations. A focus is also on graphing functions by hand and understanding and identifying the parts of a graph. A scientific and/or graphics calculator is recommended for work on assignments, and on examinations.

Semester B

Pre-Calculus Part B covers the major units of Introductory Trigonometry and Graphs, Trigonometric Equations and Identities, Analytical Trigonometry, Sequences and Series, Conic Sections and an Introduction to Calculus. A focus is also on graphing functions by hand and understanding and identifying the parts of a graph.

Course Requirements

Grade Level - 11 - 12 Duration -

2 Semesters Materials - None

Prerequisites - Algebra II

HONORS MATH

HONORS ALGEBRA 1 A & B

In the Honors course, students will do in depth study, problem-solving and application of algebraic concepts.

Semester A

Students explore algebraic problems and apply the knowledge to real-life situations. Topics include: linear inequalities, forms of linear equations, relate linear equations and functions, solve systems of equations and systems of inequalities, interpret solutions mathematically and contextually, statistics, measures of central tendency, relative frequencies, and scatter plots.

Semester B

Students explore functions by exploring new families of functions, the effect of different transformations, key features of their graphs, and how they compare functions represented in different ways. Additional topics include: polynomials on quadratics, quadratic equations and their graphs, various methods of factoring and solving quadratic equations, exponential growth and decay, and how linear, quadratic, and exponential functions compare to one another.

Course Requirements

Grade Level - 9 - 12 Duration - 2

Semesters Materials - None

HONORS GEOMETRY A & B

Semester A

Students examine congruence, proofs, and constructions to prove statements about lines, angles, triangles, and quadrilaterals; apply the knowledge of transformations to learn a formal definition for similarity to write proofs, are introduced to trigonometry through its connection to the concept of similarity, derive and use formulas for the areas and volumes of two- and three-dimensional figures, and investigate cross sections and solids of revolutions.

Semester B

Students explore the Pythagorean theorem, distance formula, midpoint formula, and slope formula to solve geometric problems and develop coordinate proofs. Topics include: understand and apply theorems about circles to find arc lengths and areas of sectors of circles; apply the distance formula to write equations of circles in the coordinate system; and understand the concepts of permutations and combinations to explore the concept of probability

Course Requirements

Grade Level - 9 - 12 Duration - 2

Semesters Materials - None

Prerequisites - Algebra I or equivalent

HONORS ALGEBRA 2 A & B

Semester A

Students explore polynomial, rational, radical, and trigonometric functions, solving equations, including quadratic equations over the complex numbers, as well as rational and radical equations.

Semester B

Students explore modelling real-life situations with equations and inequalities, solving exponential equations with logarithms, and synthesizing and generalizing a variety of functions families, how to make probability decisions and how to use statistics and sampling processes to understand data sets and answer questions about samples and populations.

Course Requirements

Grade Level - 9 - 12 Materials -

Calculator Duration - 2 Semesters

Prerequisites – Geometry

SCIENCE

PHYSICAL SCIENCE A & B

Semester A

Students examine science as a whole and the course leads to how methods and tools provide scientists meaningful results. Topics include: chemistry to interpret chemical names, formulas, equations, and models to discover the types and properties of reactions and nuclear reactions and their uses, historical perspectives, and the social impacts.

Semester B

Students explore physics, are introduced to topics in engineering, and the ways scientists think, communicate, and do their jobs. The topics of motion and force, including the motion of fluids and Newton's law build a foundation to explore thermodynamics, energy, work, machines, waves, electricity, and magnetism.

Course Requirements

Grade Level - 9 - 12 Duration - 2

Semesters Materials - None

EARTH SCIENCE A & B

Semester A

The first three modules of Semester 1 cover Scientific Inquiry, the Structure and Composition of the Universe, and the Features of the Solar System. Students learn the importance of scientific inquiry and how to communicate the results of scientific investigations. They then have material on the formation of the universe, including the Big Bang Theory, the motions of celestial objects, and stellar evolution. The third module covers material related to the Solar System, including features of the Sun and the planets and the movements of Earth. The second three modules of Semester 1 cover Weather, Climate, and Earth's Water Cycle. Students first learn in Module 4 about the atmosphere and clouds, as well as the factors that influence local and global climate. In Module 5 they continue by learning about weather and air masses, meteorology and storms. Module 6 then discusses the water cycle, including groundwater and ocean features, as well as water scarcity and pollution.

Semester B

The first three modules of Semester 2 cover the physical structure of the Earth and Earth's tectonic system, including the rock cycle, tectonic activity, and mountain building. It then covers weathering and erosion and soil formation. The next material in the course then addresses the concept of systems; it addresses the Earth as a system, feedback in systems, and Earth's major nutrient cycles. The second three modules of Semester 2 cover geologic history, including the evolution of Earth's atmosphere, the geologic time scale, and the fossil record. It then goes over natural resources and the effects of human population on natural resources. The course wraps up with a discussion of human society and its interconnectedness with the Earth's environment, how science and technology work together, and the technological design process in earth science applications.

Course Requirements

Grade Level - 9 - 12 Duration - 2

Semesters Materials - None

BIOLOGY A & B

Semester A

Biology A introduces students to the scientific method and the major concepts of biology from an historical and practical viewpoint. The three major themes of this course are the cell, the molecular basis of heredity, and the interdependence of organisms. Students who take this class will have a deeper appreciation for the complexities of living organisms. Life on this planet, unlike anywhere else in the observable universe, is complex and highly organized. Whether examining life on the molecular or the planetary level, it exhibits a highly organized structure that inspires awe by its genius and complexity. In the last 50 years, discoveries have launched new branches of biology that have transformed the daily routing, from conception to death. New challenges await, such as the current crisis in ecology, global warming, and the resurgence in viral disease. Biology A is presented in a multimedia format using interactive modules, labs, narrated animation, text, and videos to present the study of life on this planet. Student work through and complete several self-check activities and quizzes for practice and participate in self- reflection. In each unit, students complete the unit exam and deliver a unit project.

Semester B

The major concepts covered in Semester B are population dynamics and evolution. Students explore population dynamics through the study of mutualism, predation, parasitism, and competition. The theory of evolution is presented, along with the many evidences and details that make evolution the backbone of modern biology. The second semester further examines the wonder of life and its mechanisms. Students work through and complete several self-check activities and quizzes for practice and participate in self-reflection. In each unit, students complete the unit exam and deliver a unit project.

Course Requirements

Grade Level - 9 - 12 Duration - 2

Semesters Materials – None

Prerequisites— Algebra 1

CHEMISTRY A & B

Semester A

Students examine basic principles and properties of matter to see its everyday uses. Topics include: atomic models, predicting chemical reactions to see how scientists can engineer them to solve problems.

Semester B

Students examine basic principles and properties of matter to see its everyday uses. Topics include: atomic models, predicting chemical reactions to see how scientists can engineer them to solve problems.

Course Requirements

Grade Level -10 - 12

Duration - 2 Semesters

Materials - Graphing Calculator Prerequisites -

Algebra 1 & Geometry

PHYSICS A & B

Semester A

Students begin their exploration of physics by reviewing the International System of Units (SI), scientific notation, and significant digits. They then learn to describe and analyse motion in one and two dimensions. Students learn about gravity and Newton's laws of motion before concluding the course with an examination of circular motion. Students apply mathematical concepts such as graphing and trigonometry in order to solve physics problems. Throughout the course, students apply their understanding of physics by playing roles like science museum curator and elementary teacher.

Semester B

Physics B continues the student's exploration of mechanics while also guiding them through some other important topics of physics. Students begin by exploring simple harmonic motion, wave properties, and optics. Students then learn the basics of thermodynamics and fluids. Afterwards, the students explore the principles of electricity and magnetism. Finally, students explore the area of physics known as Modern Physics, which includes topics such as the photoelectric effect, nuclear science, and relativity. This is a trig based course. It is assumed you know and can use trigonometry.

Course Requirements

Grade Level - 11- 12 Duration - 2

Semesters

Materials - Graphing Calculator Prerequisites -
Algebra 1 and Geometry

ANATOMY AND PHYSIOLOGY A & B

Semester A

Whether you plan on pursuing a career in health sciences or simply looking to gain an understanding of how the human body works, you will first need to understand the relationship between anatomy and physiology. Learn how to read your body's story through understanding cell structure and their processes, and discover the functions and purposes of the skeletal, muscular, nervous, and cardiovascular systems, as well as diseases that affect those systems.

Semester B

Whether you plan on pursuing a career in health sciences or simply looking to gain an understanding of how the human body works, you will first need to understand the relationship between anatomy and physiology. Learn how to read your body's story through understanding cell structure and their processes, and discover the functions and purposes of the skeletal, muscular, nervous, and cardiovascular systems, as well as diseases that affect those systems.

Course Requirements

Grade Level - 10 - 12 Duration - 2

Semesters Materials - None

Prerequisites— Biology

ENVIRONMENTAL SCIENCE*

Students examine the relationships between organisms and the environment, including impacts of research on scientific thought and the environment by using scientific practices, evidence based data and its display, as well understanding how data informs societal decision-making.

Course Requirements

Grade Level - 9 – 12 Duration – 1

Semester Materials – None

HONORS SCIENCE

HONORS BIOLOGY A & B

Semester A

Students examine life at the cellular level by understanding how the scientific method is used by scientists to investigate questions and present their findings. Topics include chemical make up and size of cells, cell structure, the flow of energy, and how traits are inherited.

Semester B

Students examine life on Earth from a big picture perspective by exploring the evolution of species and history of life on Earth. Topics include: living organisms from microorganisms to plants and animals, the human body systems, ecology, and how humans interact with the environment. Historical perspectives and societal impact of biology are included in each lesson.

Course Requirements

Grade Level -9 - 12 Duration - 2

Semesters Materials – None

Prerequisites Algebra I

HONORS CHEMISTRY A & B

Semester A

Students examine basic principles and properties of matter to see its everyday uses. Topics include: atomic models, predicting chemical reactions to see how scientists can engineer them to solve problems. The honors course offers additional examples and practice.

Semester B

This semester culminates in the ability to evaluate the ethical and social implications of chemistry-related technologies. Topics include: matter, types of bonds and forces that hold atoms and molecules together, states of matter, phase changes, gas laws, solutions, thermodynamics and kinetics of chemical reactions, chemical equilibrium and electrochemistry, radiation and the difference between nuclear fission and fusion. The honors course offers additional examples and practice.

Course Requirements

Grade Level -10 - 12 Duration - 2

Semesters Materials - None

Prerequisites - Algebra – Geometry

HONORS PHYSICS A & B

Semester A

Students explore principles of Newtonian mechanics (including rotational motion); work, energy, and power; mechanical waves and sound; and introductory, simple circuits. The course is based on six Big Ideas, which encompass core scientific principles, theories, and processes that cut across traditional boundaries and provide a broad way of thinking about the physical world.

Semester B

Students establish lines of evidence and use them to develop and refine testable explanations and predictions of natural phenomena. Focusing on these disciplinary practices enables teachers to use the principles of scientific inquiry to promote a more engaging and rigorous experience for AP Physics students.

Course Requirements

Grade Level - 11 - 12 Duration - 2

Semesters Materials - None

Prerequisites - Algebra – Geometry

HISTORY

WORLD HISTORY A & B

Semester A

Students explore key events and historical developments from hunter-gatherer societies to the Industrial Revolution. Beginning with the analysis of prehistoric people from the Paleolithic era to the Agricultural Revolution, the course follows the rise and fall of early empires including the Roman Empire. Topics include: The Crusades, feudalism, the plague, Asian empires and trade routes, effects of the Renaissance and Protestant Reformation, and important revolutions that shaped history

Semester B

Students trace the developments of the last 250 years by examining the origins of modern Western imperialism and analysing the cultural, economic, and political impacts on Africa and Asia. Topics include: the influence of the Industrial Revolution, the impact of imperialism and nationalism on World War I, how the Treaty of Versailles contributed to the rise of fascism in Europe and the start of World War II, 20th-century warfare, the Armenian Genocide, and the Holocaust.

Course Requirements

Grade Level - 9 - 12 Duration - 2

Semesters Materials – None

WORLD GEOGRAPHY A & B

Semester A

Students explore the five themes of geography, analyses the earth's processes, and how the processes impact both physical and human geography. Both physical and political maps are studied to examine trends and impacts with a focus on the Americas, Central Asia, and Europe.

Semester B

Students continue the exploration of the five themes of geography with a focus on the Middle East, Africa, and Asia. Cultural beliefs and social and political systems are examined within the context of countries, regions, and global interactions

Course Requirements

Grade Level - 9 - 12 Duration - 2

Semesters Materials – None

AMERICAN HISTORY A & B

Semester A

This course covers the discovery, development, and growth of the United States. Major topics include; American Indian cultures, European colonization of the Americas, and the causes and effects of the American Revolution. Geographical, economic, and political factors are explored as the key factors in the growth of the United States of America. American History is a survey of the struggle to build the United States of America from the colonial period to the beginning of the twentieth century. By means of reading, analysing, and applying historical data, students come to appreciate the forces that shaped our history and character as an American people.

Students also explore research methods and determine accurate sources of data from the past.

Semester B

American History B begins with a study of American life before the 1929 Stock Market crash and how the Roaring Twenties influenced society in the late 19th through early 20th centuries. Students will examine the causes and consequences of the Great Depression and move on into a detailed study of World War II with an emphasis on America's role in the conflict. The course continues with an analysis of the Cold War struggle and America's rise as a superpower. The Civil Rights and Women's rights movements, pollution and the environment, and American domestic and foreign policy will be examined. This course begins with an assessment of life in United States prior to World War I and ends with the conflicts of the new millennium. The course ends with a summary of current events and issues, including a study of the Middle East. Students look at the nation in terms of economic, social, and political trends. The experiences of the last century are summarized, including a look into the civil rights issues that have embroiled the nation in conflict. The development of the United States of America into a superpower is explored within a global context.

Course Requirements

Grade Level - 10 - 12 Duration - 2

Semesters Materials – None

AMERICAN GOVERNMENT*

Students examine the history and philosophy of the United States government and the guiding principles of democracy. Topics include: analysis of the United States Constitution, functions and duties of the three branches of government, the role of the Supreme Court, civic engagement in political process, the rights and responsibilities of citizens, government systems of the world, political parties, interest groups, and the media in shaping the government.

Course Requirements

Grade Level - 11 - 12 Duration - 1

Semester Materials - None

Prerequisites - American History

ECONOMICS*

Students explore principles to make informed decisions about personal finance, develop a broader understanding of national and international economic decisions and policies. Topics include: why economics impacts history, distribution of wealth, and quality of life for all members of society.

Course Requirements

Grade Level - 11 - 12 Duration - 1

Semester Materials – None

HONORS HISTORY

HONORS WORLD HISTORY A & B

Semester A

In Honors World History A, students explore ancient civilizations in order to understand the geographic, political, economic, and social characteristics of people. By developing their understanding of the past, students can better understand the present and determine their direction for the future. In this course, students explore the first civilization in Mesopotamia; the ancient civilizations of China, Greece, and Rome; the rise of the Byzantine Empire; and the feudal system in Europe and Japan. They also learn about the Renaissance and Reformation, the Enlightenment Period, and the scientific and democratic revolutions in Europe that spread to the new nation of America. The last part of the course concentrates on the Napoleonic Era, the Industrial Revolution in England, and the rise of imperialism in Europe. In addition, historical analysis and current events are featured in the final lessons.

Semester B

In this semester, students examine the factors leading up to World War I, the rise of nationalism, and the worldwide economic depression. The causes of War II, and the military strategies involved are also analysed. The advances in modern warfare for both World Wars are a special focus. In addition, students learn about the struggle between the ideologies of democracy and communism as well as the change in the balance of power after World War II in which countries fought for self-rule. An appraisal of the Cold War and the fall of the Soviet Union are included. Later lessons find students exploring the roots of terrorism and the conflicts in the Middle East, Eastern Europe, and Asia.

The final unit of the course centers on the new global economy, advances in science and technology, and current environmental issues.

Students assess primary and secondary source materials in depth. Projects and class discussions challenge students to predict outcomes, draw conclusions, and make choices based upon critical thinking.

Course Requirements

Grade Level - 9 - 12 Duration - 2

Semester Materials - None

AMERICAN HISTORY HONORS A & B

Semester A

Honors American History A helps students learn the story of the settling of North America by Europeans in the 1600s. A prevailing theme of the course is that America accomplished tasks that no other country had undertaken before. America broke away from Europe, established its own country with a Constitution that has given freedom to more people than any other country in the world, and settled a country by putting that Constitution into practice. The course ends with a study of America's emergence as a world power at the beginning of the 20th Century. Students will encounter primary and secondary source document investigations, biographies of key individuals, political cartoons, map studies, and period literature.

Semester B

American History B Honors begins in the 1920s Jazz Age and ends in the 21st Century. Students will examine economic factors that lead to the Great Depression and World War II. The West's involvement in the Cold War, as well as the fall of the Soviet Union, will be covered in detail. America's rise as a world power is featured. The final unit of the course includes a study of the environment, modern presidential foreign and domestic policies, and the Middle East.

Course Requirements

Grade Level - 10 - 12 Duration - 2

Semester Materials – None

HONORS AMERICAN GOVERNMENT*

Students examine early political ideas that led to the development of the United States government, and the various smaller governments that operate within the United States provide insights of local, state, and national levels of government. By examining how the United States interacts with the world regarding trade, immigration, and global conflicts, students discover how civic engagement influences the government.

Course Requirements

Grade Level - 11 - 12 Duration - 1

Semester Materials - None

Prerequisites - American History

WORLD LANGUAGES

HS SPANISH 1 A & B

Students explore how to discuss school subjects, professions, and daily routines, as well as illness and injury, shopping, and money through reading, writing, listening, and speaking. The course also explores cultures of some Spanish-speaking countries, such as Venezuela, Chile, Ecuador, Guatemala, and Cuba.

Course Requirements

Grade Level - 9 - 12 Duration - 2

Semesters Materials - None

HS SPANISH 2 A & B

Spanish 2 continues to build reading, writing, listening, and speaking skills in order to discuss transportation, extracurricular interests, professions, cuisine, clothing, health, and technology. Topics included: present, past, future, and conditional tenses, present subjunctive mood, explores cultures of some Spanish-speaking countries, such as the Dominican Republic, Equatorial Guinea, Honduras, Uruguay, and Panama.

Course Requirements

Grade Level - 9 - 12 Duration - 2

Semesters Materials - None

Prerequisites - Spanish 1

HS SPANISH 3 A & B

Spanish 3 builds reading and writing of informative, argumentative, and descriptive texts, listening, and speaking skills using the indicative subjunctive, and imperative moods. The course also explores significant historical events of some Spanish-speaking countries, as well as cultural products, practices, and philosophies. Students continue acquiring the Spanish language through reading poems and short stories by notable Spanish-language authors. The continuation of writing, listening, and speaking includes exploring behavioural norms in different Spanish-speaking cultures, in order to discuss these topics in the indicative and subjunctive moods in a variety of tenses.

Course Requirements

Grade Level - 10 - 12 Duration - 2

Semesters Materials - None

Prerequisites - Spanish 2 or equivalent

HS FRENCH 1 A & B

French 1 focuses on developing listening skills by repeated exposure to the spoken language. Speaking skills are encouraged through recommended assignments using voice tools. Reading and writing skills, as well as language structures, are practiced through meaningful, real-life contexts. The use of technology enhances and reinforces authentic language development and fosters cultural understandings through exposure to native speakers and their daily routines.

Course Requirements

Grade Level - 8 - 12 Duration

- 2 Semesters Materials -

None

HS FRENCH 2 A & B

Semester A

Semester A focuses on the continuation and enhancement of language skills presented in Level 1. Vocabulary and grammar structures are revisited and expanded to provide students an opportunity to move towards an intermediate comprehension level. Speaking and listening skills are enhanced through recommended real-life voice activities. Listening skills are honed through online dialogues. Reading and writing skills are developed through access to completion of meaningful activities, reading of culturally-related articles of interest and responding to reading in the target language. The use of technology enhances and reinforces authentic language development and fosters cultural understandings through exposure to native speakers and their daily routines.

Semester B

Semester B continues the enhancement of language skills. Vocabulary and grammar structures are revisited and expanded as students explore other French-speaking areas. Speaking and listening skills are enhanced through recommended real-life voice activities. Listening skills are honed through online dialogues. Reading and writing skills are developed through access to completion of meaningful activities related to travel, to the Olympics, to natural disasters, and to the space program. Reading of culturally related articles of interest and responding to reading in the target language, along with the use of technology, reinforces authentic language development and fosters cultural understandings through exposure to native speakers and their daily routines.

Course Requirements

Grade Level - 9 - 12 Duration - 2

Semesters Materials - Semester B

Only

Joie De lire! Intermediate Reader Level 2. July 19, 2002 By Rinehart and Winston Holt

ISBN: 0030656273

Prerequisites - French 1 or equivalent

HS FRENCH 3 A & B

Students deepen their understanding of French by focusing on the three modes of communication: interpretive, interpersonal, and presentational. Each unit consists of a variety of activities which teach the students how to understand more difficult written and spoken passages, to communicate with others through informal speaking and writing interactions, and to express their thoughts and opinions in more formal spoken and written contexts. Students should expect to be actively engaged in their own language learning, use correct vocabulary terms and phrases naturally, incorporate a wide range of grammar concepts consistently and correctly while speaking and writing, participate in conversations covering a wide range of topics and respond appropriately to conversational prompts, analyse and compare cultural practices, products, and perspectives of various French-speaking countries, read and analyse important pieces of literature, and take frequent assessments where their language progression can be monitored. The course is conducted almost entirely in French. The course has been carefully aligned to national standards as set forth by ACTFL.

Course Requirements

Grade Level - 10 - 12 Duration - 2

Semesters Materials - None

Prerequisites - French 2 or equivalent

HS GERMAN 1 A & B

Semester A

The German 1 course is an introduction to basic comprehension and communication in German. It coordinates the study of language with culture through the use of video, audio and media production. This course assumes no prior knowledge of the German language. It introduces the fundamentals of conversational and grammatical patterns of the German language with presentations to present the material. Students who complete the course successfully will begin to develop a functional competency in the four primary language areas: speaking, reading, listening and writing, while establishing a solid grammatical base and exploration into German culture.

Semester B

The second semester course will expand on the knowledge gained from German 1A and further develop their skills in pronunciation, grammar skills, grammar structures and vocabulary. Oral practice (via Voice Tools), homework assignments, games, songs, watching videos, quizzes, tests, projects and other activities such as writing wikis and journal entries, will be emphasized to accomplish this goal. The different cultures of the German-speaking world are emphasized through readings, videos and other activities. Taking the time to learn another language is a mind-expanding activity that can open up a world of opportunities and advantages.

Course Requirements

Grade Level - 8 - 12 Duration - 2

Semesters Materials – None

HS GERMAN 2 A & B

Semester A

In this course, students build on grammar and language skills that they acquired during their G1A and G1B courses. While reviewing basic grammar skills, (present and past tenses), students learn and study stem-changing verb conjugation and explore cultural themes regarding current events, famous German people, music and famous festivals.

Semester B

In the second semester course, students increase their proficiency in being able to communicate by forming more complex German sentences in a variety of tenses using all four cases (Nominative, Accusative, Dative and Genitive). The variety of topics increases also, from exploring different careers to discussing relationships. Cultural themes are entwined throughout this course related to going shopping, to going to the zoo and also to travel throughout the German-speaking world.

Course Requirements

Grade Level - 9 - 12 Duration

- 2 Semesters Materials -

None

Prerequisites- German 1 or equivalent

AP LANGUAGE ARTS

ENGLISH LANGUAGE AND COMPOSITION A & B

This course provides high school students with college-level instruction in analysing and writing various texts. The course covers topics in language and rhetoric as well as expository and persuasive writing. Students become skilled readers of prose written in various periods, disciplines, and rhetorical contexts. This course fulfils one required English credit for high

school graduation.

Course Requirements

*Additional Costs apply Grade

Level 11 - 12 Duration - 2

Semesters

*Reading list detailed in Appendix A.

Prerequisites - Honors Language Arts 11 or Equivalent

AP MATH

AP CALCULUS AB A & B

Study limits, continuity, differentiation, integration, differential equations, and the applications of derivatives and integrals. This course fulfils one required math credit for high school graduation.

Course Requirements

*Additional Costs apply Grade

Level -11 - 12 Duration - 2

Semesters

Materials - Study Forge; calculator Prerequisites – Pre-Calculus

AP CALCULUS BC A & B

Comparable to college and university calculus, this course will help prepare you for the Calculus BC Advanced Placement exam. Study limits, continuity, differentiation, integration, differential equations, and the applications of derivatives and integrals, parametric and polar equations, and infinite sequences and series. This course fulfils one required math credit for high school graduation.

Course Requirements

*Additional Costs apply Grade

Level - 11 - 12 Duration - 2

Semesters

Materials – Study Forge; calculator Prerequisites - Pre-calculus

AP SCIENCE

AP BIOLOGY A & B

This course provides a foundation for developing an understanding for biological concepts through scientific inquiry, investigations, interactive experiences, higher-order thinking, real-world applications, writing analytical essays, statistical analysis, interpreting and collecting data. This course fulfils one required science credit for high school graduation

Course Requirements

*Additional Costs apply Grade

Level - 11 - 12 Duration - 2

Semesters

Materials - Campbell Biology In Focus 3rd Edition AP Edition for Advanced Placement Author(s): Urry, Lisa | Cain, Michael | Wasserman, Steven | Minorsky, Peter Textbook ISBN-13: 9780135214763, student provided lab materials

Prerequisites - Algebra 1 –Geometry

AP CHEMISTRY A & B

This Course is taught at the college level and is designed to prepare students to take the Advanced Placement Examination. College-level textbooks are used. Topics include an introduction to chemistry as the study of change, gases, thermochemistry, quantum theory, chemical bonding, crystals, phase changes, solutions, chemical kinetics, chemical equilibrium, acids and bases, entropy, electrochemistry, nuclear chemistry, metallurgy, alkali and alkaline metals, non-metallic metals, transition metals, organic chemistry, and synthetic and natural organic polymers.

Course Requirements

*Additional Costs apply Grade

Level - 11 - 12 Duration - 2

Semesters

Materials - AP Chemistry Chang- Raymond Chang, Kenneth Goldsby - 12th Edition, 2016

ISBN-13:978-0076727704 ISBN-10:007672770X

Cracking the AP Chemistry Exam, 2020 Edition SBN-13: 978-0525568186

ISBN-10: 0525568182

Lab Materials - Please note that iCademy ME has access to virtual labs, so the physical labs are Optional - Advanced Microchem Kit (AP Chemistry Lab Kit by Quality Science Labs)

Prerequisites - Chemistry, Algebra & Geometry

AP HISTORY

AP GOVERNMENT & POLITICS A & B

Research the roles of the media, political parties, interest groups, states, candidates, bureaucracy, and the public in the governmental process. You will experience the production of policy building in multiple economic and social settings.

Course Requirements

*Additional Costs apply Grade

Level - 11 - 12 Duration - 2

Semesters

Materials - Ginsberg, Benjamin, Theodore J. Lowi, Margaret Weir, Caroline J. Tolbert, and Andrea L. Campbell. *We the People: An Introduction to American Politics*. 12th edition. New York, NY: W.W. Norton, 2018. Prerequisites - American History

AP U.S. HISTORY A & B

Examine key themes and events of our history, including American identity, diversity, religion, culture, war, and slavery, as well as economic, political, and demographic changes. You will also analyze globalization and environmental issues. This course fulfills the United States History requirement for high school graduation.

Course Requirements

*Additional Costs apply Grade

Level - 11 - 12 Duration - 2

Semesters

Materials - Give Me Liberty- AP 6th Ed.-Eric Foner ISBN: 978-0-393-44123-9

AP WORLD HISTORY A & B

Semester A

The first semester of AP World History Modern delves into the history of mankind. Looking back to the prehistoric times, students will develop the connections between the early river valleys, the beginnings of civilizations, and governments. Through this semester, students will be introduced to concepts that will be placed on the AP examination, and will also be given multiple opportunities to practice skills necessary for the AP exam. This specific time will start from the First Agricultural Revolution to the Age of Exploration.

Semester A

The second semester of AP World History Modern is a continuation of semester one, starting with how Europe evolved from the colonies being brought into the New World. This course will continue to make connections between nations and look at the big picture concepts of the world until present day. This semester will also spend one time preparing specifically for the AP exam. Through review materials and practicing skills needed for the AP exam, students will work on being prepared for the exam.

Course Requirements

*Additional Costs apply Grade

Level - 10 - 12 Duration - 2

Semesters

Materials - Bentley, Traditions & Encounters: A Global Perspective on the Past.

UPDATED AP Edition © 2017, 6e, Student Edition ISBN-13:

978-0076681280

ISBN-10: 0076681289

AP World History Modern Prep Plus 2020 & 2021 ISBN-13:

978-1506248127

ISBN-10: 1506248128

Prerequisites - World History

AP WORLD LANGUAGES

AP SPANISH LANGUAGE AND CULTURE A & B

Our online AP Spanish Language and Culture course is an advanced language course in which students acquire proficiencies that expand their cognitive, analytical and communicative skills. The AP Spanish Language and Culture course prepares students for the College Board's AP Spanish Language and

Culture exam. It uses as its foundation the three modes of communication (Interpersonal, Interpretive and Presentational) as defined in the Standards for Foreign Language Learning in the 21st Century.

The course is designed as an immersion experience and is conducted almost exclusively in Spanish. In

addition, all student work, practices, projects, participation, and assessments are in Spanish.

Course Requirements

*Additional Costs apply Grade

Level - 11 - 12 Duration - 2

Semesters

Materials - Cracking the AP Spanish Language & Culture Exam with Audio CD, 2020 Edition ISBN-13: 978-0525568346

ISBN-10: 0525568344

Prerequisites - Spanish III or equivalent

ELECTIVES

ANTHROPOLOGY*

What makes us human? Is it our ability to use language, tools, or technology? Trace the history of homo sapiens and explore our evolutionary trail through an anthropologic lens to observe our movement from cave dwellers to modern humans. Learn how we forged our way and developed all of the things that make us humans, such as our cultures, languages, and religions.

Course Requirements

Grade Level - 9 - 12 Duration - 1

Semester Materials - None

ART HISTORY MODERN*

Students explore art of the late 1700s to modernity from Western movements in artworks and architecture to China, Japan, Africa, Oceania, Southeast Asia, India.

*Given the subject matter, the course is extensively visual. Please also be aware that this course includes depictions of nudity, as many art movements celebrated the human form.

Course Requirements

Grade Level - 9 - 12 Duration - 1

Semester Materials – None

ART HISTORY ORIGINS*

Students explore the art of the prehistoric, ancient, medieval, Renaissance and Rococo periods to understand how to read and interpret art. *Given the subject matter, the course is extensively visual. Please also be aware that this course includes depictions of nudity, as many art movements celebrated the human form.

Many important and influential works of art include nudity, and it would be nearly impossible to teach art history without including them.

Course Requirements

Grade Level - 9 - 12 Duration - 1

Semester Materials – None

ASTRONOMY*

The universe is truly the last unknown frontier and offers more questions than answers. Why do stars twinkle? Is it possible to fall into a black hole? Will the sun ever stop shining? Since humans first glimpsed into the vastness of the night sky, we have been fascinated with the celestial world of planets and stars. Astronomy: Exploring the Universe introduces you to the engaging world of astronomy. By using online tools, students will examine such topics as the solar system, space exploration, and the Milky Way and other galaxies. The course also explores the history and evolution of astronomy including those basic scientific laws of motion and gravity that have guided astronomers as they made their incredible discoveries of the universe.

Course Requirements

Grade Level - 9 - 12 Duration - 1

Semester Materials – None

CREATIVE WRITING*

Literature is an important form of art that allows us to give voice to our emotions, create imaginary worlds, express ideas, and escape the confines of reality. Explore the writing process and find inspiration to build a story of your own and learn literary techniques to create hybrid forms of poetry and prose. Let's turn your creative thoughts and ideas into pieces of creative writing.

Course Requirements

Grade Level - 9 - 12 Duration - 1

Semester Materials – None

EARLY CHILDHOOD A & B

Semester A

Are you curious to see what it takes to educate and nurture early learners? Use your curiosity to explore the fundamentals of childcare, like nutrition and safety, but also the complex relationships caregivers have with parents and their children. Examine the various life stages of child development and the best educational practices to enrich their minds while thinking about a possible future as a childcare provider!

Semester B

Discover the joys of providing exceptional childcare and helping to develop future generations. Learn the importance of play and use it to build engaging educational activities that build literacy and math skills through each stage of childhood and special need. Use this knowledge to develop your professional skills well suited to a career in childcare.

Course Requirements

Grade Level - 9 - 12 Duration - 2

Semesters Materials – None

LIFE SKILLS*

What do you want out of life? How do you achieve your dreams for the future? These can be difficult questions to answer, but they don't have to be with the right tools.

Learn more about yourself and prepare for the future through goal setting, decision making, surviving college and career, and how to become a valuable contributing member of society. It's your life; make it count!

Course Requirements

Grade Level - 9 - 12 Duration - 1

Semester Materials – None

MARINE SCIENCE*

About 70% of the Earth is covered by water. Even today, much of the world's oceans remain unexplored. Marine scientists make exciting new discoveries about marine life every day. In this course, students will discover the vast network of life that exists beneath the ocean's surface and study the impact that humans have on the oceans.

Course Requirements

Grade Level - 9 - 12 Duration - 1

Semester Materials – None

MUSIC APPRECIATION*

Students will gain a thorough understanding of music by studying the elements of music, musical instruments, and music history, as well as music advocacy. Students will be introduced to the orchestra and composers from around the world. They will be required to be a composer, performer, instrument inventor, and advocate.

Course Requirements

Grade Level - 9 - 12 Duration - 1

Semester Materials - None

PALEONTOLOGY*

From Godzilla to Jurassic Park, dinosaurs continue to captivate us. In this course, students will learn about the fascinating creatures both large and small that roamed the earth before modern man. Watch interesting videos from experts at The Royal Tyrrell Museum, a leading paleontology research facility, and discover how the field of paleontology continues to provide amazing insight into early life on earth.

Course Requirements

Grade Level - 9 - 12 Duration - 1

Semester Materials - None

PSYCHOLOGY A & B

Semester A

This semester explores human behaviour, behaviour interaction and the progressive development

of individuals. Topics include: major theories and orientations of psychology, psychological methodology, human growth and development, individual variation and personality, psychobiology, as well as sensation and perception.

Semester B

This semester explores human social interactions, psychological therapies, and careers in the

field. Topics include: psychological perspectives, positive relationships, social and cultural diversity, language structures, memory and cognition, psychological testing, statistical research, stress/coping strategies, and mental health.

Course Requirements

Grade Level - 9 - 12 Duration - 2

Semesters Materials - None

SOCIOLOGY*

Human beings are complex creatures, and when we interact and begin to form relationships and societies, things become even more complicated. Are we more likely to act differently in a group than we will when we're alone? How do we learn how to be "human"?

Examine answers to these questions and many more as you explore culture, group behaviour, and societal institutions and how they affect human behaviour.

Course Requirements

Grade Level - 9 - 12 Duration - 1

Semester Materials - None

THEATER, CINEMA & FILM PRODUCTION*

Lights! Camera! Action! Theater and cinema are both forms of art that tell a story. Let's explore the enchanting world of live theater and its fascinating relationship to the silver screen. Explore the different genres of both and how to develop the script for stage and film. Then dive into how to bring the script to life with acting and directing. If you have a passion for the art of film and stage, let's bring your creativity to life!

Course Requirements

Grade Level - 9 - 12 Duration - 1

Semester

Materials - Access to Singing in the Rain, Wizard of Oz, Casablanca

CAREER ELECTIVES

AGRISCIENCE*

How can we make our food more nutritious? Can plants really communicate with each other? These are just two of the questions tackled in Introduction to Agriscience. From studying the secrets in corn roots to examining how to increase our food supply, this course examines how agriscientists are at the forefront of improving agriculture, food production, and the conservation of natural resources. In Introduction to Agriscience, students will learn about the innovative ways that science and technology are put to beneficial use in the field of agriculture. They will also learn more about some of the controversies that surround agricultural practices as nations strive to provide their people with a more abundant and healthy food supply.

Course Requirements

Grade Level - 9 - 12 Duration - 1

Semesters Materials - None

BUSINESS LAW*

Whether you plan on starting your own business or being in charge of one, it is crucial you understand how to keep the company compliant. Explore what it means to run an ethical business, how to keep intellectual property, technology, and e-commerce safe and protected, understand insurance and taxes, and how to have a healthy workplace environment.

Course Requirements

Grade Level - 9 - 12 Duration - 1

Semesters Materials - None

COMPUTER BASICS HS*

In this course students will learn how to use productivity and collaboration tools, such as G Suite by Google Cloud to create word processing documents, spread- sheets, surveys and forms such as personal budgets and invitations.

Course Requirements

Grade Level - 9 - 12 Duration - 1

Semesters Materials - None

CRIMINOLOGY*

Why do certain people commit horrible acts? Can we ever begin to understand their reasoning and motivation? Perhaps. The mental state of a criminal can be affected by many different aspects of life: psychological, biological, sociological, all of which have different

Course Requirements

Grade Level - 9 - 12 Duration - 1

Semesters Materials - None

CULINARY ARTS A & B

Semester A

Thinking of a career in the foodservice industry or looking to develop your culinary skills? Explore basic cooking and knife skills while preparing you for entry into the culinary world. Discover the history of food culture, food service, and global cuisines while learning about food science principles and preservation.

Prepare for your future by building the professional, communication, leadership, and teamwork skills that are crucial to a career in the culinary arts.

Semester B

Did you know that baking is considered a science? Discover how to elevate your culinary skills through the creation of stocks, soups, sauces, and learn baking techniques. Examine sustainable food practices and the benefits of nutrition while maintaining taste, plating, and presentation to truly wow your guests. Explore careers in the culinary arts for ways to channel your newfound passion!

Course Requirements

Grade Level - 9 - 12 Duration - 2

Semesters

Materials – cooking vessels and materials, plus food

DIGITAL MEDIA FUNDAMENTALS A & B

Discover your talent for building digital media applications using text, graphics, animations, sounds, videos, and more! Learn about the elements that make impressive media, such as typography, colour theory, design, and manipulation. Explore careers to apply your digital media skills and find your place in this fast-paced and exciting field!

Course Requirements

Grade Level - 9 - 12 Duration – 2

Semesters

Materials - Vecteezy account, Powtoon account, Canva account GIMP or Adobe Photoshop; GarageBand (Mac) or Audacity (any platform), An account with Wix.com, An account with Canva (or other image creation software)

DIGITAL PHOTOGRAPHY A & B

Semester A

Have you wondered how professional photographers manage to capture that perfect image? Gain a better understanding of photography by exploring camera functions and the elements of composition while putting theory into practice by taking your own spectacular shots! Learn how to display your work for exhibitions and develop skills important for a career as a photographer.

Semester B

Let's further develop your photography skills by learning more professional tips, tricks, and techniques to elevate your images. Explore various photographic styles, themes, genres, and artistic approaches. Learn more about photojournalism and how to bring your photos to life, and using this knowledge, build a portfolio of your work to pursue a career in this field!

Course Requirements

Grade Level - 9 - 12 Duration - 2

Semesters

Materials - Digital or Smartphone camera

ENTREPRENEURSHIP*

Entrepreneurship explores entrepreneurial characteristics, business leadership, and the skills and steps involved in marketing, developing, starting, and exiting a business. Key topics and activities include hands-on projects to apply the knowledge as a small business owner and entrepreneur. The course is aligned to the Marketing, Sales, and Services CTE pathway.

Course Requirements

Grade Level - 9 - 12 Duration - 1

Semester Materials - MS Office

FORENSICS*

Fingerprints. Blood spatter. DNA analysis. Law enforcement is increasingly making use of the techniques and knowledge from the sciences to better understand the crimes that are committed and to catch those individuals responsible for the crimes. Explore techniques and practices used by forensic scientists during a crime scene investigation (CSI). Starting with how clues and data are recorded and preserved, you'll follow evidence trails until the CSI goes to trial in the criminal justice system, examining how various elements of the crime scene are analysed and processed.

Course Requirements

Grade Level - 9 - 12 Duration - 1

Semester Materials - None

GRAPHIC AND WEB DESIGN*

Students explore visual communication and the range of careers in the field. Topics include: principles of design, ethics of creative fields, and the publishing process.

Course Requirements

Grade Level - 9 - 12 Duration - 1 Semester Software Needed (Choose One);

- Adobe Illustrator (there is a cost associated, Mac OS X, Windows)
- Adobe Photoshop (there is a cost associated, Mac OS X, Windows)
- GIMP (free downloadable, Mac OS X, Windows, GNU/Linux)
- Pixlr (free browser-based program, Mac OS X, Windows, GNU/Linux, Chrome OS)

Materials - None

HEALTH SCIENCE: NURSING*

The demand for nurses has never been higher! Learn what it takes to become a nurse, pursue a career, and understand the practice of nursing and the healthcare system. With a strong focus on patient care, you'll explore safety, communication and ethics, relationship building, and how to develop wellness strategies for your patients. From emergency to rehabilitative care, to advances and challenges in the healthcare industry, discover how you can launch a fulfilling career providing care to others.

Course Requirements

Grade Level - 10 - 12 Duration - 1

Semester Materials – First Aid Kit

JOURNALISM*

Does your curiosity lead you to the heart of the matter? Channel this curiosity into developing strong writing, critical thinking, and research skills to perform interviews and write influential pieces, such as articles and blog posts. Learn about the evolution of journalism and its ethics, bias, and career directions to forge your path in this field.

Course Requirements

Grade Level - 9 - 12 Duration - 1

Semester Materials - None

LAW & ORDER*

Imagine if there were no laws and people could do anything they wanted. Every society needs some form of regulation to ensure peace in our daily lives and in the broader areas of business, family disputes, traffic violations, and the protection of children. Explore the importance of laws and how their application affects us as individuals and communities. Through understanding the court system and how laws are actually enacted, you'll learn to appreciate the larger legal process and how it safeguards us all.

Course Requirements

Grade Level - 9 - 12 Duration - 1

Semester Materials - None

NUTRITION AND WELLNESS*

Keeping our physical body healthy and happy is just one of the many challenges we face, and yet, many of us don't know how to achieve it best. In this course, you'll explore positive decisions around diet and food preparation to pursue a healthy, informed lifestyle.

Making sure you know how to locate, buy, and prepare fresh, delicious food will make you and your body feel amazing.

Course Requirements

Grade Level - 9 - 12 Duration - 1

Semester Materials - None

SPORTS AND ENTERTAINMENT MARKETING*

The world of sports and entertainment is never boring. This field offers careers that combine entertainment with traditional marketing, but with a whole lot more glamour. Explore basic marketing principles while delving deeper into the multi-billion-dollar sports and entertainment industry. Learn how professional athletes, sports teams, and famous entertainers are marketed as commodities and how the savvy people who handle these deals can become very successful.

Course Requirements

Grade Level - 9 - 12 Duration - 1

Semester Materials - None

VETERINARY SCIENCE*

Whether you want to step into the wild side of veterinary medicine or just take care of loveable dogs and cats, explore how to care for domestic, farm, and wild animals, diagnose their common diseases and ailments, and learn about different veterinary treatments. If you have always been drawn to the world of our furry, scaly, and feathered friends, this is the course for you!

Course Requirements

Grade Level - 9 - 12 Duration - 1

Semester Materials - None

HEALTH & P.E.

HEALTH A & B

Semester A

In this course, students acquire the knowledge and skills they need to lead a healthy life. Semester A focuses on the impact of personal decisions on the student's own health. Students learn how to find, evaluate, and use reliable information related to a variety of health topics. They also study the basic science behind nutrition, exercise, stress, and psychology, and examine how these factors affect a person's overall health. Each lesson in the course guides students in applying what they have learned in the lesson to their own lives and choices—and gives them a chance to discuss the topic with peers and instructors.

Semester B

Semester B focuses on the developmental aspects of being human and healthy. Students learn about some of the more dramatic changes that the human body experiences from birth to death. They explore topics related to aging and sexuality and identify ways to remain healthy and safe throughout life's major events and challenges. As in Semester A, this part of the course emphasizes what students can do to improve or maintain their own health and encourages them to be a positive influence on family and friends. Each lesson helps identify ways that students might use what they have learned in the lesson in their own lives. As in semester A, students discuss lesson topics with peers and/or an instructor.

Course Requirements

Grade Level - 9 - 12 Duration - 2

Semesters Materials - None

PHYSICAL EDUCATION A & B

Physical Education encompasses learning how to live and maintain a healthy lifestyle. This course covers physical fitness, why it is important, how to have a healthy attitude, and how to stick with a healthy game plan. In this ever-changing world, physical fitness becomes more important and more difficult to find the time for. This course allows the student to discover how to make physical fitness not only a part of their daily life, but also see that it is attainable. This course leads the student to discover healthy behaviours and sets the tone for physical fitness as well as healthy exercise. PE will examine the emotional, physical, and scientific factors that influence physical performance. This course is designed for anyone, ranging from the beginner to advanced abilities.

Course Requirements

Grade Level - 9 - 12 Duration - 2

Semesters Materials - None





APPENDIX A

MATERIALS AND READING LIST

The list below has been provided for your information; many items will be classed as general household items. It is not necessary to purchase all items at once. Materials can be bought as and when required based on grade and subject.

Basic School supplies for KG - Grade 5

The list below details the school supplies required to supplement the Grade Level Materials Kits.

Coloured Pencils
Composition Notebooks, QTY 4
Glue
Highlighter, Yellow
Marker, Black Permanent
Paint Brushes

Pencils (12pk)
Ruler
Scissors
Scotch Tape
Watercolour Paints palette of 6 colours

Grade KG Materials

The list below details the school supplies required to supplement the Grade Level Materials Kits.

Alfalfa seeds 1/2 teaspoon
Bean seeds, Lima, QTY 8
Blocks (Lego, building blocks, etc.), QTY 16
Cardboard, 8.5" X 11", QTY 2
Crayons (64ct)
Coin, Dime (Caution: Choking hazard), QTY 1
Chalk, sidewalk, 1 piece
Cup, clear plastic, 12 oz (drinking glass)
Cups, foam coffee, 8 oz
Dowel, 12" X 3/8"
Flashlight, easy to take apart standard type
Iron filings, 3 cc
Magnets, 1 each of bar type and horse shoe type
Modeling clay, about 2.5 lbs.
Paper plate, 9", QTY 5
Pipe cleaners in various colors, QTY 26 total
Pots, starter peat pots (includes soil), QTY 5
Salt, 1 cup
Seeds, flowers, QTY 10
String, 9'
Tacks / pushpins, QTY 26
Beads (caution: choking hazard)
Maple sugar, 1 tablespoon

Bag of dry beans, QTY 100
Bean seeds, Scarlet runner, QTY 20
Coin, Pennies (Caution: choking hazard) QTY 10
3x5 Index Cards (100pk)
Cloth, (as a cape), 22" X 32"
Coin, Nickels (Caution: Choking hazard), QTY 5
Cotton balls, 1.25 cups
Cup, clear plastic, 9 oz (glass tumbler)
Deck of cards, (like kid's Crazy 8s)
Felt, 8" X 8"
Garden stakes, 3' to 4' long, QTY 3
Jar, wide mouth, 16 to 32 oz
Magnifying glass, 50 to 75 mm
Mixture of soil, sand and peat, 1 cup
Nails, zinc 2" to 2.5", QTY 3
Paper towel to use as blotter paper, 2 sheets
Plastic, vinyl, 6" X 6"
Rubber band, thick, 3" long
Sand or glitter, 1 teaspoon
Straws, clear drinking, QTY 6
Sunflower seeds (to plant), QTY 25
Beads in three colours, 1/8" to 3/16" wide, QTY 30 of each colour
Toothpicks, QTY 10

(Poster Board (8.5 x 11, 9 pieces
Watercolor paper, 9" X 12", QTY 2
Apple
Variety of containers
Textured fabrics and materials of different
Garden fork

Pen, black click (able to be taken apart)
Multi-Colour Construction Paper
Large piece of display board, about 36" X 48"
Sweet potato or avocado seed
Potato

Grade 1 Materials

The list below details the school supplies required to supplement the Grade Level Materials Kits.

Bags, plastic zip close type, quart size, QTY 2	Balance scale (small handheld)
Ball, indoor safe, about 2"-3"	Bean bags, QTY 2
Beans, as counters, QTY 100	Bird seeds, 1 cup
Blindfold(bandana)	Bowl, foam, 20 oz
Bowl, foam, 12 oz	Box, cardboard, shoe box size
Thermometer, outdoor, with Celsius and Fahrenheit, measurements	Cardstock printed with coins (included in the supply kit) or coins
Cardstock printed with sock shapes to cut out	Clay, 4-6 oz
Compass, 25 mm or larger size	Container, about 2 oz
Cotton balls, 1-2 cups	Deck of cards such as "Go Fish" game
Dowel, 8" X 5/8"	Drinking glass, plastic 12 oz
Forceps or tweezers	Globe,inflatable
Hole puncher, single	Honey, small packet
Inflatable ball (soccer ball size)	Inflatable beach ball, about 6"
Jump rope, kid's size	Magnet, with center hole
Magnifying glass, 50mm or larger	Nails, 1.5"-2", QTY 3
Paper clips, QTY 12	Paper towels (blotting paper), 6 sheets
Paper, 8 1/2" X 11", QTY 10	Paper, legal size, QTY 12
Paper, poster, about 11" X 17", 3 Pieces	Paper roll of blank white, 24" X 10'
Pin, sewing type	Pinecones, QTY 3
Plate, plastic, 9"	Potting soil, 1.5 cups
Push pins, QTY 3	Starting pots, 2 1/2" X 2 1/2", QTY 2
Straw, plastic drinking	String, cotton 16'
Crayons (64ct)	Tomato seeds, QTY 8
Cardboard, about 11" X 17"	Multi-Color Construction Paper
Toothpicks, QTY 10	Wax paper, 12" pieces, QTY 4
Wood dowel (or stick), 12"	Yarn, 12' for 4 pieces of finger knitting
Yarn, 8", 6 pieces	Empty toilet paper roll
Socks (from family laundry)	Hard boiled eggs, QTY 7
Large box (big enough for the student to sit in)	Rope for tug of war
Gallon or half gallon plastic milk jug	Hat
Flowers or plants for pressing	Old sheet or towel
Soapy water	Iron
Pre-made calendar or available calendar	Peanut butter
Empty milk carton	1 cup of Crisco or shortening
Water	Large pot, pitcher, or sink filled with water
Marbles(optional)	Play Dough (optional)
Magazines (optional)	Popcorn(optional)
Toys(optional)	

Grade 2 Materials

The list below details the materials required for Grade 2.

Bag of Beans, for counters, about 130 beans
Birdseed, 1 cup
3x5 Index Cards (100pk)
Hole punch, single
Rubber bands, coloured
Globe (inflatable)
Pots for plants, 2.5" square, QTY 3
Popsicle Sticks (craft sticks), QTY 2
Iron
Large grapefruit or orange
Old sheet or towel
Gum

String, 13 feet
Towel
Multi-Colour Construction Paper
Wax Paper, 10" X 12", QTY 10
Push pins, tall, QTY 25
Seeds, beans, QTY 6
Yarn, red, blue and green, 8' each
Yarn, 8", QTY 9
Potting soil, about 2 cups
Small objects for measuring (string, paperclips, etc.)
Leaves (evergreen and / or deciduous)

Grade 3 Materials

The list below details the materials required for Grade 3.

Balloons, 9", QTY 2
Brass Brad
Cardboard, 8.5" X 11", QTY 3
Clay, any colour, 4 oz non-drying
Bowl, foam, 12 oz
Construction paper, Blue 3 hole pre-punched, 7 pages
3x5 Index Cards (300)
Cups, foam, 3 to 6 oz, QTY 2
Cups, plastic clear, 12 oz, QTY 2
Eye dropper
Foam rod, round ½" X 20'
Globe inflatable, 10" to 14"
Jar with lid, 6 oz to 12 oz
Liquid Measuring Cup, 4 cups / 1 liter
Nail, 2 ½"
Paper clips, QTY 12
Plate, paper, 9"
Plate, small paper 6", QTY 2
Rubber band, 3"
Sponge, standard, 2" x 2" x ½" (clean)
Spoon
String, cotton, 10 feet
Tape measure, 60" cloth with metric and inches
Toothpicks, box of 100
Yarn, 14 feet
Wire hanger
Gallon job
Body temperature thermometer
Lamp from your home or school
Ice cubes
Avocado or sweet potato
Flower

Pitcher (Gallon)
Plastic bowl, 12 oz
Clay, air dry, 2.5 pounds
Clear plastic or plastic wrap, 6" X 6"
Box, cardboard, shoe box size
Printed sheet of coins with 50 pennies, 4 dimes, 1 nickel, 1 quarter, 1 dollar bill, and 30 counters
Tempera Paint (R,Y, B) with small roller
Cups, paper, 3-5 oz, QTY 3
Cups, plastic clear, 9 oz, QTY 3
Foam craft material, 8.5" X 11"
Food colouring (red and green), 5 mL each
Hole puncher, single hole
Liquid Measuring Cup, 1 cup (8 oz)
Magnifying glass, 2x to 10 x
Outdoor thermometer / general purpose, F/C
Permanent Marker, black
Plate, plastic, 9"
Cotton balls, about 1 quart
Sheets of Hundred Blocks, QTY 13
Sponge, standard, 2" x 4" x ½"
Steel washer, 7/16 – ½"
Tablespoon
Teaspoon
Watercolour paper
Yarn, ball, 30-60 feet
Cylinder object such as a crayon
Meat thermometer
Dictionary print or online
Gallon container or similar bowl or pan
Celery stalk
Leaf
Globe and / or world maps that indicate terrain (Google maps)

Grade 4 Materials & Reading List

The list below details the materials required for Grade 4.

Reading List

Semester A
A Tale of Despereaux by Kate Dicamillo
Bud, Not Buddy by Christopher Paul Curtis
Tales of a Fourth Grade Nothing by Judy Blume

Semester B
Wringer by Jerry Spinelli
Pictures of Hollis Woods by Patricia Reilly Gif
Shiloh by Phyllis Reynolds Naylor

Materials

Aluminium Foil, about 12" X 10"
Bags, 4" X 6" 4 mil, zip-close plastic, QTY 3
Battery, D
Box for a diorama, shoebox size
Chalk, ½ Teaspoon, ground up
Clay, modelling, 2 oz each (blue, brown, green, white, grey, yellow)
3x5 Index Cards (100pk)
Craft sticks, small, wooden, QTY 4
Cups, 12 oz clear plastic, QTY 8
Dirt, ½ teaspoon
Epsom salt, 12 oz
Flour, 1.1 cup
Food colouring (any colour will work)
Gumdrops, 5 of one colour, 1 of each of 4 colours
Indoor holiday light, 1 bulb with wires attached
Measuring spoon, ½ teaspoon
Nail, 3", zinc (galvanized nails are zinc coated)
Pebbles, 1 cup
Plate, white foam, 9", QTY 1
Potting soil, 1.5 quart
Salt, 1.75 cups
Soap, ½ teaspoon liquid
Socks, 1 pair
Spoon, large mixing
Straw, clear plastic drinking
Sugar cubes, QTY 6
Thermometer, 6"
Liquid measuring cup, 1 cup / 250 ml size (metric & standard)

Bag, clear plastic, 1 gallon, 2 mil, zip lock
Balloons, 9", QTY 3
Bowl, 12 oz foam, QTY 4
Car, small toy
Clay, air dry, 8 oz
Container, plastic, 6 quarter, QTY 2
Highlighters – 4 Colours, No Yellow
Cup, clear plastic, 9 oz
Cups, paper, about 3 oz, QTY 4
Drawing paper, 8.5" X 11, 28 pound, QTY 6
File folders, manila, tabbed, QTY 7
Foam, plastic, 2" X 3" X ½"
Inflatable globe
Index cards, 4" X 6", QTY 30
Jars with lids, clear plastic, 6 oz, QTY 8
Match, QTY 3
Measuring spoon 1 tablespoon
Oil, ½ teaspoon cooking
Pitcher ½ gallon
Plywood, about 5" X 11"
Protractor
Sand, 1.25 quart
Soap, ½ teaspoon solid laundry
Straight pin
String, light cotton, 6'
Sugar, 3 teaspoons of regular granular
Thumbtacks, QTY 2 metal
Sponge, 2" X 2" X ½" (simple, inexpensive sponge with no scrubber side)

Toothpicks, QTY 16
Wax paper, 12" long, QTY 7
Wire, copper, 3", bare thick 10-14 gauge
Poster Board, 11'x17", 3 Pieces
Graph paper
House plant
Lamp from your home or school
Rubbing alcohol
Eggs, QTY 2
Bottle of soda, 2-Liter
Leaf, large
Ice cubes, 2-3 trays
Metal and non-metal objects
Lemon
Materials to build landscape

Vinegar, 4.2 oz
Wood block, about 1.5 "X 3.5" X 4"
Dictionary print or online
Bottle, 2-Liter, plastic
3 liquids (pint of milk, bottle of water, can of juice
Wire, copper with insulation, ends stripped, 20 gauge 12"
Water bottle
Orange juice can of frozen concentrate
Watch or clock
Alcohol, ½ teaspoon rubbing
Materials for wrapping cups (such as bubble wrap
Tap water
Cardboard, heavy paper, and/or modelling clay
Leaves and grass, collected

Grade 5 Materials & Reading List

The list below details the materials required for Grade 5.

Reading List

SemesterA
Because of Winn Dixie
Number the Stars
The Watsons Go to Birmingham

Semester B
Maniac Magee by Jerry Spinelli
Out of the Dust by Karen Hesse
Island of the Blue Dolphin by Scott O’Dell

Materials

Comb, 4-inch plastic
Balloons, 12”, QTY 2
Cheesecloth, 8” X 8”, QTY 2
Box for a diorama, shoebox size
Chalk, ½ Teaspoon, ground up
Container, 6 qt plastic shoebox size (to hold the water)
Dice, QTY 2
Dried sweet basil
Flashlight
Needle and thread
Paper, drawing, 3 sheets
Small mirror, about 2” X 3”
Glass, with thin rim
3x5 Index Cards (10)
Masking Tape
Three types of seeds: corn (maize), bean (lima or another large bean), and radish
Poster Board 8.5”x11”
Calculator, handheld or online
Graph paper can be printer
Rose petals

Pennies, QTY 8
Cardboard, 8.5” X 11”, QTY 2
Clothespin
Dried mint leaves
Fabric, soft such as lightweight flannel 9” X 9”, QTY
Containers, small plastic with similar volume and different shapes, QTY 3
Ground cloves
Paper towel, 1 sheet
Rubber bands, 3”
Tape measure, cloth
Waxed paper, 4” X 3”
Ziploc or plastic lunch bag, quart size
Highlighter - Blue
Multi-Colour Construction Paper
Jars with lids, clear plastic, 6 oz, QTY 8
Rectangular prisms of any size from around your home or school (tissue box, shoe box,
Paper towel tube

Grade 6 Science Lab - Materials List

Certain labs/projects require the use of outside materials. The following is a list of the course's labs/projects (by unit) and the materials you are responsible for having.

Semester A - Projects
Living vs. Nonliving
Plant Growth Lab
Plant Project Background
Plant Asexual Reproduction Investigation
Plant Sexual Reproduction Investigation
Plant Reproduction: Image Upload
Plant Reproduction Write-Up

Semester B - Projects
Plan an Experiment
Keeping it Cool
Solving an Environmental Issue, Research Write Up
Solving an Environmental Issue, Plan Write Up
Solving an Environmental Issue, Gather Data
Solving an Environmental Issue, Conclusion Write Up
Solving an Environmental Issue, Create Presentation
Solving an Environmental Issue, Submit Presentation

Materials

Notebook
Box for a diorama, shoebox size
Printer paper or images printed from the computer
Markers
Crayons
Coloured pencils
Pens
Clay
Moulding dough
Paper
Diorama with desert background
3 note cards or pieces of paper
A camera or something to take pictures with (such as a cell phone or the camera on your computer)

Notebook
Two ice cubes that are the same size
Materials to construct a device to keep an ice cube cold
Something to measure the size of your ice cubes with (scale, ruler, camera, etc.)
Internet access
Poster board
Craft materials
Camera

Grade 7 Science Lab - Materials List

Certain labs/projects require the use of outside materials. The following is a list of the course's labs/projects (by unit) and the materials you are responsible for having.

Semester A - Projects

3-D Models Pre-Lab
3-D Models
3-D Models File Upload
Understanding Phase Changes Background & Procedures
Understanding Phase Changes Virtual Lab
Understanding Phase Changes Graph Upload
Designing a Cold Pack Background & Procedures
Designing a Cold Pack Virtual Lab
Designing a Cold Pack Data Table Upload
Improving a Cold Pack Background and Procedures
Improving a Cold Pack Virtual Lab
Improving a Cold Pack Data Table Upload
Matter and Energy Model—Animals Part 1
Matter and Energy Model—Animals Part 2
Matter and Energy Model—Animals Part 3
Matter and Energy Model—Animals Part 4
Matter and Energy Model—Animals Part 5
Matter and Energy Model—Plants Part 1
Matter and Energy Model—Plants Part 2
Matter and Energy Model—Plants Part 3
Matter and Energy Model—Plants Part 4
Matter and Energy Model—Plants Part 5
Matter and Energy Model Diorama Upload
Impact of Aluminium
Impact of Aluminium Research Table Upload
Impact of Aluminium Recycling
Impact of Aluminium Recycling Research Table Upload

Semester B - Projects

Effects on Populations
Resource Availability
Predicting Interactions
Preserving Biodiversity
Project: Preserving Biodiversity—Results
Modelling the Rock Cycle, Part 1
Modelling the Rock Cycle, Part 2
Modelling the Rock Cycle, Part 3
Modelling the Rock Cycle, Part 4
Reasons for the Uneven Distribution of Resources
Modelling the Rock Cycle, Part 5
Modelling the Rock Cycle Diorama Upload
Forecasting Disaster—Background
Forecasting Disaster
Evidence of Plate Motion—Fact or Opinion
Evidence of Plate Motion—Pangaea Breakup
Evidence of Plate Motion—Virtual Map
Changing Earth

Materials

6 different colours of a similar item (for example, if the item you choose is marshmallows, you could have a pink, a blue, a green, a yellow, an orange, and a white marshmallow)

You will need approximately 18 objects in one colour for chlorine, 18 objects in another colour for sodium, & 7 objects each in the 7 remaining colours.

Research materials (Internet, books)

Images and details of proposed wildlife bridges

Grade 7 Science Lab - Materials List

6 separate containers to hold your items (for example, 6 plastic bags)
Connectors (for example, pretzel sticks or toothpicks)
Notecards or sheets of paper
Diorama, such as a shoebox or a shadow box picture frame
Videocamera—either a cell phone video camera or a stand-alone video camera
Glue and/or tape
Pens and/or markers
Platform that will hold your diorama (for example, a shoebox)

Glue and/or tape
Pens and/or markers
Notebook (paper or computer document)
Field Notes

Grade 8 Science Lab - Materials List

Certain labs/projects require the use of outside materials. The following is a list of the course's labs/projects (by unit) and the materials you are responsible for having.

Semester A - Projects

Photosynthesis Experiment 1

Photosynthesis Experiment 2

Photosynthesis Experiment 3

Photosynthesis Experiment 4

Heredity and Evolution Experiment 1

Heredity and Evolution Experiment 2

Heredity and Evolution Experiment 3

Heredity and Evolution Experiment 4

Species Discovery

Semester B - Projects

Experiment 1: Designing a Balloon Car

Building and Testing a Balloon Car

Experiment 2: Improving your Balloon Car Research

Experiment 3: Balloon Car Final Modification Research

Pre-Lab

Moon Phases

Moon Phases Reminder

Moon Phases Upload and Lab Write-Up

Solar System

Materials

1 tsp corn starch

2 glass parfait cups (or small, transparent plastic cups)

20 mL or 1 fl oz of iodine*, *Make sure the label says, 2%

Plastic disposable spoon

Disposable gloves

A pair of safety glasses**, **Check a local hardware store.

A source of water

A geranium plant, or another plant that has mostly flat leaves*, *Plants with thick, plastic-like leaves should not be used.

A paper clip

A heat-safe glass measuring bowl

An electric kettle, or other source of boiling water

A small dish

A small bottle of 70% rubbing alcohol

Tweezers (optional)

The plastic lid from a disposable plastic container

Materials from Photosynthesis Experiments 1 and 2

Aluminium foil

Axles

Car body

Wheels

Straw

Balloon

Tape

Scissors

Stopwatch (you can use your phone)

Masking tape or a piece of paper

String, yarn, pipe cleaners, or wire

Balls or round objects of varying sizes

Grade 8 Science Lab - Materials List

Materials from Photosynthesis Experiments 1, 2, and 3
Scissors
Cardboard
A coin
A photographic negative or electric tape and a sheet of clear plastic
A marker
2 Coins
Large sheets of white paper
Large sheets of black paper
A timer (may be found on a cell phone or online)
A box of toothpicks
A larger box
Two cups

Styrofoam balls
Paint, markers, crayons
Coloured paper
Glue or tape
Measuring tool (measuring tape, ruler, meter stick) **You will be measuring in metric units, so make sure your measuring tool has metric units on it (i.e. Centimeters, meters).



APPENDIX A

AP EXTERNAL MATERIALS

AP English Language and Composition A&B

Semester A (one of the following texts)

Zen in the Art of Writing by Ray Bradbury

On Writing Well by William Zinsser

Semester B - See the lesson titled The Memoir for an overview of text choices and choose one of the following:

**Narrative of the Life of Frederick Douglass by Frederick Douglass

*A Work in Progress: A Memoir by Connor Franta

The Reason I Jump: The Inner Voice of a Thirteen- Year-Old Boy with Autism by Naoki Higashida

*The Color of Water: A Black Man's Tribute to His White Mother by James McBride

*The Glass Castle: A Memoir by Jeannette Walls

*I am Malala: The Girl Who Stood Up for Education and Was Shot by the Taliban by Malala Yousafza

*I Know Why the Caged Bird Sings by Maya Angelou

Dust Tracks on a Road by Zora Neale Hurston

***Incidents in the Life of a Slave Girl by Harriet Jacobs

**The Story of My Life by Helen Keller

Semester B - See the Checklist lesson for an overview of text choices and choose one of the following:

Pilgrim at Tinker Creek by Annie Dillard

*Nickel and Dimed: On (Not) Getting By in America by Barbara Ehrenreich

Mountains Beyond Mountains: The Quest of Dr. Paul Farmer, A Man Who Would Cure the World by Tracy Kidder

*The Devil in the White City: Murder, Magic, and Madness at the Fair that Changed America by Erik Larson

**Up from Slavery: An Autobiography by Booker T. Washington

Into Thin Air by Jon Krakauer

The Immortal Life of Henrietta Lacks by Rebecca Skloot

Warmth of Other Suns by Isabell Wilkerson

Bury My Heart At Wounded Knee by Dee Brown

The Boys in the Boat by Daniel James Brown

* All works have rhetorical merit for the AP English student; texts marked with asterisks deal with mature subject matter or contain adult language or situations. If this is a concern for you or your family, please choose a different text from the list.

**This text can be read online

***Mature subject matter & available online

AP Biology A&B

Campbell Biology In Focus 3rd Edition AP Edition for Advanced Placement Author(s): Urry, Lisa | Cain, Michael | Wasserman, Steven | Minorsky, Peter Textbook ISBN-13: 9780135214763, student provided lab materials

AP CHEMISTRY A&B

AP Chemistry Chang – Raymond Chang, Kenneth Goldsby – 12th Edition, 2016 ISBN-13: 978-0076727704, ISBN-10: 007672770X

Cracking the AP Chemistry Exam, 2020 Edition ISBN-13: 978-0525568186 ISBN-10: 0525568182

AP GOVERNMENT & POLITICS A & B

Ginsberg, Benjamin, Theodore J. Lowi, Margaret Weir, Caroline J. Tolbert, and Andrea L. Campbell. We the People: An Introduction to American Politics. 12th edition. New York, NY: W.W. Norton, 2018.

AP U.S. HISTORY A & B

Give Me Liberty- AP 6th Ed.-Eric Foner ISBN: 978-0-393-44123-9

AP WORLD HISTORY A & B

Bentley, Traditions & Encounters: A Global Perspective on the Past. UPDATED AP Edition © 2017, 6e, Student Edition ISBN-13: 978-0076681280 ISBN-10: 0076681289

AP World History Modern Prep Plus 2020 & 2021 ISBN-13: 978-1506248127 ISBN-10: 1506248128

AP SPANISH LANGUAGE AND CULTURE A & B

Cracking the AP Spanish Language & Culture Exam with Audio CD, 2020 Edition ISBN-13: 978-0525568346 ISBN-10: 0525568344



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