

Third Grade Science



Course Overview

Students learn to observe and analyze through hands-on experiments, and gain further insight into how scientists understand our world. They observe and chart the phases of the moon, determine the properties of insulators and conductors, and make a three-dimensional model of a bone. Students will explore topics such as:

- **Weather**—air pressure; precipitation; clouds; humidity; fronts; forecasting
- **Vertebrates**—features of fish, amphibians, reptiles, birds, and mammals
- **Ecosystems**—climate zones; tundra, forests, desert,

grasslands, freshwater, and marine ecosystems

- **Matter**—phase changes; volume; mass; atoms; physical and chemical changes
- **Human Body**—the musculoskeletal system; the skin
- **Energy**—forms of energy; transfer of energy; conductors and insulators; renewable and nonrenewable energy resources
- **Light**—light as energy; the spectrum; how the eye works
- **Astronomy**—phases of the moon; eclipses; the solar system; stars and constellations; the Milky Way

Course Outline

Weather

- Identify forms of precipitation (rain, snow, sleet, and hail) and explain how they form
- Use appropriate tools to measure and record weather conditions, including air temperature, wind direction, wind speed, humidity, and pressure
- Explain that air masses meet at fronts and that most weather changes occur along fronts
- Explain how air moves in cold and warm fronts and identify common weather patterns associated with each
- Identify humidity as the amount of water vapor in the air
- Identify common weather patterns associated with changes in air pressure
- Recognize that meteorologists rely on data collected from various resources, such as weather stations, weather balloons, weather satellites, and weather radar
- Interpret weather maps and their symbols, including those for cloud cover, precipitation, temperature, pressure, and fronts

Classification of Vertebrates

- Distinguish between *vertebrates* and *invertebrates*
- Recognize that some animals have constant internal body temperatures and others have internal body temperatures that fluctuate depending on the temperature of their surroundings
- Identify different groups of vertebrates (fish, amphibians, reptiles, birds, and mammals) according to their common characteristics

Ecosystems

- Explain that an *ecosystem* includes all living things in a particular region

- Describe *climate* as the usual weather in a certain area over many years
- Identify the three main climate zones as *tropical*, *temperate*, and *polar*
- Recognize that scientists use patterns of climate, vegetation, and animal life to identify different ecosystems
- Describe different ecosystems: tundra, boreal forest, temperate deciduous forest, tropical rain forest, grasslands, desert, freshwater, and marine
- Recognize that living things have physical and behavioral adaptations that enable them to survive in a particular ecosystem

Ecosystems of the Past

- Recognize that many organisms that once lived on Earth are extinct, and while some of them resembled animals and plants alive today, others were quite different
- Compare modern ecosystems with similar ecosystems from Earth's geologic past (for example, reef, tundra, and forest)
- Recognize methods (fossils, tree rings, and ice) scientists use to study past ecosystems

Properties of Matter

- Identify forms of matter: solid, liquid, and gas
- Describe the properties of solids, liquids, and gases (for example, *solids* have a definite shape and a definite volume; *liquids* have a definite volume but no definite shape; *gases* have neither definite shape nor definite volume)
- Recognize that all matter is made of particles called *atoms*, which are constantly in motion and much too small to be seen with the naked eye
- Describe the motion of atoms in solids, liquids, and

gases: atoms in solids vibrate slightly but do not change positions; atoms in liquids vibrate too much to stay in a fixed position; and atoms in gases move freely

- Describe how matter changes states when heated (from solid to liquid to gas) or cooled (from gas to liquid to solid)
- Use appropriate tools to measure the length, volume, mass, and weight of objects in metric units
- Convert measurements from one metric unit to another, such as millimeter (mm) to centimeter (cm)
- Define volume as the amount of space occupied by matter
- Recognize that mass is the resistance of an object to acceleration by a force
- Recognize that the mass of an object stays the same, but its weight changes depending on where it's weighed

Physical and Chemical Changes of Matter

- Identify a physical change as either a change in size and shape (by cutting, breaking, or grinding) or a change in phase (by melting, boiling, freezing, evaporating, or condensing)
- Classify changes in matter as chemical or physical
- Identify clues that suggest a chemical change (for example, producing heat or light, or changing color)
- Recognize that atoms of different elements can combine to form compounds, such as when hydrogen and oxygen combine to form water
- Recognize that scientists organize all known chemical elements in the Periodic Table, representing each element with a symbol

Human Body

- Explain that bones, cartilage, tendons, and ligaments make up the skeletal system
- Identify bones by shape (flat, curved, long, short, and irregular), name (skull, backbone, ribs, pelvis, and femur), and function (protection, support, and movement)
- Examine the internal structure of bones
- Observe that bones have tiny passageways containing nerves, blood vessels, and marrow where blood cells are made
- Identify musculoskeletal connections such as joints (ball and socket, hinge, pivot, and gliding), ligaments, and tendons, and describe how they function
- Examine how the human body heals and repairs broken bones
- Describe different types of muscles as skeletal, smooth, or cardiac and identify them as voluntary or involuntary
- Recognize that most skeletal muscles work in pairs:

flexors contract to move a bone as *extensors* relax

- Identify the skin as the body's largest organ
- Explain the main functions of the skin (protecting, cooling, and sensing)
- Identify and describe the skin's two main layers (epidermis and dermis) and its structures, such as sweat glands, hair follicles, oil glands, and sense receptors

Energy

- Identify the earth's major source of energy as the sun, and recognize that you see and feel this energy as light and heat and that this energy makes life on Earth possible
- Recognize that energy can be stored in many forms, such as food, fuel (for example, coal, oil, gas, wood, and batteries), and even coiled springs and stretched rubber bands
- Recognize that energy is used to do work
- Recognize that machines and living things convert stored energy into different forms of energy, such as heat, light, and motion
- Explain that a *conductor* is a substance that allows energy to pass through it easily, while an *insulator* is a substance that allows little or no energy to pass through it
- Classify energy sources as either *renewable* (wind, wood, solar, hydroelectric, and geothermal) or *nonrenewable* (natural gas, oil, coal, and nuclear)

Light

- Explain that when light strikes an object, it can be reflected, transmitted, or absorbed
- Recognize that as light travels from one medium to another it refracts (bends)
- Explain that the color of an object is due, in part, to the color of light that is reflected back to your eyes
- Explain that a dark surface absorbs more light than a light surface and a light surface reflects more light than a dark surface
- Recognize that vision is one of your primary senses and that your vision relies on light energy
- Recognize that when an object is seen, light rays enter the eye and are interpreted by the brain
- Identify various parts of the eye: cornea, iris and pupil, lens, retina, optic nerve, rods, and cones

Sun, Earth, and Moon

- Describe the rotation and revolution of Earth: Earth completes one *rotation* on its axis every 24 hours, while it completes one orbit around the sun, or *revolution*, every year

- Explain how the tilt of Earth's axis causes the seasons
- State that the moon orbits Earth, and explain that the moon makes one revolution around Earth and one rotation in approximately one month
- Explain that the moon does not produce its own light, but that the moon is visible from Earth because sunlight reflects off its surface
- Describe the way in which the moon's appearance changes during the phases of the lunar cycle: new, full, quarter, crescent, and gibbous
- Explain that when Earth blocks sunlight from the moon, a *lunar eclipse* occurs; when the moon blocks sunlight from the Earth, a solar eclipse occurs
- Describe the features of the lunar landscape, such as craters, lowlands (maria), valleys (rilles), highlands, and soil
- Identify the moon as Earth's natural satellite, and give a simplified current explanation of how the moon was formed

The Solar System and Beyond

- Describe our solar system as a collection of nine planets, moons, and numerous other objects (such as asteroids and comets) with the sun at its center
- State that the force of gravity keeps the planets in orbit around the sun
- Name the planets in our solar system in order starting with the planet closest to the sun
- Identify the layers of the sun: core, photosphere, and corona
- Explain that stars are located far outside our solar system and are much farther away from Earth than the nine planets in our solar system
- Recognize that stars are classified according to their brightness, or *magnitude*, and that the brightness of a star in the sky has to do with its size and distance from Earth
- Recognize some prominent stars, such as Polaris, Sirius, Betelgeuse, and Rigel, and constellations, such as the Little Dipper, the Big Dipper, and Orion
- State that our solar system is part of the Milky Way galaxy
- Recognize that telescopes magnify the appearance of some distant objects in the sky, such as the moon and the planets, and increase the number of visible stars

Lesson Time and Scheduling

Total lessons: 72. If you teach Science twice a week, you can comfortably complete the program within a typical school year.

Lesson Time: 60 minutes. You might choose to split the

lessons into smaller segments. The K¹² online lesson tracking system will allow you to pick up wherever you left off in any given lesson.

Standard Curriculum Items

A Walk in the Boreal Forest by Rebecca L. Johnson
A Walk in the Desert by Rebecca L. Johnson
A Walk in the Rainforest by Rebecca L. Johnson
A Walk in the Tundra by Rebecca L. Johnson
A Walk in the Deciduous Forest by Rebecca L. Johnson
A Walk in the Prairie by Rebecca L. Johnson
Sunshine Makes the Seasons by Franklyn M. Branley
The Moon Seems to Change by Franklyn M. Branley
Graduated cylinder
Safety goggles
Magnifying glass
Thermometer

Additional Curriculum Items

Some lessons require additional resources, including common household items and books that are readily available online or in your local library:

Modeling clay
Directional compass

NOTE: List subject to change.

Fourth Grade Science



Course Overview

Students develop scientific reasoning and perform hands-on experiments in Earth, Life, and Physical Sciences. They construct an electromagnet, identify minerals according to their properties, use chromatography to separate liquids, and assemble food webs. Students will explore topics such as:

- **The Interdependence of Life**—producers, consumers, and decomposers; food webs
- **Animal and Plant Interactions**—populations; competition; predators and prey; symbiosis; animal behavior
- **Invertebrates**—sponges; worms; mollusks; arthropods; echinoderms
- **Chemistry**—mixtures vs. solutions; distillation,

evaporation, and chromatography

- **Forces and Fluids**—pressure; forces in flight; density; buoyancy
- **Human Body**—nervous system (senses, reflexes, nerves, and brain); endocrine system (hormones, glands, growth, and digestion)
- **Electricity and Magnetism**—charges; magnets; static electricity; currents and circuits; electromagnetism
- **Rocks and Minerals**—the earth's interior; crystals; minerals; rock cycle; plate tectonics; volcanoes, earthquakes
- **The Fossil Record and the History of Life**—types of fossils; the Paleozoic, Mesozoic, and Cenozoic eras

Course Outline

Ecosystems: Interdependence of Life

- Explain that ecosystems are characterized by both their living and nonliving parts
- Explain that an *environment* is the nonliving part of an ecosystem
- Describe some ways in which organisms are dependent on each other for survival, including the need for food, pollination, and seed dispersal
- Recognize that all organisms need some source of energy to stay alive
- Explain that, in all environments, organisms are constantly growing, reproducing, dying, and decaying
- Explain that certain organisms, such as insects, fungi, and bacteria, depend on dead plants and animals for food
- State that sunlight is the major source of energy for ecosystems, and describe how its energy is passed from organism to organism in food webs
- Explain how producers and consumers (herbivores, carnivores, omnivores, and decomposers) are related in food chains and food webs in an ecosystem
- Recognize that cycles in nature provide organisms with the food, air, and water they need
- Recognize that conditions within an ecosystem are constantly changing, further recognize that some plants and animals survive because they either adapt to such changes or move to another location, while others die

ecosystems, some of which are detrimental to other organisms, while others are beneficial

- Recognize that organisms in an ecosystem can compete for resources such as food, shelter, and water
- Classify organisms as *predators* and *prey*
- Identify various symbiotic relationships between organisms as *mutualism*, *commensalism*, or *parasitism*
- Explain that an animal's behavior helps it survive
- Identify behaviors as either *inborn* or *learned*

Chemistry of Solutions

- Identify a *mixture* as a combination of two or more substances that are not chemically bound
- Identify a *solution* as a mixture in which two or more substances are evenly mixed and do not settle
- Identify a *solute* as a substance that is dissolved and a *solvent* as a substance that does the dissolving
- Recognize that solutions can be made from combinations of gases, liquids, or solids
- Identify different ways to separate solutions such as chromatography, distillation, or evaporation
- Identify some ways to change the rate at which solids dissolve in liquids, including grinding, stirring, and increasing the temperature
- Recognize that not all substances can dissolve in water in the same amounts
- Compare the concentrations of different solutions

Plant and Animal Interactions

- State that a *population* is a group of individuals of the same type living in a certain area
- Describe some factors that change the growth of a population
- Explain that living things cause changes in their

Forces in Fluids

- Define *pressure* as the force exerted on a surface per unit area and recognize that pressure is measured in units called *pascals*
- Explain that atmospheric pressure decreases with height *above* sea level while water pressure increases

with depth *below* sea level

- Describe the forces present in flight, including lift, weight, thrust, and drag
- Measure the density of a solid and compare its mass with its volume displacement in water to predict whether it will sink or float
- Recognize that an object denser than water will sink unless it is shaped such that the weight of the water it displaces is greater than the weight of the object itself

The Human Body

- Explain that the various systems of the human body function because the cells, tissues, and organs all work together
- Explain that the brain gets information about the rest of the body, and the outside world, through nerves, and likewise use nerves to direct actions in other parts of the body
- Define *senses*, *reflexes*, *voluntary nervous system*, and *involuntary nervous system*
- Identify various parts of the nervous system (such as the brain, spinal cord, nerves, nerve cells, and neurotransmitters) along with their structures and functions
- Explain that the *endocrine system* is composed of glands and chemical messengers called *hormones*, which function over a wide range of time scales
- Identify the locations of some major glands of the endocrine system (such as the adrenals, thyroid, pituitary, and pancreas)
- Describe how glands and their hormones affect major body processes, including growth, stress, digestion, and the sleep-wake cycle

Classification of Invertebrates

- Identify different groups of invertebrates, such as sponges, cnidarians, worms, mollusks, arthropods, and echinoderms, according to their common characteristics

Electricity and Magnetism

- Recognize that objects with the same electrical charges repel, while those with different electrical charges attract
- Demonstrate that magnets have two poles (north and south) and that like poles repel while unlike poles attract
- Describe the earth's magnetic field, and identify magnetic north and south
- Explain how to construct a temporary magnet
- Explain that friction can build up static electrical charge when two objects are rubbed together by transferring electrons from one surface to the other
- State that electric currents flow easily through materials that are conductors and do not flow easily through

materials that are insulators

- Identify the parts of a circuit: battery, light, wire, and switch
- Differentiate between *series* and *parallel circuits*
- State that electric currents produce magnetic fields, and that an electromagnet can be made by wrapping a wire around a piece of iron and then running electricity through the wire
- Recognize that electromagnets are used in a variety of everyday devices, including electric motors, generators, doorbells, and earphones

Rocks and Minerals

- Identify and describe the properties of the earth's layers: crust, mantle, outer core, and inner core
- Explain that rock is composed of different combinations of minerals
- Recognize that minerals have their own distinct crystal shape, determined by the arrangement of their atoms
- Identify common rock-forming minerals using their physical properties: color, streak, luster, and hardness
- Recognize that ore is rock with a high metal content and that most metals come from minerals mined from the earth's crust
- Know how to differentiate among igneous, sedimentary, and metamorphic rocks by referring to both their properties and methods of formation
- Explain that the surface of the earth is made of rigid plates that are in constant motion, and that the motion of these plates against, over, and under each other causes earthquakes, volcanoes, and the formation of mountains
- Identify the various structures of volcanoes, describe the types of eruptions that form them, and explain how they change the landscape
- Describe what happens during an earthquake and how the landscape can change as a result

Weathering, Erosion, and Deposition

- Explain both the physical and the chemical weathering of rocks
- Describe a soil profile and explain how new soil forms as a result of many years of weathering
- Explain that soil is a mixture of weathered rock, humus, air, and water
- Describe how gravity, moving water, wind, and glaciers reshape the surface of the land by weathering, eroding, and transporting sediment from one location to another

Fossils and Geologic Time

- Describe the conditions under which fossils may form and distinguish among the different types, such as *petrified*, *molds*, *casts* and *trace fossils*

- Explain that fossils provide information about organisms that lived long ago and that they help scientists reconstruct the history of life on Earth
- State that fossils provide evidence that many types of organisms that once lived on Earth are now extinct
- Recognize that scientists divide geologic time into four eras (Precambrian, Paleozoic, Mesozoic, and Cenozoic) and that each era covers one major stage in Earth's history
- Name one major event that occurred in each of the four geologic eras: Precambrian, Paleozoic, Mesozoic, and Cenozoic

Lesson Time and Scheduling

Total lessons: 72

Lesson time: 60 minutes. You might choose to split the lessons into smaller segments and take breaks as needed. The K¹² online lesson tracking system allows you to pick up wherever you left off in any given lesson.

Standard Curriculum Items

Come Learn with Me: Animals Without Backbones—Invertebrates by Bridget Anderson

Come Learn with Me: The Fossil Record and the History of Life by Bridget Anderson

Bar magnets

Safety goggles

Graduated cylinder

Lamp receptacles

Lamp bulbs

Magnifying glass

Rock kit

Spring scale

Thermometer

Additional Curriculum Items

Some lessons require additional resources, including common household items, and books that are readily available online or in your local library:

Modeling clay

Copper wire

Gravel

Adding machine paper

Pipe cleaners

Sand

Sea shell

White tile

Plastic aquarium tubing

NOTE: List subject to change.

Fifth Grade Science



Course Overview

Students perform experiments, develop scientific reasoning, and recognize science in the world around them. They build a model of a watershed, test how cell membranes function, track a hurricane, and analyze the effects gravity. Students will explore topics such as:

- **Water Resources**—water pollution; conservation; aquifers; watersheds; wetlands
- **The World's Oceans**—properties of ocean water; currents, waves, and tides; the ocean floor; marine organisms
- **Earth's Atmosphere**—layers; weather patterns, maps, and forecasts; fronts; El Niño; and the greenhouse effect
- **Forces of Motion**—types of pushes or pulls; position

and speed; inertia; energy as a measure of work; gravity and motion

- **Chemistry**—structure of atoms; elements and compounds; the Periodic Table; chemical reactions; acids and bases
- **Cells and Cell Processes**—structure; membrane function; respiration and photosynthesis; growth cycles; genes and DNA
- **Taxonomy of Plants and Animals**—levels of classification; plants, animals, monerans, viruses, protists, and fungi
- **Animal Physiology**—circulatory, respiratory, digestive, excretory, and immune systems

Course Outline

Water Resources

- Identify the various sources of water, its uses, and different ways to conserve it
- Identify the typical steps that water-treatment plants go through to purify drinking water
- Describe how both natural processes and human activities affect water quality in watersheds
- Differentiate between *point source pollution* and *nonpoint source pollution*, and identify some ways by which they can both be reduced
- Identify and describe the different parts of a watershed
- Interpret a topographic map to identify the boundaries of a watershed
- Explain how a model of something differs from the real thing, but can be used to learn about the real thing
- Explain why wetlands are important to watersheds and how they can improve water quality

The World's Oceans

- Explain that water covers approximately three-quarters of the Earth's surface and that, since all the earth's oceans are connected, their water circulates through them all
- Define *salinity* and explain how the density of ocean water changes as salinity levels and temperature change
- Describe the movements of both the ocean's surface currents and its deep-water currents
- Explain how ocean waves form, identify their properties (such as height, length, crest, and trough), and describe their motions
- Explain how the combined gravitational pull of the sun and moon causes daily high and low tides
- Explain that the monthly cycle of spring and neap tides results when the earth, sun, and moon change their relative positions

- Describe characteristics of ocean habitats, and explain how various organisms are adapted to living in them
- Explain that the continental margin extends into the ocean and has three regions: the continental shelf, the continental slope, and the continental rise
- Describe some major features of the ocean floor, such as abyssal plains, trenches, ridges, seamounts, and reefs
- Identify some devices scientists use to study the ocean, including submersibles, sonar, and satellites
- Identify some ocean resources, such as fish, oil, and minerals, and describe how each one is obtained

Earth's Atmosphere

- Describe some properties of the atmosphere, such as its composition, density, and pressure, and explain how air density is related to both temperature and pressure
- Identify the five layers of the atmosphere: troposphere, stratosphere, mesosphere, thermosphere, and exosphere
- Explain that the uneven heating of the earth's surface transfers heat through convection currents in the atmosphere
- Define humidity as the amount of water vapor in the air, and the dew point as the temperature at which the air cannot hold any more water vapor
- Explain how clouds form, and identify common weather patterns associated with different types of clouds
- Identify types of precipitation (rain, snow, sleet, and hail) and explain how each type forms
- Identify some sources of air pollution
- Identify the three main types of storms and describe the air movements that produce them
- Identify the four types of fronts (cold, warm, stationary, and occluded) and describe how air masses interact
- Interpret weather maps to forecast the weather

- Distinguish between weather and climate, and describe some factors that influence climate (such as latitude, altitude, and ocean currents)
- Describe possible causes of climate changes (such as El Niño and the Greenhouse Effect) and their potential effects on climate

Motion and Forces

- Plot the movement of an object across a surface as separate horizontal and vertical movements
- State that moving objects always travel in one direction with constant speed unless a force—a push or a pull—is applied to them
- Describe the *mass* of an object as a measure of how difficult it is to change the object's speed or direction
- Identify different pushes and pulls (spring-driven, muscular, wind-driven, magnetic, or electric) as forces that can change an object's speed and direction
- State that every push or pull on one thing causes a balancing push or pull in the other direction on something else, and demonstrate in some actual situations in which these two sides of any given force are always present
- Identify the forces that are in balance when an object's speed and direction stay constant
- State that *energy* is a measure of how much work an object, or set of objects, can do
- State that the total amount of energy in a system always remains constant
- Recognize that moving objects have energy (kinetic energy), and that the position of an object may give it the ability to do work (potential energy)
- Describe how levers change the effects of pushes and pulls
- Recognize that for an object to continue moving in a circle, a force must pull the object toward the center of the circle, and predict that if the force disappears, the object will continue to move in a straight line
- Recognize that objects are pulled toward the earth by a force known as *gravity*
- Recognize that, regardless of the mass of a falling object, its speed toward the ground increases at the same rate as that of any other object
- State that any two masses have a gravitational pull between them, but this pull is easily noticeable only if at least one mass is very large
- Recognize that the pull decreases as the masses move farther apart, and increases as the size of either mass increases
- Recognize that gravity causes the moon to orbit the earth and the planets to orbit the sun
- Recognize that gravity is the primary force that shapes everything from clusters of stars to enormous galaxies

- Describe how our attempt to understand gravity has led to changes in our understanding of our solar system, our galaxy, and even our universe

Chemistry

- Explain that atoms are composed of a nucleus containing protons (with positive charge) and neutrons (with a neutral charge)
- Explain that negatively charged electrons move around the nucleus in paths called *shells*
- Describe a *compound* as a substance made of two or more elements
- Explain that the properties of a compound differ from the properties of the elements that make it up
- Recognize that each element is made of only one kind of atom
- Explain that all the elements are organized in the Periodic Table of the Elements according to their chemical properties
- Describe some properties of metals and nonmetals
- Identify some common elements and compounds by both their chemical symbols and their formulas
- Recognize that in chemical reactions, the original atoms rearrange themselves into new combinations, and that these new combinations have properties differing from those of the reacting compounds
- Write chemical equations to show what happens in a chemical reaction
- Use the pH scale to determine whether a solution is acidic or basic
- Recognize that compounds can be identified by chemical reactions
- Recognize that a wide variety of materials, and indeed living organisms, are often composed of just a few elements
- Explain that all chemical reactions require energy
- Describe how reaction rates increase with temperature, surface area, concentration, and the presence of a catalyst

Cells and Cell Processes

- Explain the major ideas of the cell theory
- Identify the major structures of cells, and describe their functions
- Compare plant and animal cells
- Explain that different types of substances move across the cell membrane by means of diffusion, osmosis, and carrier molecules
- Explain that plant cells store energy through photosynthesis, and that plant and animal cells release energy during respiration
- Explain that all cells have a cycle of growth, called

interphase, and a cycle of division, called *mitosis*

- Identify the four stages of mitosis: prophase, metaphase, anaphase, and telophase
- Explain that all the information an organism needs to live and reproduce is contained in its DNA
- Explain that traits are passed from parents to offspring and are determined by a pair of genes, one of which comes from each parent

Taxonomy of Plants and Animals

- Recognize that living things are classified according to shared characteristics, and that there are seven major levels of classification: kingdom, phylum, class, order, family, genus, and species
- Name the five kingdoms (plants, animals, monerans, protists, and fungi) and identify some organisms from each
- Describe *vascular plants* as plants that have systems for transporting water, sugar, and minerals, whereas *nonvascular plants* lack these structures
- Explain how sugar, water, and minerals are transported in vascular plants
- Compare the common characteristics, adaptations, and life cycles of gymnosperms and angiosperms

Animal Physiology

- Recognize that all body systems play a role in maintaining a constant internal environment
- Describe how the circulatory system transports oxygen and nutrients to cells while removing carbon dioxide and other wastes
- Recognize that many organisms have specialized structures for respiration, digestion, waste disposal, and immune response, and that these structures are responsible for the transportation of materials such as oxygen, carbon dioxide, and nutrients
- Explain how blood flows through the human heart
- Describe how the respiratory system exchanges carbon dioxide and oxygen in the lungs
- Put the various steps in digestion into correct order, describing the function of the mouth, esophagus, stomach, small intestine, large intestine, and liver
- Explain how the urinary system removes cellular waste from the blood, converts it to urine, and stores it in the bladder until the waste leaves the body
- Identify the types of organisms that can cause diseases and explain how they spread
- Describe ways in which the body's immune system recognizes and destroys pathogens

Lesson Time and Scheduling

Total lessons: 72

Lesson time: 60 minutes. You might choose to split the lessons into smaller segments and take breaks as needed. The K¹² online lesson tracking system allows you to pick up wherever you left off in any given lesson.

Standard Curriculum Items

Alum
Test tube
Safety goggles
Graduated cylinder
Spring scale
Thermometer

Additional Curriculum Items

Some lessons require additional resources, including common household items and books that are readily available online or in your local library:

Marble/small ball
Modeling clay
Potting soil
Coarse gravel
Pea gravel
Coarse sand
Fine sand
Plastic box
Tag board
How Bodies Work (Lickle Publishing)
Classifying Life (Lickle Publishing)

NOTE: List subject to change.

Course Outline

Organisms

From giant redwoods to tiny algae, and from lumbering elephants to “no-see-‘em” gnats, the diversity of life on earth delights, startles, and amazes. But all living things share some common characteristics. What are the characteristics of life? What is the chemical basis for life? What molecules support life? In this course you’ll explore these questions and more.

- Introduction to Life Science
- Diversity of Life
- Challenges of Life
- Characteristics of Life
- Classification of Living Things
- Domains of Life
- Chemistry of Life
- Single-Celled Organisms
- Multicellular Organisms

Cells

They’re everywhere, and they control our lives. What are they? Alien invaders? No. They are cells. They are inside us and all around us, in every living thing on earth. They are constantly growing, reproducing, communicating, and using energy. They sense, respond, and adapt to their environment. You’ve probably never thought much about cells, but there’s much to discover about their intriguing lives.

- The Cell
- Differing Cells
- Cell Organelles
- Looking at Cells
- DNA Makes RNA Makes Proteins
- Plant and Animal Cells
- Cells and Energy
- Diffusion and Osmosis
- Cell Division
- Mitosis

Living Systems

Organisms must meet many challenges to survive. The systems in multicellular organisms are like the different parts of a computer. Just as all the parts of a computer must function individually so that the computer will work, all the systems in an organism work together in a coordinated manner to keep the organism alive. What are these systems? How are they related? This unit will explore living systems and how they function.

- From Cells to Organs
- Muscular and Skeletal Systems
- Respiratory System
- Circulatory System
- Digestive and Excretory Systems

- Immune System
- How Systems Work Together
- Comparison within Species
- Continuation of Species
- Cells for Reproduction
- Life Cycles

Interdependence of Life

Look at everything in an aquarium. How do you think each of the organisms in the aquarium survives? If you were to draw a diagram of the interactions that take place in an aquarium, you would see a complex series of relationships. In the living world, no organism can survive by itself. Living things depend on other organisms and their environment to supply them with their needs.

- Organisms and Their Needs
- Staying Balanced
- Responses
- Ecosystems
- Populations
- Cycles in Nature
- Energy Flow in Ecosystems
- Food Chains
- Food Webs
- Competitive Relationships
- Cooperative Relationships

Adaptation and Change

Every organism lives in a particular type of environment. In this unit, we will explore how populations change over time to survive in their environments, and what happens when the environment changes.

- Change Over Time
- Structural Adaptations
- Behavioral Adaptations
- Extinct or Endangered?
- Changes in Ecosystems
- Rates of Environmental Change
- Population Changes
- The Human Factor

Genetics

Individuals that reproduce sexually have many characteristics that make them different from each other. In this unit, you will learn about the mechanisms responsible for these differences.

- Mendel’s Pea Plants
- Genes and Alleles
- Inheritance
- Punnett Squares

- Similarities Among Organisms
- Chromosomes
- Meiosis
- Meiosis and Mitosis
- Mutations
- Genetic Engineering

History of Life on Earth

Galaxies teeming with stars. Mysterious black holes. Exploding supernovas. The far reaches of the universe are filled with wonders. Right here on our own planet, however, is perhaps the greatest wonder of all: life. Scientists currently know of no other place in the universe where life exists. This unit explores scientists' ideas about how life originated on earth and how it has changed over its long history.

- Origin of Life on Earth
- The Theory of Evolution
- Natural Selection
- Origin of New Species
- Development of Life

Science Investigation

- Scientific Methods
- Design and Set Up Your Experiment
- Data Collection
- Data Analysis
- Reporting Conclusions

Standard Curriculum Items

Graduated cylinder (100 mL)
Compound microscope
Radish seeds
Microscope slides (set of 12)
Slide cover slips (set of 12)
Transparencies (set of 12)
Petri dishes
Agar vials
Rhizobium bacteria
Green bean bush seeds
Blue Fescue grass seeds
Safety glasses
Magnifying glass
Advanced thermometer

Earth Science



Course Outline

Earth's Surface

Our earth is right here under our feet, and a lot of knowledge can be gained from looking down at terra firma. This unit introduces the surface of our earth. Students learn about mapping the earth as it is, and then learn how the surface of the earth changes due to weathering and erosion. In a hands-on laboratory, students study earth's soils, comparing and contrasting them and examining how desertification takes place.

- Introduction to Earth Science
- Spheres of the Earth
- Mapping the Earth
- Weathering
- Erosion
- Soils of the Earth
- Soil Profiles
- Laboratory: Desertification

Rocks and Minerals

The beauty of minerals and the earthiness of rocks form the basis for this unit. Students start by examining and defining crystals, with lots of hands-on activity. The three kinds of rocks are examined, and then students tackle the rock cycle, which shows the interrelationships between the various rock types. The rock cycle is an underlying, unifying feature, a "big idea" of geology.

- Identifying Minerals and Crystals
- Laboratory: Minerals and Crystals
- Laboratory: Mineral Identification
- Igneous Rocks
- Sedimentary Rocks
- Metamorphic Rocks
- The Rock Cycle
- Laboratory: Rock Cycle

Geologic History

This unit deals with the changes that earth has undergone over time. What can we learn from fossils, how can we understand the lessons that are in rocks, and how can the layering of the earth tell us what might have happened in the past? Students see a broad picture of an earth that has changed over time and examine the evidence for it. Importantly, students understand that the processes that occurred in the past are the same that are still occurring on our earth.

- Linking Past to Present
- Earth's Age

- Fossils
- Records in Rocks
- Laboratory: Index Fossils
- Geologic Time

Plate Tectonics

The overriding theory of geology is the theory of plate tectonics. This theory explains the drift of the continents, earthquakes, and volcanoes and thus unifies much of our experience under a single idea. This unit is a thorough explanation of plate tectonics, its processes and results. In a hands-on laboratory, students build their own seismograph—but more importantly, they understand the causes of earth movements as a direct result of the movement of earth's plates.

- Center of the Earth
- Continental Drift
- Seafloor Geography
- Seafloor Spreading
- Plate Tectonics
- Convection
- Plate Boundaries
- Landforms
- Laboratory: Plate Boundaries
- Earthquakes
- Laboratory: Seismographs

Air, Weather, and Climate

Is it rainy, windy, or sunny with blue skies? Do you live in an area with lots of rain all year or a desert with limited rainfall? Weather and climate are phenomena familiar to all of us and both have a huge bearing on our lives. In this unit students will study weather, including air masses and patterns of air circulation. What is the difference between weather and climate and in what ways has climate changed over time?

- Layers of the Atmosphere
- Conduction, Convection, Radiation
- Daily Weather
- Air Circulation
- Air Masses
- Weather Fronts
- Meteorology
- Laboratory: Working with Weather
- Weather and Climate
- Factor Affecting
- Laboratory: Global Warming

Water on Earth

So much of the earth is covered with water. Water is the basis of all life and the water cycle ensure that water is constantly being replenished on our earth. Of all the places that water resides none is more important than our oceans. Ocean water, tides, and currents affect all of our lives, and this unit lets students take a good look at the “water planet.”

- Water and the Water Cycle
- Ocean Water
- Ocean Currents
- Ocean Waves
- Ocean Tides

Energy and Earth Resources

One of the most important issues facing us today is our use of energy. Whether it is our relationship to fossil fuels or our concern with nuclear energy, we need to understand and make wise decisions about our resources and the energy we can get from them. What are the issues and debates surrounding our consumption of natural resources? How can we ensure that the next generation will have enough resources to advance? In this unit students will study the science of resources, which will give them a basis to participate in one of our society’s most important debates.

- Energy Resources
- Fossil Fuels
- Consumption and Environmental Effects
- Alternative Energy Resources
- Resource Management
- Laboratory: Power from Tides

Our Place in the Universe

We on earth are part of a solar system, which is part of a galaxy called the Milky Way, which is part of a universe of almost unfathomable size. Students in this unit get a chance to understand our place in the universe. Starting at the level of the universe and then narrowing focus, students learn about the planets of the solar system, about how the earth rotates, the seasons, and about phenomena involving the moon. This unit provides a broad picture of our earth in space and concludes with an examination of how we have sought over time to understand space through exploration.

- Origin of the Universe
- Galaxies
- Gravitation Forces
- Rotation and Revolution
- Solar System

- Inner Planets
- Outer Planets
- Earth’s Seasons
- Asteroids and Comets
- Moon
- Moon Phases
- Eclipses
- Space Exploration
- People in Space

Scientific Investigation

In this unit students get a chance to do a personal scientific investigation. They will learn about and follow scientific methods to set up, conduct, analyze, and make conclusions based on a hands-on investigation. Students will create a display of their investigation and then they will prepare to give an oral report.

- Scientific Methods
- Set up an Experiment
- Data Collection
- Data Analysis
- Reporting Conclusions
- Create a Display
- Oral Presentation

Physical Science



Course Overview

K¹²'s Middle School Physical Science course presents the fundamentals of physics and chemistry. Students explore the amazing universe we live in, including motion, energy, the nature of matter and atoms, how chemicals mix and react, and the forces that hold the universe together.

The course begins with a study of chemistry. After discussing physical and measurement systems, students then explore the properties and characteristics of matter, changes in matter, and the structure of the atom. In addition they examine the Periodic Table, different types of

compounds, chemical formulas, and chemical reactions. After becoming familiar with chemistry, students begin a study of physics, starting with motion and forces. Newton's laws of motion are studied and applied to motion, acceleration, periodic motion, and gravity. Next, students examine motion and work, which includes the study of potential and kinetic energy, heat, momentum, collisions, and simple machines. Students continue their studies investigating waves, light, electricity, and magnetism. They finish the year by completing a research project.

Course Outline

Introduction to Physical Science

What does physical science cover? Everything physical, which covers quite a lot. Begin your journey into physical science by learning about measurements and how to do proper lab procedures. You will also be introduced to lessons that will prepare you for standardized tests in science.

- Introduction to Physical Science
- Physical Systems
- Measurement and the International System
- Laboratory: Measured Steps
- Laboratory: Density
- Working with Model Problems
- Model Problems

Matter

Have you ever played solitaire, where you arrange cards horizontally and vertically looking for connections? Russian scientist Dmitri Mendeleev did, and he was inspired to create the pattern of the Periodic Table. This pattern displayed in the periodic table helps us understand atoms, chemical reactions, chemical formulas, chemical compounds, atomic mass, and other concepts covered in this unit.

- Atoms
- Atomic and Mass Numbers
- Elements and the Periodic Table
- Design of the Periodic Table
- Molecules
- Properties of Matter
- States of Matter
- Physical and Chemical Changes

Chemistry

When you see the word *chemistry*, you may have an

image of someone in a lab wearing goggles pouring liquids from one beaker to another. But chemistry surrounds you every day. Cars are built with chemicals and run on chemical fuel. Chemicals make up the clothes you wear and the food you eat. You breathe chemicals, your computer and radio are composed of chemicals, and our world today is dependent on chemicals.

- Chemical Bonding
- Chemical Reactions
- Chemical Formulas
- Laboratory: Testing and Producing Gases
- Rates of Chemical Reactions
- Chemical Equations
- Laboratory: Dissolving Metals
- Mixtures
- Separating Mixtures
- Solutions
- Substances
- Laboratory: Separating Ingredients
- Acids and Bases
- Model Problems

Force and Motion

When you roll a marble across a room, you open the door to understanding the same rules of motion that keep airplanes flying and pendulums swinging. What are these forces? What are the "laws" of motion? Come learn about displacement, speed, acceleration, Newton's laws of motion, and gravitation.

- Force
- Gravitational Force
- Motion
- Laboratory: Calculating Speed
- Speed and Velocity
- Measuring Speed and Velocity

- Acceleration
- Newton's First Law of Motion
- Mass and Weight
- Newton's Second Law of Motion
- Newton's Third Law of Motion
- Buoyant Forces
- Laboratory: Precious Cargo
- Model Problems

Energy

Nothing stays the same, at least not in our universe. Energy is constantly changing from one form to another, whether it's the light in your house or the sound of a horn. The good thing is you can use this changing energy to do all sorts of work. Scientists can use mass to create energy, use explosions for transportation, and use electricity to make our work easier. Learn about the different energy that constantly surrounds you, and how you use this energy in your everyday life.

- Energy
- Work
- Kinetic Energy
- Potential Energy
- Laboratory: The Pendulum
- Laboratory: Using a Lever
- Simple Machines
- Compound Machines
- Laboratory: Heat Flow
- Thermal Energy
- Temperature
- Model Problems

Waves, Sound, and Light

At this very moment, you have a lot of waves traveling to your body. You have sound waves you can hear and light waves you can see, but there's even more that you cannot see. There are radio waves, radiation, magnetism, and other invisible waves that you use to cook with, navigate by, and communicate. Explore the different waves you're being exposed to every second of every day.

- Waves
- Electromagnetic Waves
- Light Waves
- Laboratory: Path of Light
- Reflection and Refraction
- Lenses
- Model Problems

Electricity and Magnetism

You've investigated forces, learned about energy, and examined waves; now look at electricity and magnetism,

two particular forms of energy that are quite important to you. Yes, electricity keeps your computer on and your MP3 player going. But do you know why electricity is so useful? Do you wonder how to build your own circuits and currents? Do you know how to build a basic motor?

- Electric Charge
- Electric Currents
- Electric Circuits
- Laboratory: Series and Electric Circuits
- Magnetism
- Electricity and Magnetism
- Laboratory: Motoring On!
- Motors and Generators
- Model Problems

Scientific Investigation

Scientists conduct experiments and form conclusions. Now you can do the same thing. Be a scientist as you design and carry out your own experiment. Discover how the scientific process works, what makes it different from just guessing, and why it's the most powerful and successful way of figuring out how the forces of nature work.

- Scientific Methods
- Design and Set-Up Your Experiment
- Data Collection
- Data Analysis
- Reporting Conclusions
- Create a Display
- Oral Presentation

Lesson Time and Scheduling

Total lessons: 96 lessons in ten units of study; 7 laboratory lessons

Lesson time: 60 minutes per reading lesson; 90 minutes per lab. You might choose to split the lessons into smaller segments and take breaks as needed. The K¹² online lesson tracking system allows you to pick up wherever you left off in any given lesson.

Standard Curriculum Items

Graduated cylinder, 250 mL
Stopwatch
10 Newton Spring Scale
Digital scale
Double pulley
Lye
Metallic rod
Metallic spring
Muratic acid
Phenolphthalein

Protective gloves (2 pair)
D cell battery holder
Cork stoppers
Lead weight (500 g)
Enamel coated heavy gage copper wire
Non-insulated copper wire
Insulated copper wire strips (set of 5)
Directional compass
Bar magnet (pair)
Plastic pipette
Safety glasses
Iron filings
Lamp bulbs (set of 4)
Lamp bulb receptacle (set of 2)
Advanced thermometer

NOTE: List subject to change.

Advanced Earth Science



Course Overview

The K¹² Middle School Earth Science curriculum presents the fundamentals of geology, oceanography, meteorology, and astronomy. Students explore amazing landforms around the globe, the nature of the sea and air, the wonders of geological history, and recent discoveries about our universe.

The course opens with a focus on geology. Students learn the basics of mapping, and then begin a study of Earth's minerals and rocks. They learn about the materials of Earth's interior, and progress to the unifying theory of plate tectonics, which explains diverse phenomena such as earthquakes, volcanoes, and the movements of continents over time. They also consider the evidence

presented by the fossil record. In the last half of the course, students learn about oceans and the atmosphere, and then expand their study to our solar system, the stars, and the universe. Students will explore topics such as:

- Basics of mapping
- Earth's minerals and rocks
- Earth's interior
- Plate tectonics, earthquakes, volcanoes, and the movements of continents
- Geology and the fossil record
- Oceans and the atmosphere
- The solar system, stars, and universe

Course Outline

Mapping the Earth

If everything on Earth were the same, our planet would look like a big, smooth ball—uniform and not very interesting. Instead, Earth is like a giant jigsaw puzzle, made of many different parts, from the layers of rock beneath our feet to the atmosphere above our heads. Driven by energy, these puzzle pieces of Earth are always moving—the oceans, the mountains, and even the land we stand on. Learn what these various parts are, the kinds of energy that drive them, and how they fit together in the living planet we call home.

- Welcome to Earth Science
- Spheres of the Earth
- Map Essentials
- Cartography
- Laboratory: Map Projections

Minerals

Find out what makes one mineral different from another and learn some simple tests to show what kinds of fascinating minerals make up common rocks. Discover, too, that almost half the earth's crust is made of one very important thing—oxygen.

- Identifying Minerals and Crystals
- Classification of Minerals
- Laboratory: Mineral Identification

Rocks

Do you know where that big rock in your backyard came from? What about the little, flat rocks you skip across a lake? Why are rocks different colors? Why is one smooth

and another jagged? Learn how rocks are “born” and then how they’re “reborn.” Discover different types of rocks, how they’re made, what they’re made of, and how they’re constantly changing.

- Igneous Rocks
- Sedimentary Rocks
- Metamorphic Rocks
- Laboratory: Rocks in the Rock Cycle

Earth's Interior

Our home planet is like a giant onion. Explore Earth's interior by peeling back each layer to uncover what lies beneath. Find out what the layers are made of, how they move and alter the landscape, and how scientists have used seismographs to learn about the mysteries of our planet's depths.

- Structure of the Earth's Interior
- Using Seismic Waves to Map the Earth's Interior
- Laboratory: Using a Seismograph in Earthquake Engineering

Plate Tectonics

Scientists think that, from one supercontinent that broke apart into smaller continents hundreds of millions of years ago, the continents have been moving around ever since. Explore the forces driving this large-scale motion, and discover what happens when two continents meet on a collision course.

- Drifting Continents
- Seafloor Geography
- Plate Tectonics

- Divergent and Transform Plate Boundaries
- Convergent Plate Boundaries
- Folding and Faulting
- Laboratory: Convection and Plate Motion
- Laboratory: Plate Motion and Geography

Forces Reshaping Earth's Surface

How can simple things—gusts of wind, drops of water—cause Earth's surface to change? How does a young river affect the land? What about an old river? How can rivers be “young” or “old”? What does a glacier do to the land? Explore the relentless processes of weathering, erosion, and mass wasting on Earth's landforms, and learn how they work together over time to change the way our planet looks.

- Weathering and Soil Formation
- Surface Water and Ground water
- Glaciers
- Laboratory: Desertification

The Fossil Record

The past is still with us today, if you know how to look for it. More than a million living things have left traces of their bodies in the earth. Dig up some fossils and discover how things looked in the distant past, from ancient environments to long-ago animals and plants. Learn how to play detective and read the clues told by the walls of the Grand Canyon.

- Steno's Principles
- Fossil Succession and Uniformitarianism
- Geochronology: Dating the Past
- A Geologic Tour of North America
- Laboratory: Index Fossils and Paleoenvironments

Oceans

If you could stand on the moon and look at the Earth, you'd see a big, blue ball. Why blue? Most of Earth's surface is water—lakes, seas, and deep oceans. Learn more about all the splashing, sloshing stuff that covers three-fourths of the planet. Explore tides, waves, thermoclines, and water temperatures. And find out about a phenomenon called El Niño and its effects on our world.

- Welcome to Earth Science, Semester 2
- Properties of Ocean Water
- Surface Currents
- Deep water Currents
- Ocean Waves and Tides
- Laboratory: Tidal Power: Benefits and Costs

Weather and Climate

Snow usually falls quietly and softly, yet it has the power to bring down power lines and shatter tree branches. Rain can cause the land to bloom with flowers and crops, but it's also capable of washing away fields and trees. Winds can do everything from mussing up your hair to rearranging the face of a rugged cliff. Learn what weather really is—where it comes from, why it happens the way it does, and how constant changes in weather are part of what happens in the energy-filled outer shell of Earth known as the atmosphere.

- Daily Weather
- Air Masses and Fronts
- Weather Versus Climate
- Climate Control
- Ocean, Land, and Air: Water and Energy Budgets
- Laboratory: Changing Climates: Global Warming

Renewable and Nonrenewable Resources

What happens to the soda can tossed into a recycling bin? Learn about the potential and perils associated with both renewable and nonrenewable resources.

- Energy Resources: Overview
- Nonrenewable Energy: Fossil Fuels, Part 1
- Nonrenewable Energy: Fossil Fuels, Part 2
- Nonrenewable Energy: Nuclear
- Laboratory: Consuming Fossil Fuels
- Renewable Energy: Hydroelectric Power
- Renewable Energy: Alternate Energy Resources
- Laboratory: Energy from Wind

Project: Scientific Investigation

Become a scientist as you design and carry out your own experiment. Discover how the scientific process works, what makes it different from just guessing, and why it's the most powerful and successful way of figuring out how the forces of nature work.

- Scientific Process: Selecting a Research Topic
- Making a Hypothesis and Experimental Design
- Step-by-Step Experimenting
- Data Collection: Data Types
- Data Tables
- Data Analysis
- Conclusions and Lab Reports
- Writing a Bibliography and Making a Display
- Preparing for an Oral Presentation and Final Check
- Science Investigation Presentation

Advanced Earth Science

Our Place in the Universe

What does a faraway star in the night sky have in common with our own blazing sun? What causes the sun to burn so brightly and with such heat? Explore comets, asteroids, meteorites, and asteroids. There is much to learn about the amazing universe—from a theory called the *big bang*, which explains how the entire universe was formed, to the reason why days are longer in summer and shorter in winter.

- Origin of the Solar System
- Star Qualities
- Sun Fusion
- Planets of the Solar System
- Stars
- Expanding Universe
- Laboratory: Earth Seasons, Moon Phases, and Eclipses

Lesson Time and Scheduling

Total lessons: 96

Lesson time: 60 minutes; one or two 90 minute labs per unit

You might choose to split the lessons into smaller segments and take breaks as needed. The K¹² online lesson tracking system allows you to pick up wherever you left off in any given lesson

Standard Curriculum Items

Wall Map Set (Science/History)

Graduated cylinder, 100 mL

Graduated cylinder, 500 mL

Pipe cleaners

Advanced Rock and Mineral Kit

Diffraction grating film

Stopwatch

Grape seeds

Latch magnet

Safety glasses

Magnifying glass

Centimeter gram cubes

Clay (four colors)

Fine sand

White tile

Advanced thermometer

NOTE: List subject to change.

Advanced Life Science



Course Outline

Life on Earth

What are some of the characteristics of life? What is the relationship between the chemicals that make up our world and living things? These and other questions are asked and answered in this unit. Students will also do a laboratory on the chemical breakdown of proteins.

- Introduction to Life Science
- Diversity of Life
- Characteristics of Life
- Chemistry of Life
- Laboratory: Protein Breaks Down Protein

The Organisms in Their Worlds

This unit gives a big picture of life on earth by placing organisms in their environments. The study of ecology involves studying the interrelationships between an organism and its physical and biological surroundings. A laboratory involving testing for toxicity brings home the concept that the health of an organism is directly tied to the quality of its ecological world.

- The Organism and Its Environment
- Behavior and Symbiotic Relationships
- Food Chains and Food Webs
- The Ecosystem and Energy Flow
- Energy and Biomass Pyramids
- Populations and Biomes
- Laboratory: Toxicity Testing

History of Life on Earth

This unit deals with evolution and its relationship to life on earth. Students are introduced to the concept of natural selection and how it affects populations. Students learn that the modern view of evolution involves an understanding of genetics. A laboratory on the relationship between predator and prey helps students master some aspects of the concept of survival of the fit.

- Origin of Life on Earth
- Evidence for Change Over Time
- Natural Selection
- Types of Natural Selection
- Modern Views of Evolution
- Your Choice
- The Origin of New Species
- Laboratory: Natural Selection: Predator vs. Prey

Prokaryotes, Fungi, Protists, and Viruses

Students begin their study of life by examining microorganisms, including viruses, bacteria, protists,

and fungi. They learn the characteristics of each group of organism and are given a primer on naming and organizing the many kinds of life on earth. They conduct an experiment involving nitrogen-fixing bacteria to give them hands-on experiments with one type of microorganism.

- Naming and Organizing Life
- Prokaryotes
- Protists and Fungi
- Viruses
- Laboratory: Nitrogen-Fixing Bacteria

Survey of Animals

When most students think of biology, the first idea that comes to their mind is the animals. This unit surveys animals, both invertebrates and vertebrates. Students do a clam dissection to get them in touch with the anatomy of an invertebrate. From sponges to mammals, the animal kingdom opens up to the students.

- Sponges and Flatworms
- Cnidarians, Roundworms, and Mollusks
- Annelids, Arthropods, and Echinoderms
- Fish and Amphibians
- Reptiles, Birds, and Mammals
- Lab: Clam Dissection

Comparing Animal Systems

In Unit 5 students surveyed animal systems. In this unit they will survey the various systems that make up living things. They will study circulatory, respiratory, digestive, nervous, and other systems and how they vary between groups. Students will dissect a chicken wing and draw its structure.

- Circulatory and Respiratory Systems
- Circulatory Systems
- Comparing Digestive Systems
- Comparing Nervous Systems
- Comparing Other Systems
- Laboratory: Chicken Wing Anatomy Laboratory

Plants

Plants are all around us and make up a large part of the biological world. Students will survey the plants of the world and learn about their biology. They will study how plants grow and reproduce. Students will perform botanical illustration as a way of taking a close look at plant structure.

- Survey of Plants
- Plant Reproduction

- Plant Growth and Responses
- Laboratory: Botanical Illustration

The Functional Cell

The cell is the fundamental building block of living things and in this unit students take a close look at the structure and inner workings of cells. Starting with the cell membrane and then moving inside the cell to study organelles, students explore the relationship of cell structure to its function. A laboratory follows that allows students to see the insides of cells.

- Cell and Boundary
- The Plasma Membrane
- Across the Plasma Membrane
- Inside the Cell
- Cell Communication
- Lab: Looking Inside a Cell

Cells and Energy

Where does a cell get the energy to carry out all of its functions? In this unit students trace the pathways of energy in the cellular world. Photosynthesis, cellular respiration, fermentation, and the role of ATP in the cell are all explored. A laboratory examining the process of photosynthesis gives students a hands-on experience with cell functions.

- Photosynthesis
- Phases of Photosynthesis
- Breaking Down Glucose
- Making ATP
- How ATP Works in the Cell
- Climates: Global Warming
- Laboratory: Fermentation

Cell Division and Heredity

In the previous units students learned about the structure of cells, their functions, and the role that sunlight and chemical energy plays in the energetics of cells. In this lesson students examine two closely related cellular phenomena—cell division and heredity. Students examine the processes of mitosis and meiosis with special emphasis on chromosome numbers. They then use this knowledge to work on problems involving heredity and even work a genetics problem in a laboratory on a genetic cross.

- Chromosomes
- Mitosis and Cell Division
- Meiosis and Gamete Formation
- Mendelian Genetics
- Mendelian Genetics II
- Lab: Incomplete Dominance Cross

How the Gene Works

Modern biology as practiced around the world in our century is often directed towards understanding the roles of RNA, DNA, and proteins in the cell. In this unit students learn about the relationships between genes and the functions of the cells, connecting the roles of DNA, RNA, and proteins and how they make the cell the central building block of life.

- Structure of DNA and RNA
- DNA Replication
- What Is a Gene?
- DNA Makes RNA Makes Protein
- What Proteins Do
- Gene Expression
- Differentiation in Cells
- Laboratory: Amino Acids and Proteins

Scientific Investigation

In this middle school program, students conduct a scientific investigation following scientific methods for each discipline. Students choose a research topic, develop a hypothesis, experiment, take and organize data, and develop a science presentation. This is a hands-on unit that gives students the feel of conducting scientific research.

- Scientific Process, Selecting a Topic, Research
- Making a Hypothesis and Experimental Design
- Step-by-Step Experimenting
- Data Collection
- Data Analysis
- Conclusions and Lab Reports
- Writing a Bibliography and Making a Display
- Complete Display Poster and Rehearse
- Oral Presentation
- Oral Presentations

Advanced Physical Science



Course Outline

Introduction and Chemistry

In this unit students launch their excursion into the world of physical science. They begin by understanding some of the rudiments of the metric system and doing a laboratory exercise. Students then begin to examine some aspects of matter, including a look at its various states, physical and chemical changes, and mixtures. A laboratory in separating solutions gives them a chance to make and use a distillation apparatus.

- Introduction to Physical Science
- Laboratory: Measured Steps
- Physical Systems
- Fundamental Quantities and Measurement
- Working with Model Problems
- Laboratory: Separating Ingredients
- Properties of Matter
- Classification of Matter
- Solids, Liquids, and Gases
- Physical and Chemical Changes
- Mixtures and Solutions
- Structure of the Atom

Chemistry 2

The world of chemistry opens up for student in this lesson. Students perform two laboratories to get hands-on experience with chemical procedures. They also learn chemical subjects such as atomic numbers, types of chemical reactions, balancing chemical reactions, types of bonding, and acids and bases. This gives students a solid understanding of the basic areas of chemistry.

- Laboratory: Chemical Reactions
- Atomic and Mass Numbers
- Periodic Table
- Ionic and Covalent Compounds
- Chemical Formulas
- Chemical Reactions
- Laboratory: Titrating Vinegar
- Balancing Chemical Equations
- Rates of Chemical Reactions
- Acids and Bases

Motion and Forces

This unit deals with physics, focusing on aspects of motion and forces. Students have hands-on experience doing a laboratory on the topic of speed. Motion and forces are explored in such subjects as the pendulum, motion in two directions, and gravity. This unit includes a semester review and test.

- Laboratory: Calculating Speed
- Displacement, Speed, and Velocity
- Acceleration
- Newton's First Law
- Newton's Second Law
- Equal and Opposite Forces
- The Pendulum 1
- Motion of a Projectile
- Motion in a Circle
- Harmonic Motion
- The Pendulum 2
- Gravitation I
- Gravitation II

Energy and Thermodynamics

Students delve more deeply into physics in this unit. They begin by studying problems in work and energy, using simple machines as a starting point. They then move into a related study—thermodynamics, the study of heat. Along the way students do laboratories on using a lever and the flow of heat. Energy is the key word in this lesson and students gain a lot of experience in using this term correctly.

- Laboratory: Using a Lever
- Energy: Conservation and Transformation
- Work
- Simple Machines
- Work and Kinetic Energy
- Potential Energy
- Linear Momentum
- Collisions
- Laboratory: Heat Flow
- Thermal Energy
- Temperature
- First Law of Thermodynamics
- Second Law of Thermodynamics

Waves, Light, Electricity, and Magnetism

Energy continues to be the central core of student learning in this lesson. Students learn about the characteristics of waves and apply that knowledge to a study of light and sound. They then turn their attention to electricity and magnetism, building a motor in a laboratory to gain experience in working with electrical currents.

- Laboratory: Path of Light
- Characteristics of Waves
- Sound Waves
- Understanding Light
- Reflection and Refraction

- Laboratory: Motoring On!
- Electric Charge
- Electric Fields and Potentials
- Circuits
- Magnetism
- Currents and Magnetic Fields

Research Project

In this middle school program, students conduct a scientific investigation following scientific methods for each discipline. Students choose a research topic, develop a hypothesis, experiment, take and organize data, and develop a science presentation. This is a hands-on unit that gives students the feel of conducting scientific research.

- Science Research Topic
- Design and Set Up Your Experiment
- Data Collection
- Data Analysis
- Writing a Research Paper
- Construct a Display Poster
- Oral Presentation

Kindergarten History



Course Overview

The kindergarten History program teaches basics of world geography with the seven continents. Students will:

- Explore the Great Barrier Reef in Australia, the frozen expanses of Antarctica, and the grasslands and rain forests of Africa.
- Learn what it is like to climb the Andes and ride with the gauchos.
- Become familiar with the landmarks, people, and stories of many countries in Europe and Asia, as well

as North America, including Canada and Mexico.

- Learn about American History through biographies of famous figures, from Christopher Columbus and the Pilgrims to Thomas Jefferson and Sacagawea, from Harriet Tubman and Susan B. Anthony to Abraham Lincoln and Theodore Roosevelt, from Thomas Edison and the Wright brothers to Cesar Chavez and Martin Luther King, Jr.

Course Outline

Our World

- Develop basic geographic awareness of the continents, major oceans, and directions
- Learn to use a simple globe and map

Australia: The Land Down Under

- Locate and explore Australia, and become familiar with its land, people, and wildlife

Europe: Many Countries, Many Stories

- Locate and explore Europe, and become familiar with its countries, people, traditions, monuments, and stories

Asia: The Asian Adventure

- Locate and explore Asia and become familiar with its land, wildlife, people, cities, monuments, and stories

An African Safari

- Locate and explore Africa, and become familiar with its varied geography and climate
- Discover the various ways people and animals have adapted, and learn stories from different cultures

South American Scenes

- Locate and explore South America, become familiar with human and animal life in the rain forest and the pampas, and visit Rio de Janeiro

Antarctica: The Frozen Continent

- Locate and explore Antarctica, and become familiar with the land and wildlife on the world's coldest continent

North America: From Maple Leaf to Cactus Branch

- Locate and explore North America, and become familiar with its land, people, national symbols, and cultural heritage

America the Beautiful

- Develop geographic awareness of the major features of the United States from the song America the Beautiful

The First Americans

- Explore the different cultures and ways of life of Native Americans from the Eastern Woodlands, Plains, and Southwest

A New World

- Become familiar with major historical figures and events surrounding European exploration and settlement of North America, including Christopher Columbus and the Pilgrims

Becoming Our Own Nation

- Learn the significance of the American flag
- Identify major historical figures, events, and songs associated with the Revolutionary War and the early years of the United States

A Nation Grows Up

- Identify major figures, real and legendary, in the westward expansion of the United States

Liberty and Justice for All

- Understand the significance of the Civil War
- Become familiar with reform movements of the eighteenth and nineteenth centuries for African Americans, women, and deaf people

America on the Move

- Become familiar with pioneer life, the building of railroads, and immigration
- Learn about the significance of the Statue of Liberty

Doers and Dreamers

- Identify major inventors and social innovators, and understand their impact on American society

Let Freedom Ring

- Recognize major figures, issues, and achievements in the twentieth-century civil rights movement

Lesson Time and Scheduling

Total lessons: 72. If you teach History twice a week, you can comfortably complete the program within a typical school year.

Lesson Time: 45 minutes. You might choose to split the lessons into smaller segments, for example, from 20 to 25 minutes. The online lesson tracking system allows you to pick up wherever you left off in any given lesson.

Standard Curriculum Items

US/World Desk Map

Inflatable Globe

Let's Journey: Around the World and Through America's Past CD

Additional Curriculum Items

Some lessons require additional resources, including common household items and books that are readily available online or in your local library:

Bringing the Rain to Kapiti Plain by Verna Aardema (Dial Books, 1992)

Follow the Drinking Gourd by Jeannette Winter (Knopf, 1992)

Madeline by Ludwig Bemelmans (Puffin Books, 1977)

Possum Magic by Mem Fox (Voyager/Harcourt Brace, 1991)

Rachenka's Eggs by Patricia Polacco (Paper Star, 1996)

The Great Kapok Tree by Lynne Cherry (Harcourt Brace, 1998)

The Story About Ping by Marjorie Flack (Puffin Books, 1977)

The Story of Ferdinand by Munro Leaf (Puffin Books/Viking, 1977)

When Clay Sings by Byrd Baylor (Aladdin Paperbacks, 1972)

NOTE: List subject to change.

First Grade History



Course Overview

The first grade History program begins an overview of world history (spanning grades 1–4) from the Stone Age to the Space Age. Through lively stories and activities, students will:

- Understand how geography influences the rise of civilizations, and develop spatial sense through regular work with maps and globes
- Explore the recurrent themes of civilization: settling down and surviving, innovating and inventing, building cities and empires, establishing laws and government,

and preserving knowledge and works of the imagination

- Become familiar with mythologies, traditions, and belief systems of various cultures
- Identify important figures, events, and concepts related to the historical origins of major world religions
- Recognize lasting contributions in ideas (for example, democracy, republican government, and civil service) from various civilizations

Course Outline

Getting Around This Great Big World

- Reinforce basic geographic awareness using simple maps and globes
- Learn about the work of historians and archaeologists

Early Civilizations

- Understand how nomadic people settled down and started villages and cities
- Recognize achievements of early kingdoms in Mesopotamia and ancient Egypt

The Rise of Ancient Empires

- Become familiar with the historical origins of Judaism
- Learn more about civilization in Mesopotamia

Ancient Kingdoms Rise and Fall

- Become familiar with the rise and fall of Mesopotamian, Israeli, and Egyptian empires

Ancient Greece Part I:

The Land and the Myths

- Become familiar with the geography, people, and myths of ancient Greece

Ancient Greece, Part II:

From Athens to Alexander

- Recognize the significance of democracy
- Recognize the contrast between Greek and Spartan cultures
- Follow the life and campaigns of Alexander the Great

Ancient India

- Learn about the geography and history of ancient India
- Become familiar with the historical origins of Hinduism and Buddhism

Ancient China

- Learn about the geography of China
- Study early leaders in Chinese history
- Learn about the discoveries of silk and paper, the building of the Great Wall, and the development of Chinese writing

Lesson Time and Scheduling

Total lessons: 72. If you teach History twice a week, you can comfortably complete the program within a typical school year.

Lesson Time: 60 minutes. You might choose to split the lessons into smaller segments, for example, from 25 to 35 minutes. The online lesson tracking system allows you to pick up wherever you left off in any given lesson.

Standard Curriculum Items

US/world desk map

Inflatable Globe

CD: *Tales from the Old Testament* by Jim Weiss (Great Hall Productions)

CD: *Greek Myths* by Jim Weiss (Great Hall Productions)

Additional Curriculum Items

Some lessons require additional resources, including common household items, and books that are readily available online or in your local library:

Mummies by Joyce Milton (Grosset & Dunlap, 1996)

The Egyptian Cinderella by Shirley Climo (HarperCollins Juvenile, 1992)

The Trojan Horse by Emily Little (Random House, 1988)

Tut's Mummy: Lost...and Found by Judy Donnelly (Random House, 1988)

NOTE: List subject to change.

Second Grade History



Course Overview

Second graders continue their investigation (spanning grades 1–4) into history from the Stone Age to the Space Age.

Through lively stories and activities, second graders will:

- Explore ancient Rome and meet Julius Caesar
- Learn about the beginnings of Christianity during the Roman Empire
- Hear stories of the raiding and trading Vikings
- Appreciate the achievements of early Islamic civilization
- During the early Middle Ages in Europe, meet knights in

armor, and hear stories of St. George, Robin Hood, and Joan of Arc

- Visit the medieval African kingdoms of Ghana, Mali, and Songhai
- Travel the Silk Road across China, and meet the powerful emperor, Kublai Khan
- Learn about the fighting samurai and the growth of Buddhism and Shintoism in feudal Japan

Course Outline

Getting Around This Great Big World

- Practice with simple maps and globes to reinforce geographic awareness
- Begin to understand the work of historians and archaeologists

Ancient Rome

- Locate Rome on a map
- Learn about Rome's mythical and historic origins
- Explore life in Rome and Roman gods, goddesses, and myths

From Caesar to Augustus

- Understand the significance of the Roman republic
- Become familiar with the rise, rule, fall, and legacy of Julius Caesar

Roman Empire and Roman Peace

- Learn about Rome under the rule of Augustus Caesar and subsequent emperors
- Understand the historical beginnings of Christianity
- Learn about the relocation of the Empire's capital to Byzantium

Byzantium Rises

- Recognize the contributions of Rome to modern civilization
- Identify the eastern part of the Roman Empire as the Byzantine Empire
- Explain the contributions of Justinian and Theodora

Rome Divides and Falls

- Recognize the significance of Attila the Hun
- Understand how Rome fell to invading warrior tribes
- Discover Rome's lasting contributions to society
- Explore Constantinople

The Early Middle Ages in Western Europe

- Explore the early settling of England and France
- Discover the legendary saga of King Arthur and his court at Camelot
- Learn about the role of monasteries in preserving knowledge

The Rise of Islam

- Become familiar with the origins of Islam
- Learn about major figures, events, and cultural achievements of the Islamic Empire

A World in Turmoil

- Learn about Charlemagne's struggle to unify European tribes
- Explore the Vikings' lives, beliefs, and heroes
- Learn that Vikings raided, conquered, and settled lands on both sides of the Atlantic

The Feudal World

- Become familiar with the concept of feudalism
- Learn about the knight's code of chivalry and about real and legendary acts of honor, courage, and courtliness

Crusades Abroad and Changes in Europe

- Become familiar with real and legendary heroes from the Crusades and the Hundred Years War
- Understand the significance of the terrible plague that swept Europe

Medieval African Empires

- Explore the rich, varied lands and people of medieval Africa
- Follow the travels of Ibn Battuta through Asia, Africa, and the Mediterranean

Medieval China

- Learn about life during the Sui, Tang, Sung, and Yuan dynasties
- Become familiar with the major figures and architectural feats in Chinese history
- Learn about the discoveries of the compass and porcelain, and the development of Chinese trade with Europe

Feudal Japan

- Learn about the history and governance of feudal Japan and about the samurai's code
- Become familiar with the Shinto religion, haiku, and a popular Japanese folktale

Lesson Time and Scheduling

Total lessons: 108. If you teach History three times a week, you can comfortably complete the program within a typical school year.

Lesson Time: 60 minutes. You might choose to split the lessons into smaller segments for example, from 25 to 35 minutes. K¹²'s online lesson tracking system allows you to pick up wherever you left off in any given lesson.

Standard Curriculum Items

US/world desk map
Inflatable Globe

Additional Curriculum Items

Some lessons require additional resources, including common household items, and books that are readily available online or in your local library:

Knights in Shining Armor by Gail Gibbons
(Little, Brown, 1998)

Pompeii: Buried Alive by Edith Kunhardt
(Random House, 1987)

Saint Valentine by Robert Sabuda (Simon & Schuster Children's Books, 1998)

The Hundredth Name by Shulamith Levey Oppenheim
(Boyds Mills Press, 1997)

St. George and the Dragon by Margaret Hodges
(Little, Brown, 1990)

Sundiata: Lion King of Mali by David Wisniewski
(Clarion Books, 1999)

NOTE: List subject to change.

Third Grade History



Course Overview

Continuing their investigation (spanning grades 1–4) into history from the Stone Age to the Space Age, third grade students will:

- Explore the Renaissance, and meet Petrarch, da Vinci, Michelangelo, Gutenberg, Galileo, and more
- Journey through the Age of Exploration with Dias, da Gama, Magellan, and more

- Get to know the Maya, Aztecs, and Incas
- Visit civilizations in India, Africa, China, and Japan
- During England's Golden Age, meet Elizabeth I, Sir Walter Raleigh, and William Shakespeare
- Explore Jamestown, Plymouth, and the thirteen colonies in Colonial America
- Learn about the American Revolution

Course Outline

Where Do We Go from Here?

- Learn how to use maps and other geographic representations, tools, and technologies to acquire, process, and report information from a spatial perspective
- Learn how to analyze the spatial organization of people, places, and environments on the earth's surface
- Understand that people create regions to interpret the earth's complexity

- State that strong monarchs emerged in England, France, and Spain
- Identify key artistic and scientific advances in northern Europe
- Define the Reformation as a split within Christianity
- Identify Martin Luther as a German monk who led the Reformation
- Know that the Reformation created political and religious splits in Europe

Background to the Renaissance

- Define "Renaissance" as rebirth, referring to a *rebirth* of interest in the classical civilizations of Greece and Rome
- Describe Greece and Rome as civilizations that valued learning, reason, and human striving and potential
- Characterize the Middle Ages as a dangerous time and an Age of Faith
- Identify Christianity as Europe's dominant faith
- Describe the late Middle Ages as a time when writers, thinkers, and artists rediscovered classical models

The Italian Renaissance

- Identify Italy (with its numerous competing city-states) as the place where the Renaissance began
- Identify Florence, Venice, and Rome as centers of Renaissance learning
- Recognize that artists and scholars were inspired by ancient Greece and Rome
- Describe the Renaissance ideal of a well-rounded individual (Renaissance man)
- Identify key figures, characteristics, and accomplishments of the Italian Renaissance

The Renaissance Elsewhere and the Reformation

- Identify the invention of the printing press as key to the spread of Renaissance ideas and ideals
- Recognize Italy's role in spreading Renaissance ideas to northern Europe

Moving from One World to Another

- Locate and identify mountain ranges around the world
- Identify selected mountain peaks on several continents
- Explain the purpose of the scale on a map
- Use the scale on a map to measure the distance between places
- Name agricultural product maps as maps that show where crops are grown and animals are raised
- Use an agricultural product map to get information
- Understand how to use maps and other geographic representations, tools, and technologies to acquire, process, and report information from a spatial perspective
- Recognize the patterns and networks of economic interdependence on Earth's surface
- Identify how physical systems affect human systems

The Age of Exploration

- Describe the Renaissance as an age of exploration and discovery
- List key advances in navigation that made voyages of discovery possible (for example, caravel, compass, and astrolabe)
- Identify European motivations for voyages of discovery
- Recognize Portugal and Spain as the leading powers of this time
- Identify key individuals and their important voyages

The World They Found

- Recognize that different civilizations and cultures inhabited the Americas before the arrival of Europeans
- List the Maya, Aztecs, and Incas as three major pre-Columbian civilizations, and describe some of their skills and abilities
- Describe the motivations of the Spanish in the New World
- Characterize the conflict of Spanish and Native American civilizations as a clash of civilizations in which the Spanish conquered the Aztec and Inca empires
- Identify key figures in the conflict: Moctezuma, Cortés, Atahualpa, Pizarro, and las Casas

Looking East: Ottomans and Mughals

- Describe the Ottoman and Mughal empires as large and expanding Muslim empires during the Renaissance
- Locate the Ottoman and Mughal empires on a map
- Describe the Ottomans as rivals for trade and territory with European countries such as Spain and Portugal
- Recognize Hinduism and Islam as two faiths present in India
- Identify key places and people in the Ottoman and Mughal empires: Istanbul, Agra, the Süleymaniye mosque, the Taj Mahal, Süleyman, Akbar, and Shah Jahan

Africa, China, and Japan

- Describe the growth of European trade with Africa, China, and Japan
- Understand the impact of New World exploration on the development of a transatlantic slave trade
- Locate the kingdoms of Benin, China, and Japan on a map
- Recognize that both China and Japan closed themselves to the west in this period
- Identify key places, dynasties, people, and products of the three areas: Benin, brasswork, the Niger River, Beijing, the Forbidden City, the Great Wall, the Ming Dynasty, silk and porcelain, the Tokugawa shogunate, and Francis Xavier

England's Golden Age and Beyond

- Identify the reign of Elizabeth I as a *golden age*, or time of cultural and political flourishing
- Describe England as an increasingly strong nation-state under Elizabeth I
- Identify Spain as England's main rival
- State that England began to explore and colonize North America
- Identify Shakespeare as England's most famous bard
- Recognize historic English concern for defense of liberties in quarrel with James I and the Glorious Revolution

The America They Found and Founded

- Recognize that different cultures inhabited North America before the arrival of Europeans
- List the Pacific Northwest, desert, Plains, and Eastern Woodland peoples as major cultures, and describe some of their skills and abilities
- Describe various motivations of the English who came to the New World (for example, gold, religious freedom, land, and freedom from imprisonment)
- Explain that many people with maverick ideas came to the British colonies in North America
- Identify key figures and events in early settlement: John Smith, Pilgrims, Puritans, William Penn, Quakers, James Calvert, Catholics, and James Oglethorpe
- Identify the physical and human characteristics of places
- Recognize the characteristics, distribution, and migration of human populations on the earth's surface
- Observe the processes, patterns, and functions of human settlement
- Understand how physical systems affect human systems
- Learn how to apply geography to interpret the past

The American Revolution

- Describe the North American colonies as proud of their English heritage of liberty
- Explain that American colonists had made laws for the colonies in their own assemblies
- Explain why American patriots believed that being taxed by Parliament was an attack on their liberty
- Identify key events and figures in the American Revolution: Paul Revere's ride; the battle of Lexington, Concord, and Bunker Hill; the Declaration of Independence; winter at Valley Forge; French aid; Yorktown; George Washington; John Adams; and Thomas Jefferson
- Describe the result of the American Revolution as independence from England and the formation of a modern republic

America: Present to Past

- Discover the geography of the original thirteen colonies

Lesson Time and Scheduling

Total lessons: 108. If you teach History three times a week, you can comfortably complete the program within a typical school year.

Lesson Time: 60 minutes. You might choose to split the lessons into smaller segments. The online lesson tracking system will allow you to pick up wherever you left off in any given lesson.

Third Grade History



Standard Curriculum Items

Michelangelo by Mike Venezia (Children's Press, 1991)

"America 1492" (Kids Discover magazine)

The Revolutionary War by Brendan January (Children's Press, 2000)

Understanding Geography Level 3—Map Skills and Our World (maps.com, 2006)

Inflatable globe

US/world desk map

NOTE: List subject to change.

Fourth Grade History



Course Overview

Concluding their investigation (spanning grades 1–4) into history from the Stone Age to the Space Age, fourth grade students turn to the study of the modern world. They will:

- Learn about the Age of Enlightenment and the Scientific Revolution, and meet Isaac Newton and Benjamin Franklin
- Become familiar with James Madison and American constitutional government, as well as Napoleon in France

- Learn about various revolutions in Latin America
- See how great changes—nationalism, industrialism, and imperialism—shaped, and sometimes shattered, the modern world, leading to the two world wars
- Study many inventors and innovators who achieved great advances in communication, transportation, medicine, and government

Course Outline

Finding Your Way Around the World

- Maps, Scales, and Finding Our Place
- The Shape of the Land
- Grids Show the Way

Introducing the Modern World:

The Scientific Revolution

- What's So Modern About the Modern World?
- William Harvey Gets to the Heart of Things
- What's Under That Microscope?
- A Fly on the Ceiling: The Story of Cartesian Coordinates
- Young Isaac Newton
- A New Kind of Knight
- Curious Ben Franklin
- Diderot's Revolutionary Encyclopedia

Two Democratic Revolutions

- John Locke Spells Out the Laws of Good Government
- Thomas Jefferson and the Declaration of Independence
- James Madison and the US Constitution
- George Washington and the American Presidency
- The US Constitution: Three Branches of Government
- The US Constitution: Checks and Balances
- Rumblings of Revolution in France
- Storming the Bastille!
- Farewell, Louis XVI: From Monarchy to Republic
- The Terror
- The Rise of Napoleon
- Washington's Farewell: Stay Out of Europe's Wars
- Napoleon: Lawgiver and Emperor
- Waterloo!

Latin American Revolutions

- Haiti Went First: Toussaint L'Ouverture
- Spanish America and Seeds of Independence
- Miguel Hidalgo: Father of Mexican Independence
- Simón Bolívar: The Liberator
- Liberating the South: San Martín and O'Higgins

The Industrial Revolution

- James Hargreaves and the Spinning Jenny
- James Watt and the Steam Engine
- Fulton and McAdam: A Revolution in Transportation
- Americans Climb Aboard
- The First Factories
- Capitalism and New Wealth
- Charles Dickens: From Boy to Author
- Karl Marx in London
- The Great Exhibition

The Growth of Nations

- A New Kind of Czar: Peter the Great
- Catherine the Great
- Nicholas Nixes Change
- Greece Against the Ottoman Empire
- The New American Nationalism
- One Nation or Two?
- The Civil War Makes One Nation
- Lincoln's Leadership
- The Brothers Grimm in Germany
- Bismark Unites Germany
- Garibaldi Fights for a United Italy
- The Olympics Revived

The Age of Imperialism

- Livingstone and Stanley in Africa
- The French and the Suez Canal
- Rudyard Kipling: Author and Advocate for Empire
- Germany's "Place in the Sun"
- "A Splendid Little War": The Spanish-American War

Can Do! An Age of Breakthroughs and Enterprise

- Louis Pasteur
- Speeding It Up: Telegraphs, Sewing Machines, and Typewriters
- The Wizard of Menlo Park: Thomas Edison
- Alexander Graham Bell and the Telephone

- Carnegie and Steel
- Mr. Eiffel Builds a Tower
- Henry Ford Makes Cars Affordable
- Marconi and the Radio
- First in Flight: Orville and Wilbur Wright
- The Panama Canal

Mostly Hard Times: War, the Roaring 20s, and Depression

- The Great War Begins
- In Flanders Fields
- Lafayette, We Are Here!
- Dashed Hopes
- Russia's Dethroned and Lenin Rising
- From Lenin to Stalin
- American Women Get the Vote
- The Roaring 20s
- Charles Lindbergh and Advances in Flight
- Fleming and Penicillin: Advances in Medicine
- The Great Depression

World War II

- The Rise of Dictators
- Hitler's Gamble
- Nazi Blitzkrieg and Axis Expansion
- Churchill Leads Embattled Britain
- The Holocaust
- Pearl Harbor and United States Entry into the War
- D-Day, and Victory in Europe
- The Atomic Bomb and V-J Day

Rebuilding a Better World

- Lending a Hand with the Marshall Plan
- Formation of the United Nations
- End of Empires: Gandhi in India
- The Cold War and the Berlin Wall
- Mao Zedong in China
- Defeating Polio
- A Computer Revolution
- We Will Go to the Moon
- A Polish Pope and Eastern Europe
- The End of the Cold War

Lesson Time and Scheduling

Total lessons: 108. If you teach History three times a week, you can comfortably complete the program within a typical school year.

Lesson Time: 60 minutes. You might choose to split the lessons into smaller segments, for example, 25 to 35 minutes.

The online lesson tracking system will allow you to pick up wherever you left off in any given lesson.

Standard Curriculum Items

Understanding Geography: Map Skills and Our World (Level 4)

Inflatable globe

US/world map

Charles Dickens: The Man Who Had Great Expectations, by Diane Stanley and Peter Vennema (William Morrow and Co., 1993)

Inventors: A Library of Congress Book, by Martin Sandler (HarperCollins, 1996)

The U.S. Constitution and You, by Syl Sobel (Barron's, 2001)

NOTE: List subject to change.

American History Before 1865



Course Overview

In this program, students undertake the first course in a two-year detailed survey of the history of the United States. Building on the award-winning series from Oxford University Press, *A History of US*, K¹²'s online lessons and assessments guide students through critical episodes in the story of America. Students will:

- Study the development of various Native American civilizations
- Learn about European exploration and the growth of

the thirteen colonies

- Investigate in detail the causes and consequence of the American Revolution
- Examine the Constitution and the growth of the new nation
- Become familiar with Jacksonian democracy, westward expansion, and Manifest Destiny
- Study the causes and consequences of the Civil War

Course Outline

The Earliest Americans

- Describe current theories of migration from Asia to the Americas
- Identify characteristics of major societies in North America before 1492
- Compare and contrast types of shelter and acquisition of food
- Compare and contrast customs and beliefs
- Describe the roles and duties of men and women
- Describe major accomplishments of Native Americans in North America before 1600
- Review and practice use of maps, globes, latitude, and longitude
- Identify and locate on a map the major physical features of North America
- Locate on a map the Bering Sea and land bridge
- Trace the migration routes of early Native Americans
- Identify and describe major climate regions of the United States
- Describe the impact of climate and geography on the way Native Americans lived
- Give examples of the ways in which Native Americans traded with each other
- Analyze the change in economics and ways of life that occurred as a result of the Spanish introduction of the horse to North America

European Exploration

- Describe the reasons for European exploration in the fifteenth and sixteenth centuries
- Identify the technological advances that allowed exploration
- Identify Spain, France, Holland, and England as the major countries involved in exploration
- Identify major explorers and their accomplishments
- Analyze the effect of exploration on Native American and European societies
- Describe the beginning of African slavery in the Americas

- Use a variety of maps and explain their purposes
- Identify on a map the routes and land claims of European explorers
- Describe motives for exploration
- Identify cultural clues to the history of a place
- Explain the different ways Native Americans and Europeans viewed the concept of land ownership
- Describe the economic goals of European explorers
- Analyze the reasons for the use of slave labor in the Americas

Thirteen Colonies, Part 1

- Compare and contrast the early English colonies of Jamestown, Plymouth, and Massachusetts Bay
- Identify the House of Burgesses and the Mayflower Compact as the beginnings of representative government in the colonies
- Give examples of cooperation between Native Americans and colonists
- Describe the beginnings of African slavery in the colonies
- Recognize the characteristics and accomplishments of the West African kingdoms before 1600
- Use a variety of maps to locate places and make comparisons
- Determine the significance of relative location
- Identify physical characteristics of the eastern seaboard
- Describe and apply the concept of region in terms of the Chesapeake and New England
- Describe the migration of Puritans and of Africans to the colonies
- Explain the influence of geography and climate on the ways of life of the people who settled in the Chesapeake and New England regions
- Describe the reasons for the development of small farms and plantations
- Explain the reasons for indentured servitude and slavery
- Describe the significance of the House of Burgesses

and the Mayflower Compact as they relate to self-government

Thirteen Colonies, Part 2

- Identify the major groups and individuals responsible for the founding of the thirteen colonies, and describe the reasons for the founding of the colonies
- Compare and contrast the southern, middle, and New England regions
- Describe life in the colonies for members of various social groups
- Give examples of conflict between colonists and Native Americans before 1775
- Give examples of religious toleration and intolerance in the colonies before 1775
- Locate on a map the major physical features of the North American eastern seaboard
- Locate major cities of colonial times on a map
- Define *region*, and explain the division of southern, middle, and New England colonies
- Describe the characteristics of the major culture groups that populated the thirteen colonies
- Explain the effect of geography and climate on the development of the thirteen colonies
- Describe the magnitude of African migration to the colonies before 1775
- Describe the economic systems that developed in the thirteen colonies
- Explain the routes, products, and motives for triangular trade
- Give examples of representative government in the colonies
- Give examples of separation of church and state in the colonies

Road To Revolution

- Describe the factors leading to the French and Indian War and the territorial changes that resulted from it
- Recognize the problems Britain faced at the end of the French and Indian War
- Define *salutary neglect*, and describe its consequences before 1763
- Identify chronologically major examples of conflict and misunderstanding between colonists and the British government between 1763 and 1775
- Identify individuals who led the revolutionary movement
- Describe the significance of political organization and cooperation between 1763 and 1776
- Define *patriot* and *loyalist*
- Identify on a map the major sites of the French and Indian War
- Compare historical and contemporary maps

- Practice using map scales
- Define and give examples of free market and private property issues between 1763 and 1776
- Trace the steps the colonies took toward self-government and independence before 1776
- Explain the origins of *no taxation without representation*
- Recognize the main arguments and influence of *Common Sense*
- Identify the Declaration of Independence as a key document in American history and political thought, and explain its main arguments
- Recognize the origins of the theories presented in the Declaration of Independence

The American Revolution

- Describe the roles of major military and political leaders during the American Revolution
- Recognize the contributions of France and other nations and foreign individuals to the American Revolution
- Describe the roles of women and African Americans in the American Revolution
- Describe the impact of the war on families and the economy of the new nation
- Explain the problems the new government faced in financing the war and maintaining a military
- Give examples of the social, political, and economic impacts of the American Revolution
- Locate major battles of the American Revolution on a map
- Explain the importance of relative location in developing strategies
- Describe the economic problems and solutions the nation faced during the American Revolution
- Identify ways in which the ideals of democracy were expanded or restricted during the American Revolution

The Constitution

- Describe the development and significance of state constitutions written during the American Revolution
- Explain the importance of the land policies under the Articles of Confederation
- Recognize the Articles of Confederation as the government of the United States before 1789 and describe its weaknesses
- Identify the major individuals involved in the writing and ratification of the US Constitution
- Locate the Northwest Territory on a map, and describe its major features
- Analyze the importance of the Northwest Territory
- Explain why people wanted to migrate to the Northwest Territory

American History Before 1865



- Describe the economic factors in the migration to the Northwest Territory
- Describe the economic factors involved in the decision to write a new constitution in 1787
- Describe earlier concepts of government that influenced the writing of the US Constitution
- Explain the role of compromise in establishing the United States government
- Describe the role and powers of the three branches of government
- Define and describe the system of *checks and balances* and the concept of *separation of powers*
- Define *federalism*
- Describe the principles of the Bill of Rights
- Give examples of the ways in which democracy has expanded or been restricted over time
- Define First Amendment rights
- Summarize the duties and responsibilities of citizens

A New Nation

- Identify George Washington as the first president and describe his contributions
- Identify the first six presidents and give examples of their accomplishments and problems
- Summarize the problems faced by Native Americans as the United States expanded
- Explain the causes and results of the War of 1812
- Locate the Louisiana Territory on a map and list the states that were formed from it
- Identify the physical characteristics of the Louisiana Territory
- Trace the route of the Lewis and Clark expedition
- Identify the states added to the Union between 1790 and 1815
- Explain the role of trade in foreign policy decisions between 1789 and 1815
- Describe the economic results of the War of 1812
- Describe the role of compromise in establishing the new nation
- Identify the precedents set by George Washington in defining the role of the president
- Explain major constitutional issues that faced the first three presidents
- Analyze “The Star-Spangled Banner”

A New Age and New Industries

- Identify Andrew Jackson, and describe the significance of his election in terms of the expansion of democracy
- Become familiar with the eight presidents who served between Andrew Jackson and Abraham Lincoln
- Describe new forms of transportation between 1800 and 1860 and their influence on the nation and on people's lives

- Recognize the innovations in industry, agriculture, and communications between 1790 and 1860 and their influence on the nation and on people's lives
- Describe the potential benefits and problems of growing cities of the early nineteenth century
- Recognize the importance of natural resources in patterns of settlement and conflict
- Use a variety of maps to assess changes over time
- Make connections between geographic factors and economic decisions
- Explain the role of labor in the development of economic systems
- Identify individuals who helped expand the ideals of democracy
- Recognize limitations on democracy in the early nineteenth century

Americans Take New Land

- Explain Manifest Destiny
- Identify the major immigrant groups of the early nineteenth century and describe their experience
- Identify individual and group motives for going West, and describe the experience of the pioneers
- Assess the impact of westward expansion on Native Americans and on slavery
- Describe the ways in which new territories were acquired between 1783 and 1860
- On a map, locate and identify the states added to the United States between 1815 and 1860
- Describe the physical features of the territories gained between 1815 and 1860
- Explain the shifting regions of the United States as the nation grew
- Identify push and pull factors in the migrations of the early nineteenth century
- Trace migration routes of the time
- Relate physical geography and climate to the ways in which people can make a living
- Explain the role of profit motive in U.S. expansion
- Give examples of economic interdependence
- Describe the law of supply and demand as it relates to resources and opportunity
- Give examples of the ways in which democracy was expanded or restricted between 1800 and 1850

Reform and Reflection

- Describe the goals, achievements, and difficulties of major reform movements before 1860
- Give examples of nationalism in American literature and art of the early nineteenth century
- Identify individuals who helped expand the ideals of democracy

American History Before 1865



Slavery and Sectionalism

- Explain the growing divisions between North and South between 1820 and 1860
- Describe the goals, achievements, and problems of the abolition movement
- Describe the shifting regions of the United States as cotton and slavery moved West
- Explain the role and nature of slavery in the economic system of the South
- Identify individuals who played a role in expanding or restricting the ideals of democracy

The Road to Civil War

- Trace the sequence of events between 1850 and 1861 that increased sectional tension and led to the Civil War
- Identify the changing regions of the United States in the years before the Civil War
- Use maps to identify the provisions of major legislation between 1820 and 1860
- Describe the arguments over the nature of federalism in the years before the Civil War
- Identify individuals who worked to expand democracy between 1850 and 1861

The Civil War

- Identify major political and military leaders on both sides of the Civil War
- Recognize the major strategies, battles, and outcomes of the Civil War
- Summarize the reasons for and results of the Emancipation Proclamation
- Describe the roles of women and African Americans in the war effort
- Describe the human and economic cost of the war and its effect on families, slaves, and soldiers
- Use maps to locate major battles and strategies of the Civil War
- Recognize the significance of relative location in battle plans
- Identify the Emancipation Proclamation and the thirteenth Amendment in expanding democracy
- Recognize key passages of the Gettysburg Address and Abraham Lincoln's Second Inaugural Address
- Analyze the words of selected Civil War songs
- Become familiar with selected monuments

Reconstruction

- Describe the impact of Abraham Lincoln's assassination on the effort to rebuild the nation
- Discuss the successes and failures of Reconstruction in terms of the economic, political, and social problems facing the nation between 1865 and 1877

- Describe the ways in which human actions during the Civil War affected the South's agriculture and economy long after the war
- Analyze graphs of economic output before, during, and after the war
- Explain the origins and purpose of the sharecropping system
- Summarize the Thirteenth, Fourteenth, and Fifteenth Amendments

Lesson Time and Scheduling

Total lessons: 180.

Lesson Time: 60 minutes.

Standard Curriculum Items

US/world map

Understanding Geography—Map Skills and Our World (Level 5)

A History of US: The First Americans by Joy Hakim (Oxford University Press, 1999)

A History of US: Making Thirteen Colonies by Joy Hakim (Oxford University Press, 1999)

A History of US: From Colonies to Country, Vol. 3 by Joy Hakim (Oxford University Press, 1999)

A History of US: The New Nation, Vol. 4 by Joy Hakim (Oxford University Press, 1999)

A History of US: Liberty for All, Vol. 5 by Joy Hakim (Oxford University Press, 1999)

A History of US: War, Terrible War, Vol. 6 by Joy Hakim (Oxford University Press, 1999)

American History Since 1865



Course Overview

American History Since 1865 is the second and concluding course in a two-year survey of American history, with integrated topics in geography, civics, and

economics. This course takes students from the post-Civil War era to recent times.

Course Outline

Rebuilding a Nation

When the Civil War ended in 1865, slavery had been abolished, the Constitution reigned supreme over individual states, and the nation had endured. But the costs of the war were terrible, and the problems to be solved were enormous. Reconstruction attempted to deal with those difficulties, but Abraham Lincoln's assassination, conflict between the executive and legislative branches of the government, and resistance in the South postponed real healing.

- Learning from History
- The Civil War
- Reconstruction: Andrew Johnson
- Bringing the Confederacy Back into the Union
- The Freedman's Bureau
- The Thirteenth, Fourteenth, and Fifteenth Amendments
- Thaddeus Stevens and the Radical Republicans
- The Impeachment of Andrew Johnson
- Carpetbaggers and Scalawags
- Attempts to Deny Rights to African Americans

Changing and Growing

Homesteaders braved the hardships of the Great Plains, the Transcontinental Railroad united the nation physically and psychologically, and cowboys carved a lasting image in American lore, but the price was the devastation of the ways of life of many Native Americans. At the same time, immigrants swelled growing cities despite nativist prejudice, while corruption and inequality met opposition from writers and reformers.

- Westward Ho!
- Homesteading
- A Cowboy's Life
- The Transcontinental Railroad
- Effects of Settlement on Native Americans
- Chief Joseph: "I Will Fight No More Forever"
- The Growth of Cities
- Corruption and Crusaders
- Samuel Clemens/Mark Twain
- Immigration
- Resistance: Know-Nothings and the Chinese Exclusion Act
- Woman Suffrage: Susan B. Anthony and Elizabeth Cady Stanton

Writing an Essay

Practice writing skills in an essay.

- Finding and Organizing Information, Parts 1 and 2
- Organizing Information
- Writing the Essay

Freedom Denied

Jim Crow laws undid the post-Civil War gains of African Americans in the South, but courageous individuals fought local governments, the Supreme Court, and the public to help restore the American ideal that "all men are created equal."

- Segregation: Jim Crow Laws, Lynching, and Poll Taxes
- Separate but Unequal: *Plessy v. Ferguson*
- Ida B. Wells
- Booker T. Washington and W.E.B. DuBois

Politics, Power, and the People

Entrepreneurs introduced a new kind of business and new power to the nation in the late 1800s. Hundreds of thousands of immigrants flooded into the United States to work in the factories and mills that the entrepreneurs built. Cities literally grew up as skyscrapers rose higher and higher. But many Americans were left out of the politics and prosperity.

- Andrew Carnegie: Steel and Philanthropy
- John D. Rockefeller: A Fortune in Oil
- J.P. Morgan: Banking and Finance
- Monopolies and the Sherman Antitrust Act
- Building Up
- "I Lift My Lamp"
- In Office
- A Third Party
- Money Matters
- Money Debates
- A Grand Campaign
- All Americans?

Making Things Better

Ever hopeful and confident, American individuals and organizations took on the challenges of a new society and endeavored to make life better for all. These people and organizations demanded better conditions and pay for workers, safer food, an end to child labor and corrupt business practices, and safeguards for the environment.

- Changes at Work
- Haymarket Square
- Unions and Collective Bargaining
- Samuel Gompers
- Mother Jones
- The Power of the Press
- Raking Muck and Tackling Trusts
- John Muir: Conservation and National Parks
- Jane Addams and Hull House
- Analyzing Population Density Maps

Taking a Position

Practice writing skills in a position paper.

- Choosing a Topic
- Choosing a Position
- Writing a Position Paper

Entering a New Century

As the United States faced and then entered a new century, a middle class gradually came to dominate society and make itself felt in politics. Acknowledging the problems facing the nation, this emerging middle class took on the challenge of solving these problems. Theodore Roosevelt embodied the national exuberance of the time and led the charge to look outward. The country briefly embraced imperialism and then took on the role of world power under Woodrow Wilson.

- Growth of Cities and the Middle Class
- The Progressive Movement
- The Spanish-American War
- Annexation of the Hawaiian Islands
- Our Youngest President
- Professor President
- World War I: From Neutrality to Engagement
- Wilson's Fourteen Points and the League of Nations

A Fascinating Era

The Roaring Twenties opened as women got the vote, and as radio, jazz, and the automobile transformed the nation. But there was tension between people who embraced change and people who feared it. The experiment of prohibition failed, the Red Scare ruined lives, African Americans fled the crushing poverty of the South, and the economy boomed—only to crash a few years later.

- Amending Behavior
- Doubling Voters
- Seeing Red
- Black Migration from the Rural South to the Urban North
- The Harlem Renaissance
- The Jazz Age
- Boom and Bust
- Basic Principles of the U.S. Market Economy

Hard Times

Led by the collapse of the farm economy in the Dust Bowl, depression gripped the nation. The unemployment rate soared to 25 percent, and civil unrest ensued. But Franklin Roosevelt's optimism and personal courage were contagious, and the New Deal changed the role of government forever.

- Suffering
- The Bonus March
- Franklin and Eleanor Roosevelt
- The New Deal: Roosevelt's Plan for Ending the Great Depression
- Compare and Contrast: Coolidge, Hoover, and Roosevelt
- The Government Grows

Thesis and Support

Practice writing a thesis using supporting information.

- Gathering Information
- Forming a Thesis
- Preparing an Outline
- Writing and Revising

The Second World War

Totalitarian dictatorships arose in Europe and Asia, ushering in a period of devastating genocide and bringing on the biggest war in history. After clinging to an isolationist policy throughout the 1930s, the United States entered World War II when Pearl Harbor was attacked. American industrial power and enormous individual and national sacrifice brought victory to the Allies, but the country also had to deal with its own prejudices and the advent of the nuclear age.

- Background and Causes
- Totalitarianism: The Rise of Dictators in the 1930s (Japan, Spain, Italy, and the Soviet Union)
- Hitler and the "Final Solution"
- U. S. Isolationism in the 1930s
- The Axis and Allied Powers
- Alliance with the Soviet Union
- How Airpower Changed Warfare
- Pearl Harbor
- Codes: Navajo Code-Talkers
- Internment of Japanese Americans
- Eisenhower and Marshall
- The Battle of Midway
- Guadalcanal, Stalingrad, the D-Day Invasion
- The Home Front: How Civilians Helped the War Effort
- The Yalta Conference
- President Truman
- The Atomic Bomb

Recovery, Reaction, Reform

After the fall of the Iron Curtain, Western democracies squared off against the Communist bloc. The United States countered this new threat through economic aid plans, bringing democracy to former enemies, and military action in Korea. But there was conflict at home as the fear of communism led to the abuse of civil liberties, a push for conformity, and a controversial war in Southeast Asia. At the same time, people who had fought to save democracy now demanded full participation in that form of government through the civil rights movement.

- Communist and Capitalist Systems
- Winston Churchill: The “Iron Curtain”
- The Truman Doctrine
- The Marshall Plan
- The U.S. Role in Japan’s Transition to Democracy
- The Korean War
- Joseph McCarthy and the Fear of Communism
- Eisenhower and the Culture of the Fifties
- The Beginnings of US Involvement in Vietnam
- Brown v. Board of Education
- Martin Luther King, Jr. and the Civil Rights Movement

A Turbulent Time

A new generation took the political stage in 1960. The next decade saw challenges at home and abroad as the nation tried to balance the needs of minorities, women, and the poor with those associated with the Cold War and Vietnam.

- JFK
- Rachel Carson and *Silent Spring*
- The Cuban Missile Crisis
- Different Approaches to Civil Rights (NAACP, SNCC, CORE)
- JFK’s New Frontier
- The Great Society
- Malcolm X
- The United States and Vietnam: Foreign Policy and Civil Unrest
- Women Speak Out
- Cesar Chavez and the Rights of Migrant Workers
- Robert F. Kennedy as Activist
- The Native American Movement

Writing from Documents

Practice writing from documents.

- Analyzing Documents
- Answering a Document-Based Essay Question

Not So Long Ago

Conflict over Vietnam and civil rights brought national unrest to crisis levels during the 1960s. Corruption uncovered in the Watergate affair resulted in impeachment proceedings, the

first presidential resignation, and public cynicism. But the country moved forward and saw the end of the Cold War and a revolution in technology. The beginning of the twenty-first century held unfamiliar and sometimes frightening challenges, but the past offered much insight in helping people, organizations, and institutions meet those challenges.

- The 1960s Counter-Culture
- The Nixon Era
- The Watergate Affair
- President Jimmy Carter
- The Reagan Revolution
- The Bush Years
- The End of the Cold War
- New Immigrants
- Where Are We Headed?

Lesson Time and Scheduling

Total lessons: 180.

Lesson Time: 60 minutes.

Standard Curriculum Items

Wall map set

A History of US: Reconstruction and Reform, Vol. 7, by Joy Hakim (Oxford University Press, 2003)

A History of US: An Age of Extremes, Vol. 8, by Joy Hakim (Oxford University Press, 2003)

A History of US: War, Peace, and All That Jazz, Vol. 9, by Joy Hakim (Oxford University Press, 2003)

A History of US: All the People, Vol. 10, by Joy Hakim (Oxford University Press, 2003)



Intermediate World History A:

Prehistory Through the Middle Ages

Course Overview

K¹² Intermediate World History A surveys the story of the human past from the period before written records, prehistory, through the fourteenth century. The course is organized chronologically and, within broad eras, regionally. The course focus is the story of the human past and change over time, including the development of religion, philosophy, the arts, and science and technology. Geography concepts and skills are introduced as they appear in the context of the historical narrative.

Students explore what archaeologists and historians have learned about the earliest hunter-gatherers and farmers and then move to a study of the four river

valley civilizations. After a brief writing unit, they study the origins of Confucianism, Hinduism, Buddhism, and Judaism and the eras in which they developed. The second half of the course traces the story of classical Greece and Rome, the Byzantine Empire, the origins of Christianity and Islam, and then continues through the fourteenth century in Europe, North Africa, and East Asia.

Historical thinking skills are a key component of Intermediate World History. Students practice document and art analysis, conduct research, and write in a variety of formats. They also practice map reading skills and look at how historians draw conclusions about the past as well as what those conclusions are.

Course Outline

History: The Map of Time

History is the study of the human past--the story of change over time. It's a story based on evidence. Our physical world is the setting that helps shape the story, real people are its heroes, and time and space are its anchors. Historians ask questions about all of these elements. How did the Egyptians build pyramids? When and where did democracy begin? Why are most of the world's great cities located on rivers? Join our odyssey through history. The questions are endless, and the answers amazing.

- History and You
- When?
- Where?
- Maps, Maps, Maps
- Thinking Geographically

From Gathering to Growing

Imagine finding food, clothes, and shelter if there were no stores, factories, or farms. Long ago, everyone constantly struggled to survive. Today, in much of the world, only a few people produce food; most are involved in other activities. We create cities, art, and governments—all part of civilization. But what is civilization? How did it begin? How do we know what happened before people kept records? Historians and archaeologists help answer these and thousands of other questions.

- How Long Is Long?
- Pre-History: Hunter Gatherers and Cave Dwellers
- Cave Paintings: What do we Know About Lascaux?
- From Nomad to Farmer
- Leaping Forward

The Mesopotamian Moment

Agriculture, a system of writing, the wheel, and written law all developed in one small area of the world—Mesopotamia. How do we know? We have solid evidence. As archaeologists and historians continue to work in the area between the Tigris and Euphrates Rivers, our knowledge grows and changes. People a century ago knew only a fraction of what you will know about Mesopotamia. Archaeological digs and written records tell us how early people lived and worked.

- How Do We Know?
- Finding Sumer
- Cities of Sumer
- Growing Trade
- Ideas about the Gods
- A Ziggurat to the Gods
- Writing it Down
- *The Epic of Gilgamesh*
- Sumer No More
- Sargon: A Mighty Ruler
- Hammurabi's Code
- Nebuchadnezzar Builds

Civilization Spreads

What's the recipe for civilization? Start with water and good soil. When you figure out how to grow plenty of crops, divert some attention to other activities. Divide up the work. Start by building villages and places to store your surplus food, and then cities. Spend some time inventing a system of writing, and make laws. All these ingredients first combined in Sumer, but civilizations soon sprang up in three other river valleys. Was it a good



recipe? Do any of these civilizations still exist?

- A River Rules
- Building Power and Pyramids
- Life in Ancient Egypt
- Life in Ancient Egypt
- Significant Pharaohs
- Ramses II: Conqueror and Builder
- Thinking About Egypt
- By the Banks of the Indus
- Remarkable Cities
- Civilization Along the Yellow and Yangtze
- The Silk People
- Writing and Ruling
- Mapping

Writing About the Past

It's time to use what you have learned. Historians often compare and contrast new information with what they already know. You will do the same. How were the early river valley civilizations alike? How were they different? Write an essay to express your thoughts.

- Think Before You Write
- Writing

Some Lasting Ideas

People have always wondered how the world came to be and how it works. Their wonderful curiosity led to ideas and insights that have survived through the ages. Almost a billion people practice Hinduism today. Another half billion follow the teachings of Buddha. Confucianism endures in East Asia and elsewhere. How did people form these belief systems? Why have they lasted so long?

- A Wise Teacher
- Relationships and Rulers
- Who Made a Difference?
- Qin Shi Huangdi Unites China
- The Han
- The Origins of Hinduism
- The Hindu View
- The Enlightened One
- A Search for Goodness

More Lasting Ideas

Hinduism, Buddhism, and Confucianism played enormous roles in the development of ancient and modern Asian thought and culture. Western civilization came primarily from the Hebrews and Greeks. The Hebrews introduced enduring ideas about monotheism, justice, law, and morality. The Greeks celebrated people's ability to reason and decipher the mysteries of the world. Where did the Hebrews and the Greeks get their ideas?

- Monotheism Takes Hold

- Covenants
- The Law
- Kings
- Renewing Their Faith
- Another Land
- Gods in Ancient Greece
- The Gift of Reason
- Stories and Games
- Arts and Histories
- The Polis
- Telling Tales

Write Again

The ancient Greeks were truly amazing. They made lasting contributions to science, mathematics, art, literature, government, philosophy, and more. Do some research on the Greeks and report your findings in a well-written essay.

- Preparing to Write
- Organizing Thoughts
- Writing
- Semester Review and Geography Assessment
- Semester Assessment

Classical Greece

The Greeks valued serious thought and individual effort, and the results were remarkable. The Greeks gave us philosophy, art, theater, and the concept of democracy. What made such accomplishments possible? Climate, terrain, war, individuals, and even diseases played a role. If any of these factors had been different, history might have taken another course.

- Classically Different Ways of Life
- Athens
- An Empire Threatens
- Free to Flourish
- A Golden Time
- Art and Architecture
- The Play's the Thing
- The Decline of Athens
- Different Perspectives
- Three Great Thinkers
- Alexander the Great

Rome: Republic and Empire

The Greeks were great innovators, but the Romans built an empire on the ideas of others. We can see Roman influences even today. People still walk on Roman roads and get water from Roman aqueducts. Many modern languages have their roots in Latin—the language of Rome. The Roman Republic's form of government—representative democracy—enjoys an ever-growing influence in the world. And Christianity, born in a Roman



province and finally adopted by the Empire, has spread to all corners of the world.

- A Republic Is Born
- Celebrating Citizenship
- Fighting for Power
- Julius Caesar
- From Republic to Empire
- The Real Rome
- Learning Something New Everyday: Pompeii
- Rome and Judea
- Jesus of Nazareth
- A New Religion
- Conflicts for Christians
- Empire in Crisis
- Barbarians at the Gate
- Who Were They?
- Legacies

Empires

The glory of Rome faded in Western Europe, but it remained strong in the East. The Eastern Roman, or Byzantine Empire, blended Greco-Roman and western Asian cultures to create its own splendor. The Byzantine Empire flourished for more than seven centuries. South of the empire, a new religion grew up on the Arabian Peninsula, and spread quickly as its followers forged a powerful empire. Why did Islam spread so quickly along the trade routes of North Africa? What lured traders to cities like Timbuktu?

- Byzantine Beauty
- Justinian and Theodora
- The Origins of Islam
- Islam Emerges
- Religion and Empire
- Scholars and Storytellers
- More Mapping
- Mapping Africa
- Gold and Salt
- A Man Called Mansa Musa

In Western Europe

As the Roman Empire declined, barbarians invaded Western Europe. How did people survive this dangerous time? What did Europeans do without powerful governments to maintain the old roads and protect villages? Lords built self-sufficient manors and armies to defend them. The church expanded its power into civic life. Christians traveled east and fought wars with Muslims over sacred cities. Eventually, new systems of government developed new ideas about power and justice.

- Where to Turn?
- Monasteries Carry On

- Charlemagne
- Viking Ventures
- Gods and Leaders
- The Structure of Medieval Society
- Manors
- Christendom
- Building on Faith
- Cultures in Conflict
- Monarchs
- New Ideas of Justice
- Limiting Power

From East Asia to Western Europe Again

China, the longest continuous civilization in the world, entered a golden age under the Tang dynasty. The Chinese produced exceptional poetry, paintings, and porcelain. Inventions like the compass and fireworks would change the world. Even when fierce Mongol invaders took over China's government and, for a time, ruled the largest empire in the world, Chinese civilization lived on. Meanwhile in Europe, wars and plague brought calamity and change.

- A New Dynasty
- Changing the Earth
- A Golden Age
- Remarkable Achievements
- The Mongols
- Conquering Khans
- A World Traveler
- How Many Years of War?
- Plague

Seeking the Silk Road

You've seen how goods and ideas spread from Asia to Europe and Africa and back again along important trade routes like the Silk Road. You have looked at people and places in many parts of the world. You've also learned about the work of archaeologists and historians and studied the connections between history and geography. Now it's time to pull together what you've learned and explore a topic in greater detail in a final research project.

- Summing Up
- The Big Picture
- Trade, Trade, Trade
- Finding Information
- Finding More Information
- Showing What You've Learned
- Writing About What You've Learned
- Writing Well

Finishing

Congratulations! You have almost finished the course. To

Intermediate World History A: Prehistory Through the Middle Ages



wrap up World History, read some conclusions about the world before 1400 and draw some conclusions of your own. Then, demonstrate your knowledge in the Year-End Assessment.

- Conclusions
- Review
- Review
- Review

Lesson Time and Scheduling

Total lessons: 180.

Lesson time: 60 minutes.

Standard Curriculum Items

The Human Odyssey, Volume 1: From Prehistory Through the Middle Ages, edited by Klee, Cribb, and Holdren
(K12 Inc., 2004)



Intermediate World History B:

Our Modern World, 1400 to 1917

Course Overview

Continuing a survey of World History from prehistoric to modern times, K¹² online lessons and assessments complement the second volume of *The Human Odyssey*, a textbook series developed and published by K¹². This course focuses on the story of the past from the fourteenth century to 1917 and the beginning of World War I. The course is organized chronologically and, within broad eras, regionally. Lessons explore developments in religion, philosophy, the arts, and science and technology. The course introduces geography concepts and skills as they appear in the context of the historical narrative. Major topics of study include:

- The cultural rebirth of Europe in the Renaissance
- The Reformation and Counter-Reformation
- The rise of Islamic empires
- Changing civilizations in China, Japan, and Russia
- The Age of Exploration, and the civilizations that had been flourishing in the Americas for hundreds of years prior to encounters with Europeans
- The changes that came with the Scientific Revolution and the Enlightenment
- Democratic revolutions of the eighteenth and nineteenth centuries
- The Industrial Revolution and its consequences
- Nineteenth century nationalism and imperialism
- The remarkable transformations in communications and society at the turn of the twentieth century

Course Outline

Beginning

History is the study of the human past—the story of change over time. It's a story based on evidence. Our physical world is the setting that helps shape the story, and real people are its heroes. Historians ask questions about all of these elements. Why did Europeans of the Middle Ages build cathedrals? How did the shoguns of Japan maintain their power? What inspired explorers to set sail across the seas? Join our odyssey through history. The questions are endless; the answers, amazing.

- Getting Started

A Renaissance Begins in Europe

Most Europeans lost touch with classical Greece and Rome in the centuries after the fall of the Roman empire. They lost touch with each other and with Asia when trade declined. But in Italy, there were constant reminders of what had been. People used stones from the Colosseum to build their homes. They walked beneath great aqueducts, and scholars still read classical works. When the plague subsided and trade picked up in the fourteenth century, Italian artists, scholars, and authors were ready to try out new ideas, and there were merchants who could afford to help them. We know this period of enormous achievement as the *Renaissance*.

- Europe Reborn: Discovering Greece and Rome
- Cities Spur Change
- Genius in Florence
- Rome Revived

The Spread of New Ideas

The Renaissance wasn't limited to Italy, and it wasn't limited to new styles of art and literature. Ideas spread north from Italy and artists and thinkers across Northern Europe used those ideas to create their own distinct styles. Renaissance ideas spread into other fields as well. Ideas that we take for granted today in politics and religion came about during the Renaissance. Machiavelli questioned the political world, while Luther and Calvin questioned the practices and beliefs of the Christian Church and the Church examined itself. Europe and the world would never be the same.

- The Renaissance Beyond Italy
- The Reformation Splits Christendom
- The Counter-Reformation and Beyond

New Powers in Asia

While European culture grew and redefined itself, political and cultural changes occurred in Asia, too. Almost every part of Asia had suffered hardship during Mongol rule. Now, each region developed its own political and cultural identity. Great Muslim empires rose in Western and Southern Asia, and the religious differences within Islam led to political conflict in some places. Farther east in China, the Ming dynasty achieved greatness and supported tremendous cultural accomplishment. In Japan, a feudal system maintained control. And in Russia, rulers borrowed cultural ideas that would become distinctly Russian.

- Three Islamic Empires
- Ming China and Feudal Japan
- Russia Rising



Europe Seeks Asia and Meets the Americas

Asia had much to offer and Europeans knew it. But how could they get the spices, silks, porcelain, and all the rest? The Ottomans controlled the ancient Silk Road, and it was terribly dangerous to travel through mountains and deserts anyway. But what if ships could sail to Asia and back again? New ship design and new navigation aids might make such trips possible. The race was on. The explorers and those who sent them knew what they were after. They had no idea that they would actually find whole worlds unknown to them. At the same time, the people of the powerful empires across the seas knew nothing of Europe or Asia or Africa. They had no idea what was about to happen.

- Portugal and Spain Explore, and the Age of Exploration
- Filling in the Map
- Old Civilizations

Exploration Changes the World

Gold, glory, and God. The Spanish and Portuguese conquistadors and their sponsors knew what their goals were, and they were willing to go to great lengths to achieve them. Guns and germs helped them defeat two great empires. But the conquistadors could not have predicted the long-term and often unintended consequences of their actions. Farming changed on three continents. Diets changed. Thousands of people willingly crossed the oceans to start new lives. Millions were kidnapped and forced to cross the oceans as slaves. And millions more died of disease and abuse. We still feel the consequences today.

- Clash of Civilizations
- The Spanish and Portuguese Empires
- The Columbian Exchange
- Songhai, Benin, and the New Slave Trade

Changing Empires, Changing Ideas

Elizabeth I was quite a woman and quite a ruler. One of England's most powerful monarchs, she had an entire age named for her, and the explorations she sponsored led to the colonies that became the United States. But England faced difficult times after Elizabeth, and a political revolution there meant that no English monarch would ever again have so much power. At the same time, a revolution in science changed the way people think and started "modern times." Have you ever examined something to find out more about it? Or conducted a small experiment? Do you believe you can figure a lot of things out for yourself by using your mind? Then you are part of an enlightened age.

- Elizabethan England and North American Initiatives
- England: Civil War and Empire

- The Scientific Revolution
- The Enlightenment: An Age of Reason

Writing

The world changed in many ways between 1300 and 1800. Think of all that happened and all the people who influenced what happened. Which individual had the most influence on the way people thought, particularly in Europe? Could it have been Leonardo da Vinci? Or Johannes Gutenberg? How about Martin Luther, or John Locke, or Isaac Newton? Prepare to choose someone who interests you as a topic for research and writing.

- Writing from Research

Age of Democratic Revolutions

England's revolution was just the beginning. Educated people in many places read and thought about what had happened in England and what John Locke had said about the purpose of government. They gathered in French salons to discuss politics as well as philosophy and art. And the more they thought about it, the more they grew dissatisfied with the status quo—the way things were. In British colonies like Virginia and Massachusetts, in France, in the Spanish colonies of Latin America, and even in Russia, the time had come for change. A revolution is just that—a dramatic change—and the world was about to witness a series of revolutions. How many would succeed? How difficult would they be?

- The World Turned Upside Down: The American Revolution
- The French Revolution
- Napoleon: From Revolution to Empire
- Latin American Independence Movements
- The Russia of the Romanovs

Revolutions in Arts, Industries, and Work

The eighteenth and nineteenth centuries saw remarkable political revolutions. But not all revolutions are about government. In the midst of the political changes taking place in the eighteenth and nineteenth centuries, there were revolutions taking place in arts and industries, in economics, and in communication and transportation, too. Everyday life may have changed more between 1750 and 2000 than in all the human history before that. Much of that change gave people longer lives and less labor. But some of it brought human misery and indescribable hardship—problems the world is still trying to solve.

- Romantic Art in an Age of Revolution
- Britain Begins the Industrial Revolution
- A Revolution in Transportation and Communication
- Hard Times
- Slavery in a Modern World



Picturing Your Thoughts

A picture is worth a thousand words. So what is a whole collage of pictures worth? When you put it together thoughtfully, a collage can speak volumes and even prove a point.

- Picturing Your Thoughts

Nations Unite and Expand

Can you name the nations of Europe? If you thought of Italy and Germany as two of them, you would be right. But that wasn't true 150 years ago. As old as their cultures and histories are, Italy and Germany are fairly young as unified nations. The United States had to fight to be unified 150 years ago, too. But once those issues were settled, there was time for enormous innovation. A new industrial revolution occurred and it resulted in both astonishing inventions and a need for raw materials and markets. A new race started; this one for empire.

- Growing Nationalism in Italy and Germany
- The United States Fights and Unites
- Age of Innovation
- The New Imperialism

Answers and Questions

People of the nineteenth century were confident that they could change things for the better. So when cities grew too fast and workers lived there in filth, it was time to take action. Scientists worked on disease. City governments worked on sanitation. Industrial workers organized unions to gain better conditions, and women demanded a voice. Writers and artists looked for answers to serious questions, too, as did musicians. And entrepreneurs—business leaders with vision—saw the cities and the people in them in a whole new way.

- Organizing for Change
- Reaching Millions
- Culture Shocks
- Remarkable Individuals

The Dawn of the Twentieth Century

The world seemed to be getting smaller and smaller as the twentieth century opened. Canals made travel from one part of the world to another faster and safer. Soon, people would be traveling at unimaginable speeds through the air, as well. And ideas about who people are and what rights they have brought people together in their demands for self-rule. In Southeastern Europe, in Central Europe, in India, and in China and parts of Africa, people developed a sense of *nationalism*, identity with their own country. And they demanded the freedom to throw off the old empires and rule themselves.

- Rising Expectations in Waning Empires
- Linking the Seas and Reaching for the Skies
- Wrapping Up

End-of-Course Review and Assessment

Congratulations! You have almost finished the course.

To wrap up World History, read some conclusions about the world between 1400 and 1917, and draw some conclusions of your own. Then, demonstrate your knowledge in the Year-End Assessment.

- Review
- Assessment

Lesson Time and Scheduling

Total lessons: 180

Lesson time: 60 minutes

Standard Curriculum Items

The Human Odyssey, Volume 2: Our Modern World, 1400 to 1914, edited by Klee, Cribb, and Holdren (K12 Inc., 2005)



Kindergarten Art



Course Overview

Kindergarten students are introduced to the elements of art—line, shape, color, and more. Students will:

- Learn about important paintings, sculpture, and architecture
- Study the works of artists like Henri Matisse, Joan Miró, Rembrandt van Rijn, Ando Hiroshige, Paul Cézanne,

Pablo Picasso, and Faith Ringgold

- Create artwork similar to works they learn about, using many materials and techniques, including brightly colored paintings inspired by Henri Matisse, and mobiles inspired by Alexander Calder.

Course Outline

Let's Get Started

- Identify lines in artwork such as *Purple Robe and Anemones* by Henri Matisse
- Learn about different types of artwork, including paintings and sculpture
- Compare art that looks *real* with art that looks *make-believe*
- Learn about the lives of Ando Hiroshige and Henri Matisse, and the characteristics of their works

Shapes and Colors

- Identify shapes and colors in artwork, such as *Improvisation Painting* by Wassily Kandinsky
- Describe how colors are mixed to make new colors
- Learn about the life of Joan Miró and the characteristics of his works

How Artists See People:

Portraits and Self-Portraits

- Identify portraits and self-portraits, such as *Self-Portrait* by Rembrandt van Rijn, and describe their characteristics
- Learn about the lives of Pablo Picasso and Henry Ossawa Tanner, and the characteristics of their works

Let Me Repeat Myself: Patterns

- Identify and describe patterns in artwork, such as *Around the Fish* by Paul Klee
- Learn about the life of Henri Rousseau and the characteristics of his works

Getting in Touch with Art: Texture

- Identify and describe qualities of texture in artwork, such as a “cap mask” by a Kuba artist from Congo
- Learn about the life of Faith Ringgold and the characteristics of her works

Made in America: American Symbols and Native American Art

- Identify and describe American symbols, artwork depicting American symbols, and American Indian art,

such as the Statue of Liberty and a Navajo blanket

Don't Move! Still Life Paintings

- Identify still life paintings, such as *Still Life with a Basket (The Kitchen Table)* by Paul Cézanne, and describe their characteristics
- Learn about the life of Paul Cézanne and the characteristics of his works

Scenic Overlook: Landscapes

- Identify landscapes, such as *Hunters in the Snow* by Pieter Brueghel the Elder, and describe their features

In the Round: Sculpture

- Identify and describe examples of sculpture, such as *Bronco Buster* by Frederick Remington

How Artists See Play

- Identify paintings showing people at play, such as *The Swing* by Jean-Honoré Fragonard, and describe their characteristics

How Artists See Celebrations

- Identify paintings showing celebrations, such as *The Wedding Dance in Open Air* by Pieter Brueghel the Elder, and describe their characteristics

Lesson Time and Scheduling

Total lessons: 72. If you teach Art twice a week, you can comfortably complete the program within a typical school year.

Lesson Time: 45 minutes. You might choose to split the lessons into smaller segments, for example, from 20 to 25 minutes. The online lesson tracking system allows you to pick up wherever you left off in any given lesson.

Standard Curriculum Items

Come Look with Me: Enjoying Art with Children by Gladys S. Blizzard



Come Look with Me: Animals in Art by Gladys S. Blizzard
Art Print Kit, Kindergarten

Additional Curriculum Items

Some lessons require additional resources, including common household items, and books that are readily available online or in your local library:

Paintbrush, tempera, flat bristle, 1"

Paintbrush, tempera, medium, size 4

Paintbrush, tempera, large, size 8

Tempera paint set

NOTE: List subject to change.

First Grade Art



Course Overview

Following the timeline of the K¹² History program, first grade Art lessons introduce students to the art and architecture of different cultures, such as Mesopotamia and ancient Egypt, Greece, and China. Students will:

- Identify landscapes, still-lives, and portraits
- Study elements of art, such as line, shape, and texture

- Create artwork similar to works they learn about, using many materials and techniques—inspired by Vincent van Gogh’s *The Starry Night*, students paint their own starry landscape using bold brushstroke, and they make clay sculptures inspired by a bust of Queen Nefertiti and the Great Sphinx

Course Outline

Let’s Get Started

- Identify lines in artworks, such as *Parade* by Jacob Lawrence
- Identify different types of artworks, including paintings and sculpture
- Differentiate between art that looks real and art that looks make-believe
- Learn about the life of Jacob Lawrence and the characteristics of his works

Shapes and Colors

- Identify shapes and colors in artworks, such as *American Gothic* by Grant Wood
- Describe how colors are mixed to make new colors
- Identify symmetry in artworks, such as the Bust of Queen Nefertiti from Egypt
- Learn about the lives of Piet Mondrian and Wassily Kandinsky, and the characteristics of their works

Ancient Art, Part 1: Cave Paintings, Mesopotamian Art, and Ancient Egyptian Art

- Identify and describe characteristics of cave paintings, Mesopotamian art and architecture, and ancient Egyptian art and architecture, such as red bull and horse from Lascaux, lion from the Processional Way from Babylon, and the bust of Queen Nefertiti from Egypt

Let Me Repeat Myself: Patterns

- Identify and describe patterns and alternating patterns in artworks, such as *Broadway Boogie Woogie* by Piet Mondrian
- Learn about the life of Edward Hicks and the characteristics of his works

Getting in Touch with Art: Texture

- Identify and describe qualities of texture in artworks, such as *A Young Hare* by Albrecht Dürer

As Different as Night and Day: Tints and Shades

- Identify tints and shades in artworks, such as *Water Lilies Nymphs* by Claude Monet
- Describe how tints and shades are made
- Learn about the lives of James McNeill Whistler and Claude Monet, and the characteristics of their works

How Artists See People

- Identify self-portraits and portraits, such as *Mona Lisa* by Leonardo da Vinci
- Describe characteristics of self-portraits and portraits
- Describe how paintings show artists’ memories and visual stories
- Learn about the life of Leonardo da Vinci and the characteristics of his works

Scenic Overlook: Landscapes

- Identify landscapes, such as *The Starry Night* by Vincent van Gogh, and describe their features
- Learn about the life of Vincent van Gogh and the characteristics of his works

Don’t Move: Still Life Paintings

- Identify still life paintings, such as *Mandolin and Guitar* by Pablo Picasso, and describe their characteristics

Ancient Art, Part Two

- Identify and describe characteristics of ancient Greek and Chinese art, such as Greek vases and *The Flying Horse* from China.

Lesson Time and Scheduling

Total lessons: 72. If you teach Art twice a week, you can comfortably complete the program within a typical school year.

First Grade Art



Lesson Time: 45 minutes. You might choose to split the lessons into smaller segments, for example, from 20 to 25 minutes. The online lesson tracking system allows you to pick up wherever you left off in any given lesson.

Standard Curriculum Items

Come Look with Me: Exploring Landscape Art with Children
by Gladys S. Blizzard

Come Look with Me: World of Play by Gladys S. Blizzard
Art Print Kit, Grade 1

Additional Curriculum Items

Some lessons require additional resources, including common household items, and books that are readily available online or in your local library:

Paintbrush, tempera, flat bristle, 1"

Paintbrush, tempera, medium, size 4

Paintbrush, tempera, large, size 8

Modeling clay, assorted colors

Tempera paint set

NOTE: List subject to change.

Second Grade Art



Course Overview

Following the timeline of the K¹² History program, second grade Art lessons introduce students to the art and architecture of ancient Rome, medieval Europe, Islam, Mexico, Africa, China, and Japan. Students will:

- Examine elements and principles of art, such as line, shape, pattern, and more
- Study and create self-portraits, landscapes, sculptures, and more

- Create artwork similar to works they learn about, using many materials and techniques—after studying Winslow Homer's *Snap the Whip*, students paint their own narrative landscape and design stained glass windows inspired by the Cathedral of Notre Dame in Paris

Course Outline

Let's Get Started

- Identify lines in artwork, such as *The Great Wave off Kanagawa* by Katsushika Hokusai
- Identify different types of artwork, including paintings and sculpture
- Differentiate between art that looks *real* and art that looks *make-believe*
- Learn about the life of Katsushika Hokusai and the characteristics of his works

Shapes and Colors

- Identify shapes and colors in artwork, such as *The Harlequin's Carnival* by Joan Miró
- Describe how colors are mixed to make new colors
- Learn about the life of Henri Matisse and the characteristics of his works

Let Me Repeat Myself: Patterns

- Identify and describe patterns in artwork, such as *Surprised! Storm in the Forest* by Henri Rousseau
- Learn about the life of Henri Rousseau and the characteristics of his works

How Artists See Animals

- Identify and describe qualities of texture in artwork, such as *A Young Hare* by Albrecht Dürer
- Differentiate between realistic and abstract artwork, such as *American Flamingo* by John James Audubon and *Cat and Bird* by Paul Klee
- Identify examples of realistic and abstract sculpture, such as *The Thinker* by Auguste Rodin and *Bird in Space* by Constantin Brancusi

How Artists See People:

Portraits and Self-Portraits

- Identify and describe the characteristics of portraits and self-portraits, such as *Head of Adam* from the Sistine Chapel by Michelangelo

- Learn about the life of Joseph Whiting Stock and the characteristics of his works

The View from Far and Near: Landscape and Still Life

- Identify and describe the characteristics of landscapes and still life paintings, such as *Peasants Under the Trees at Dawn* by Jean Baptiste-Camille Corot and *Ease* by William Harnett
- Identify in landscapes the horizon line, foreground, and background

Storytelling in Art

- Identify and describe paintings that show visual stories, such as *Snap the Whip* by Winslow Homer
- Describe an artist's source of inspiration
- Learn about the lives of Winslow Homer and Faith Ringgold and the characteristics of their works

A World of Art: The Roman Empire through the Middle Ages

- Identify and describe characteristics of art and architecture from ancient Rome and medieval Europe, such as the Column of Trajan from Rome, Byzantine mosaics, and Gothic cathedrals

A World of Art: Islam, Mexico, and Africa

- Identify and describe characteristics of Islamic, Mexican, and African art and architecture, such as the Alhambra in Spain, a turquoise pectoral from Mexico, and a Benin mask from Africa

A World of Art: China and Japan

- Identify and describe characteristics of Chinese and Japanese art and architecture, such as scrolls from China and Japan, and the Himeji Castle from Japan

Second Grade Art



Lesson Time and Scheduling

Total lessons: 72. If you teach Art twice a week, you can comfortably complete the program within a typical school year.

Lesson Time: 45 minutes. You might choose to split the lessons into smaller segments, for example, from 20 to 25 minutes. The online lesson tracking system allows you to pick up wherever you left off in any given lesson.

Standard Curriculum Items

How Artists See Play: Sports, Games, Toys, Imagination

by Colleen Carroll

How Artists See Animals: Mammal, Fish, Bird, Reptile

by Colleen Carroll

Art Print Kit, Grade 2

Additional Curriculum Items

Some lessons require additional resources, including common household items, and books that are readily available online or in your local library:

Paintbrush, tempera, flat bristle, 1"

Paintbrush, tempera, medium, size 4

Paintbrush, tempera, large, size 8

Modeling clay, assorted colors

Tempera paint set

NOTE: List subject to change.

Third Grade Art



Course Overview

Following the timeline of the K¹² History program, third grade Art lessons introduce students to the art and architecture of the Renaissance throughout Europe, including Italy, Russia, and Northern Europe. Students will:

- Extend their knowledge of elements and principles of art, such as form, texture, and symmetrical balance
- Draw, paint, and sculpt a variety of works, including self-portraits, landscapes, and still life paintings

- Investigate artworks from Asia, Africa, and the Americas
- Create artworks inspired by works they learn about, using many materials and techniques—after studying da Vinci's *Mona Lisa*, students use shading in their own drawings, and they make prints showing the features and symmetry of the Taj Mahal.

Course Outline

The Building Blocks of Art

- Classify artworks as portrait, self-portrait, landscape, still life, genre, painting, sculpture, or architecture
- Identify and describe the difference between representational and abstract artworks
- Identify colors or color schemes as primary, secondary, intermediate, complementary, warm, or cool
- Describe the purpose of an artist's sketchbook

Good-Bye Middle Ages,

Hello Renaissance: 1300–1400s

- Describe characteristics of or facts about early Renaissance art or architecture, such as *Gattamelata* by Donatello and Brunelleschi's Dome
- Describe characteristics of or facts about Medieval European and Byzantine art or architecture, such as the Cathedral of Notre Dame, Paris and Byzantine *Madonna and Child on a Curved Throne*
- Explain that classical Greek and Roman art and architecture inspired early Renaissance artists

The Renaissance in Italy: 1500s

- Describe characteristics of or facts about Italian Renaissance art or architecture, such as *The Last Supper* by Leonardo da Vinci, *Tombs of Giuliano and Lorenzo De' Medici* by Michelangelo, *The Small Cowper Madonna* by Raphael, and *Portrait of a Man* by Titian
- Describe events in the lives of Leonardo da Vinci, Michelangelo, and Sofonisba Anguissola, and characteristics of their art

The Renaissance in Northern Europe: 1500s

- Describe characteristics of or facts about Renaissance art or architecture in northern Europe, such as *Self-Portrait* by Albrecht Dürer, *Henry VIII* by Hans Holbein the Younger, *Hunters in the Snow* by Pieter Brueghel the Elder, and St. Basil's Cathedral in Russia
- Describe events in the lives of Albrecht Dürer and Pieter Brueghel the Elder, and characteristics of their art

Baroque and Rococo Art: 1600–1700s

- Describe characteristics of or facts about Baroque or Rococo art or architecture, such as *David* by Gian Lorenzo Bernini, *Self-Portrait* by Judith Leyster, *Self-Portrait* by Rembrandt, and *Prince Baltasar Carlos on Horseback* by Diego Velázquez
- Describe events in the lives of Judith Leyster and Rachel Ruysch, and characteristics of their art

Asia and Africa: 1500–1700s

- Describe characteristics of or facts about Japanese, Chinese, Indian, or African art or architecture, such as *Act II of Chushingura* by Utamaro, a Ming porcelain jar, the Taj Mahal, and a Benin plaque from Africa

American Indians: 1500–1700s

- Describe characteristics of or facts about American Indian art, such as an Aztec calendar stone, an Inca toucan sculpture, and a Haudenosaunee wampum belt

Colonial America: 1600–1700s

- Describe characteristics of or facts about Colonial American art or architecture, such as an American Windsor chair and a teapot by Paul Revere
- Describe how the desire for European luxuries affected Colonial American art

Lesson Time and Scheduling

Total lessons: 72. If you teach Art twice a week, you can comfortably complete the program within a typical school year.

Lesson Time: 45 minutes. You might choose to split the lessons into smaller segments (for example, 20 to 25 minutes). The online lesson tracking system will allow you to pick up wherever you left off in any given lesson

Standard Curriculum Items

How Artists See Families: Mother, Father, Sister, Brother by Colleen Carroll

How Artists See Work: Farm, Factory, Office, Home by Colleen Carroll

Art Print Kit, Grade 3

Additional Curriculum Items

Some lessons require additional resources, including common household items, and books that are readily available online or in your local library:

Modeling clay, assorted colors

Tempera paint set

Paintbrush, tempera, flat bristle, 1"

Paintbrush, tempera, small, size 1

Paintbrush, tempera, medium, size 4

Paintbrush, tempera, large, size 8

NOTE: List subject to change.

Fourth Grade Art



Course Overview

Following the time line of the K¹² History program, fourth grade Art lessons introduce students to the artists, cultures, and great works of art and architecture from French and American Revolutions through modern times. Students will:

- Study and create artworks in various media, including portraits, quilts, sculpture, collage, and more
- Investigate the arts of the United States, Europe, Japan, Mexico, and Africa
- Learn about Impressionism, Cubism, Art Nouveau, Regionalism, and more

Course Outline

The Building Blocks of Art

- Classify artworks as portrait, self-portrait, landscape, still life, genre, painting, sculpture, or architecture
- Express one's reasons for preferring one work of art over another
- Identify and describe the difference between representational, abstract, and non-representational artworks
- Describe the purpose of an artist's sketchbook
- Identify colors or color schemes as primary, secondary, intermediate, complementary, warm, cool, or monochromatic

Making History

- Describe characteristics of or facts about early American art and architecture, such as *George Washington* by Charles Willson Peale, Thomas Jefferson's Monticello, and *The Oregon Trail* by Albert Bierstadt
- Describe events in the life of Charles Willson Peale and characteristics of his art
- Identify features of early American architecture, such as pediments, cupolas, or columns
- Identify sources for an artist's inspiration, such as a historical event or the work of another artist

The Romantics and the Realists

- Describe characteristics of or facts about artwork by Romantic and Realist artists, such as *Liberty Leading the People* by Eugène Delacroix, *Snap the Whip* by Winslow Homer, and *The Old Violin* by William Harnett
- Identify symbols in artworks, such as the American flag

Making a Good Impression

- Describe characteristics of or facts about Impressionist and Post-Impressionist artworks, such as *Artist's Garden at Giverny* by Claude Monet, *The Little Fourteen-Year-Old Dancer* by Edgar Degas, *Sunflowers* by Vincent van

- Create artworks inspired by works they learn about, using many materials and techniques—after studying sculptures and paintings of ballerinas by Edgar Degas, students create their own clay sculptures of a figure in action, and, inspired by works of Grandma Moses, they create winter landscapes demonstrating the illusion of space

Gogh, and *Mont Saint-Victoire* by Paul Cézanne

- Describe events in the life of Vincent van Gogh and characteristics of his art
- Identify ways in which Impressionist and Post-Impressionist artists were influenced by Japanese prints

Breaking the Mold

- Describe characteristics of or facts about early modern art, such as *The Red Room (Harmony in Red)* by Henri Matisse, *Guitar on a Table* by Juan Gris, *Two Cats* by Franz Marc, and *Cubi XIX* by David Smith
- Identify ways African art influenced Cubist artists

Modern Views of the Man-Made World

- Describe characteristics of or facts about works of modern art and architecture dealing with the man-made world, such as the Wainwright Building by Louis Sullivan, *The Brooklyn Bridge: Variation on an Old Theme* by Joseph Stella, and a Louis Comfort Tiffany lamp
- Describe events in the life of Louis Sullivan and characteristics of his architecture
- Describe characteristics of abstract art, such as *Silver Bridge* by Robert Indiana

Modern Views of the Natural World

- Describe characteristics of or facts about works of modern art dealing with the natural world, such as *Stone City, Iowa* by Grant Wood; *Jitterbugs I* by William H. Johnson; *Melon Season* by Romare Bearden; *Hoosick River, Summer* by Grandma Moses; and *The Flower Vendor (Girl with Lilies)* by Diego Rivera
- Describe events in the life of William H. Johnson and characteristics of his art

What's New?

- Describe characteristics of or facts about modern art since the 1950s, such as *Seated Woman* by Joan Miró,

Fourth Grade Art



Buzzard's Bay by Helen Frankenthaler, *Ragga II* by Frank Stella, and *Untitled (Ice Cream Dessert)* by Andy Warhol

Lesson Time and Scheduling

Total lessons: 72 If you teach Art twice a week, you can comfortably complete the program within a typical school year.

Lesson Time: 45 minutes. You might choose to split the lessons into smaller segments (for example, 20 to 25 minutes). The online lesson tracking system will allow you to pick up wherever you left off in any given lesson.

Standard Curriculum Items

Come Look with Me: The Artist at Work by R. Sarah Richardson

Come Look with Me: Exploring Modern Art by Jessica Noelani Wright
Art Print Kit, Grade 4

Additional Curriculum Items

Some lessons require additional resources, including common household items, and books that are readily available online or in your local library:

Tempera paint set
Paintbrush, tempera, flat bristle, 1"
Paintbrush, tempera, small, size 1
Paintbrush, tempera, medium, size 4
Paintbrush, tempera, large, size 8
Burlap (green)

NOTE: List subject to change.



Fifth Grade Art/Intermediate Art:

American A

Course Overview

Following the timeline of the K¹² History program, Intermediate Art: American A introduces students to the artists, cultures, and great works of art and architecture of North America, from pre-Columbian times through 1877.

Students will:

- Study and create various works, both realistic and abstract, including sketches, masks, architectural models, prints, and paintings
- Investigate the arts of the American Indians, and Colonial and Federal America
- Create artworks inspired by works they learn about, using many materials and techniques—after studying John James Audubon's extraordinary paintings of birds, students make bird paintings with realistic color and texture, and they make weavings inspired by the colors and patterns of Navajo blankets

Course Outline

The Building Blocks of Art

- Classify artworks as portrait, self-portrait, landscape, still life, genre, painting, sculpture, or architecture
- Express reasons for preferring one work of art to another
- Identify and describe the difference between representational, abstract, and non-representational artworks
- Identify colors or color schemes in a work of art, such as primary, secondary, intermediate, complementary, warm, cool, and monochromatic
- Describe the purpose of an artist's sketchbook

Native Peoples of the North

- Describe characteristics of or facts about art of the American Indians of the north, such as Yup'ik finger masks, Eskimo serving dishes, and Northwest Coast totem poles
- Identify symmetry in artworks

Native Peoples of the Southwest

- Describe characteristics of or facts about art and architecture of the American Indians of the southwest, such as Southwest petroglyphs, Anasazi dwellings, Mimbres pottery, and Navajo weavings
- Describe events in the lives of Navajo weavers or characteristics of their art

Native Peoples of the East

- Describe characteristics of or facts about art of the American Indians of the east, such as Mound Builder ear spoons and Woodland birch bark baskets

Native Peoples of the Plains

- Describe characteristics of or facts about art of the American Indians of the plains, such as a Plains shirt, Nez Perce mask, and a Dakota saddlebag

Early American Art for the Home

- Describe characteristics of or facts about early American art for the home, such as a sampler by Anna Bateman, a Pennsylvania Dutch decorated chest, Captain Samuel Chandler by Winthrop Chandler, and a stencil

America: Art for the New Nation

- Describe characteristics of or facts about American Post-Revolutionary art and architecture, such as The Staircase Group by Charles Willson Peale, American Flamingo by John James Audubon, the Massachusetts State House by Charles Bulfinch, The Torn Hat by Thomas Sully, and Minuteman by Daniel Chester French
- Describe events in the life of John James Audubon or characteristics of his art
- Identify ways Federal architects were inspired by Classical architecture

America: Untamed Territory

- Describe characteristics of or facts about American art of the 1800s, such as A View of the Mountain Pass Called the Notch of the White Mountains (Crawford Notch) by Thomas Cole; American Railroad Scene; Snow Bound by Currier and Ives; Rainmaking Among the Mandan by George Catlin; Thunder Storm on Narragansett Bay by Martin Johnson Heade; and a daguerreotype
- Describe events in the life of George Catlin or characteristics of his art
- Identify techniques artists use for showing the illusion of space in flat artworks

Lesson Time and Scheduling

Total lessons: 72. If you teach Art twice a week, you can comfortably complete the program within a typical school year.

Lesson Time: 45 minutes. You might choose to split the



lessons into smaller segments (for example, 20 to 25 minutes). The online lesson tracking system will allow you to pick up wherever you left off in any given lesson.

Standard Curriculum Items

Come Look With Me: Art in Early America by Randy Osofsky

Come Look With Me: American Indian Art by Stephanie Salomon

Art Print Kit, Intermediate Art: American A

Additional Curriculum Items

Some lessons require additional resources, including common household items, and books that are readily available online or in your local library:

White self-hardening clay

Tempera paint set

Burlap (tan)

Paintbrush, tempera, small, size 1

Paintbrush, tempera, medium, size 4

Paintbrush, tempera, large, size 8

NOTE: List subject to change.

Intermediate Art: American B



Course Overview

Following the time line of the K¹²'s History program (American History Since 1865), Intermediate Art: American B introduces students to the artists, cultures, and great works of art and architecture of North America, from the end of the Civil War through modern times. Students will:

- Study and create various works, from realistic to abstract to nonrepresentational, including prints, clay sculptures, architectural models, and paintings
- Investigate paintings in various styles, from Impressionistic to Pop. They learn about modern

sculpture and folk art, and how photographers and painters have inspired one another. They examine examples of modern architecture, from skyscrapers to art museums

- Create artworks inspired by works they learn about, using many materials and techniques—after studying cityscapes by Edward Hopper and Stuart Davis, students make cityscapes with bold colors and shapes; and they make models of monumental sculpture inspired by Alexander Calder's sculpture

Course Outline

The Artist's Eye

- Identify roles of an artist
- Recognize the influence art exhibits have on artists and the general public
- Identify that artworks with similar characteristics have been grouped into periods or styles
- Identify color groups as primary, secondary, intermediate, warm, cool, monochromatic, analogous, and complementary
- Describe the effect color has in an artwork
- Explain how artists use art elements and design principles in their compositions

Modern American Painting: From Impressionism to Pop Art

- Identify the use of the elements of art and principles of design in artworks
- Identify characteristics of or facts about the art of Mary Cassatt, John Sloan, Edward Hopper, Stuart Davis, Marsden Hartley, Josef Albers, Mark Rothko, and Roy Lichtenstein.
- Identify characteristics of the art movements called Impressionism, Ashcan School, American Scene Painting, Color Field, and Pop Art
- Identify how new technology influenced an artist or illustrator's vision

New Ideas in Sculpture

- Identify the use of elements of art and principles of design in sculptures
- Identify characteristics of or facts about the sculpture of Augustus Saint-Gaudens, Frederic Remington, Alexander Calder, Louise Nevelson, Deborah Butterfield, and Maya Lin
- Identify events in the life of Maya Lin, and characteristics of her art
- Identify a reason artists make monuments or memorials

The Camera and the Brush

- Identify how Eadweard Muybridge's motion photography influenced painters
- Identify characteristics of or facts about the art of Eadweard Muybridge, Thomas Moran, Edward Weston, Georgia O'Keeffe, Lewis Hine, and Charles Sheeler
- Identify events in the life of Thomas Moran, and characteristics of his art

The Architect at Work

- Explain the meaning of the phrase, "Form follows function"
- Identify characteristics of or facts about the architecture of Daniel Burnham, William Van Alen, Shreve, Lamb, and Harmon, Frank O. Gehry, Frank Lloyd Wright, and I.M. Pei

Colorful Traditions

- Identify characteristics of or facts about folk art from the Americas, including Cuna Indian molas, Zapotec woodcarvings, South American arpilleras, Hawaiian kapa apana, and South and Central American weavings
- Recognize that people decorate functional objects
- Recognize that people create artworks based on cultural traditions



Standard Curriculum Items

Art Print Kit, Intermediate Art: American B

Additional Curriculum Items

Some lessons require additional resources, including common household items, and books that are readily available online or in your local library:

Acrylic paint set

Paintbrush, acrylic, small, size 1

Paintbrush, acrylic, medium, size 4

Paintbrush, acrylic, large, size 8

Paintbrush, acrylic, flat bristle ½"

Plastalina clay

NOTE: list subject to change.

Intermediate Art: World A



Course Overview

Intermediate Art: World A is designed to complement the World History: From Prehistory Through the Middle Ages course. Following the timeline of the K¹² History program, lessons introduce students to the artists, cultures, and great works of world art and architecture from ancient through medieval times.

Students study and create various works of art. They compare and contrast works from many civilizations, from paintings to sculpture, architecture, pottery, mosaics, and

more. For example, they see Egyptian paintings next to Roman paintings, and Minoan pottery next to Chinese pottery.

Students create artworks inspired by works they learn about, using many materials and techniques. After learning about great works of Egyptian, Greek, Roman, Gothic, Japanese, and Islamic architecture, students design a building with characteristics of a building type they learned about. They study sculptures of the human figure from various civilizations and then make clay self-portraits.

Course Outline

Art Techniques

- Recognize that many cultures used the same or similar art techniques
- Identify characteristics of Egyptian, Roman, and Chinese landscape paintings
- Identify characteristics of Roman, Byzantine, and Islamic mosaics or tile work
- Identify characteristics of Mesopotamian, Egyptian, and Roman relief sculpture

Common Threads Among Ancient Cultures

- Recognize common themes in decorations on artworks made by various ancient cultures
- Compare and contrast ancient rock art from France, Southern Africa, and Australia
- Identify characteristics of Chinese, Minoan, and Native American pottery
- Identify purposes and designs of cartouches and seals made in ancient Mesopotamia, Egypt, and India
- Compare and contrast Scandinavian, Greek, Egyptian, and Aztec works depicting a sun disc or symbol

Treasures from the Tomb

- Recognize that many of the best-preserved works of art from ancient times were those placed in tombs
- Identify characteristics of the decoration on Pharaoh Tutankhamen's tomb goods.
- Identify characteristics of mummy portraits made in ancient Egypt
- Identify characteristics of figures and models found in Egyptian and Chinese tombs

The Human Presence in Art

- Recognize that humans have made works of art for and about themselves since ancient times
- Compare and contrast the depiction of humans in Egyptian, Greek, and Roman sculpture

- Compare and contrast the depiction of humans in Egyptian and Roman paintings
- Identify characteristics of Egyptian, Chinese, Viking, Moche, and Roman jewelry
- Identify characteristics of Teotihuacán, Greek, and Japanese masks
- Recognize that humans artistically documented their history and beliefs
- Identify characteristics of Celtic, Japanese, and Islamic illuminated documents

Function and Beauty

- Recognize that people since ancient times decorated objects they used in their daily lives
- Identify characteristics of the decoration on Chinese, Luristan, Italian, Viking, and Egyptian horse gear
- Identify characteristics of Moche, Greek, Chinese, and Persian vessels
- Identify characteristics of Egyptian, Japanese, and Byzantine containers

Architecture: From the Pyramids to the Gothic Cathedral

- Recognize that architecture could be classified by its period or style based on similarities
- Identify characteristics of Egyptian, Greek, Roman, Gothic, Islamic, or Japanese architecture
- Identify features of a Gothic cathedral in Notre Dame Cathedral, Paris
- Identify characteristics of elaborate gateways or walls at building sites in ancient India, Mesopotamia, and Persia
- Identify characteristics of Egyptian, Greek, Roman, and Mayan columns
- Identify characteristics of Egyptian, Mayan, and Chinese guardian statues found at architectural sites



Standard Curriculum Items

Art Print Kit, Intermediate Art: World A

Additional Curriculum Items

Some lessons require additional resources, including common household items, and books that are readily available online or in your local library:

Acrylic paint set

Paintbrush, acrylic, small, size 1

Paintbrush, acrylic, medium, size 4

Paintbrush, acrylic, large, size 8

White self-hardening clay

NOTE: List subject to change.

Intermediate Art: World B



Course Overview

Intermediate Art: World B is designed to complement the World History: Our Modern World, 1400 to 1917 course. Following the timeline of the K¹² History program, lessons introduce students to the artists, cultures, and great works of world art and architecture from Renaissance through modern times.

Students study and create various works of art. They compare and contrast works from many civilizations, from paintings to sculpture, architecture, book covers, prints, and more. For example, they see a Leonardo da

Vinci drawing next to a Vincent van Gogh drawing, and a Donatello sculpture next to a Rodin sculpture.

Students create artworks inspired by works they learn about, using many materials and techniques. After learning about great works of architecture by Donato Bramante, Joseph Paxton, Frank Lloyd Wright, and I.M. Pei, students design their own model of a building. They study expressive portrait paintings by Rembrandt, Judith Leyster, and Pablo Picasso, and then make expressive self-portraits.

Course Outline

Renaissance and Beyond

- Recognize that artworks with similar characteristics are grouped into periods or styles
- Identify characteristics of Italian Renaissance art in works by Sandro Botticelli, Leonardo da Vinci, Michelangelo, and Raphael
- Identify events in the life of Raphael and characteristics of his art
- Identify the use of one-point and atmospheric perspective in paintings
- Identify characteristics of Northern Renaissance art in works by Albrecht Dürer and Pieter Brueghel the Elder
- Identify ways Renaissance artists were inspired by the ideals of Classical art
- Compare and contrast Renaissance and Baroque sculpture by Michelangelo and Bernini
- Identify ways the arts from Africa, China, and the Islamic world influenced artists and patrons of Renaissance Europe

Eye on Design

- Identify ways Jean-Baptiste-Siméon Chardin, Paul Gauguin, André Derain, and Mark Rothko use color in paintings
- Compare and contrast the use of color in Naturalistic and Fauve art in works by Jean-Baptiste-Siméon Chardin and André Derain
- Identify ways Edgar Degas, Utagawa Hiroshige, and Giacomo Balla show movement in artworks
- Recognize that artists use the elements of art and principles of design in artworks
- Identify ways African and Japanese artists use the elements of art and principles of design in their art
- Identify compositional characteristics in paintings by Diego Velázquez and Titian

It's All in the Technique

- Recognize that artists use various techniques to produce different effects in their drawings
- Identify techniques used in drawings by Michelangelo, Leonardo da Vinci, and Vincent van Gogh
- Identify techniques used in paintings by John James Audubon, Pierre-Auguste Renoir, and Paul Signac
- Compare and contrast techniques used in Naturalistic and Impressionist paintings in works by John James Audubon and Pierre-Auguste Renoir
- Identify techniques used in prints by Albrecht Dürer, Henri de Toulouse-Lautrec, and Andy Warhol
- Identify techniques used in sculptures by Donatello, Michelangelo, Auguste Rodin, and Marisol Escobar

Themes in Art: The Artist's Vision

- Recognize that artists have different ways of portraying the same theme or subject
- Identify characteristics of portraits by Rembrandt, Judith Leyster, and Pablo Picasso
- Identify characteristics of landscapes by Thomas Cole, Vincent van Gogh, Shen Zhou, and Ansel Adams
- Identify events in the life of Pablo Picasso or characteristics of his art
- Describe characteristics of Cubist art in works by Pablo Picasso

Function and Beauty

- Identify characteristics of book covers made by Islamic, French, and Russian artists
- Identify ways artists add beauty to functional objects
- Identify events in the life of William Morris, and characteristics of his art

Architecture and Environments:

Renaissance Through Modern Buildings

- Recognize that architects add beauty to buildings where people live, play, work, and worship
- Identify characteristics and features of Renaissance and Modernist buildings designed by Donato Bramante, Joseph Paxton, Frank Lloyd Wright, and I.M. Pei
- Identify characteristics of sculpture and artistic objects at architectural sites, made by Gianlorenzo Bernini, Antonio Gaudí, David Smith, and Japanese artists
- Identify characteristics of buildings designed by Oscar Niemeyer and I.M. Pei

Standard Curriculum Items

Art Print Kit, Intermediate Art: World B

Additional Curriculum Items

Some lessons require additional resources, including common household items, and books that are readily available online or in your local library:

Acrylic paint set

Paintbrush, acrylic, small, size 1

Paintbrush, acrylic, medium, size 4

Paintbrush, acrylic, large, size 8

White self-hardening clay

NOTE: List subject to change.

Preparatory Music



Course Overview

Kindergarteners learn about music through lively activities, including listening, singing, and moving. Through games and folk songs from diverse cultures, students learn musical concepts such as high and low, or loud and soft. Creative movement activities help students enjoy the music of composers such as Grieg and Haydn.

Students will:

- Sing along with folk songs
- Practice moving to music
- Listen actively to different kinds of music
- Understand concepts such as high and low, fast and slow, long and short, loud and soft
- Identify and contrast beat and rhythm

Course Outline

Beat and Melodic Direction

- Students identify high and low sounds
- Students walk to the beat of music in a moderate tempo

Moving Faster and Slower

- Students identify fast and slow music
- Students identify the difference between beat and rhythm

Music Goes Up and Music Goes Down

- Students recognize melodies that go up or down in pitch

Music Can Be Loud or Soft

- Students identify and perform soft and loud sounds

Sounds Can Be Long or Short

- Students identify short and long notes in rhythmic patterns

Beat and Beat Division

- Students walk the beat in their feet and divide the beat in their hands

Melodies Can Change Directions

- Students trace the melodic direction of melodies that ascend, descend, or have one change in direction

More About Rhythm and Beat

- Students walk the beat and clap several different rhythm patterns in duple and triple meter

More About High and Low

- Students identify high and low notes in high/low and low/high patterns
- Students sing patterns in tune using the head voice.

Lesson Time and Scheduling

Total lessons: 72. If you teach Music twice a week, you can comfortably complete the program within a typical school year.

Lesson Time: 45 minutes. You might choose to split the lessons into smaller segments. K¹²'s online lesson tracking system allows you to pick up wherever you left off in any given lesson.

Standard Curriculum Items

Let's Learn Music Video, Volume K

Let's Listen CD, Volume K

Let's Sing CD, Volume K

Tambourine

Slide Whistle

NOTE: List subject to change.

Beginning 1 Music



Course Objectives

Beginning 1 Music is for students of first grade age who are continuing with K¹², as well as students of second grade age who are new to K¹². In this course, traditional games and folk songs from many cultures help students begin to read and write simple melodic and rhythmic patterns. Students are introduced to the instruments of the orchestra through Prokofiev's classic *Peter and the Wolf*. They explore how music tells stories in *The Sorcerer's Apprentice* and are introduced to opera through a lively unit on Mozart's *Magic Flute*.

Students will:

- Sing along with folk songs
- Practice moving to music
- Listen actively to different kinds of music
- Begin to learn how to read and write music
- Learn to recognize basic melody in two and three note patterns
- Identify basic rhythms in music using eights, quarters, and rests
- Begin to learn about the instruments of the orchestra
- Learn how different kinds of music, such as tone poems and operas, can tell stories

Course Outline

Let's Get to Know Music

- Students identify high and low sounds
- Students walk to the beat of music and clap simple rhythm patterns

Let's Review Rhythm and Melody

- Students walk to the beat and clap simple rhythm patterns

Melodic and Rhythmic Basics

- Students sing melodic patterns of so and mi
- Students clap rhythm patterns using ta and ti-ti
- Students sing songs in call and response form

Music Can Be Written Down

- Students write rhythmic patterns in stick notation, and write melodies on the staff
- Students identify new melodic and rhythm patterns using so and mi, and ta and ti-ti

The Instruments of the Orchestra

- Students identify the families of orchestral instruments
- Students continue to practice patterns of ta and ti-ti, and so and mi

Music has Steps and Skips

- Students identify the intervals of steps and skips using a variety of techniques
- Students identify the highest note of a song

A New Note

- Students identify the high note in songs as a la and learn its hand sign

Sometimes There's No Sound

- Students learn that some beats have no sound, and define these as rests
- Students learn to write the symbol for rest
- Students identify and read patterns of so, mi, and la

Music Can Tell a Story

- Students identify characters in a tone poem by their themes, and use these to follow a musical story

La and Rest, Reading and Writing

- Students read and write rhythms with ta, ti-ti, and rest
- Students read and write melodic patterns using so, mi, and la
- Students identify the intervals of so, mi, and la

Music and Singing Can Tell Stories

- Students identify characters and conflicts in the opera, *The Magic Flute*, and discover how the music helps describe the characters
- Students identify dupe meter

Lesson Time and Scheduling

Total lessons: 72. If you teach Art twice a week, you can comfortably complete the program within a typical school year.

Lesson Time: 45 minutes. You might choose to split the lessons into smaller segments, for example, from 20 to 25 minutes. The online lesson tracking system allows you to pick up wherever you left off in any given lesson.

Standard Curriculum Items

Tambourine
Slide Whistle

Beginning 1 Music



Let's Learn Music Video, Volume 1

The Magic Flute CD

Let's Listen CD, Volume 1

Let's Sing CD, Volume 1

NOTE: List subject to change.

Beginning 2 Music



Course Overview

Beginning 2 Music is for students who have completed K¹²'s Beginning 1 Music program. Through traditional folk songs and games, students learn to read more complicated melodic patterns and rhythms. As the students listen to works by great composers, such as Vivaldi and Saint-Saens, they learn to recognize these patterns in the music. Students will:

- Sing along with folk songs
- Practice moving to music
- Listen actively to different kinds of music

- Read and write music
- Learn to recognize melody in three and four note patterns
- Identify rhythms in music using half notes
- Become familiar with string and percussion instruments of the orchestra
- Recognize duple and triple meter
- Begin to understand standard musical notation

Course Outline

Let's Review Melody and Rhythm

- Students identify, read, and write melodic patterns with mi, so, and la; and rhythmic patterns with ta, ti-ti, and rest
- Students identify changes in tempo and dynamics

A New Interval, A New Rhythm

- Students identify, read, and write patterns with the interval of a jump
- Students identify, read, and write patterns with two beat ties
- Students sing simple rounds with the CD
- Students list characteristics of stringed instruments

Half Notes and Intervals

- Students identify, read, and write rhythm patterns with half notes (ta-ah) and melodic patterns with so, mi, and la
- Students sing melodic steps, skips, and jumps

Prepare, Practice, and Percussion

- Students prepare for a new melodic note (do)
- Students practice patterns and rhythms
- Students classify percussion instruments as melody or rhythm instruments

Do and Three Sounds on a Beat

- Students identify and read mi-do and so-mi-do patterns
- Students identify, read, and write rhythm patterns with triplets

The Double Skip

- Students are introduced to the interval so-do
- Students read and write four measure patterns with half notes
- Students define triple meter

A New Way of Writing

- Students combine writing in melodic and stick notation, which introduces them to standard notation

Notation and Beat Division

- Students learn the stem rule and how to write ta-ah in standard notation
- Students identify rhythms that have four sounds on a beat

Lesson Time and Scheduling

Total lessons: 72. If you teach Music twice a week, you can comfortably complete the program within a typical school year.

Lesson Time: 45 minutes. You might choose to split the lessons into smaller segments. K¹²'s online lesson tracking system allows you to pick up wherever you left off in any given lesson.

Standard Curriculum Items

Let's Learn Music Video, Volume 2

Let's Listen CD, Volume 2

Let's Sing CD, Volume 2

NOTE: List subject to change.

Introduction to Music



Course Overview

Introduction to Music is for students in grades 3–5 who are new to K¹² or just beginning their study of music. Using traditional folk songs, students learn most of the skills covered in the K¹²'s Beginning 1 and 2 Music courses. They learn to recognize and write melodic and rhythmic patterns with four elements, and they practice recognizing these patterns in the music of great composers, such as Beethoven and Brahms. Students become familiar with instruments of the orchestra as they listen to music by Vivaldi, Saint-Saens, and Holst. Students will:

- Sing along with folk songs

- Practice moving to music
- Listen actively to different kinds of music
- Read and write music
- Learn to recognize melody in two, three, and four note patterns
- Identify rhythms in music using eighths, quarters, rests, and half notes
- Become familiar with string and percussion instruments of the orchestra
- Recognize duple and triple meter
- Begin to understand standard musical notation

Course Outline

So and Mi, Ta and Ti

- Students move to the beat of music
- Students study the relationship between beat and rhythm
- Students identify high and low sounds

Reading and Writing

- Students read and write rhythm patterns using stick notation
- Students identify high and low pitches in solfege
- Students write solfege notes on the staff
- Students identify members of the string family

La and Rest

- Students identify melodic steps and skips
- Students identify the solfege note la
- Students identify beats without sound
- Students identify the members of the percussion family

Jumps and Long Notes

- Students will identify the interval of a jump
- Students read and write a rhythm with one sound that lasts for two beats

Prepare and Practice

- Students prepare for a new melodic note (do)
- Students practice all melodic patterns and rhythms

Do and Three Sounds on a Beat

- Students identify and read mi-do and so-mi-do patterns
- Students identify, read, and write rhythm patterns with triplets

The Double Skip

- Students are introduced to the interval of so-do
- Students read and write four-measure patterns with half notes
- Students define triple meter

A New Way of Writing

- Students combine writing in melodic and stick notation, which introduces them to standard notation

Standard Curriculum Items

Tambourine
Slide Whistle
Let's Learn Music Video, Volume 2
Let's Sing CD, Volume 2
Let's Listen CD, Volume 2

NOTE: List subject to change.

Exploring Music



Course Overview

Exploring Music is for the fifth grade aged elementary student who is new to the K¹² Music program. This course presents the basics of traditional music appreciation through the singing and the study of music in history and culture. Students begin by studying some of the most important classical composers, and then study traditional music from around the country and around the world. Finally, they learn how to follow the form of a piece of music.

The course opens with the study of composers from the Baroque and Classical periods. Bach, Handel, Haydn, Mozart and Beethoven are all studied with a focus on their lives and the impact of their times on the music they created. Students then study the traditional music of the major cultural regions of the world, Europe, Africa, Latin America, the Middle East and Asia. Students learn how the music of these cultures fit into the history and daily life of the people, and learn to

identify some of the unique instruments in these cultures.

Students then return to their study of composers, studying the lives and music of Romantic and early Modern period composers. They learn about the expansion of emotional expression in the music of composers like Schubert, Schumann, Brahms and Tchaikovsky. They also see how a renewed interest in national culture helped inspire the music of Dvorak, Mussorgsky and Bartok. And they learn about the revolutionary changes in music at the beginning of the twentieth century.

Students then take more time to study the music and cultures of the regions of the United States. They focus on how the history and ethnicity of areas of our country is reflected in its music. Finally, they study five of the most important forms of music, learning to recognize and map the structure of many different pieces of music.

Course Outline

Composers of the Baroque and Classical Era

Though the history of music stretches back almost a thousand years, many of music's greatest composer lived in the last three centuries. Learn about music of the early 18th century, a period known as the Baroque period and discover how the great changes in society at this time is reflected in the music of the time.

- Music of the Baroque
- About Handel
- J. S. Bach
- Papa Haydn
- Wolfgang Amadeus Mozart
- Mr. Beethoven

Music From Around the World

Learn about music from many different cultures around the world. What makes the music different? What makes it similar?

- Folk Music From Europe
- African Music, African Rhythm
- The Caribbean
- Music of the Middle East
- Japan and China
- Travel the World in Music

Romantic and Modern Composers

The nineteenth and twentieth centuries saw the greatest period of change in the history of the world. Learn how the ideas and events of these turbulent times have influenced the composers of these exciting centuries.

- Music in the Romantic Era
- The Story of a Friendship
- The Nationalist Composers

- Debussy—The French Impressionist
- Bartok—The Hungarian Genius
- Two Russians

All American Music

Journey westward across the United States and explore the folk music of the various regions of the country. See how each new wave of immigrants helped shape the music and culture of the land.

- The Music of New England
- Good Old Mountain Music
- African American Folk Music Traditions
- Music of the First Americans
- Music of the Great Plains
- Westward Ho
- The Rise of Popular Music
- I Know American Music

Composing Music—The Big Forms

To understand most music you need to listen for the form. Form is like a roadmap of a piece. Explore some of the major forms of classical music, including the biggest one of all—the symphony!

- Three-Part Song Form
- Theme and Variations
- The Rondo
- The Sonata-Allegro
- Beethoven's Fifth
- Bach and the Fugue
- Map That Music!
- Recognizing Form

Intermediate 1 Music



Course Overview

Intermediate 1 Music is intended for students of third-grade age or older who have completed K¹² Beginning 1 and 2 Music or Introduction to Music. Through traditional folk songs and games, students learn to read and write a variety of musical patterns. They learn to play simple melodies and rhythms on the recorder. They become more familiar with the orchestra, especially the woodwind and brass families, and learn about the lives and works of Bach, Handel, Haydn, Mozart and Beethoven. Students will:

- Learn to play the recorder
- Sing along with folk songs
- Practice moving to music
- Listen actively to different kinds of music
- Read and write music
- Learn to recognize melody in four and five note patterns
- Identify rhythms in music using sixteenths, dotted half notes, and whole notes
- Recognize AB and ABA form
- Become familiar with string and percussion instruments of the orchestra
- Become familiar with brass and woodwind instruments
- Learn about the lives and music of classical composers

Course Outline

Let's Play the Recorder

- Perform on pitch, in rhythm, and with appropriate dynamics and timbre, and maintain a steady tempo
- Perform easy rhythmic and melodic patterns on the recorder
- Echo short rhythmic and melodic patterns
- Perform a varied repertoire of music representing diverse genres and styles
- Prepare do vocally and present
- Define standard terms for rhythm (quarter, half, and eighth notes, and corresponding rests)
- Relate solfege to absolute pitches
- Listen to and become familiar with instruments of the woodwind family

Breathing and Singing

- Sing independently, on pitch, and in rhythm with appropriate timbre, diction, and posture, and maintain a steady beat
- Sing expressively, with appropriate dynamics and phrasing
- Sing from memory a varied repertoire of songs representing genres and styles from diverse cultures
- Discriminate between melodic steps, skips and jumps, and double skips, and learn the standard names for intervals (2nds, 3rds, 4ths, 5ths)
- Aurally identify, sing, read, and notate patterns with *do*, *mi*, *so*, and *la*
- Echo clap four measure patterns of eighth, quarter, half notes, and rests
- Aurally identify, read patterns with eighth, quarter, half notes, and rests
- Notate melodic and rhythmic patterns in stick notation, in staff notation, and in standard notation

Four Notes, Five Rhythms

- Identify steps, skips, jumps, and double skips by ear
- Aurally identify, read and notate patterns with *do*, *mi*, *so*, and *la* (*smd*, *dms*, *sd*, *ds*, *msmd*)
- Identify, clap, notate, and aurally identify four measure rhythmic patterns with *ta*, *titi*, *rest*, and *ta-ah*
- Aurally identify and read patterns with *tiritiri* (16th notes)
- Identify pieces using AABB or AB form (verse/chorus form in folk music, simple binary form in classical pieces)
- Read patterns in standard notation
- Become familiar with works by moving, listening for familiar melodic or rhythmic content, by identifying melodic direction, or through appropriate video material

Brass and More

- Discriminate between steps, skips, jumps, and double skips
- Identify the double skip step (*do* to *la*)
- Aurally identify, read, and notate patterns with *do*, *mi*, *so*, and *la* (*lsmd*, *dmsl*, *dls*)
- Identify, clap, notate, and read patterns with *ta*, *titi*, *ta-ah*, *rest*, and *tiritiri*
- Read patterns in standard notation and continue to refer to standard note values and absolute pitch
- Identify pieces using AABB or AB forms in songs or listening material
- Listen to and become familiar with instruments of the brass family

Bach, Handel, and the Baroque

- Know about the life and music of Handel through musical listening and through appropriate biographical material
- Know about the music of Bach through musical listening and appropriate biographical material

- Compare the music of Bach and Handel and understand the influence of the time period on the music output of both men

Re and Whole Note

- Aurally identify all learned intervals and introduce their proper names (2nd, 3rd, 4th, 5th, and 6th)
- Aurally identify, read, and notate patterns with *do*, *mi*, *so*, and *la*
- Aurally identify, read, and notate patterns of *mrd* and *drm*
- Identify, clap, notate, and read patterns with *ta*, *titi*, *ta-ah*, *rest*, and *tiritiri*
- Identify notes that hold for four beats and define them as *ta-ah-ah-ah* (and whole note)
- Continue to reinforce note value names and absolute pitch

The Pentatonic Scale, the Dotted Half Note, and Mozart

- Aurally and visually identify all learned intervals, using their proper names
- Identify, read, write, and notate patterns with *do*, *re*, *mi*, *so*, and *la* (*smrd*, *drms*, *lsmrd*)
- Define the pentatonic scale and use it to compose original melodies
- Identify, clap, notate, and read patterns with *ta*, *titi*, *ta-ah*, *rest*, *tiritiri*, and *ta-ah-ah-ah*
- Identify notes that hold for three beats in measures of $\frac{3}{4}$ and define them as *ta-ah-ah* and dotted half note
- Examine phrase structure in folk song material (AB, ABA, AABA, AAAB, etc.)
- Know about the music of Mozart through musical listening and appropriate biographical material

Classical Composers—Haydn, Mozart, and Beethoven

- Aurally and visually identify all learned intervals
- Identify, read, and write patterns using the pentatonic scale
- Practice rhythmic patterns using all known rhythmic elements
- Continue to reinforce note values and absolute pitch
- Identify phrase structure in folk song material
- Know about the music of Haydn and Beethoven through musical listening and appropriate biographical material
- Know the relationship of music of the Classical period (c. 1770–1815) to the events of the time period through story

Standard Curriculum Items

Let's Learn the Recorder Video
Let's Sing CD, Volume 3
Let's Listen CD, Volume 3
Let's Sing Songbook, Volume 3
Let's Learn Rhythm CD
Recorder

NOTE: List subject to change.

Intermediate 2 Music



Course Overview

Intermediate 2 Music is intended for students of third grade age or older who have completed Intermediate 1 Music. The course begins by introducing notes that are lower or higher than the familiar lines and spaces of the staff. Students expand their knowledge of rhythm and harmony, and they practice recognizing pentatonic patterns. The course introduces the Romantic period in music, with listening activities to help students recognize Romantic music and identify pieces by individual composers, such as Schubert, Schumann, Brahms, and Tchaikovsky. Students also take a musical trip through Europe, Africa, the Middle East, the

Caribbean, Japan, and China. Students will:

- Identify notes below *do* in song material
- Perform songs with solfege syllables for low *la* and low *so*
- Identify rhythms of *ti-tiri*
- Identify rhythms of *tiri-ti*
- Read and write patterns with low *la* and low *so*
- Read and write patterns with *ti-tiri* and *tiri-ti*
- Identify characteristics of Romantic composers
- Identify Romantic composers and know facts about their lives

Course Outline

Lower Notes and New Rhythms

- Identify the interval from *do* to the low note as a skip
- Identify divisions of the beat
- Identify the fractions used to divide the beat in rhythm
- Perform the handsign for the low note
- Define *ti-tiri*
- Identify *ti-tiri* in song material
- Define low *la*
- Identify low *la* in songs
- Read patterns with *ti-tiri*
- Compare music with low and high *la*

New Rhythms, New Notes, New Composers

- Identify the interval from *do* to the low note as a skip
- Identify divisions of the beat (number of sounds on a beat)
- Identify the fractions used to divide the beat in rhythm
- Perform the hand sign for the low note
- Identify *ti-tiri* in song material
- Define low *la*
- Identify low *la* in songs
- Read patterns with *ti-tiri*

Low So and Writing Rhythms

- Perform the hand sign for the lower note
- Read patterns of *ti-tiri* and *tiri-ti*
- Identify the intervals between *do* and lower notes
- Write patterns with *ti-tiri* or *tiri-ti*
- Define low *so*
- Identify low *so* in song
- Write patterns with *do*, low *la* and low *so*
- Read patterns with *do*, *la* and *so*

Music from Around the World

- Identify the characteristics of music from these cultures: Europe, Africa, the Caribbean, the Middle East, China and Japan
- Identify similarities and differences between music of various cultures
- Perform an ostinato with music that contains a new rhythm
- Read a pattern in standard notation, that contains low *la* and low *so*

Standard Curriculum Items

Let's Sing CD, Volume 3 & 4

Let's Listen CD, Volume 4

Let's Sing Songbook, Volume 4

Let's Learn Rhythm CD

NOTE: List subject to change.

Intermediate Music 3



Course Overview

Intermediate Music 3 begins by introducing the student to all the notes of the major scale, from low to all the way up to high do. Students also learn to recognize and sing the natural minor scale. Students expand their knowledge of rhythm with simple syncopated patterns. This semester introduces students to the Modern period in music, with listening activities to help them recognize Modern music

and identify pieces by individual composers. Near the end of the year explore the folk music of the American continent as they follow the expansion of the country westward. And at the end of the year, they learn to recognize the major forms of classical music, the song form, theme and variations, rondo, sonata, and fugue forms.

Course Outline

Octaves and Syncopation

Learn more about syncopation—a “ragged” rhythm in songs. What are its elements? Where does the beat fall? Learn to read the symbols for this rhythm, and learn about the interval between high and low so or high and low la, which is called an octave.

- Light and Dark
- A Ragged Rhythm
- Major and Minor Chords
- Where Is the Beat?
- A Very Big Interval
- Syncopation
- The Octave
- Ti-Ta-Ti
- Reading Syncopation
- I Know Octaves; I Know Syncopation

Composers of Many Nations

In the late nineteenth and early twentieth centuries, many countries that had not had a great musical tradition began to produce great composers of their own. Learn about composers from Russia, France, Bohemia, and Hungary. Discover how some of these composers helped usher in the Modern period in music.

- Homesick Dvořák
- Mussorgsky and His Friend
- Debussy, the French Impressionist
- Bartok, the Hungarian Genius
- Stravinsky Starts a Riot
- Prokofiev in Trouble

All-American Music

Journey westward across the United States and explore the folk music of the various regions of the country. See how each new wave of immigrants helped shape the music and culture of the land.

- The Music of New England
- Good Old Mountain Music
- African-American Folk Music Traditions
- Music of the First Americans

- Music of the Great Plains
- Westward Ho!
- The Rise of Popular Music
- I Know American Music

Composing Music: The Big Forms

Music can take many forms. The form of a musical composition is like a road map of the piece. Explore some of the major forms of classical music, including the biggest one of all—the symphony!

- The Three-Part Song Form
- Theme and Variations
- The Sonata Allegro
- Beethoven's Fifth!
- Bach and the Fugue
- Map That Music
- I Can Recognize Form

Music Concepts A



Course Overview

This traditional music course teaches students the fundamentals of music as they relate to the piano key and a study of a select group of composers and their music.

Students will complete lessons using Music Ace CD-ROM, student guides, and listening CDs. The lesson content is not online.

Course Outline

- The Staff and the Keyboard
- Extending the Staff
- Flats, Sharps and Scales

Lesson Time and Scheduling

Lessons: 34

Suggested Time for each lesson: 45 minutes

Standard Curriculum Items

Music Ace CD-ROM Grade 6

Beethoven CD (Vox 8507)

Mendelssohn CD (Vox 8503)

Mozart CD (Vox 8501)

Vivaldi and Corelli CD (Vox 8510)

Music Concepts B



Course Overview

This is the second course in the Music Concept Series. This is a traditional music course teaching the fundamentals of music as they relate to the piano key and a study of a select group of composers and their music.

Students will complete lessons using Music Ace CD-ROM, student guides and listening CDs. The lesson content is not online.

Course Outline

- The Elements of Rhythm and Melody
- Rhythms, Rests and Keys
- Minor Scales, Syncopation and Harmony

Lesson Time and Scheduling

Lessons: 34

Suggested Time for each lesson: 45 minutes

Standard Curriculum Items

Sousa CD

Music Ace CD, Grade 7

Chopin CD (Vox 8502)

Schumann & Grieg CD (Vox 8505)

Verdi CD (Vox 8517)

Music Appreciation



Course Overview

Description: Intellectual approach to music covers the fundamentals of music (such as rhythm, beat, melody, harmony, form and expression) and a survey of music

history beginning with early music of the Greeks and Middle Ages and concluding with Modern Music of composers such as Copland and Prokofiev.

Course Outline

- The Elements of Music
- Music and Emotion
- Musical Style
- Musical Instruments of the World
- Music Through History

Lesson Time and Scheduling

Lessons: 32

Suggested Time for each lesson: 45 minutes

Standard Curriculum Items

Music Appreciation 6 CD set



ENG102: Literary Analysis and Composition I

In this course, students work on their written and oral communication skills, while strengthening their ability to understand and analyze works of literature, both classic and modern.

LITERATURE: Students read short stories, poetry, drama, novels, essays, and informative articles. The course sharpens reading comprehension skills and engages readers in literary analysis as they consider important human issues and challenging ideas. Students also learn to read for information in nonfiction texts.

LANGUAGE SKILLS: Students learn to express their ideas effectively. They sharpen their composition skills through a focus on writing good paragraphs and essays in a variety of genres, such as persuasive and research essays. Students plan, organize, and revise written works in response to feedback on drafts. In grammar, usage, and mechanics lessons, students expand their understanding of parts of speech, phrases and clauses, sentence analysis and structure, agreement, punctuation, and other conventions. Vocabulary lessons build knowledge of Greek and Latin words that form the roots of many English words. Students use word origins and derivations to determine the meaning of new words as they increase their vocabularies.

COURSE LENGTH: Two semesters

MATERIALS: *Explorations: An Anthology of Literature, Volume A; English Language Handbook; Vocabulary from Classical Roots, Book B; Julius Caesar for Young People*

PREREQUISITES: Middle school English/language arts

NOTE: This course is only for students who are new to the K¹² curriculum. Students who have taken K¹² Intermediate English A or B or K¹² middle school Literary Analysis and Composition courses should not enroll in this course.

I. LITERATURE

Literature lessons sharpen reading comprehension skills, engage readers in literary analysis, and offer a variety of literature to suit diverse tastes. Through a varied selection of stories, plays, and poems, students develop skills of close reading and literary analysis while considering important human issues and challenging ideas. They come to appreciate the writer's craft as they consider the feelings, thoughts, and ideas of characters, and make connections between literature and life. Students also learn to read for information in nonfiction texts and practice the critical reading and analysis skills that are necessary for taking standardized assessments.

Readings include:

Novels (choose any two of the following)

The Outsiders by S.E. Hinton

The Dark Is Rising by Susan Cooper

The Fellowship of the Ring by J.R.R. Tolkien

The Hound of the Baskervilles by Sir Arthur Conan Doyle

Roll of Thunder, Hear My Cry by Mildred Taylor

White Fang by Jack London

The Martian Chronicles by Ray Bradbury

Drama

Julius Caesar for Young People (Swan Books)

Prose Fiction and Nonfiction

Works by Langston Hughes, Francisco Jiménez, Yoshiko Uchida, John Greenleaf Whittier, Joseph Addison, Robert E. Lee, and others

Poetry

Works by Emily Dickinson, William Wordsworth, Christina Rossetti, Rudyard Kipling, Robert Frost, Walter de la Mare, Elizabeth Coatsworth, and others

Partial List of Skills Taught:

- Describe characters based on speech, actions, or interactions with others.
- Identify character traits and motivations.
- Identify rhyme scheme.
- Recognize use of language to convey mood.
- Recognize author's purpose and devices used to accomplish it, including author's language, organization, and structure.
- Identify and interpret the use of figurative language.
- Compare and contrast literary characters and selections.
- Identify theme.
- Identify point of view.
- Make inferences and draw conclusions.
- Demonstrate knowledge of authors, characters, and events of historically or culturally significant works of literature.
- Identify conflict and resolution.
- Identify climax.
- Recognize author's attitude or tone.
- Compare and contrast characters or literary selections.
- Identify conflict and resolution.
- Identify symbolism.
- Recognize the effect of setting or culture on a literary work.
- Recognize use of language to convey mood.
- Make inferences and draw conclusions.

II. COMPOSITION

Students learn the building blocks of effective compositions by starting with the basis for all essays—the paragraph. After they have learned about the structure and organization of ideas in a paragraph, they begin the study of the essay. Students read model essays and analyze the essays from the perspective of both a reader and a writer. In writing their own essays, students apply the concepts they have learned from studying the models. Students go through a process in writing essays: They plan, organize, write, revise, and proofread their essays, implementing feedback they receive in the early stages of writing. Students also learn to write in response to prompts similar to those they will encounter on standardized tests.

Introduction to the Paragraph

Students learn about the parts of a paragraph, the importance of purpose and audience, and the concepts of unity, clarity, and coherence. They apply what they learned as they write their own paragraph.

Introduction to the Essay

Students read a model essay and analyze it. They learn about the importance of developing a strong thesis statement that controls the ideas in the rest of the essay. Then students plan, write, revise, and proofread an essay on a topic they have chosen.

Writing to a Prompt

As students progress through high school, they are faced with standardized tests that ask them to write a response to a question, also known as a prompt. In this course, students learn how to read and analyze a prompt, plan their response, and write their essay, all within a predetermined time limit.

Personal Narrative

The personal narrative offers students a chance to express themselves in the form of an essay. After reading a model narrative essay, students analyze it, focusing on the way the writer uses language to show—not merely to tell—what is happening. Students plan, write, and revise their narrative essay, incorporating what they learned about showing language.

Persuasive Essay

The ability to persuade is a skill students will find useful throughout their lives. Students focus on the elements of logical thinking and on the importance of knowing the difference between fact and opinion as they read and analyze the model essay and as they write their own persuasive essay.

Research Report

The Composition curriculum culminates with a research report. Before students begin their research, they learn about information sources, both in libraries and online. They are introduced to Internet searches and ways to determine if a source is reliable. Note-taking, outlining, and citing sources are other topics covered in this comprehensive unit.

III. GRAMMAR

The Grammar, Usage, and Mechanics program addresses many grammatical topics, with reinforcement activities in sentence analysis, sentence structure, and proper punctuation. Students analyze syntax and diagram sentences in order to understand how words, phrases, and clauses function in relation to each other. Frequent exercises and regular practice help students absorb the rules so they can confidently apply them in their own writing.

General Topics of Study Include:

- Sentence Review
- Parts of Speech Review
- Kinds of Complements
- Kinds of Phrases
- Verbals and Verbal Phrases
- Clauses
- Sentence Fragments and Run-ons
- Using Verbs
- Using Pronouns
- Subject and Verb Agreement
- Using Adjectives and Adverbs
- Capital Letters
- End Marks and Commas
- Italics and Quotation Marks
- Other Punctuation

IV. VOCABULARY

The *Vocabulary from Classical Roots* program builds knowledge of Greek and Latin words that form the roots of many English words, especially the polysyllabic terms that sometimes cause students to stumble. Throughout this program, students define and use words with Greek and Latin roots, and use word origins and derivations to determine the meaning of new words, as they increase their own vocabularies and develop valuable test-taking skills.



ENG103: Literary Analysis and Composition I

This course challenges students to improve their written and oral communication skills, while strengthening their ability to understand and analyze literature in a variety of genres.

LITERATURE: Students read a broad array of short stories, poetry, drama, novels, autobiographies, essays, and famous speeches. The course guides students in the close reading and critical analysis of classic works of literature, and helps them appreciate the texts and the contexts in which the works were written. Literary selections range classic works such as Shakespeare's *Romeo and Juliet* to contemporary pieces by authors such as Maya Angelou.

LANGUAGE SKILLS: Students broaden their composition skills by examining model essays in various genres by student and published writers. Through in-depth planning, organizing, drafting, revising, proofreading, and feedback, they hone their writing skills. Students build on their grammar, usage, and mechanics skills with in-depth study of sentence analysis and structure, agreement, and punctuation, reinforced by online activities (Skills Updates). Student vocabularies are enhanced through the study of Greek and Latin roots, improving students' ability to decipher the meanings of new words.

COURSE LENGTH: Two semesters

MATERIALS: *Classics for Young Readers, Volume 8; Classics for Young Readers, Volume 8: An Audio Companion; BK English Language Handbook, Level 1; Vocabulary from Classical Roots, Book C; The Narrative of the Life of Frederick Douglass, An American Slave*, by Frederick Douglass; *Anne Frank: Diary of a Young Girl*, by Anne Frank; *Romeo and Juliet*, by William Shakespeare

PREREQUISITES: K¹² Intermediate English A and B, or equivalent

NOTE: Students who have already succeeded in K¹² middle school Literary Analysis and Composition should not enroll in this course.

I. LITERATURE

Students read writings from diverse traditions, including poetry, drama, autobiography, short stories, and novels, with an emphasis on literary classics. Lessons help students develop skills of close reading by showing how to "read between the lines," both analyzing formal features of literary works and asking appropriate interpretive questions. Many lessons provide background information to help students connect the work to the historical or biographical context.

Readings include:

Novels (choose any one of the following)

Animal Farm by George Orwell

Jane Eyre by Charlotte Bronte

Lord of the Flies by William Golding

A Separate Peace by John Knowles

A Tale of Two Cities by Charles Dickens

To Kill a Mockingbird by Harper Lee

The Yearling by Marjorie Kinnan Rawlings

Drama

Romeo and Juliet by William Shakespeare

Autobiography (choose one)

Anne Frank: The Diary of a Young Girl

Narrative of the Life of Frederick Douglass

Short Stories

"The Glass of Milk" by Manuel Rojas

"To Build a Fire" by Jack London

"The Secret Life of Walter Mitty" by James Thurber

"The Piece of String" by Guy de Maupassant

"The Tell-Tale Heart" by Edgar Allan Poe

"The Lottery" by Shirley Jackson

"The Lady or the Tiger" by Frank Stockton

Memoir

"A Cub Pilot" from *Life on the Mississippi* by Mark Twain

Excerpts from "Barrio Boy" by Ernest Galarza

"No Gumption" by Russell Baker

Excerpts from *I Know Why the Caged Bird Sings* by Maya Angelou

Poetry

To Everything There Is a Season

"Spring and Fall" by Gerard Manley Hopkins

"In Just-" by E. E. Cummings

"July" by Susan H. Sweet

"To Autumn" by John Keats

"The Snowstorm" by Ralph Waldo Emerson

"It sifts from leaden sieves" by Emily Dickinson

Voices and Viewpoints

"The Rainy Day" by Henry Wadsworth Longfellow

"Invictus" by W. E. Henley

"We Real Cool" by Gwendolyn Brooks

"The Negro Speaks Rivers" by Langston Hughes

"Mending Wall" by Robert Frost

Sonnets 18 and 29 by William Shakespeare

Poetry of Ideas

"I dwell in Possibility" by Emily Dickinson
 "Will there really be a 'Morning'?" by Emily Dickinson
 "Ozymandias" by Percy Bysshe Shelley
 "Do Not Go Gentle into That Good Night" by Dylan Thomas
 "The Charge of the Light Brigade" by Alfred Lord Tennyson
 "The Battle of Blenheim" by Robert Southey

Partial List of Skills Taught:

- Describe characters based on speech, actions, or interactions with others.
- Demonstrate knowledge of authors, characters, and events of works of literature.
- Identify, analyze, interpret and discuss the following elements of literature:
 - character traits and motivations
 - allusions
 - conflict and resolution
 - irony
 - figurative language, imagery, and sensory language
 - point of view
 - author's attitude or tone
 - climax
- Identify, analyze, and discuss elements of a drama.
- Identify analyze, and discuss elements of a short story.
- Identify, analyze, and discuss theme in literary works.
- Identify cause-and-effect relationships.
- Make inferences and draw conclusions.
- Recognize the effect of setting or culture on a literary work.
- Recognize use of language to convey mood.
- Discuss author's purpose and analyze literary devices used to accomplish it, including language, organization, and structure.
- Compare and contrast literary characters and selections.

II. COMPOSITION

In this writing program, students practice writing essays in various genres. Many units use the literature lessons as a springboard and thereby reinforce the connection between reading for meaning and writing to communicate one's own ideas. Students learn the form and structure of a variety of essays they will encounter in their academic careers, including memoirs (narrative), literary essays, compare and contrast essays, research papers, arguments, and speeches. In writing each essay, students go through a process of planning, organizing, and revising, and they learn to examine their own writing with a critical eye, paying attention to ideas, organization, structure, style, and correctness. Throughout the course, students write in response to prompts similar to those they will encounter on standardized tests.

Memoir

- Analysis of a Memoir: Examining Mark Twain's "A Cub Pilot"
- Planning a Memoir
- Writing a Memoir I
- Writing a Memoir II

- Revising a Memoir
- Proofreading and Publishing a Memoir

Argument

- What Is an Argument?
- Recognizing Logical Fallacies and Emotional Appeals
- Choosing a Topic and Gathering Information
- Planning and Organizing the Argument
- Writing an Argument
- Revising an Argument
- Proofreading and Publishing an Argument

Research Paper

- What Is a Research Paper?
- Taking Notes I
- Taking Notes II
- Organizing the Information
- Writing a Research Paper I
- Writing a Research Paper II
- Creating a Works Cited Page
- Revising a Research Paper
- Proofreading and Publishing a Research Paper

Literary Essay: Theme

- What Is a Literary Essay About Theme?
- Planning a Literary Essay About Theme
- Writing a Literary Essay About Theme
- Revising a Literary Essay About Theme
- Proofreading and Publishing a Literary Essay About Theme

Compare and Contrast Essay

- What Is a Compare-and-Contrast Essay?
- Planning a Compare-and-Contrast Essay
- Organizing a Compare-and-Contrast Essay
- Writing a Compare-and-Contrast Essay
- Polishing a Compare-and-Contrast Essay

Great Speeches and Oratory

- Reading, Listening to, and Analyzing a Speech I: The Gettysburg Address
- Reading, Listening to, and Analyzing a Speech I: I Have a Dream
- Planning a Speech
- Writing a Speech
- Revising a Speech
- Practicing and Delivering a Speech





III. GRAMMAR, USAGE, AND MECHANICS

K12's GUM course addresses and provides reinforcement activities in sentence analysis, sentence structure, and proper punctuation and other important topics. Optional materials are available for students who need to review concepts that should have been mastered prior to this course. Skills updates, frequent exercises, cumulative reviews, and regular practice help students absorb the rules so they can confidently apply them in their own writing. The *Barrett Kendall Language Handbook* provides exercises and a ready resource for grammar rules and conventions.

IV. VOCABULARY

K12's Vocabulary program uses the *Vocabulary from Classical Roots* program (from Educator's Publishing Service) to build knowledge of Greek and Latin words that form the roots of many English words. The purpose of the program is to help students unlock the meanings of words from classical roots, not necessarily to memorize lists of difficult or obscure vocabulary words. These polysyllabic words are those that frequently cause students to stumble and often appear on standardized tests. Throughout this program, students define and use words with Greek and Latin roots, and use word origins and derivations to determine the meaning of new words, as they increase their own vocabularies and develop valuable test-taking skills.



ENG104: Honors Literary Analysis and Composition I

This course challenges students to improve their written and oral communication skills, while strengthening their ability to understand and analyze literature in a variety of genres. Students enrolled in this course work on independent projects that enhance their skills and challenge them to consider complex ideas and apply the knowledge they have learned.

LITERATURE: Students read a broad array of short stories, poetry, drama, novels, autobiographies, essays, and famous speeches. The course guides students in the close reading and critical analysis of classic works of literature, and helps them appreciate the texts and the contexts in which the works were written. Literary selections range from the Greek tragedy *Antigone* to Shakespeare's *Romeo and Juliet* to contemporary pieces by authors such as Annie Dillard and Maya Angelou.

LANGUAGE SKILLS: Students broaden their composition skills by examining model essays in various genres by student and published writers. Through in-depth planning, organizing, drafting, revising, proofreading, and feedback, they hone their writing skills. Students build on their grammar, usage, and mechanics skills with in-depth study of sentence analysis and structure, agreement, and punctuation, reinforced by online activities. Student vocabularies are enhanced through the study of Greek and Latin root, improving students' ability to decipher the meanings of new words.

COURSE LENGTH: Two semesters

MATERIALS: *Classics for Young Readers, Volume 8; Classics for Young Readers, Volume 8: An Audio Companion; BK English Language Handbook, Level 1; Vocabulary from Classical Roots, Book C; The Narrative of the Life of Frederick Douglass, An American Slave*, by Frederick Douglass; *Anne Frank: Diary of a Young Girl*, by Anne Frank; *Romeo and Juliet*, by William Shakespeare

PREREQUISITES: Success in K¹² Intermediate English A and B, or equivalent, and teacher/counselor recommendation

NOTE: Students who have already succeeded in K¹² middle school Literary Analysis and Composition should not enroll in this course.

I. LITERATURE

Students read writings from diverse traditions, including poetry, drama, autobiography, short stories, and novels, with an emphasis on literary classics. Lessons help students develop skills of close reading by showing how to "read between the lines," both analyzing formal features of literary works and asking appropriate interpretive questions. Many lessons provide background information to help students connect the work to the historical or biographical context.

Readings include:

Novels (choose any one of the following)

Animal Farm by George Orwell

Jane Eyre by Charlotte Bronte

Lord of the Flies by William Golding

A Separate Peace by John Knowles

A Tale of Two Cities by Charles Dickens

To Kill a Mockingbird by Harper Lee

The Yearling by Marjorie Kinnan Rawlings

Drama

Romeo and Juliet by William Shakespeare

Antigone by Sophocles

Autobiography (choose one)

Anne Frank: The Diary of a Young Girl

Narrative of the Life of Frederick Douglass

Short Stories

"The Glass of Milk" by Manuel Rojas

"To Build a Fire" by Jack London

"The Secret Life of Walter Mitty" by James Thurber

"The Piece of String" by Guy de Maupassant

"The Tell-Tale Heart" by Edgar Allan Poe

"The Lottery" by Shirley Jackson

"The Lady or the Tiger" by Frank Stockton

Memoir

"A Cub Pilot" from *Life on the Mississippi* by Mark Twain

Excerpts from "Barrio Boy" by Ernest Galarza

"No Gumption" by Russell Baker

Excerpts from *I Know Why the Caged Bird Sings* by Maya Angelou

Poetry

To Everything There Is a Season

"Spring and Fall" by Gerard Manley Hopkins

"In Just-" by E. E. Cummings

"July" by Susan H. Sweet

"To Autumn" by John Keats

"The Snowstorm" by Ralph Waldo Emerson

"It sifts from leaden sieves" by Emily Dickinson

Voices and Viewpoints

"Rainy Day" by Henry Wadsworth Longfellow

"Invictus" by W. E. Henley

"We Real Cool" by Gwendolyn Brooks

"The Negro Speaks Rivers" by Langston Hughes

"Mending Wall" by Robert Frost

Sonnets 18 and 29 by William Shakespeare

Poetry of Ideas

- "I dwell in Possibility" by Emily Dickinson
- "Will there really be a 'Morning'?" by Emily Dickinson
- "Ozymandias" by Percy Bysshe Shelley
- "Do Not Go Gentle into That Good Night" by Dylan Thomas
- "The Charge of the Light Brigade" by Alfred Lord Tennyson
- "The Battle of Blenheim" by Robert Southey

Partial List of Skills Taught:

- Describe characters based on speech, actions, or interactions with others.
- Demonstrate knowledge of authors, characters, and events of works of literature.
- Identify, analyze, interpret, and discuss the following elements of literature:
 - character traits and motivations
 - allusions
 - conflict and resolution
 - irony
 - figurative language, imagery, and sensory language
 - point of view
 - author's attitude or tone
 - climax
- Identify, analyze, and discuss elements of a drama.
- Identify, analyze, and discuss elements of a short story.
- Identify, analyze, and discuss theme in literary works.
- Identify cause-and-effect relationships.
- Make inferences and draw conclusions.
- Recognize the effect of setting or culture on a literary work.
- Recognize use of language to convey mood.
- Discuss author's purpose and analyze literary devices used to accomplish it, including language, organization, and structure.
- Compare and contrast literary characters and selections.

II. COMPOSITION

In this writing program, students practice writing essays in various genres. Many units use the literature lessons as a springboard and thereby reinforce the connection between reading for meaning and writing to communicate one's own ideas. Students learn the form and structure of a variety of essays they will encounter in their academic careers, including memoirs (narrative), literary essays, compare-and-contrast essays, research papers, descriptive essays, speeches, and arguments. In writing each essay, students go through a process of planning, organizing, and revising, and they learn to examine their own writing with a critical eye, paying attention to ideas, organization, structure, style, and correctness. Throughout the course, students write in response to prompts similar to those they will encounter on standardized tests.

Memoir

- Analysis of a Memoir: Examining Mark Twain's "A Cub Pilot"
- Planning a Memoir
- Writing a Memoir I
- Writing a Memoir II
- Revising a Memoir
- Proofreading and Publishing a Memoir

Argument

- What Is an Argument?
- Recognizing Logical Fallacies and Emotional Appeals
- Choosing a Topic and Gathering Information
- Planning and Organizing the Argument
- Writing an Argument
- Revising an Argument
- Proofreading and Publishing an Argument

Research Paper

- What Is a Research Paper?
- Taking Notes I
- Taking Notes II
- Organizing the Information
- Writing a Research Paper I
- Writing a Research Paper II
- Creating a Works Cited Page

Literary Essay: Theme

- What Is a Literary Essay About Theme?
- Planning a Literary Essay About Theme
- Writing a Literary Essay About Theme
- Revising a Literary Essay About Theme
- Proofreading and Publishing a Literary Essay About Theme

Compare and Contrast Essay

- What Is a Compare-and-Contrast Essay?
- Planning a Compare-and-Contrast Essay
- Organizing a Compare-and-Contrast Essay
- Writing a Compare-and-Contrast Essay
- Polishing a Compare-and-Contrast Essay

Great Speeches and Oratory

- Reading, Listening to, and Analyzing a Speech I: The Gettysburg Address
- Reading, Listening to, and Analyzing a Speech I: I Have a Dream
- Planning a Speech
- Writing a Speech
- Revising a Speech
- Practicing and Delivering a Speech

Descriptive Essay

- Seeing with the Mind's Eye: Beauty
- Seeing with the Mind's Eye: Nature
- Seeing with the Mind's Eye: Wonders
- Planning a Descriptive Essay



- Recognizing Descriptive Language
- Writing a Descriptive Essay I
- Writing a Descriptive Essay II
- Revising a Descriptive Essay
- Polishing a Descriptive Essay

III. GRAMMAR, USAGE, AND MECHANICS

This section addresses and provides reinforcement activities in sentence analysis, sentence structure, proper punctuation, and other important topics. Optional materials are available for students who need to review concepts that should have been mastered prior to this course. Skills updates, frequent exercises, cumulative reviews, and regular practice help students absorb the rules so they can confidently apply them in their own writing. The *Barrett Kendall Language Handbook* provides exercises and a ready resource for grammar rules and conventions.

IV. VOCABULARY

This section uses the *Vocabulary from Classical Roots* program (from Educator's Publishing Service) to build knowledge of Greek and Latin words that form the roots of many English words. The purpose of the program is to help students unlock the meanings of words from classical roots, not necessarily to memorize lists of difficult or obscure vocabulary words. These polysyllabic words are those that frequently cause students to stumble and often appear on standardized tests. Throughout this program, students will define and use words with Greek and Latin roots, and use word origins and derivations to determine the meaning of new words, as they increase their own vocabularies and develop valuable test-taking skills.



ENG202: Literary Analysis and Composition II

COURSE DESCRIPTION

In this course, students build on their language skills while reading classic and modern works of literature and improving their writing skills.

LITERATURE: Students read short stories, poetry, drama, and novels, sharpening their reading comprehension skills and analyzing important human issues.

LANGUAGE SKILLS: Students continue to work on their oral and written expression skills, writing a variety of essays, including persuasive and research essays. Students plan, organize, and revise their essays in response to feedback. They build on their skills in grammar, usage, and mechanics by studying phrases and clauses, sentence analysis and structure, agreement, punctuation, and other conventions. Thematic units focus on word roots, suffixes and prefixes, context clues, and other strategies to help students strengthen their vocabularies.

COURSE LENGTH: Two semesters

MATERIALS: *Explorations: An Anthology of Literature, Volume B; The Miracle Worker*, by William Gibson

PREREQUISITES: ENG102: Literary Analysis and Composition I, or equivalent

NOTE: Students who have taken K¹² Intermediate English A or B or K¹² middle school Literary Analysis and Composition courses should not enroll in this course.

Readings Include:

Short Stories

- "Charles" by Shirley Jackson
- "The Gift of the Magi" by O. Henry
- "The Necklace" by Guy de Maupassant
- "President Cleveland, Where Are You?" by Robert Cormier
- "My Father Is a Simple Man" by Luis Omar Salinas
- "Raymond's Run" by Toni Cade Bambara
- "The White Umbrella" by Gish Jen

Poetry

- "Casabianca" by Felicia Hemans
- "The Inchcape Rock" by Robert Southey
- "The Listeners" by Walter de la Mare
- "Casey at the Bat" by Ernest Lawrence Thayer
- "The Cremation of Sam McGee" by Robert Service
- "The Highwayman" by Alfred Noyes
- "I Have Ten Legs" by Anna Swir
- "Boy Flying" by Leslie Norris
- "The Courage That My Mother Had" by Edna St. Vincent Millay
- "Nothing Gold Can Stay" by Robert Frost

"A Poison Tree" by William Blake
 "Beauty" by E-Yeh-Shure'
 "Barter" by Sara Teasdale
 "All the world's a stage" (from *As You Like It*) by William Shakespeare
 "The Wind Began to Rock the Grass" by Emily Dickinson
 "I'll Tell You How the Sun Rose" by Emily Dickinson
 "There Is No Frigate Like a Book" by Emily Dickinson
 "Harlem [2]" by Langston Hughes
 "Hold Fast Your Dreams" by Louise Driscoll

Drama

The Miracle Worker by William Gibson

Novels (choose two of the following)

Jesse by Gary Soto
Fahrenheit 451 by Ray Bradbury
Let the Circle Be Unbroken by Mildred Taylor
The Pearl by John Steinbeck

Partial List of Skills Taught:

- Describe characters based on speech, actions, or interactions with others.
- Demonstrate knowledge of authors, characters, and events of works of literature.
- Identify, analyze, interpret, and discuss the following elements of literature:
 - character traits and motivations
 - allusions
 - conflict and resolution
 - irony
 - figurative language, imagery, and sensory language
 - point of view
 - author's attitude or tone
 - elements of plot
- Identify, analyze, and discuss elements of a drama.
- Identify analyze, and discuss elements of a short story.
- Identify, analyze, and discuss theme in literary works.
- Identify cause-and-effect relationships.
- Make inferences and draw conclusions.
- Recognize the effect of setting or culture on a literary work.
- Recognize use of language to convey mood.
- Discuss author's purpose and analyze literary devices used to accomplish it, including language, organization, and structure.
- Compare and contrast literary characters and selections.

COMPOSITIONS

Autobiographical Incident

- What Is an Autobiographical Incident?
- Plan an Autobiographical Incident
- Organize an Autobiographical Incident
- Write an Autobiographical Incident
- Revise an Autobiographical Incident
- Proofread and Publish an Autobiographical Incident

Letter to the Editor

- What Is a Letter to the Editor?
- Choose a Topic
- Gather Information
- Plan a Letter to the Editor
- Logical Thinking
- Write a Letter to the Editor
- Revise a Letter to the Editor
- Proofread and Publish a Letter to the Editor

Persuasive Speech

- What Is a Persuasive Speech?
- Repurpose a Letter/Essay
- Practice a Persuasive Speech
- Deliver and Listen to a Persuasive Speech

Writing to a Prompt

- What Is a Narrative Prompt?
- Use a Narrative Rubric
- What Is a Persuasive Prompt?
- Use a Persuasive Rubric
- Write to a Prompt

Literary Essay about Character

- What Is a Literary Essay about Character?
- Choose and Develop a Topic
- Plan and Organize a Literary Essay
- Focus on Unity and Coherence
- Write a Literary Essay
- Revise a Literary Essay
- Proofread and Publish a Literary Essay

Research Paper

- What Is a Research Paper?
- Focus on a Topic
- Find Information Sources
- Take Notes
- Cite Sources
- Organize and Outline a Research Paper
- Write a Research Paper
- Focus on Citations
- Revise a Research Paper
- Proofread and Publish a Research Paper

Practical Writing

- Analyze Examples of Practical Writing
- Plan a Cover Letter and Application
- Use Appropriate Language in Business Correspondence
- Write a Cover Letter and Complete an Application
- Hints for Revising
- Revise a Cover Letter and Application
- Proofread and Publish a Cover Letter and Application

Integrated lessons on selected topics in grammar, usage, and mechanics include:

- Sentences
- Compound Subjects and Compound Verbs
- Natural and Inverted Sentence Order
- Sentence Errors
- Direct and Indirect Objects
- Subject Complements
- Prepositional Phrases
- Appositives and Appositive Phrases
- Commas
- Independent and Dependent Clauses
- Adjective Clauses
- Adverb Clauses
- Sentence Structure
- Italics and Quotation Marks for Titles
- Writing Quotations
- Apostrophes for Possession
- Principal Parts of Regular Verbs
- Principal Parts of Irregular Verbs
- Verb Tense
- Progressive Forms



- Active and passive voice
- Agreement
- Negative words
- Capitalization
- Nominative, objective, and possessive case pronouns
- Agreement of pronouns and antecedents
- Indefinite pronouns
- Participles
- Gerunds
- Infinitives
- Misplaced modifiers
- Colons and semicolons



ENG203: Literary Analysis and Composition II

In this course, students build on existing literature and composition skills and move to higher levels of sophistication.

LITERATURE: Students hone their skills in literary analysis by reading short stories, poetry, drama, novels, and works of nonfiction, both classic and modern. Authors include W. B. Yeats, Sara Teasdale, Langston Hughes, Robert Frost, Edgar Allan Poe, Nathaniel Hawthorne, Kate Chopin, Amy Tan, and Richard Rodriguez. Students read William Shakespeare's tragedy, *Macbeth*, and they are offered a choice of novels and longer works to study, including works by Jane Austen, Charles Dickens, Elie Wiesel, and many others.

LANGUAGE SKILLS: In this course, students become more proficient writers and readers. In composition lessons, students analyze model essays from readers' and writers' perspectives, focusing on ideas and content, structure and organization, style, word choice, and tone. Students receive feedback during the writing process to help them work toward a polished final draft. In addition to writing formal essays, applications, and business letters, students write and deliver a persuasive speech. Students expand their knowledge of grammar, usage, and mechanics through sentence analysis and structure, syntax, agreement, and conventions. Students strengthen their vocabularies through thematic units focused on word roots, suffixes and prefixes, context clues, and other important vocabulary-building strategies.

COURSE LENGTH: Two semesters

MATERIALS: *Journeys in Literature: Classic and Modern, Volume B; Journeys in Literature: Classic and Modern, Volume B: An Audio Companion; Vocabulary for Achievement, Fourth Course; Macbeth*, by William Shakespeare

PREREQUISITES: ENG103: Literary Analysis and Composition I, or equivalent

I. LITERATURE

Students read writings from diverse traditions and genres, including poetry, drama, short stories, nonfiction, and novels. Online lessons help students develop skills of close reading. Students analyze formal features of literary works; explore theme, character, and uses of language; and learn to articulate an interpretation based on textual evidence. Many lessons provide background information to help students connect the work to the historical or biographical context. Students also practice the critical reading and analysis skills that are necessary for taking standardized assessments.

Readings include:

Novels (choose any two of the following)

Sense and Sensibility by Jane Austen

The Scarlet Pimpernel by Baroness Orczy

Cry, the Beloved Country by Alan Paton

Night by Elie Wiesel

The Way to Rainy Mountain by N. Scott Momaday

Frankenstein by Mary Shelley

Drama

Macbeth by William Shakespeare

Prose Fiction and Nonfiction

Works by Edgar Allan Poe, Anton Chekhov, Kate Chopin, O. Henry, Flannery O'Connor, Sherwood Anderson, Tillie Olsen, Jerome Weidman, Richard Rodriguez, Dr. Martin Luther King, Jr., Amy Tan, and others

Poetry

Works by William Shakespeare, Lord Byron, Walt Whitman, Stephen Crane, Edna St. Vincent Millay, Ezra Pound, William Carlos Williams, Langston Hughes, Robert Frost, D. H. Lawrence, Wilfred Owen, Sara Teasdale, Rita Dove, Dudley Randall, Judith Ortiz Cofer, and others

Partial List of Skills Taught:

- Analyze the relationship between a literary work and its historical period and cultural influences.
- Recognize and examine the impact of voice, persona, and the choice of narrator on a work of literature.
- Identify character traits and motivations.
- Describe and analyze characters based on speech, actions, or interactions with others.
- Analyze the relationship between character actions/interactions and plot.
- Identify elements of plot and analyze plot development.
- Identify conflict and resolution.
- Recognize literary devices, such as foreshadowing, flashbacks, suspense, irony, metaphor, simile, symbolism, and other figures of speech.
- Identify author's purpose, style, tone, and intended audience.
- Identify and understand universal themes.
- Compare and contrast characters based on their actions, traits, and motives.
- Compare and contrast themes in different works and across different genres.
- Recognize the impact of word choice, style, and figurative language on tone, mood, and theme.
- Analyze imagery, personification, irony, hyperbole, paradox, and figures of speech in poetry and fiction.
- Examine the use of sound devices to create rhythm, appeal to the senses, or establish mood in literature.
- Recognize and examine a writer's use of poetic conventions and structures, such as line, stanza, rhythm, rhyme, meter, and sound devices.
- Interpret oral readings from literary and informational texts.
- Recite poetry using effective delivery skills, such as tone, rate, volume, pitch, gesture, pronunciation, and enunciation.

II. COMPOSITION

Students begin the Composition units by reading model essays and analyzing the essays from the perspective of both a reader and a writer. In writing their own essays, students apply the concepts they have learned from studying the models. Using the writing process, students plan, organize, write, revise, and proofread their essays, implementing feedback they receive from teachers and mentors. In addition to writing full-length essays, students also write timed responses to prompts, similar to those found on standardized tests.

Narrative: I Believe

Students analyze a sample narrative with the theme of "I Believe" and then write their own narrative that explains something they believe and how they arrived at that belief.



Persuasive Essay

Students analyze a sample persuasive essay, learn about the importance of using logical and emotional appeals and connotative language, and understand the significance of conceding a point and issuing a call to action. They then plan, write, and revise their persuasive essays.

Persuasive Speech

Students first read and then listen to a speech, based on the model persuasive essay. They study how an oral presentation differs from a written one. Then they use their own persuasive essays as the basis for writing and delivering their persuasive speeches.

Research Paper

Students analyze a model research paper on a scientific topic and learn how to locate appropriate resources and evaluate the reliability of the sources. They take notes, create a formal outline, and write and revise their own research papers.

Practical Writing

In this optional unit, students read a model cover letter and application for a job. Then they create their own cover letter and application for their “dream” job.

III. GRAMMAR, USAGE, AND MECHANICS

K12's Grammar covers not only grammar but also usage and mechanics. Often referred to as “GUM,” this online course helps students understand how language works so that they can apply the concepts in their own writing. In addition to GUM skills, lessons on such topics as clear sentences, sentence combining, parallel structure, placement of modifiers, wordiness, diction, and idioms help students learn skills frequently tested on standardized tests. Each lesson ends with an optional activity that provides additional practice.

Partial List of Topics Include:

- Prepositional Phrases
- Sentences and Sentence Errors
- Clauses: Adjective, Adverb, Noun
- Clear Sentences: Coordination, Subordination, Combining Sentences
- Subject-Verb Agreement
- Verb Forms and Usage
- Pronouns and Pronoun Usage
- Verbals and Verbal Phrases: Participles, Gerunds, Infinitives
- Refining Sentences: Modifiers, Parallel Structure

IV. VOCABULARY

K12's Vocabulary program uses the *Vocabulary Achievement* workbook (from Great Source Publisher) to provide a systematic approach to new vocabulary acquisition, application, and retention. Students study logical grouping of words in clearly structured lessons. To unlock word meaning, students apply a variety of strategies including contextual clues and determining roots and affixes. Students also practice the kinds of items that are frequently used in sentence-completion and critical-reading assessments, including the SAT.