

SCIENCE

**Unit 1: Cells and Microorganisms**

In this unit, you will study life science. You will explain how magnifiers such as microscopes or hand lenses are used to observe cells and their structure. You will recognize and determine the functions of plant and animal cell structures (i.e., cell membrane, cell wall, cytoplasm, nucleus, chloroplasts). You will distinguish between the structure and function of cells in multi-celled organisms and single-celled organisms. You will identify beneficial microorganisms and explain why they are beneficial, and you will identify harmful microorganisms and explain why they are harmful.

**KEY TERMS**

Very small objects and parts of objects can be seen by **magnifying** them so they appear larger. Magnification can also make it easier to see small details of an object. (S5L3a)

A **microscope** is used to magnify objects. Some objects are too small to be seen without magnification. (S5L3a)

**Cells** are the smallest unit of life and make up all living things. Cell structures perform basic life functions for the cell such as making energy, growing, repairing, and getting rid of waste. Cells can look different and perform different roles in an organism. All cells come from other cells. (S5L3b)

Cells are made up of many different parts. This table shows where you will find some cell **structures** and describes some of the **functions** of these cell parts. (S5L3b)

	Animal Cell	Plant Cell
Cell Wall	not found in animal cells	<ul style="list-style-type: none"> <li>outer layer of a cell</li> <li>provides support and structure to cell</li> <li>most plant cell walls are rigid</li> </ul>
Cell Membrane	outer layer of the cell	separates the cell wall from everything inside the cell
Cytoplasm	<ul style="list-style-type: none"> <li>the fluid and cell parts found within the cell</li> <li>all cell activity happens in the cytoplasm</li> </ul>	<ul style="list-style-type: none"> <li>the fluid and cell parts found within the cell</li> <li>all cell activity happens in the cytoplasm</li> </ul>
Nucleus	the part that controls all the activity in a cell	the part that controls all the activity in a cell
Chloroplast	not found in animal cells	produces sugar for the plant to use and to store

**Single-celled** organisms are made up of one cell, and all cell functions are performed by the one cell. Single-celled organisms are individual living organisms. (S5L3c)

**Multi-celled** organisms are made up of more than one cell. Different cells perform different functions within the organism. Multi-celled organisms have cells that depend on each other for the organism to survive. (S5L3c)

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**Microorganisms** are living things that are too small to be seen without magnification. They are not plants or animals, and they live on every part of the planet Earth. (S5L4a)

Some microorganisms are **beneficial** to people and the environment. Other microorganisms can be **harmful** and can cause **disease** and death. (S5L4a, b)

**Bacteria** are single-celled microorganisms. There are many different kinds of bacteria. Some bacteria can be used to make cheese. Bacteria are the oldest known life forms on Earth and live in almost every environment on Earth. Many bacteria are beneficial, but many other bacteria are harmful. (S5L4a, b)

A **germ** is a microorganism that can cause a disease. Because most microorganisms live in water, the tap water you drink has been cleaned to make the water safe to drink. (S5L4b)

**Microbe** is another word used for microorganisms. (S5L4a)

### **Important Tip**

*If you are having trouble remembering the parts of a plant cell, think of your home. The outside wall is like the cell wall, protecting what is inside and providing structure. The inside walls are like the cell membrane, which is just inside the cell walls. The cytoplasm is everything inside your home: you, the refrigerator where food is stored, everything. The nucleus is like a parent who decides what gets done and when inside the home. The chloroplasts are like the plants inside your home, making energy from the sunlight. (S5L3b)*

## **Unit 2: Classification**

In this life science unit, you will learn how plants and animals are sorted into groups (i.e., fish, amphibian, reptile, bird, and mammal) and how to classify organisms. You will classify things based on their characteristics by looking for similarities and differences. You will study vertebrates and invertebrates, as well as producers, consumers, and decomposers.

### **KEY TERMS**

You **classify** things when you organize them into **groups** based on **characteristics** they share. Scientists classify things so they can study ways those things are similar or different. A classification system can be used to identify and study species. (S5L1a)

Scientists use similarities, or things that the organisms have in common, to help them classify organisms into different groups. (S5L1a)

Sometimes scientists learn more things about a particular organism, and that new information makes them modify or change the way that the organism is classified. (S5L1a)

Animals are classified into animals with backbones, known as **vertebrates**, and animals without backbones, known as **invertebrates**. Vertebrates have a backbone, or spine, that runs the length of their body, and they are sorted into five groups: **fish, amphibian, reptile, bird, and mammal**. Primates and rodents are examples of vertebrates. (S5L1a)

Animals without backbones, known as **invertebrates**, make up 97% of all animal species. They include insects, spiders, and crabs. (S5L1a)

**Plants** are organisms that make their own food. They can be classified by the way in which they transport materials within the organism. They can also be classified by the way in which they reproduce.

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Many plants are classified by scientists as **vascular plants**. Vascular plants have tissues that let the plant move resources like water and sugars in the plant. Grasses and fruit trees are examples of vascular plants. **Nonvascular** plants are plants that do not have the tissues that vascular plants use to move resources. The nonvascular plants rely on simpler ways to move resources. Nonvascular plants also do not have stems and grow lower to the ground. Mosses and algae are examples of nonvascular plants. (S5L1b)

Some plants use **seeds** to reproduce, while others do not. Some plants make their seeds in **flowers**, while other plants do not. Ferns are classified as plants that do not make seeds. Pine trees are classified as plants that make seeds without using flowers. Apple trees and roses are examples of plants that make seeds by using flowers. (S5L1b)

Many plants are also classified by scientists as **deciduous**. Deciduous plants shed their leaves every year. **Coniferous** plants are plants that are classified as not losing their leaves **every season**. The majority of coniferous plants are trees. Most conifers are **evergreens**, such as pine, fir, and cedar trees. (S5L1b)

Flowering plants that protect their seeds by enclosing them in a structure such as a fruit are called **angiosperms**. Non-flowering plants that keep their seeds visible, usually in a cone, are called **gymnosperms**. Coniferous plants are gymnosperms. (S5L1b)

### Unit 3: Genetics

In this life science unit, you will learn about the characteristics of learned behaviors and inherited traits. You will be able to describe what a gene is and the role genes play in the transfer of traits.

#### KEY TERMS

In genetics, a **trait** is a physical characteristic of an organism that is inherited from the parents. The color of your eyes is a trait. Your **genes** will determine your physical traits such as skin, eye, and hair color. Other traits, such as height and weight, might be affected by your genes but will not be completely determined by genes. The collection of your traits makes you an individual, unique in your own way. (S5L2b)

Traits are said to be common when the majority of organisms have a similar trait. Being right-handed is a common trait because most people are right-handed. (S5L2b)

An **offspring** is the product of one or more parents. You are the offspring of your parents. Yeast, which is used to make bread, is an example of the offspring of a single parent. Each parent passes an equal amount of their genetic code to the offspring. (S5L2b)

The passing of traits from parent(s) to offspring is known as **heredity**. The color of your hair is an example of a trait that is passed down from parents to offspring. A trait that has been passed down is known as a **hereditary** trait. (S5L2a)

In contrast to traits, an organism also has **learned behaviors**. These are ways organisms act and react to their environment. When you get ready for school, at some point you tie your shoes. This is an example of a learned behavior. (S5L2a)

#### **Important Tip**

The environment plays a role in making you who you are. Your genes will determine some of your traits, like hair color, but environmental factors can also affect your hair color. As an older adult, your hair will

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start to turn gray or white. Some scientists have hypothesized and done studies that show that stress will cause your hair to change color earlier in your life. (S5L2a)

### Unit 4: Electricity/Magnetism

In this unit on physical science, you will learn to carry out investigations to become familiar with the characteristics of magnetic forces and static electricity. You will understand that, without touching them, an object that has been electrically charged pulls on uncharged objects and may either push or pull other charged objects. You will gain an understanding of the relationship between magnetism and electricity. You will also learn about the conditions necessary for electricity to flow through an electric circuit.

#### KEY TERMS

**Electricity** is the effect of the apparent flow of electrons through a conductor. People also refer to electricity when they talk about using electrical energy to power their homes, cars, and other things. (S5P3)

**Electric current** is the flow of an electric charge through a conductor. When electric currents move through a conductor, they create heat and magnetic fields. Lightning, static electricity, and the movement of electricity in power lines are examples of electric currents. (S5P3)

**Static electricity** is the buildup of an electrical **charge** in or on the surface of an object. When two objects, like a balloon and a piece of cloth, are rubbed together, some of the electrons from one object stick to the other object. This causes the buildup of a charge on one of the objects. When a second object is brought near the first object, the buildup of the electrical charge can jump across to the second object. When the electrical charge jumps from one object to another, it is said to have discharged. This is the spark you see. (S5P3a)

**Electric force** is the force of attraction between two electrically charged objects or a charged object and a neutral object. When you use a balloon to pick up pieces of paper, the electric force between the balloon and pieces of paper is great enough to pick up the pieces of paper. Objects cling to each other when there is enough electric force. (S5P3a)

To make an **electric circuit**, you need at least a **power source** and a path for the electric current to flow through. You can add objects, such as light bulbs, along the path. You can also add a **switch** to start and stop the flow of an electric current to the circuit. (S5P3b)

**Conductors** are any type of object through which an electric current can flow. Metal wire is the most common conductor. Conductors are used in electric circuits. **Insulators** are any type of object through which an electric current cannot flow. Glass and rubber are very common **insulating materials**. Insulators are used to protect people from electric currents. (S5P3c)

**Magnetism** is produced when **magnetic fields** are generated. Magnetism is a property of certain types of materials that allows them to attract or repel other objects that have this property. Magnetism is generated by the presence of magnetic fields or by the presence of an electric current. (S5P3d)

An **electromagnet** is created when an electric current flows through a wire. In general, the wire in an electromagnet is wrapped around a **core** made of a magnetic metal such as iron or steel. A magnetic field is created around the wire, turning the core into a temporary magnet. When the electric current is

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turned off, the magnetic field quickly fades. You can make an electromagnet using a circuit with a battery, switch, and wire wrapped around a nail. (S5P3d)

### **Important Tip**

*Electricity and magnetism are connected to each other. Electricity can produce magnetism. When an electric current flows through a wire, it creates a very small magnetic field. The field is so small it can barely be measured. If you take a wire and create a bunch of loops around it, it will generate a bigger magnetic field. If you wrap the wire around a magnetic metal core, the magnetic field generated from the wire will create a much stronger magnetic field. Magnetism can also create electricity. If you take the loops of wire and move a magnet by the wire, the magnetic field of the magnet will push the electrons in the wire around, creating an electric current. If you were to pass the magnet by the wire loops many times very, very quickly, you would create a stronger electric current. (S5P3d)*

## Unit 5: Chemical and Physical Change

In this physical science unit, you will explain the difference between chemical and physical changes. You will conduct basic experiments and determine whether matter has changed physically by separating mixtures or chemically by observing changes in the properties of substances before, during, and after a chemical reaction. You will develop a basic understanding of the Law of Conservation of Matter.

### **KEY TERMS**

**Physical properties** are any properties that are measurable and can be seen. Physical properties can be determined without changing the chemical properties of an object. Color, hardness, area, length, strength, and temperature are some examples of physical properties. (S5P2a)

**Chemical properties** are any properties that can only be measured by chemically changing an object. Paper starts to burn at around 450°F. At this temperature the paper combines with oxygen in the air and new substances are formed. (S5P2c)

A **physical change** happens when matter has a change in its physical properties but not its chemical properties. For example, salt can be dissolved in water but, if the water evaporates, the salt is still there. (S5P2a)

**Substance** is matter of any form that cannot be broken down into separate elements by physical means but can be broken down using chemical changes. (S5P2c)

A **chemical change** happens when matter breaks down into two or more substances or when more than one substance is combined to form a new substance. Hydrogen peroxide forming bubbles on its own is an example of matter breaking down into two substances. Vinegar and baking soda turning into bubbling foam is an example of two substances combining to create other substances. (S5P2c)

A **chemical reaction** is a process where two or more substances change chemically from one substance to one or more other substances. When iron is combined with air, the iron is slowly converted into rust. (S5P2c)

A **mixture** is something that contains two or more substances that are not combined chemically. Salted popcorn is an example of a mixture. (S5P2a)

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Something is a mixture if you can physically **separate** the substance into the substances that made up the mixture. You can tell that salt water is a mixture because you can evaporate the water and all that will be left in the glass is some salt. (S5P2a)

**States of matter** are the different forms in which matter can be found. Water is a **liquid**, the state of matter that has a definite volume but no fixed shape. When water is ice, it is a **solid**. Solids have a definite shape and volume. Their shape and volume cannot be easily changed. When water is steam, or water vapor, it is a **gas**. Gases have no definite shape and take the shape of their container. (S5P2b)

**Matter** is anything that has mass and is in one of the states of matter. (S5P1a)

Regardless of how parts of an object are assembled, the total weight of the whole object is always the same as the sum of the parts. (S5P1a)

### **Important Tip**

*Determining if a physical or chemical change has occurred can be hard to figure out. Two good questions to ask are the following: Does the matter still look the same? Could you change the matter back to what it was before the change? A physical change is something that can be reversed. You can tear a piece of paper, but you still have a piece of paper because only the dimensions of the paper change. A chemical change is something that cannot easily be reversed and usually means there is a different form of matter. If you took the torn piece of paper and burned it, you would have some ash. Is that ash the same as the paper, and could you change the ash back to paper? The answer is no. (S5P2a, b)*

## **Unit 6: Earth Science**

In this unit on earth science, you will identify surface features of Earth caused by constructive and destructive processes. These processes include, but are not limited to, volcanoes, earthquakes, erosion, and weathering. Students should also be able to relate the role of technology and human intervention to the control of constructive and destructive processes.

### **KEY TERMS**

**Weathering** is a destructive process where Earth materials such as rocks and soil are broken down into smaller parts. Weathering can also break down roads, buildings, and other materials humans make. (S5E1a)

**Erosion** is the movement of materials from one place to another by natural methods. Erosion can be a destructive process, such as when a landslide moves material from the top of a mountain. Erosion can also be a constructive process, such as in the Mississippi Delta. Soil is eroded from farther up the Mississippi River and is carried down to the delta where it creates new land. (S5E1a)

**Deposition** is the process whereby soil and rock that is eroded from one location is deposited as **sediment** in another location, such as the soil in the Mississippi Delta. (S5E1a)

**Continental drift** is the process of the continents slowly moving around the surface of Earth. The surface of Earth, including under the ocean, is made up of **tectonic plates**. These plates form sections of the surface of Earth, and some plates move toward or away from each other. Plates can also slide past each other. (S5E1a)

The area where two or more tectonic plates meet and show movement is called a **fault**. (S5E1a)

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**Trenches** can be found where faults are located under the ocean. Much smaller trenches are also created by erosion. **Glaciers**, sheets of very old ice the size of states that move along Earth's surface, also create trenches as they slowly grind along the surface. (S5E1a, b)

**Ridges** are formed when tectonic plates collide and both push up. This creates hills and mountains. Ridges and individual mountains can also be formed in areas where **magma**, molten rock, from Earth's core pushes up between or through tectonic plates. Stone Mountain may be one of these magma-created mountains. (S5E1a)

A **volcano** is a break in Earth's crust that lets magma come out from the mantle and onto Earth's surface. Volcanoes can be found in the deep ocean and on Earth's surface. They are a constructive process. Volcanoes show up on Earth's surface where the magma can push through weakness in the crust. (S5E1a, b)

Magma is the molten rock below Earth's crust. When magma breaks the crust, it is called **lava**. Lava is thrown out by volcanoes. The islands of Hawai'i are **landforms** created by volcanoes. (S5E1a)

Tectonic plates move very slowly because they are pushing against each other with great force.

**Earthquakes** happen when tectonic plates suddenly slide around. The plates shake, and the energy from that creates waves that echo through Earth. (S5E1a, b)

Earthquakes and volcanoes can both happen underwater. When earthquakes happen underwater, they can cause tsunamis. This happens when the energy released by the earthquake is transferred to the column of water above it and creates waves that travel away from the area. **Tsunamis** happen where the ocean meets the shore. The water starts to rise as the waves from the earthquake push the water up. Tsunami waves are longer than regular water waves. As a tsunami wave hits the shore, it carries much more water and creates a lot of damage. (S5E1b)

Humans can affect constructive and destructive processes and may do so to protect people or landforms when the processes will result in undesirable results. **Beach reclamation** to reduce the effects of erosion on beaches can be accomplished by dredging sand from the ocean floor and depositing it back on the beach. **Floods** can be controlled by building **dams** to hold back floodwaters and to let the excess water move downstream more slowly, or by building **levees** (earthen walls along riverbanks) to prevent rivers from going outside their banks onto surrounding land. Cities can also modify their storm drain systems or direct the drainage flows to **retention ponds** to slow the runoff of rainwater into streams and rivers to reduce the risk of flooding downstream. (S5E1c)

Scientists have a tool they use to predict earthquakes, volcanic eruptions, and tsunamis. This tool is known as a **seismograph**. Seismic waves are vibrations that move through Earth. As an earthquake or volcanic eruption starts, a seismograph detects the increase in the strength and frequency of seismic waves. (S5E1c)

### **Important Tips**

*There are many areas on Earth where tectonic plates meet. One such area is known as the Ring of Fire, which runs from the southern tip of South America, up the Pacific Ocean side of North America, across the Bering Strait, down the Asian coastline, and alongside Japan and Australia. The tectonic plates along this area move around a lot. The crust is also thinner in this area, so there are a lot of volcanoes, which is how it got the name "Ring of Fire." (S5E1b)*

Some areas of Earth have more weathering and erosion than other areas. There are many reasons for this. Weathering can break down rocks when water freezes, so areas that are often rainy and cold are more likely to see weathering. Windy areas also experience weathering because the wind wears down

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the surface of the rock. Erosion is more likely to occur in areas of moving water, such as rivers and streams. Because soil and rock moves downhill, higher areas of Earth will always see more erosion than lower areas. (S5E1a, b)

### Social Studies

#### **Unit 2: Effective Citizenship**

In this unit, you will learn to explain the responsibilities and freedoms of citizens. Students will understand due process of law and demonstrate understanding of its connection to the U.S. Constitution and citizens' rights. Students will also explore and explain the purpose of the amendment process, the relationship between constitutional amendments and our representative democracy, and the impacts of particular amendments on citizens of our society.

##### KEY TERMS

##### **Bill of Rights:**

The first ten amendments to the U.S. Constitution, written by James Madison to guarantee individual liberties for citizens of the newly established nation.

(CG1b)

**Citizenship:** Membership of an individual in a country. A citizen is expected to give allegiance to the government. The government is expected to protect the safety, rights, and freedoms of the citizen in the United States. (CG1a)

**Rights of a citizen:** Freedoms protected by the U.S. Constitution. In the United States, these include the rights to assemble peacefully, to worship or not worship as one pleases, to freely express one's opinion, and to own property. (CG1b)

**Responsibilities of a citizen:** Obligations to help maintain the nation of which a citizen is a member. In the United States, these include obligations to pay taxes, serve on juries, and vote. (CG1a)

**Market:** Place where producers and consumers engage in the exchange of goods and services for money. (E3a)

**Price:** The cost a consumer must pay to purchase a good or service from a producer. (E3a)

#### **Unit 3: The Civil War: The Nation Divided**

In this unit, you will learn about the Civil War. You will examine historical events and the key figures who influenced history and major events. You will learn about the Confederacy and the Union, states' rights, and some famous Civil War battles.

##### KEY TERMS

**The Civil War:** A result of sectional differences between the North (Union) and the South (Confederacy). (H1)

**John Brown:** Led the raid on Harper's Ferry, Virginia, (now West Virginia) in the mid-1800s. (H1a)

**Harper's Ferry, Virginia (now West Virginia):** Site of a raid in the mid-1800s by white abolitionist John Brown. Brown led an army of eighteen men in a raid on a U.S. arsenal, planning to use the weapons for an armed slave revolt. This event led the nation closer to the Civil War. (H1a)

**Uncle Tom's Cabin:** An anti-slavery novel by Harriet Beecher Stowe. It is considered by many to have brought the issue of abolition into public awareness. It brought the nation closer to the Civil War. (H1a)



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**Slavery:** The practice of owning human beings. In the pre–Civil War American South, more than three million African Americans were held in slavery, mostly by white owners. (H1b)

**States' rights:** The idea that the federal government has very limited authority over the laws of individual states. The notion was used by Southern states before and during the Civil War to justify resistance to federal laws regulating or prohibiting slavery before the Civil War. (H1b)

**The Confederacy:** Also called the Confederate States of America, this was the collective name for the eleven Southern states that seceded from the Union before and during the Civil War. In order of secession, they were South Carolina, Mississippi, Florida, Alabama, Georgia, Louisiana, Texas, Virginia, Arkansas, North Carolina, and Tennessee. (H1)

**The Union:** States that did not secede from the United States during the Civil War. (H1e)

**Jefferson Davis:** President of the Confederacy from its establishment. (H1d)

**Stonewall Jackson:** Successful Confederate general during the Civil War. His death from pneumonia in 1863 dealt a severe blow to the Confederacy. (H1d)

**Abraham Lincoln:** The president of the United States and leader of the Union during the Civil War. He was assassinated by actor John Wilkes Booth less than a week after the war's conclusion. (H1d)

**Fort Sumter:** Site of the battle that marked the beginning of the Civil War. (H1c)

**Atlanta Campaign:** A Civil War military campaign led by Union General William T. Sherman against Confederate forces in the South. The success of the Union forces in taking the city of Atlanta proved a large setback for the South. (H1c)

**Gettysburg, Pennsylvania:** Site of the Civil War's largest battle. This failed attempt by Confederate General Robert E. Lee to invade the North is considered by many to be the Civil War's turning point. (H1c)

**Sherman's March to the Sea:** Civil War campaign in which General William T. Sherman marched 60,000 Union soldiers from Atlanta, Georgia, to Savannah, Georgia. The purpose of the march was to intimidate Confederate citizens into demanding an end to the war. (H1c)

**Appomattox Court House:** The Virginia village where Confederate General Robert E. Lee surrendered to Union General Ulysses S. Grant in 1865. This surrender effectively ended the Civil War. (H1c)

### Unit 4: Reconstruction: The Nation Reunited

In this unit, you will learn about the period following the Civil War, known as Reconstruction. You will learn about amending the U.S. Constitution and some key amendments.

#### KEY TERMS

**The Reconstruction Era:** The period immediately following the Civil War, when the federal government set the conditions by which Confederate states would be allowed to return to the Union. (H2)

**13th Amendment:** A Reconstruction constitutional amendment that abolished slavery. One of three Reconstruction-period amendments passed after the Civil War, it was added to the U.S. Constitution in 1865. (H2a, CG3b)

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**14th Amendment:** A Reconstruction constitutional amendment granting full citizenship to anyone born in the United States, including freed African Americans. It also guarantees due process for all citizens and prohibits individual states from denying anyone equal protection under the law. (H2a)

**15th Amendment:** A Reconstruction constitutional amendment that prohibits federal and state governments from denying a citizen the right to vote based on his or her race. (H2a, CG3b)

**Due process:** The U.S. Constitution's guarantee of fair treatment for any citizen accused of a crime. (CG1c)

**Freedmen's Bureau:** A government agency initiated by President Abraham Lincoln. Its purpose was to help newly freed African Americans following the Civil War. The Freedmen's Bureau built schools, provided housing, created hospitals, and helped newly freed slaves find jobs. (H2b)

**Jim Crow laws:** Named after a minstrel-show character. These laws were passed by Southern states following Reconstruction. Their purpose was to establish and enforce racial segregation (separation of the races) in everyday life. (H2c)

**Literacy tests:** Tests administered by state governments to make sure all voters could read. These tests were often given in ways intended to prevent African Americans from voting. (H2c)

**Poll taxes:** Taxes required in order to vote in elections. These taxes often prevented African Americans and poor whites from being able to vote. (H2c)

**Sharecropping:** An arrangement in which a farmer grows crops on land belonging to someone else. In return, the farmer receives a share of the value of the crops. This practice became widespread in the South after the abolition of slavery. (H2c)

### AMENDING THE U.S.CONSTITUTION (CG2)

**There are two ways to propose a constitutional amendment:**

1. An amendment can be proposed by two-thirds of both houses of Congress.
2. Two-thirds of the nation's state legislatures can call upon Congress to hold a Constitutional Convention where amendments can be proposed. (This has never been done.)

**There are also two ways to ratify (approve) a constitutional amendment:**

1. Three-fourths of the nation's state legislatures can vote for ratification.
2. Three-fourths of all states can hold ratifying conventions during which they approve an amendment. (This has only been done once.)

### Unit 5: Bigger, Better, Faster: The Changing Nation

In this unit, you will learn how the United States became an industrial and world power. Some of the famous historical figures you will study are George Washington Carver, Thomas Alva Edison, and the Wright Brothers. You will learn about the Chisholm Trail and the Panama Canal.

#### KEY TERMS

**Alexander Graham Bell:** A Scottish immigrant credited with inventing the first practical telephone. (H3b)

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**Business sector:** In our nation's free-market economy, the business sector is the segment that includes the production of goods and services. (E2a)

**George Washington Carver:** An African American, born into slavery in Missouri, who revolutionized American agriculture with his research into new crops, new uses for crops, and effective methods of soil conservation. (H3b)

**Chisholm Trail:** A trail used to drive longhorn cattle from Texas to Kansas during the period following the Civil War. (H3a, G1b)

**Thomas Alva Edison:** An American inventor who received more than 1,000 patents. He is credited with the development of the phonograph, the motion picture, and the electric light bulb. (H3b)

**Entrepreneur:** Someone who takes a risk to start and maintain a business. (E3c)

**Panama Canal:** A water passage located in the nation of Panama. It connects the Atlantic Ocean to the Pacific Ocean. (H3c, E1e)

**Spanish-American War:** A conflict between Spain and the United States. It brought about the end of Spanish colonization in North and South America. At the end of the war, the United States gained control of Guam, Puerto Rico, and the Philippines and expanded its influence in world affairs. (H3c)

**Wright Brothers:** Orville and Wilbur Wright were two American inventors who are credited with inventing the first successful airplane. They made the first heavier-than-air human flights at Kitty Hawk, North Carolina, at the start of the 20th century. (H3b)

### Unit 6: Ups and Downs: World War I, the Jazz Age, and the Great Depression

In this unit, you will move into the 20th century with a focus on history and economics. You will learn about World War I and the major movements of that time period, such as the growth of the free-market economy, the Great Depression, the Harlem Renaissance, the Jazz Age, and President Roosevelt's New Deal.

#### KEY TERMS

**World War I:** An international conflict that primarily involved European nations until the United States entered the war in 1917. The Allied Powers (France, Italy, Great Britain, and Russia), with the help of the United States, emerged victorious over the Central Powers (Germany, Austria-Hungary, and Turkey). (H4a)

**Lusitania:** A British cruise ship attacked and sunk by a German submarine. There were nearly 2,000 civilians on board, including several Americans. The attack was one reason for the United States' entry into World War I. (H4a)

**19th Amendment:** Guaranteed women the right to vote. The amendment was ratified in 1920. (CG3b)

**The Roaring Twenties:** Name given to the 1920s, ending with the onset of the Great Depression. The period was marked by a powerful U.S. economy, the rise of the middle class, and a mood of optimism. (H4b)

**Herbert Hoover:** A president of the United States. He took office shortly before the Great Depression and was defeated by Franklin Roosevelt after a single term. (H5a)

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**Franklin Delano Roosevelt:** A president of the United States. He was the first president to take office after the beginning of the Great Depression. He was reelected three times, presided over the nation's economic recovery, and died in Warm Springs, Georgia, while he was still president. (H5a)

**The Great Depression:** A period of economic hardship affecting the United States and other nations. It began with the stock market crash of 1929 and lasted into the 1940s. (H5a)

**Banking sector:** The part of the economy that provides financial support for individuals and businesses. (E2c)

**Business sector:** In a free-market economy, the business sector is the segment that produces goods and services. (E2b)

**Government sector:** The part of the economy that collects taxes and provides and manages public services. (E2d)

**Dust Bowl:** The name given to the south-central area of the Great Plains during the 1930s, when drought and soil erosion resulted in a period of severe dust storms. (H5a)

**New Deal:** The name given to President Franklin Roosevelt's economic policies and programs designed to lift the U.S. economy from the Great Depression. (H5b)

### KEY IDEA

**Cultural Development and Individual Contributions of the 1920s and 1930s Harlem Renaissance:** A period of intense African American artistic creativity in literature, art, and music that originated in Harlem, New York, and expanded across the country. Langston Hughes contributed to the Harlem Renaissance through literature.

**Jazz Age:** The period when the genre of music known as jazz became popular. Louis Armstrong and Duke Ellington helped make jazz popular.

**Babe Ruth:** A famous baseball player who increased the popularity of the sport.

**Henry Ford:** An entrepreneur who improved the assembly line and created a car (the Model T) that was affordable for most Americans. He contributed to the economic boom of the 1920s and put the United States on the move.

**Charles Lindbergh:** The first person to fly solo across the Atlantic Ocean.

**Margaret Mitchell:** An author who wrote *Gone with the Wind*.

**Jesse Owens:** An African American athlete who won gold medals at the 1936 Olympic Games in Berlin.

## Unit 7: Hot & Cold: World War II and Its Aftermath

In this unit, you will learn about World War II and the events that followed it. You will learn about communism, the Cold War, the Cuban missile crisis, the atomic bomb, the Holocaust, and the Iron Curtain. You will study historical figures who left their impact on the world, including Winston Churchill, Emperor Hirohito, Joseph McCarthy, Joseph Stalin, Adolf Hitler, and American Presidents Franklin

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Delano Roosevelt and Harry S. Truman. You will also learn about the contributions of the Tuskegee Airmen.

### KEY TERMS

**Franklin Delano Roosevelt:** A president of the United States and leader of the nation during most of World War II. He died in office, and Vice President Harry S. Truman took office after him. (H6d)

**Harry S. Truman:** A president of the United States. He authorized the use of atomic bombs on the cities of Hiroshima and Nagasaki during World War II, which led to Japan's surrender. (H6d)

**Winston Churchill:** Prime Minister of Great Britain during World War II. (H6d)

**Hirohito:** Emperor of Japan during World War II who fought against the United States. He ruled Japan as a monarch for over 62 years. (H6d)

**Adolf Hitler:** Dictator of Germany during World War II. He ordered attacks on neighboring countries in Europe, which started World War II, and founded the Nazi Party. (H6d)

**Benito Mussolini:** Fascist dictator of Italy and ally of Adolf Hitler during World War II. (H6d)

**Joseph Stalin:** Communist dictator of the Soviet Union during and after World War II. Under his rule, the Soviet Union was a member of the Allies. (H6d)

**The Holocaust:** The organized mass murder of European Jews by Hitler's Nazi Party during World War II. (H6b)

**Pearl Harbor:** Hawaiian site of the U.S. naval base that was attacked by Japan in 1941. The United States responded by declaring war on Japan and entering World War II. (G1b, H6b)

**Rosie the Riveter:** A fictional character who symbolized American female factory workers during World War II. (H6e)

**Tuskegee Airmen:** Group of African American aviators who served with distinction during World War II. Their success helped pave the way for integration of the U.S. armed forces. (H6e)

**D-day:** The name given to June 6, 1944. It was on that day that Allied forces invaded Western Europe, setting the stage for Allied victory in World War II. (H6b)

**Iwo Jima:** An island in the West Pacific taken from Japan by the United States during World War II. (H6b)

**Hiroshima and Nagasaki:** Japanese cities that the United States dropped atomic bombs upon during World War II. These acts led to Japan's surrender. (H6c)

**V-E Day:** May 8, 1945. This was the day that Germany's Nazi forces surrendered to the Allies, marking the end of World War II in Europe. The abbreviation "V-E" stands for "Victory in Europe." (H6b)

**V-J Day:** September 2, 1945. This was the day of Japan's official surrender to the Allies, marking the end of World War II in the Pacific arena. The abbreviation "V-J" stands for "Victory over Japan." (H6b)

**NATO:** The North Atlantic Treaty Organization, an alliance of Western democratic nations formed after World War II to defend themselves against communist aggression. (H7b)

**United Nations:** An international organization formed after World War II to promote cooperation among nations. It is headquartered in New York City. (H6f)

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**Berlin Wall:** A concrete and barbed wire wall separating East and West Berlin. The wall prevented defections from East Berlin (which was communist) to West Berlin (which was democratic). (H7a)

**Berlin Airlift:** A military operation led by the United States after World War II. The residents of West Berlin, Germany, were blockaded by the Soviet Union. Led by the United States, Western nations delivered food and supplies to them by airplane. (H7b)

**Cold War:** The battle for international influence that arose between communist and democratic nations following the end of World War II. (H7)

**Iron Curtain:** The name given to the physical and political division between Eastern, or communist, countries and Western, or capitalist, nations during the Cold War. The United States fought a “cold war,” or nonmilitary battle, against the Soviet Union to prevent the spread of communism into democratic countries. (H7a)

**Communism:** The political idea that all property should be publically owned and managed by a central government. (H7a)

**Korean War:** A conflict between communist North Korea hoping to unify the country under a Communist government and democratic South Korea. North Korea was allied with the Chinese, and South Korea was allied with UN forces led by the United States. The war ended and divided Korea into communist North Korea and democratic South Korea. (H7b)

**Cuban missile crisis:** A dispute during the Cold War between the United States and the Soviet Union. The Soviet Union had built missile sites in Cuba. President John F. Kennedy set up a naval blockade of the island until Soviet leader Nikita Khrushchev ordered the missiles removed. (H8a)

**Joseph McCarthy:** The U.S. senator who believed that some other congressmen and senators were secretly communist. He led investigations of his peers, as well as of several military officials and civilians, during the early 1950s. (H7c)

**Opportunity cost:** An economic term for what you must give up to obtain something else. It is always your second-best alternative. (E1a)



Who did this represent?

## Unit 8: Overcoming the Past: The Age of Civil Rights

In this unit, you will move into the latter part of the 20th century. Major events during the period included the Civil Rights movement, the Vietnam War, and the assassinations of three major leaders. Students are not required to memorize Lee Harvey Oswald, Jack Ruby, Sirhan Sirhan, or James Earl Ray.

### KEY TERMS

**24th Amendment:** An amendment to the U.S. Constitution that banned poll taxes as a condition for voting. Poll taxes had been one of many methods used in some Southern states to discourage certain groups, especially African Americans, from voting. (CG3b)

**Literacy tests:** Tests administered by state governments to prevent African Americans from voting. (H8b)

**Poll taxes:** Taxes required in order to vote in elections. These taxes often prevented African Americans and poor whites from being able to vote. (H8b)

**Thurgood Marshall:** African American attorney who successfully argued *Brown v. Board of Education* before the Supreme Court. He became the first African American Supreme Court justice when he was appointed by President Lyndon B. Johnson in 1967. (H8b)

***Brown v. Board of Education:*** The 1954 Supreme Court case ruling that racial segregation of public schools is unconstitutional. Previously, many districts had maintained separate schools for white and African American children. After the decision, the federal government required actions to racially integrate public schools. (H8b)

**Civil Rights Act of 1964:** Legislation passed by Congress that outlawed discrimination based on race, color, religion, sex, or national origin. The act required any business that operated in the public sector to provide equal access to its goods and services to all Americans. (H8b)

**Montgomery Bus Boycott:** A mass campaign by African American citizens in Montgomery, Alabama that began in 1955. The public transit system in that city was segregated by race, and Rosa Parks's refusal to give up her bus seat to a white man resulted in her arrest. In protest, African Americans stopped using the bus system. This campaign continued for 381 days until the Supreme Court ruled racial segregation of public transit unconstitutional. (H8b, G1b)

**Voting Rights Act of 1965:** Legislation passed by Congress and signed by President Lyndon B. Johnson. The act made it illegal to require African Americans to take literacy tests in order to vote. (H8b)

**Vietnam War:** Conflict between Communist and anti-Communist forces that began in Vietnam. The United States was heavily involved in the war. In 1973, the United States pulled its forces from the Southeast Asian country. Afterward, the nation became united under a Communist government. (H8a)

We conclude that, in the field of public education, the doctrine of "separate but equal" has no place. Separate educational facilities are inherently unequal. Therefore, we hold that the plaintiffs and others similarly situated for whom the actions have been brought are, by reason of the segregation complained of, deprived of the equal protection of the laws guaranteed by the Fourteenth Amendment. —*Brown v. Board of Education* (1954)

## Unit 9: Understanding the News: America's Role in the 21st Century

In this unit, you will learn about the arrival of the 21st century. Major events of this time period include the 9/11 attacks and the war on terrorism, the birth of the Internet, and the economic principle of voluntary exchange.

### KEY TERMS

**Collapse of the Soviet Union:** In 1991, Soviet Leader Mikhail Gorbachev resigned his post as leader of the Soviet Union. Russian President Boris Yeltsin assumed Gorbachev's authority over that nation, and the remainder of the Soviet Union countries became independent. (H9a)

**Persian Gulf War:** A conflict in which the United States helped the Middle Eastern nation of Kuwait repel an invasion by Iraq led by dictator Saddam Hussein. (H9a)

**9/11 attacks:** The worst terrorist incident in U.S. history took place on September 11, 2001. On that morning, a group of radical Islamic terrorists took over four commercial airplanes. Two of the planes were deliberately crashed into the World Trade Center in New York City, killing nearly 3,000 people. A third was flown into the Pentagon, killing more than 230 people. The fourth plane crashed into a field in Pennsylvania after passengers took action to prevent it from being used to crash into the U.S. Capitol building. Everyone on board was killed: thirty-three passengers, seven crew members, and four hijackers. (H9a)

**War on terrorism:** The international campaign against terrorist activity that was launched after the 9/11 attacks. (H9a)

**The Internet:** The informal name for a worldwide communication system that links individuals and businesses. Since the early 1980s, this development has revolutionized how people interact and conduct business. (H9b)

**Voluntary exchange:** The economic principle that buyers and sellers will willingly engage in free-market transactions. For this to occur, both the buyer and the seller must believe that they are better off as a result of the transaction. (E1d)

## Unit 10: Effective Citizenship: Conclusion

In this unit, we end where we began, with the concept of citizenship. The focus of the unit is on business, finance, and the growth of the economy.

### KEY TERMS

**12th Amendment:** An amendment to the U.S. Constitution. It reformed the procedure for choosing the nation's president and vice president in the event of a tie vote in the Electoral College. (CG3a)

**17th Amendment:** An amendment to the U.S. Constitution. It provided for the election of state senators by popular vote. The amendment also set the term length for senators at six years. (CG3a)

**23rd Amendment:** An amendment to the U.S. Constitution. It allowed residents of the District of Columbia to vote in presidential elections. (CG3b)

**24th Amendment:** An amendment to the U.S. Constitution that banned poll taxes as a condition of voting. Poll taxes had been one of many methods used in some Southern states to discourage certain groups, especially African Americans, from voting. (CG3a)



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**Banking sector:** The part of the economy that provides financial support for individuals and businesses. (E2)

**Business sector:** In a free-market economy, the business sector is the segment that produces goods and services. (E2b)

**Government sector:** The part of the economy that collects taxes and provides and manages public services. (E2d)

**Personal finance:** The set of financial choices made by individuals. Responsible personal finance includes sensible budgeting, investment, and saving. (E4)

### Study the Bill of Rights: 1789-91

**First Amendment:** freedom of religion, freedom of speech, freedom of the press, and freedom of assembly

**Second Amendment:** the right of the people to keep and bear arms

**Third Amendment:** restriction of housing soldiers in private homes

**Fourth Amendment:** protection against unreasonable search and seizure

**Fifth Amendment:** protects against self-testimony, being tried twice for the same crime, and the seizure of property under eminent domain

**Sixth Amendment:** the rights to a speedy trial, trial by jury, and to the services of a lawyer

**Seventh Amendment:** guarantees trial by jury in cases involving a certain dollar amount

**Eighth Amendment:** *prohibits excessive bail or fines and cruel and unusual punishment for crimes*

**Ninth Amendment:** the listing of rights (in the Bill of Rights) does not mean that other rights are not in effect

**Tenth Amendment:** power not granted to the Federal Government is reserved for states or individual people

<http://bensguide.gpo.gov/j-bill-rights-1789-91>