

HISTORY & CULTURE BENCHMARKS

Subject	First Grade	Second Grade	Third Grade
History	<p>Calendar</p> <p>Demonstrate their understanding of time by measuring in equal units reinforced by using days, months and years.</p> <p>Correctly construct a calendar using the appropriate names for the months and days in the correct order.</p> <p>Knows which months have 30 days and some months that have 31 days.</p> <p>Knows why February has 28 days (and 29 every 4 years)</p> <p>Can recite the names of the months of the year in the correct order.</p> <p>Four Seasons</p> <p>Can place the appropriate pictures in the correct place in the timeline.</p> <p>Can distinguish between Spring, Summer Autumn & Winter.</p> <p>History & Grammar</p>	<p>Concept of Time BC/AD (BCE/CE)</p> <p>Knows that modern time began tracking at the birth of Jesus Christ. BC means Before Christ and AD means Anno Domini means “Year of our Lord”.</p> <p>Knows that modern time also refers to this as Before the Common Era, and the Common Era.</p> <p>Knows that a century is demarcated by counting to 100 in either direction.</p>	<p>Longitude & Latitude</p> <p>Knows that the lines running East-West are parallel lines or latitude lines.</p> <p>Knows the longest parallel line is the equator and it is 0 degrees. Parallels occur in 15 degrees intervals.</p> <p>Knows that the North Pole is 90 degrees N, and the South Pole is 90 degrees S.</p> <p>Knows that you start at the Prime Meridian is 0 degrees. Everything that is West of the Prime Meridian is West Longitude and everything East is East Longitude.</p>

	<p>Students use the pronoun symbol and the verb symbol to discern if something is past, present or future tense.</p> <p>Students use words to describe and categorize into past, present and future tenses.</p> <p>The First Earth History Timeline</p> <p>Students know the names of the eras and periods of prehistoric time.</p> <p>Students can use the metaphor of a clock to understand the vastness of prehistory.</p>		
<p>Our Universe</p>	<p>Creation Stories</p> <p>Students know that creation stories are orally transmitted from elders to young people in each culture.</p> <p>Students locate these cultures on a map or a globe and relate them to modern day countries.</p> <p>Students know that cultures use different symbology depending on where that culture is located.</p> <p>Big Bang Theory</p> <p>Students know that the story of the Big Bang theory is a scientific theory based on observations of the universe.</p> <p>Students understand the process outlined in the Big Bang Theory</p>	<p>Our Universe, Cosmology & Astronomy</p> <p>Students know that a constellation is a group of stars that seem to form a picture and whose patterns were recorded by ancient cultures worldwide.</p> <p>Students know that different constellations will appear at certain times of the year due to Earth's orbit</p>	<p>Climate Zones of the Earth</p> <p>Students know that climate means the general weather conditions of a particular region.</p> <p>Students know that how the rays of the sun meet the Earth determines the climate of a particular zone.</p> <p>Students know the names and characteristics of Earth's major climates.</p> <p>Students understand the relationship between the sun's rays, hemispheres, and seasons.</p>

Formation of the Galaxies

Students know the definitions of galaxies and nebulae.

Students know that gravity is the force that pulls things towards each other.

Students know the three main galaxies: spiral, elliptical and irregular.

Students know that our galaxy is called The Milky Way and that it is a spiral galaxy

Birth & Death of Stars

Students know there are small, medium and large main stars.

Students know that the smallest stars live the longest while the largest live the shortest.

Students know that all stars begin to form from hydrogen.

Students know that the core of the star heats up through nuclear fusion.

Students know the elements needed for a star to live, and how they are formed.

Students know that all of these elements are pulled together by gravity, forming a supernova.

	<p>Students know that all the energy released by a supernova goes right back into the Universe where it will be used to form new stars and planets.</p> <p>Formation of Our Solar System</p> <p>Students know that a nebula is a nursery for the stars.</p> <p>Students can define 'planetesimals' & know how they are formed.</p> <p>Students understand the basic process by which our Solar System was formed.</p> <p>Students know that our solar system was created when the Universe was 10,000 million years old. Our solar system is 4,600 million years old</p> <p>The Planets</p> <p>Students know the sizes and relative locations of the planets in our Solar System</p> <p>Students know that Pluto was reclassified as a dwarf planet in 2006.</p>		
<p>Sun and Earth</p>	<p>Sun and Earth</p> <p>Students know that the attraction between the Sun and Earth is called gravity.</p> <p>Students learn that the Earth is moving forward and that this called velocity. The</p>	<p>Sun and Earth</p> <p>Students understand Earth's elliptical orbit</p> <p>Students know that Earth rotates on its axis 365 times in a year and the axis is always tilted in the same direction.</p>	

	<p>earth maintains that distance due to its relative velocity and gravitational pull.</p> <p>The Formation of the Earth</p> <p>Students understand the basic process by which Earth was formed.</p> <p>Students know that it took a million years for the Earth to reach ½ its present size, and 90 million years to reach its present size.</p>	<p>Students know the definitions of perihelion and aphelion, and how they relate to the solstices and equinoxes.</p>	
<p>Geology</p>		<p>Geology: Life Comes to Earth</p> <p>Students know that life on Earth began about a billion years ago by examining the sedimentary rock.</p> <p>Students know that fossils are the evidence of life present, preserved in rock & sediment.</p> <p>Students know that a cell is a basic part of living matter, and that the materials necessary to make cells were found in warm oceans.</p> <p>Students know that molecules of methane, ammonia, and water made up “sea soup,” and that these 3 elements make up life.</p> <p>Students know that long carbon chains formed CHONs and they can replicate themselves. They eventually formed the building blocks of amino acids.</p>	

		<p>Students understand the importance of prokaryotes in early life.</p> <p>Students know that photosynthesis means putting together with the help of light.</p> <p>Students know that the first organisms to breath are called Cyanobacteria.</p> <p>Students know the ozone's job is to protect life from the damaging ultraviolet rays of the Sun.</p> <p>Students know that humans are made up of over 10 trillion Eukaryotic cells.</p>	
<p>Structure of Earth</p>	<p>The Earth's Interior</p> <p>Students know that the Earth is made up of 3 layers; Crust, Mantle and Core.</p> <p>Students understand the makeup and relative size of these layers.</p> <p>Formation of Mountains & Faults</p> <p>Students know that mountains are formed when molten rock flows up from the Mantle through cracks in the surface of Earth.</p> <p>Students know there are 4 different types of mountains; dome mountains, gorges, folded and fault block mountains.</p> <p>Volcanoes</p>		<p>Structure of the Earth Plate Tectonics</p> <p>Students understand the theory of Plate Tectonics.</p> <p>Students know that scientists recognize that continents used to be connected and that would be a reason for finding similar fossils on different continents.</p> <p>Students know that there are 7 major plates: Pacific, North American, South American, Eurasian, African, Indo-Australia, and Antarctic Plates.</p> <p>Students know that the plates move in 3 ways; Divergent, Convergent and Transform</p>

	<p>Students know that a volcano is a mountain formed by many layers of cooled lava (molten rock). Students know the definitions of magma, magma chamber, lava, conduit, fissures, and crater.</p> <p>Students know the differences between volcano types (cinder, shield, and composite)</p> <p>Students know that volcanoes can be active, dormant and extinct</p> <p>Three Major types of Rocks</p> <p>Students know the difference between Igneous, Sedimentary, and Metamorphic rocks.</p> <p>Students know how water and ice affect rock formation.</p> <p>The Earth's Insulation</p> <p>Students know that there are 2 different kinds of heat; one that comes from something burning and the other is from something that has collected the heat from something that is burning.</p> <p>Continents Globe</p> <p>Students know and identify 4 major oceans, the equator, the Northern Hemisphere, and the Southern Hemisphere</p>		<p>Students understand how the movement of plates can result in volcanoes and mountains.</p> <p>Earthquakes</p> <p>Students know how earthquakes are formed, and where they generally occur.</p> <p>Students know the definitions of seismograph, epicenter, magnitude, intensity, and waves.</p> <p>Composition of the Earth</p> <p>Students know that a rock is made up of minerals.</p> <p>Students know that a mineral is an inorganic substance made up of elements.</p> <p>Students know that a mineral is made up of tiny crystals.</p>
--	--	--	--

<p>Hydrosphere, Lithosphere, Atmosphere</p>	<p>The Lithosphere, Hydrosphere and Atmosphere</p> <p>Students know that there is a solid Earth to live on (lithosphere), water for drinking (hydrosphere) and air to breathe (atmosphere).</p>	<p>Hydrosphere: The Work of Water</p> <p>Students know the water cycle is the continuous movement of water from fresh and saltwater sources on land to the air and back again.</p> <p>Students know the 3 main cycles of the water cycle are evaporation, condensation and precipitation.</p> <p>Students know that the Pacific, Atlantic and the Indian Ocean are the main oceans on Earth.</p> <p>Atmosphere The Work of Air - Layers of the Atmosphere</p> <p>Students know that there are 4 layers of the atmosphere; troposphere, stratosphere, mesosphere, thermosphere.</p> <p>Students know the relative locations of these layers in our atmosphere</p> <p>Students know the important characteristics of these layers.</p>	<p>Atmosphere: The Work of Air Composition of the Atmosphere</p> <p>Students know the present day composition of the atmosphere is lithosphere, atmosphere and hydrosphere.</p> <p>Students know that Nitrogen (80%) and Oxygen (20%) make up the composition of the planet.</p> <p>Students understand the basic process by which the atmosphere was formed.</p> <p>Students understand how the atmosphere affects life on Earth.</p> <p>Students know that original life forms on Earth could not survive in today's oxygen rich atmosphere.</p>
<p>Physical Geography</p>	<p>Landscapes and Geographical Features</p> <p>Students know the definitions of salt water, mountains, fresh water, and desert.</p>		<p>The Earth's Magnetosphere</p> <p>Students understand what the magnetosphere is and how it affects the habitability of our planet.</p> <p>The Electromagnetic Spectrum</p>

			<p>Students know that radiant energy and electromagnetic energy come from the Sun.</p> <p>Students know there are 7 different energy waves; Visible Light, Radio Waves, Microwaves, Infrared Waves, Ultraviolet waves, X-Rays, and Gamma Rays.</p> <p>Students know important characteristics about the various types of waves.</p>
Cultural Geography			<p>Economic Geography</p> <p>Students know that asking where our goods come from and uncover a connection between the people who provide them and the people that want/need them.</p> <p>Cultural Geography Fundamental Needs of People</p> <p>Students know that people need food, clothing and shelter.</p> <p>Students know that people need spiritual, material, art, beauty, religion, social customs, defense, transportation and communications</p>
Maps and Mapping	Intermediate Directions	Cartography Hemispheres	International Date Line

	<p>Students know that there are 4 intermediate directions; Northeast, Southeast, Southwest, Northwest.</p> <p>Students know that you find them in between the 4 cardinal directions.</p> <p>Mapping the School Grounds or Neighborhood</p> <p>Students know that using a compass rose at the bottom of the map they created assists them in determining the direction of the map they created.</p>	<p>Students know the equator is an imaginary line that separates the Earth horizontally into two equal parts.</p> <p>Students know the Earth divided vertically from the North Pole to the South Pole at 0 degrees is the Prime Meridian/International Date Line.</p> <p>Students know the Western Hemisphere is towards the left of the line and the Eastern Hemisphere is to the right of the line</p>	<p>Students know that the International Dateline is located at 0 degrees longitude.</p> <p>Students know the world's countries decided to set standard time zones so that at 12:00 noon on any day at any location on Earth the sun's rays would be directly overhead.</p> <p>Students know when you cross the date line to the west you gain a day.</p> <p>Students know when you cross the date line to the east you lose a day.</p>
--	---	--	--