

Correlation to Florida Integrated Science I: Course # 2002400

Integrated Science: An Investigative Approach

Student Text and Investigation Manual

Standard #: Strand	Standard	Grade tested	Benchmark	Volume 1 Student Text page		Volume 2 Investigation Manual page	
SC.A.1.4.1 The Nature of Matter	The student understands that all matter has observable, measurable properties.	10	The student knows that the electron configuration in atoms determines how a substance reacts and how much energy is involved in its reactions.	330	use the periodic table to predict chemical formulas	136	ions
				330	which element is more likely to combine with other elements?	140	find the number of electrons in outermost level
				341	chemical bonding and the periodic table	141	when an atom ionizes
				394	showing valence electrons in a diagram	141	modeling a chemical bond
						158	measure energy changes in 3 different reactions
SC.A.1.4.2 The Nature of Matter	The student understands that all matter has observable, measurable properties.	10	The student knows that the vast diversity of the properties of materials is primarily due to variations in the forces that hold molecules together.	395	electromagnetic force	136	strong force
				395	strong nuclear force		
				395	forces in the nucleus		

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Standard #: Strand	Standard	Grade tested	Benchmark	Volume 1 Student Text page		Volume 2 Investigation Manual page	
SC.A.1.4.3 The Nature of Matter	The student understands that all matter has observable, measurable properties.	10	The student knows that a change from one phase of matter to another involves a gain or loss of energy.	290	states of matter and arrangement of molecules	118	molecules in a liquid
				411	molecular structure of ice	118	investigate melting
				461	examples of flow of heat	119	investigate melting and create a graph
				467	conduction and convection and radiation	119	create a temperature vs. time graph of phase change
						188	investigate heating water with an immersion heater
						203	investigate the temperature/time curves as water is cooled through a phase change to ice
						204	compare the shape of the water line and the ice line on the temperature/time graph

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SC.A.2.4.1 The Nature of Matter	The student understands the basic principles of atomic theory.	10	The student knows that the number and configuration of electrons will equal the number of protons in an electrically neutral atom and when an atom gains or losses electrons, the charge is unbalanced.	317	location/size/charge of subatomic particles	132	atomic number determines what element that atom is
				317	protons/neutrons/electrons	132	building atom models
				321	atoms of same element have same atomic number	133	location of electrons in atom
				324	proton/electron attraction	133	protons and neutrons
						136	ions
						136	model stable and neutral atoms
						137	importance of atomic number
						137	build atomic models
						140	review subatomic particles
						141	whan an atom ionizes
SC.A.2.4.2 The Nature of Matter	The student understands the basic principles of atomic theory.	10	The student knows the difference between an element, a molecule, and a compound.	285	summary of matter classification	114	investigate a homogeneous mixture
				294	create a poster of matter classification	169	investigate solutions and colloids and suspensions

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SC.A.2.4.3 The Nature of Matter	The student understands the basic principles of atomic theory.	10	The student knows that a number of elements have heavier, unstable nuclei that decay, spontaneously giving off smaller particles and waves that result in a small loss of mass and release a large amount of energy.	393 fusion and fission explained 399 carbon dating 399 radioisotopes in science and medicine 406 research pros and cons of nuclear technology 629 nuclear fusion and the sun	138 fusion and fission 160 radioactive decay 161 research pros and cons of uses for radioactive elements
SC.A.2.4.4 The Nature of Matter	The student understands the basic principles of atomic theory.	10	The student knows that nuclear energy is released when small, light atoms are fused into heavier ones.	393 fusion and fission explained 629 nuclear fusion and the sun 646 death of massive stars 646 birth of elements	138 fusion and fission
SC.A.2.4.5 The Nature of Matter	The student understands the basic principles of atomic theory.	10	The student knows that elements are arranged into groups and families based on similarities in electron structure and that their physical and chemical properties can be predicted.	326 groups of elements 327 groups of elements and valence shells 335 periodic table columns and valence electrons 336 bonding and periodic table position 338 periodic table and electronegativities 341 periodic table and oxidation numbers	133 using the periodic table 141 build model of Na and Cl atoms and explain why they bond to form a molecule 142 arrangement of electrons and groups of elements

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Standard #: Strand	Standard	Grade tested	Benchmark	Volume 1 Student Text page		Volume 2 Investigation Manual page	
SC.B.1.4.1 Energy	The students recognizes that energy may be changed in form with varying efficiency.	10	The student understands how knowledge of energy is fundamental to all the scientific disciplines (e.g., the energy required for biological processes in living organisms and the energy required for the building, erosion, and rebuilding of the Earth).	60	law of conservation of momentum	36	energy conservation and the roller coaster
				89	efficiency and energy transfer in natural systems	37	investigating conservation of energy with rollercoaster
				89	energy conservation and earth systems	38	identify potential/kinetic energy conversions
				90	energy conservation and efficiency in biological systems	38	explore energy transformations
				91	concept of energy as stored work	38	conservation of energy and energy transformations
				92	potential and kinetic energy explained	39	make an energy flow chart
				94	conservation of energy explained	39	identify type of energy involved
				95	understand basic forms of energy	204	investigating latent heat and thermal buffering
				95	energy conversions		
				95	following an energy transformation		
				95	following an energy transformation		
				96	energy transformations and conservation		
				97	different forms of energy described		
				100	conservation of momentum and swimming		

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Standard #: Strand	Standard	Grade tested	Benchmark	Volume 1 Student Text page	Volume 2 Investigation Manual page
				100 energy conservation and swimming	
				102 prove that energy is conserved	
				412 hydrogen bonding and the gaseous state of water	
				491 Earth's internal energy	
				543 potential energy transformed to kinetic energy causes earthquakes	
				629 energy from the sun	
				632 harnessing the sun's energy	

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Standard #: Strand	Standard	Grade tested	Benchmark	Volume 1 Student Text page		Volume 2 Investigation Manual page	
SC.B.1.4.2 Energy	The students recognizes that energy may be changed in form with varying efficiency.	10	The student understands that there is conservation of mass and energy when matter is transformed.	89	energy conservation and earth systems	36	energy conservation and the roller coaster
				89	efficiency and energy transfer in natural systems	37	investigating conservation of energy with rollercoaster
				90	energy conservation and efficiency in biological systems	38	explore energy transformations
				92	potential and kinetic energy explained	38	conservation of energy and energy transformations
				94	conservation of energy explained	150	investigate conservation of mass in effervescent tablet reaction
				95	energy conversions		
				96	energy transformations and conservation		
				97	different forms of energy described		
				100	energy conservation and swimming		
				102	prove that energy is conserved		

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Standard #: Strand	Standard	Grade tested	Benchmark	Volume 1 Student Text page	Volume 2 Investigation Manual page
SC.C.2.4.2 Force and Motion	The student understands that the types of force that act on an object and the effect of that force can be described, measured, and predicted.	10	The student knows that electrical forces exist between any two charged objects.	111 charge is a fundamental property of matter 112 static charge discussed 113 explanation of coulomb 114 how an electroscope works 114 electroscopes 395 electromagnetic force 395 strong nuclear force 395 forces in the nucleus	42 investigate electric charge 136 strong force
SC.C.2.4.3 Force and Motion	The student understands that the types of force that act on an object and the effect of that force can be described, measured, and predicted.	10	The student describes how magnetic force and electrical force are two aspects of a single force.	112 electrical force is incredibly strong! 112 electrical forces 170 what is an electromagnet? 172 increased current vs. strength of magnetic field 172 building an electromagnet	66 build an electromagnet 67 find out what happens to strength of electromagnet when current is increased

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SC.C.2.4.4 Force and Motion	The student understands that the types of force that act on an object and the effect of that force can be described, measured, and predicted.	10	The student knows that the forces that hold the nucleus of an atom together are much stronger than electromagnetic force and that this is the reason for the great amount of energy released from the nuclear reactions in the sun and other stars.	395 electromagnetic force 395 strong nuclear force 395 forces in the nucleus 644 the life cycle of stars 645 description and illustration of the life cycle of stars 646 elements formed by nuclear fusion in stars	136 strong force 255 observe and describe the appearance of the moon and Jupiter and its moons
SC.C.2.4.5 Force and Motion	The student understands that the types of force that act on an object and the effect of that force can be described, measured, and predicted.	10	The student knows that most observable forces can be traced to electric forces acting between atoms or molecules.	111 charge is a fundamental property of matter 112 electrical force is incredibly strong! 112 electrical forces 112 static charge discussed 113 explanation of coulomb 114 how an electroscope works 114 electroscopes 395 electromagnetic force 395 strong nuclear force 395 forces in the nucleus	42 investigate electric charge 136 strong force

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Standard #: Strand	Standard	Grade tested	Benchmark	Volume 1 Student Text page		Volume 2 Investigation Manual page	
SC.D.1.4.1 Processes that shape the Earth	The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.	10	The student knows how climatic patterns on Earth result from an interplay of many factors (Earth's topography, its rotation on its axis, solar radiation, the transfer of heat energy where the atmosphere interfaces with lands and ocean currents ect..	486	transfer of energy in and out of Earth's atmosphere	207	research how large bodies of water affect climate
				489	global temperature changing over time	207	research how large bodies of water affect climate
				497	Earth's temperature varies with latitude	209	investigating factors which cause the seasons
				498	Earth's tilt causes seasons	213	exploring how temperature-dependent layering creates currents
				499	convection currents in the atmosphere	215	understanding the Atlantic gyre
				500	the Coriolis effect	219	use radar to detect a tornado
				501	global wind patterns	220	using radar to track a hurricane
				502	descriptions of ocean currents and their effects on climate		
				502	effects of the Gulf Stream on climate of Great Britain		
				503	factors which influence the weather		
				505	cloud formation		
				508	cold fronts		
				508	effects of moving air masses		
				509	warm fronts		
				509	jet streams		
				510	rotation of air masses due to Coriolis effect		

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Standard #: Strand	Standard	Grade tested	Benchmark	Volume 1 Student Text page	Volume 2 Investigation Manual page
				511 description of thunderstorms	
				512 description of hurricanes	
				513 description of tornadoes	
				514 causes and effects of the El Nino Southern Oscillation	
				516 effect of cold ocean currents on formation of fog desserts	
				517 effect of warm ocean currents on formation of tropical rainforest	
				519 effect of large bodies of water on climate	
				521 alpine tundra occurs at high altitudes	
				524 create a model to explain why Earth has seasons	
				534 Earth's surface is changing	

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Standard #: Strand	Standard	Grade tested	Benchmark	Volume 1 Student Text page		Volume 2 Investigation Manual page
SC.D.1.4.2 Processes that shape the Earth	The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.	10	The student knows that the solid crust of earth consists of slow-moving, separate plates that float on a denser, molten layer of Earth and that these plates interact with each other, changing the Earth's surface in many ways.	534	definition of plate tectonics	228 listing which kind of plate boundary is associated with each geologic feature
				536	sea-floor spreading and mid-ocean ridges	229 identifying tectonic plates and plate boundaries
				537	magnetic patterns on the sea floor	
				538	theory of plate tectonics	
				539	describing plate boundaries	
				540	divergent plate boundaries	
				541	convergent plate boundaries	
				542	transform plate boundaries	

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Standard #: Strand	Standard	Grade tested	Benchmark	Volume 1 Student Text page		Volume 2 Investigation Manual page	
SC.E.1.4.1 Earth and Space	The student understands the interaction and organization in the Solar System and the universe and how this affects life on Earth.	10	The student understands the relationships between events on Earth and the movements of the Earth, its moon, the other planets, and the sun.	497	the effects of Earth's rotation on daytime heating and nighttime cooling	208	developing a hypothesis about why the seasons occur
				498	Earth's tilt causes seasons	210	investigating how the distance of Earth from the sun affects its intensity
				500	the Coriolis effect	211	investigating how Earth's tilt affects the sun's intensity
				510	rotation of air masses due to Coriolis effect		
				590	the lunar cycle	238	why studying the moon's surface is useful for understanding Earth
				591	Earth's rotation and patterns of day and night		
				593	axial tilt causes the seasons	248	building a sundial to keep track of daily time based on the cycles between Earth and the sun
				594	solar eclipses		
				594	lunar eclipses		
				595	solar eclipses	250	modeling the lunar cycle
				595	solar eclipses	251	constructing a lunar calendar
				597	characteristics of the universe		
				607	identify seasons		
				613	properties of the moon		
				614	the moon as a satellite of Earth		
				615	the moon's effect on tides on Earth		
				616	the Earth-moon system		
				617	giant impact theory		

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Standard #: Strand	Standard	Grade tested	Benchmark	Volume 1 Student Text page	Volume 2 Investigation Manual page
				639 what is a star? 648 what is a galaxy? 658 research and describe astronomical objects	
SC.E.1.4.2 Earth and Space	The student understands the interaction and organization in the Solar System and the universe and how this affects life on Earth.	10	The student knows how the characteristics of other planets and satellites are similar to and different from those of the Earth.	478 comparison of Earth's atmosphere to other planets 618 Johannes Kepler 618 orbits of planets around the sun 619 Kepler's elliptically shaped orbits 619 explanation and illustration of the solar system 620 relative sizes and distances within the solar system 621 what makes Earth capable of supporting life 625 asteroids and comets 626 meteors and meteorites and the Kuiper Belt 647 the existence of other planetary systems	256 simulate an object in orbit and investigate how orbital period varies within distance 258 setting up a scale model of the solar system 259 determining scale distances for the planets 260 determining scale sizes of the planets

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SC.E.1.4.3 Earth and Space	The student understands the interaction and organization in the Solar System and the universe and how this affects life on Earth.	10	The student knows the various reasons that Earth is the only planet in our Solar System that appears to be capable of supporting life as we know it.	478	comparison of Earth's atmosphere to other planets	
				621	what makes Earth capable of supporting life	
				622	classifying the planets	
				623	classifying the planets	
				624	comparing properties of the planets	
				627	is Pluto a planet	
SC.E.2.4.1 Earth and Space	The student recognizes the vastness of the universe and the Earth's place in it.	10	The student knows that the stages in the development of three categories of stars are based on mass: stars that have the approximate mass of our sun, stars that are two-to-three-stellar masses and develop into neutron stars ect.	644	the life cycle of stars	255 observe and describe the appearance of the moon and Jupiter and its moons
				645	death of small to medium stars results in white dwarfs and planetary nebula and black dwarfs	264 using spectroscopy to analyze the light emitted by stars and identify most common elements
				645	description and illustration of the life cycle of stars	
				646	death of massive stars results in supernovas and neutron stars and black holes	
				646	elements formed by nuclear fusion in stars	

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SC.E.2.4.2 Earth and Space	The student recognizes the vastness of the universe and the Earth's place in it.	10	The student identifies the arrangement of bodies found within and outside our galaxy.	649 the structure of the Milky Way Galaxy	
SC.E.2.4.3 Earth and Space	The student recognizes the vastness of the universe and the Earth's place in it.	10	The student knows astronomical distance and time.	598 calculating and using light years 599 light years and time 600 history of the telescope 601 types and uses of telescopes 602 types and uses of telescopes 603 satellites as tools of astronomy 604 spacecraft as tools of astronomy 640 the use of spectroscopy to analyze stars	264 understand why spectroscopy is an important tool of astronomers 268 calculating the distance to stars and galaxies using apparent brightness and absolute brightness 268 measuring apparent brightness to calculate the distance to stars and galaxies

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SC.E.2.4.4 Earth and Space	The student recognizes the vastness of the universe and the Earth's place in it.	10	The student understands stellar equilibrium.	644 the life cycle of stars 645 death of small to medium stars results in white dwarfs and planetary nebula and black dwarfs 645 description and illustration of the life cycle of stars 646 death of massive stars results in supernovas and neutron stars and black holes 646 elements formed by nuclear fusion in stars	255 observe and describe the appearance of the moon and Jupiter and its moons 264 using spectroscopy to analyze the light emitted by stars and identify most common elements
SC.E.2.4.5 Earth and Space	The student recognizes the vastness of the universe and the Earth's place in it.	10	The student knows various scientific theories on how the universe was formed.	617 historical theories of the origin of the moon 618 historical theories about the solar system 627 historical theories of which objects were planets 653 the Big Bang theory of the origin of the universe 654 evidence for the Big Bang theory 655 evidence for the Big Bang theory	

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SC.E.2.4.6 Earth and Space	The student recognizes the vastness of the universe and the Earth's place in it.	10	The student knows the various ways in which scientists collect and generate data about our universe (e.g., X-ray telescopes, computer simulations of gravitational systems, nuclear reactions, space probes, and supercollider simulations).	600	history of the telescope	264	understand why spectroscopy is an important tool of astronomers
				601	types and uses of telescopes		
				602	types and uses of telescopes	268	measuring apparent brightness to calculate the distance to stars and galaxies
				603	satellites as tools of astronomy		
				604	spacecraft as tools of astronomy		
				640	the use of spectroscopy to analyze stars		
				654	evidence for the Big Bang theory		
				655	evidence for the Big Bang theory		

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SC.F.1.4.2 Processes of Life	The student describes patterns of structure and function in living things.	10	The student knows that body structures are uniquely designed and adapted for their function.	71	human body as a machine
				71	the human body and simple machines
				74	levers in the human body
				82	analyze the human jaw as a simple machine
				82	analyzing the jaw as a lever
				99	sweating and regulating temperature
				99	running and endurance
				99	energy conservation and the Achilles' tendon
100	the human body and efficiency of swimming				
SC.F.1.4.4 Processes of Life	The student describes patterns of structure and function in living things.	10	The student understands that biological systems obey the same laws of conservation as physical systems.	71	the human body and simple machines
				82	analyzing the jaw as a lever
				90	biological systems and energy flow
				90	transformations of matter and energy in photosynthesis
				99	energy conservation and the Achilles' tendon

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SC.G.2.4.1 How Living Things Interact with Their Environment	The student understands the consequences of using limited natural resources.	10	The student knows that layers of energy-rich organic materials have been gradually turned into great coal beds and oil pools (fossil fuels) by the pressure of the overlying earth and that humans burn fossil fuels to release the stored energy.	178	generating electric power	52	the cost of using electrical appliances
				397	nuclear vs. fossil fuels	178	predict the quality of surface water to be tested and justify your answer
				397	impact of nuclear energy		
				406	reducing pollution		
				420	environmental impact of electrical generating facilities	262	solar energy can be used to generate electricity without producing pollution
				420	effect of electrical generating facilities on dissolved oxygen in water	262	determine the efficiency of a photovoltaic cell
				444	impact of using fossil fuels		
				449	impact of increased CO2 in oceans		
				485	effects of CFC's on the ozone layer		
				488	effects of burning fossil fuels		
				521	permafrost		
				548	using seismic waves for oil and gas exploration		
				566	mineral deposits and diamonds		
				566	description of geothermal energy		
				633	the efficiency of photovoltaic cells		
				633	using photovoltaic cells		

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SC.G.2.4.2 How Living Things Interact with Their Environment	The student understands the consequences of using limited natural resources.	10	The student knows that changes in a component of an ecosystem will have unpredictable effects on the system but that the components of the system tend to react in a way that will restore the ecosystem to its original condition.	370	petroleum	163	too much CO2
				385	hydrogen-powered cars and the environment	163	consider a vehicle's fuel economy
				401	fossil fuels	163	can trees compensate for manmade CO2 from vehicles and industry?
				417	effects of PCB's in Great Lakes	164	perform water quality tests
				438	water cycle and conservation	178	actions to take to improve water quality
				439	The Clean Water Act	178	predict the quality of surface water to be tested and justify your answer
				439	wise use of water	178	wise use of water supply
				441	water quality testing	179	address what you can do to maintain or improve the water quality at the test site
				441	water usage and quality	179	maintaining water supply quality
				442	effect of excess nitrates on environment	180	save water for houseplants
				442	water quality testing	180	perform water quality tests
				443	acid rain	182	the effects of acid rain on organisms in aquatic environments
				443	acid rain explained		
				443	effects of acid rain on natural environments		
				443	acid rain		
				444	causes and health effects of acid rain		
				445	illustration of acid rain formation		
449	impact of increased CO2 on oceans						

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Standard #: Strand	Standard	Grade tested	Benchmark	Volume 1 Student Text page	Volume 2 Investigation Manual page
				449 impact of increased CO2 on oceans	182 the effects of acid rain on organisms in aquatic environments
				450 pollution and the ocean food chain	182 investigate effect of acid rain on microorganisms
				451 pollution and the ocean food chain	
				454 research the issue of acid rain	
				477 nitrogen cycle	
				488 changes to the oceans due to increasing global temperatures	
				510 temperature inversion	
				574 how urban sprawl changes local climate	

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SC.H.1.4.1 The Nature of Science	The student uses the scientific processes and habits of mind to solve problems.	10	The student knows that investigations are conducted to explore new phenomena, to check on previous results, to test how well a theory predicts, and to compare different theories.	7	experimentation begins with a question	6	asking questions and learning about natural world
				9	steps in the scientific method	7	design your own experiment
				10	forming a hypothesis	7	perform your own experiment
				19	design your own experiment	7	compare results with hypothesis
				19	design your own experiment	9	design three experiments using car and ramp
				42	devise an experiment	10	conduct car/ramp experiment
				454	describe steps you would take to determine whether pH affects frog population	16	investigate Newton's 2nd law
				479	why do ears pop	16	decide how to vary the force on the car for this experiment
				510	meteorologists use atmospheric pressure data to understand movement of weather systems	26	what variables can be changed?
				654	evidence for Big Bang theory	34	investigate motion on a rollercoaster
						75	design pendulum experiment
						75	plan three experiments to determine which variable affects the period of a pendulum
						75	perform self-designed experiment

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					93 decision trees and the advantage of doing multiple trials
					151 design experiment to find out if mass is conserved
					170 which factor will produce fastest dissolving rate?
					170 what three factors influence dissolving rate?
					182 simulating the effect of acid rain on daphnia
					188 conducting investigation of efficiency of immersion heater
					193 conducting experiments on heat transfer
					205 investigating how specific heat of water regulates Earth's temperature
					215 the food paradox of the oceans
					233 identifying how the earthquake model represents an earthquake
					237 develop a research plan for studying volcanoes

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SC.H.1.4.2 The Nature of Science	The student uses the scientific processes and habits of mind to solve problems.	10	The student knows that from time to time, major shifts occur in the scientific view of how the world works, but that more often the changes that take place in the body of scientific knowledge are small modifications of prior knowledge.	10	process of reviewing hypothesis explained	35	what evidence is there in support of your hypothesis?
				34	Aristotle vs. Newton	39	critique group's explanation of energy transformations
				45	Newton's Laws of Motion	39	review energy theory in context of everyday scenarios
				54	Newton and the force of gravity	39	analyze energy transformations in different scenarios
				111	Benjamin Franklin	77	show how energy loss data could be applied to designing a real clock
				113	Charles-Augustin Coulomb	77	compare law of conservation of energy to motion of pendulum
				318	contributions of Fermi	151	review your hypothesis
				327	contributions of Mendeleev	151	do the data support the hypothesis
				399	contributions of Marie and Pierre Curie	157	add new rules to list based on findings
				527	relative dating and modern geology based on Steno's theories	171	did you prove or disprove your hypothesis?
				530	Kelvin's calculations of Earth's age	171	what was happening at molecular level?
				534	theory of plate tectonics	197	evaluating your aneroid barometer design
				535	critiquing Wegener's theories of continental drift		
				569	Darwin's theories of the Andes formation		
				572	what causes ice ages		
				617	theories of origin of the moon		

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Standard #: Strand	Standard	Grade tested	Benchmark	Volume 1 Student Text page	Volume 2 Investigation Manual page
				618 early theories of the solar system 653 Big Bang theory	
SC.H.1.4.3 The Nature of Science	The student uses the scientific processes and habits of mind to solve problems.	10	The student understands that no matter how well one theory fits observations, a new theory might fit them as well or better, or might fit a wider range of observations, because in science, the testing, revising, and occasional discarding ect.		21 construct reasonable explanation based on data 35 study data and determine importance of height on speed of marble 45 analyze data and explain a rule 151 does your experiment agree with law of conservation of mass? 157 add new rules to list based on findings 197 evaluating your aneroid barometer design 231 evaluating your completed bathymetric map 247 evaluate your ability to interpret rock formations

Correlation to Florida Integrated Science I: Course # 2002400

Integrated Science: An Investigative Approach

Student Text and Investigation Manual

Standard #: Strand	Standard	Grade tested	Benchmark	Volume 1 Student Text page		Volume 2 Investigation Manual page	
SC.H.3.4.2 The Nature of Science	The student understands that science, technology, and society are interwoven and interdependent .	10	The student knows that technological problems often create a demand for new scientific knowledge and that new technologies make it possible for scientists to extend their research in a way that advances science.	75	relationship between science and technology	70	using engineering design cycle
				439	the clean water act		
				445	catalytic converters and scrubbing reduce acid rain		
				489	hydrogen powered cars		
				536	using echo sounders to map the sea floor		
				544	what we can learn from seismographs		
				550	understanding earhquakes allows engineers to design safer buildings		
				603	using satellite technology		
				605	space shuttle		
SC.H.3.4.3 The Nature of Science	The student understands that science, technology, and society are interwoven and interdependent .	10	The student knows that scientists can bring information, insights, and analytical skills to matters of public concern and help people understand the possible causes and effects of events.	34	Newton’s research impacted mathematics		
				75	impact of Da Vinci’s work		
				75	impact of technology		
				548	studying seismic waves leads to information used in oil and gas exploration		
				551	predicting tsunamis		

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Standard #: Strand	Standard	Grade tested	Benchmark	Volume 1 Student Text page	Volume 2 Investigation Manual page	
SC.H.3.4.4 The Nature of Science	The student understands that science, technology, and society are interwoven and interdependent .	10	The student knows that funds for science research come from federal government agencies, industry, and private foundations and that this funding often influences the areas of discovery.	406 435 454 454 454 485 489	clean air act of 1970 governments managing water resources is acid rain a problem in your community? how is the government addressing the problem of acid rain? what is the history of your community's water supply and treatment London Agreement of 1991 should governments enforce changes for lowering greenhouse gas levels	