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	Standard 1 Inquiry	Standard 2	Standard 3	Standard 4
		Physical Science	Life Science	Earth Science
		•		
6	1.1 Understands the nature	2.1 Understands the structure	3.1 Understands the principles of	4.1 Understands earth's
Ũ	of scientific knowledge	and properties of matter	heredity and related concepts	composition and structure
	• Knows that an	• Knows that matter is	• Knows that hereditary	• Knows that the Earth is
	experiment must be	made up of tiny particles	information is contained in	comprised of
	repeated many times	called atoms	genes(MCGF)	layers(GE)
	and yield consistent		g()	• Knows that Earth's
	results before the	2.2 Understands the sources	3.2 Understands the structure	crust is divided into
	results can be proven	and properties of energy	and functions of cells and	plates that move at
	1.2 Understands the nature	• Knows that energy is a	organisms	extremely slow
	of scientific inquiry	property of many	• Knows the levels of	rates(GE)
	• Conducts a scientific	substances	organization in living	
	investigation		systems including cells,	4.2 Understands the
	• Can analyze and	2.3 Understands forces and	tissue, organs, organ	composition and structure of
	interpret scientific data	motion	systems	the universe and the earth's
	•	• Knows an object that is		place in it.
	1.3 Understands the scientific	subjected to a force will	3.3 Understands relationships	Knows characteristics
	enterprise	continue to move at a	among organisms and their	and movement patterns
	Knows various settings	constant and in a straight	physical environments	of the planets in our
	in which scientists may	line, unless another force	• Knows how energy is	solar system(GE)
	work(CE)	is applied	transferred through food	
	(<u>)</u>		webs in an ecosystem	4.3 Understands atmospheric
			•	processes and the water cycle
			3.4 Understands biological	• Knows the composition
			evolution and the diversity of life	of the Earth's
			• Understands the concept of	atmosphere
			extinction and its	L -
			importance in biological	
			evolution	
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Standard 1 Inquiry Standard 2	Standard 3	Standard 4	
Physical Science I	Life Science	Earth Science	
7 <u>1.1 Understands the nature</u> <u>2.1 Understands the structure</u> <u>3.1 Understands</u>	stands the principles of	4.1 Understands earth's	
of scientific knowledge and properties of matter heredity as	and related concepts	composition and structure	
Knows that an Knows that matter is Knows that matter is	nows that reproduction is		
experiment must be made up of tiny particles a tra	rait of all living things	4.2 Understands the	
repeated many times called atoms 3.2 Unders	stands the structure	composition and structure of	
and yield consistent and function	ions of cells and	the universe and the earth's	
results before the 2.2 Understands the sources organisms	<u>s</u>	place in it.	
	nows that multi-cellular		
<u>1.2 Understands the nature</u> org	ganisms have a variety of	4.3 Understands atmospheric	
of scientific inquiry 2.3 Understands forces and spec	ecialized cells	processes and the water cycle	
Designs and conducts a motion Kno	nows that human		
scientific investigation cha	aracteristics can be		
Can analyze and designed	scribed in terms of		
interpret scientific data trai	its(MCGF)		
• <u>3.3 Unders</u>	<u>stands relationships</u>		
1.3 Understands the scientific among org	ganisms and their		
enterprise physical en	environments		
Knows various settings Knows various settings	nows ways in which		
in which scientists may org	ganisms interact and		
work(CE) dep	pend on one another		
• Kno	nows that all individuals		
of a	a species existing		
tog	gether at a given place		
and	d time make up a		
por	pulation(GE)		
<u>3.4 Unders</u>	stands biological		
evolution :	and the diversity of life		
• Kno	nows the basic ideas		
rela	ated to biological		
evo	olution		

	• Knows ways in which	
	organisms can be classified	

	Standard 1 Inquiry	Standard 2	Standard 3	Standard 4
		Physical Science	Life Science	Earth Science
8	1.1 Understands the nature of	<u>2.1 Understands the structure</u>	<u>3.1 Understands the principles of</u>	4.1 Understands earth's
	<u>scientific knowledge</u>	and properties of matter	heredity and related concepts	composition and structure
	• Knows that an	• Knows that atoms often		Knows how land forms
	experiment must be	combine to form a	3.2 Understands the structure	are created through a
	repeated many times and	molecule (crystal)	and functions of cells and	combination of
	yield consistent results		<u>organisms</u>	constructive and
	before the results are	2.2 Understands the sources		destructive forces
	proven	and properties of energy	3.3 Understands relationships	
	<u>1.2 Understands the nature of</u>	• Knows how the sun acts	among organisms and their	4.2 Understands the
	scientific inquiry	as a major source of	physical environments	composition and structure of
	• Designs and conducts a	energy for changes on the		the universe and the earth's
	scientific investigation	earth's surface	3.4 Understands biological	<u>place in it.</u>
	• Can analyze and		evolution and the diversity of life	• Knows the
	interpret scientific data	2.3 Understands forces and	• Knows that the fossil	characteristics of the
	Ĩ	motion	record through geologic	sun and its position in
	<u>1.3 Understands the scientific</u>	• Understands general	evidence documents the	the universe(GE)
	enterprise	concepts related to	appearance and diversity of	Knows characteristics
	Knows various settings	gravitational force	many life forms	and movement patterns
	in which scientists may			of the sun, Earth,
	work(CE)			moon, comets,
				asteroids, and
				meteors(GE)
				4.3 Understands atmospheric
				processes and the water cycle
				Knows factors that can
				impact Earth's climate
				impact Latur s climate

Standard I	Standard 2	Standard 3	Standard 4
Inquiry	Physical Science	Life Science	Earth Science
	3		
1.1 Understands the nature of	2.1 Understands the structure		
<u>scientific knowledge</u>	and properties of matter		
• Knows that scientific	• Knows the structure of		
explanations must meet	the atom		
certain criteria to be	• Understands how		
considered valid	elements are arranged in		
<u>1.2 Understands the nature of</u>	_		
<u>scientific inquiry</u>	2.2 Understands the sources		
 Designs and conducts 	and properties of energy		
scientific investigations	• Understands the		
•	relationship between heat		
•	-		
F	1		
1.3 Understands the scientific			
	-		
different levels(MCGF)			
	conservation of matter		
	and energy		
	 scientific knowledge Knows that scientific explanations must meet certain criteria to be considered valid 1.2 Understands the nature of scientific inquiry 	InquiryPhysical Science1.1 Understands the nature of scientific knowledge2.1 Understands the structure and properties of matter• Knows that scientific explanations must meet certain criteria to be considered valid• Knows the structure of the atom1.2 Understands the nature of scientific inquiry• Understands the nature of scientific investigations • Can analyze and interpret scientific data• Understands the sources and properties of energy • Understands the scientific enterprise• Understands the scientific enterprise• Knows how different kinds of materials respond to electric forces • Knows the law of conservation of matter	InquiryPhysical ScienceLife Science1.1 Understands the nature of scientific knowledge2.1 Understands the structure and properties of matter• Knows that scientific explanations must meet certain criteria to be considered valid5.1 Understands the structure of the atom1.2 Understands the nature of scientific inquiry• Knows the structure of the periodic table• Designs and conducts scientific investigations• Understands the sources and properties of energy• Understands the scientific enterprise• Understands forces and motion• Understands the scientific enterprise• Knows how different kinds of materials respond to electric forces• Knows the law of conservation of matter

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	Standard 1	Standard 2	Standard 3	Standard 4
	Inquiry	Physical Science	Life Science	Earth Science
10	<u>1.1 Understands the nature of</u>	<u>2.1 Understands the structure</u>	3.1 Understands the principles of	4.1 Understands earth's
	<u>scientific knowledge</u>	and properties of matter	heredity and related concepts	composition and structure
	• Knows that scientific	• Knows that atoms may	• Knows the chemical and	
	explanations must meet	be bonded together into	structural properties of	4.2 Understands the
	certain criteria to be	molecules	DNA	composition and structure of
	considered valid	• Knows that the number	3.2 Understands the structure	the universe and the earth's
	1.2 Understands the nature of	of electrons determine	and functions of cells and	<u>place in it.</u>
	<u>scientific inquiry</u>	how the atom is charged	<u>organisms</u>	
	• Uses tools to perform		• Knows the structure of	4.3 Understands atmospheric
	accurate investigations		different types of cell parts	processes and the water cycle
	and communications	<u>2.2</u> Understands the sources	• Understands the process of	• Knows how the
	• Can analyze and	and properties of energy	cell division and	evolution of life on
	interpret scientific data	• Understands the	differentiation	Earth has changed the
	1.3 Understands the scientific	relationship between heat	3.3 Understands relationships	composition of the
	<u>enterprise</u>	and temperature	among organisms and their	Earth's atmosphere(GE)
	• Understands that science	2.3 Understands forces and	physical environments	
	involves different types	motion	• Knows that matter and	
	of work in may different	• Knows that	energy flow through	
	disciplines(CE)	electromagnetic forces	different levels of	
		exist within and between	organization in living	
		atoms	systems	
			3.4 Understands biological	
			evolution and the diversity of life	
			• Understands the concept of	
			natural selection	
			• Knows how organisms are	
			classified into groups and	
			subgroups based on	
			similarities of evolutionary	
			relationships	

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	Standard 1	Standard 2	Standard 3	Standard 4
	Inquiry	Physical Science	Life Science	Earth Science
Course-	1.1 Understands the		3.1 Understands the principles of	
	nature of scientific		heredity and related concepts	
Anatomy	knowledge		• Knows the chemical and	
	• Understands		structural properties of	
	how scientific		DNA	
	knowledge		 Knows ways in which 	
	changes and		genes may be altered and	
	accumulates		combined to create species	
	over time		combined to create species	
	1.2 Understands the		3.2 Understands the structure	
	nature of scientific		and functions of cells and	
	inquiry		organisms	
	• Uses tools to		• Knows the structure of	
	perform accurate		difference cell parts	
	scientific		 Understands the chemical 	
	investigations		reactions involved in cell	
	and		functions	
	communications			
	(CE)		• Knows the complexity and	
	• Can analyze and		organization of the human	
	interpret		body	
	scientific data		2.4 Un densten da biele sieel	
	scientific data		<u>3.4 Understands biological</u>	
	1.3 Understands the		evolution and the diversity of life	
	scientific enterprise		• Knows that biochemical	
			characteristics are heritable	
	• Understands that individuals and		and determine anatomy,	
			behavior, reproduction and	
	teams work		survival or organisms.	
	together at			
	different levels			

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	Standard 1	Standard 2	Standard 3	Standard 4
	Inquiry	Physical Science	Life Science	Earth Science
Course	<u>1.1 Understands the</u>		<u>3.1 Understands the principles of</u>	4.1 Understands earth's
Environ-	<u>nature of scientific</u>		heredity and related concepts	composition and structure
mental	<u>knowledge</u>		• Knows that mutations and	• Knows the conditions of
	• Knows that from		new gene combinations	Earth that enable it to
Science	time to time		may have positive,	support life
	major shifts		negative, or no affects on	
	occur in a		the organism	4.2 Understands the
	scientific view of			composition and structure of
	how the world		<u>3.2 Understands the structure</u>	the universe and the earth's
	works(GE)		and functions of cells and	<u>place in it.</u>
	<u>1.2 Understands the</u>		<u>organisms</u>	
	nature of scientific		• Understands the process of	4.3 Understands atmospheric
	<u>inquiry</u>		photosynthesis and	processes and the water cycle
	 Designs and 		respiration in plants	• Knows how winds and
	conducts			ocean currents are
	scientific		3.3 Understands relationships	produced on the Earth's
	investigations		among organisms and their	surface
	• Can analyze and		physical environments	• Knows the major
	interpret		• Knows ways in which	external and internal
	scientific data		humans can alter the	sources of energy on
			equilibrium of	Earth
	<u>1.3 Understands the</u>		ecosystems(GE)	• Knows how the
	<u>scientific enterprise</u>		• Knows how the amount of	evolution of life on
	• Knows that		life an environment can	Earth has changed the
	science and		support is limited by the	composition of the
	technology are		availability of matter and	Earth's atmosphere(GE)
	essential social		the ecosystem's ability to	
	enterprises, but		recycle materials	
	alone they can		• Knows how the	
	only indicate		interrelationships and	

what or what should or should not happen(MCGF) • Knows that creativity, imagination, and a good knowledge base are all required in the work of science	 interdependencies among organisms generate stable ecosystems <u>3.4 Understands biological</u> <u>evolution and the diversity of life</u> Understands the concept of natural selection Knows how variations of organisms within a species increases the chance of survival of the species 	
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	Standard 1	Standard 2	Standard 3	Standard 4
	Inquiry	Physical Science	Life Science	Earth Science
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Course-	<b>1.1 Understands the</b>		<b>3.1 Understands the principles of</b>	
Accel-	nature of scientific		heredity and related concepts	
	knowledge		• Knows the chemical and	
erated	• Knows that		structural properties of	
Biology	major shifts		DNA	
	occur in the		<b>3.2 Understands the structure</b>	
	scientific view of		and functions of cells and	
	how the world		organisms	
	works(GE)		• Understands the process of	
	<b>1.2 Understands the</b>		photosynthesis and	
	nature of scientific		respiration of plants	
	inquiry		• Knows how cell functions	
	Designs and		are regulated through	
	conducts		changes in activities	
	scientific		3.3 Understands relationships	
	investigations		among organisms and their	
	• Uses technology		physical environments	
	to perform		Knows how	
	accurate		interrelationships and	
	scientific		interdependencies among	
	investigations		organisms generate stable	
	• Can analyze and		ecosystems	
	interpret		3.4 Understands biological	
	scientific data		evolution and the diversity of life	
	<b>1.3 Understands the</b>		• Knows the history of the	
	scientific enterprise		origin and evolution of life	
	• Understands that		• Knows how variations of	
	science involves		organisms within a species	
	work in many		increases the chance of	
	disciplines(CE)		survival of the species.	

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	Standard 1	Standard 2	Standard 3	Standard 4
	Inquiry	Physical Science	Life Science	Earth Science
Course	<b>1.1 Understands the</b>	2.1 Understands the structure		
Chemistry	nature of scientific	and properties of matter		
0	<u>knowledge</u>	• Understands that		
	• Knows that	chemical reactions		
	valid scientific	release or consume		
	explanations	energy		
	must meet	• Knows that chemical		
	certain criteria	reactions can take place		
	<b>1.2 Understands the</b>	at vastly different rates		
	nature of scientific	• Knows that chemical		
	<u>inquiry</u>	reactions can be		
	• Understands the	accelerated by catalysts		
	use of	• Understands the electron		
	hypotheses in	structure in the atoms as		
	science	related to quantum		
	<ul> <li>Designs and</li> </ul>	numbers		
	conducts			
	scientific	2.2 Understands the sources		
	investigations	and properties of energy		
	• Can analyze	• Knows that all energy		
	and interpret	can be considered to be		
	scientific data	kinetic or potential		
	<b><u>1.3 Understands the</u></b>			
	<u>scientific enterprise</u>			
	• Understands			
	that individuals			
	and teams			
	contribute to			
	science at			
	different			

levels(MCGF)		
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	Standard 1	Standard 2	Standard 3	Standard 4	
	Inquiry	Physical Science	Life Science	Earth Science	
	inquiry	i nysicai berenee	Life Science	Luith Science	
	<b><u>1.1 Understands the</u></b>	2.1 Understands the structure			
COURSE	nature of scientific	and properties of matter			
	knowledge				
Physics	• Knows that valid	2.2 Understands the sources			
	scientific	and properties of energy			
	explanations	• Understands the concept			
	must meet	of kinetic energy			
	certain criteria	• Understands the concept			
	<b><u>1.2 Understands the</u></b>	of potential energy			
	<u>nature of scientific</u>	2.3 Understands forces and			
	<u>inquiry</u>	motion			
	• Understands the	• Knows that laws of			
	use of	motion can be used to			
	hypotheses in	determine the effects of			
	science	forces on the motion of			
	<ul> <li>Uses technology</li> </ul>	objects			
	and mathematics	• Understands momentum			
	to perform valid	and conservation of			
	scientific	momentum			
	investigations	• Understands the law of			
	(CE)	conservation of matter			
	• Can analyze and	and energy			
	interpret				
	scientific data				
	<b><u>1.3 Understands the</u></b>				
	<u>scientific enterprise</u>				
	• Understands that				
	individuals and				
	teams contribute				
	to science at				
	different				

levels(MCGF)			
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