

**Correlation to New Mexico Science Content Standards**  
***CPO Science Earth Science (Middle School)***

<b>Standard #: Grade</b>	<b>Strand</b>	<b>Benchmark</b>	<b>Performance Standard</b>	<b>Volume 1 Student Text Page</b>		<b>Volume 2 Investigation Manual Page</b>	
I.1.1.01 7	Scientific Thinking and Practice	Use scientific methods to develop questions, design and conduct experiments using appropriate technologies, analyze and evaluate results, make predictions, and communicate findings.	Use a variety of print and web resources to collect information, inform investigations, and answer a scientific question or hypothesis.	59	Internet research	81	Internet research
				71	Internet research	114	doing background research
				140	Internet research		
				153	Internet research	116	doing background research
				201	use of Internet		
				298	Internet and print research		

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I.1.1.01 8	Scientific Thinking and Practice	Use scientific methods to develop questions, design and conduct experiments using appropriate technologies, analyze and evaluate results, make predictions, and communicate findings.	Evaluate the accuracy and reproducibility of data and observations.	9	observation—senses help to develop awareness of events or objects and their properties	5	recognize that repeatability is necessary
				10	observing—using senses to develop an awareness of events or objects and their properties	7	repeatability of investigations is
				13	observing and using observations	9	collaboration and peer review
				16	recognize the repeatability of data is necessary for validation	11	analysis of errors in measurement
				34	analysis of errors in measurement	12	errors in measurement
						13	errors in measurement
						34	calculating error between your barometer and a commercial barometer
						125	recognize repeatability of investigations is necessary for verification of evidence

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I.1.1.02 7	Scientific Thinking and Practice	Use scientific methods to develop questions, design and conduct experiments using appropriate technologies, analyze and evaluate results, make predictions, and communicate findings.	Use models to explain the relationships between variables being investigated.	39	graphical models	9	constructing and evaluating a graphical model
				41	making graphs from data		
				42	making graphical model from data	9	interpretation of pattern in data from observation
				43	how to make graphical model from data	29	determining relationship between temperature of the atmosphere and relative humidity
				44	making graphical model from data		
				45	constructing a graph	33	constructing a graph from atmospheric pressure
				51	constructing graphical models	33	graphing and drawing a trend line for atmospheric pressure data
				52	interpret patterns from data		
				52	making graphs	36	constructing and evaluating graphical models from data
				74	making and interpreting graphs	40	interpret patterns in data
				378	interpretation of patterns in data	43	construct graphical model from data and evaluate
				380	interpretation of data from graphs and charts	51	construct and evaluate a quantitative graphical model
				394	create and evaluate graph		
				412	interpret patterns in data from tables	57	interpretation of data
				420	interpretation of data from tables	67	creating and evaluating graphical model from data
				444	construct and evaluate data from graphical model	68	interpretation of patterns from data

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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
				444 interpretation of patterns from data	113 construct and evaluate graphical models 116 renewable resources 127 construct graphical model from data and evaluate 136 construct graphical model from data and evaluate 166 lab notebook 167 making graphs

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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
I.1.1.02 8	Scientific Thinking and Practice	Use scientific methods to develop questions, design and conduct experiments using appropriate technologies, analyze and evaluate results, make predictions, and communicate findings.	Use a variety of technologies to gather, analyze and interpret scientific data.	24 measurements—including appropriate tools and 25 measurements—units 26 measurement 28 measurement—choosing appropriate units 31 measurement—including correct units 40 select appropriate equipment 48 measurement—including selecting appropriate tools 49 measure—select units 51 making measurements 52 interpret patterns from data 205 making measurements 345 measuring 378 interpretation of patterns in data 380 interpretation of data from graphs and charts 412 interpret patterns in data from tables 420 interpretation of data from tables	1 measuring 4 measuring including use of appropriate tools 9 interpretation of pattern in data from observation 10 measuring and choosing tools 11 measuring 13 measuring 14 design experiment including selecting equipment 29 determining relationship between temperature of the atmosphere and relative humidity 40 interpret patterns in data 57 interpretation of data 64 collect observational data 66 making measurements 68 interpretation of patterns from data 73 measurements 82 measurements 96 measurement 121 measuring

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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
				444 interpretation of patterns from data	124 measurement 125 measurement 129 measurements 152 measuring 153 measuring 154 measuring 158 measuring 159 measuring 160 measuring 161 measuring

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I.1.1.03 8	Scientific Thinking and Practice	Use scientific methods to develop questions, design and conduct experiments using appropriate technologies, analyze and evaluate results, make predictions, and communicate findings.	Know how to recognize and explain anomalous data.	16	recognize the repeatability of data is necessary for validation	5	recognize that repeatability is necessary
				34	analysis of errors in measurement	7	repeatability of investigations is
						11	analysis of errors
						11	analysis of errors in measurement
						12	errors in measurement
						13	errors in measurement
						34	calculating error between your barometer and a commercial barometer
						125	recognize repeatability of investigations is necessary for verification of evidence

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I.I.I.1 6	Scientific Thinking and Practice	Use scientific methods to develop questions, design and conduct experiments using appropriate technologies, analyze and evaluate results, make predictions, and communicate findings.	Construct appropriate graphs from data and develop qualitative and quantitative statements about the relationships between variables being investigated.	39	graphical models	3	trends from data
				41	making graphs from data	9	constructing and evaluating a graphical model
				42	making graphical model from data	9	interpretation of pattern in data from observation
				43	how to make graphical model from data	21	contruction reasonable explanations based on direct and indirect data
				44	making graphical model from data	24	trends from data
				45	constructing a graph	29	determining relationship between temperature of the atmosphere and relative humidity
				51	constructing graphical models	33	constructing a graph from atmospheric pressure
				52	making graphs	36	constructing and evaluating graphical models from data
				52	interpret patterns from data	40	interpret patterns in data
				74	making and interpreting graphs	40	analyze trends from data
				276	analyze trends from data	43	construct graphical model from data and evaluate
				378	interpretation of patterns in data	51	construct and evaluate a quantitative graphical model
				380	interpretation of data from graphs and charts	51	construct reasonable explanations based on scientific evidence
				394	create and evaluate graph		
				394	trends in data		
412	interpret patterns in data from tables						
420	interpretation of data from tables						



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				444	analyze trends from data	57	interpretation of data
				444	interpretation of patterns from data	67	creating and evaluating graphical model from data
				444	construct and evaluate data from graphical model	68	analyze trends from data
						68	interpretation of patterns from data
						87	construct reasonable explanations supported by evidence
						88	construct explanations based on evidence
						97	construct explanations supported by scientific evidence
						100	construct explanations supported by evidence
						113	construct and evaluate graphical models
						116	renewable resources
						123	make explanations
						127	construct graphical model from data and evaluate
						127	construct explanations based on observations
						129	make reasonable explanation based on data
						133	use observations to construct explanations

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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
					136 construct graphical model from data and evaluate 151 analyze trends from data 166 lab notebook 167 making graphs
I.1.1.2 6	Scientific Thinking and Practice	Use scientific methods to develop questions, design and conduct experiments using appropriate technologies, analyze and evaluate results, make predictions, and communicate findings.	Examine the reasonableness of data supporting a proposed scientific explanation.	16 recognize the repeatability of data is necessary for validation 34 analysis of errors in measurement	5 recognize that repeatability is necessary 7 repeatability of investigations is 11 analysis of errors in measurement 12 errors in measurement 13 errors in measurement 34 calculating error between your barometer and a commercial barometer 114 analyze hypothesis based on data 125 recognize repeatability of investigations is necessary for verification of evidence 168 analyze hypothesis based on evidence

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I.1.1.3 6	Scientific Thinking and Practice	Use scientific methods to develop questions, design and conduct experiments using appropriate technologies, analyze and evaluate results, make predictions, and communicate findings.	Justify predictions and conclusions based on data.		<p>21 construction reasonable explanations based on direct and indirect data</p> <p>22 make predictions based on observations</p> <p>24 make predictions based on observations</p> <p>36 make predictions based on observed data</p> <p>48 make predictions</p> <p>51 construct reasonable explanations based on scientific evidence</p> <p>57 make predictions based on data</p> <p>63 make predictions from data</p> <p>63 make predictions based on inferences</p> <p>68 make predictions from observations</p> <p>72 predict based on observations</p> <p>87 construct reasonable explanations supported by evidence</p> <p>88 construct explanations based on evidence</p>

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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
					<p>96 make predictions based on inferences</p> <p>97 construct explanations supported by scientific evidence</p> <p>100 construct explanations supported by evidence</p> <p>102 making predictions</p> <p>119 making predictions</p> <p>123 make explanations</p> <p>127 construct explanations based on observations</p> <p>129 make reasonable explanation based on data</p> <p>133 use observations to construct explanations</p>

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I.I.II.01 7	Scientific Thinking and Practice	Understand the processes of scientific investigation and how scientific inquiry results in scientific knowledge.	Describe how bias can affect scientific investigation and conclusions.	9	observation—senses help to develop awareness of events or objects and their properties	5	recognize that repeatability is necessary
				10	observing—using senses to develop an awareness of events or objects and their properties	7	repeatability of investigations is
				13	observing and using observations	9	collaboration and peer review
				16	recognize the repeatability of data is necessary for validation	125	recognize repeatability of investigations is necessary for verification of evidence
I.I.II.01 8	Scientific Thinking and Practice	Understand the processes of scientific investigation and how scientific inquiry results in scientific knowledge.	Examine alternative explanations for observations.	52	interpret patterns from data	9	interpretation of pattern in data from observation
				378	interpretation of patterns in data	29	determining relationship between temperature of the atmosphere and relative humidity
				380	interpretation of data from graphs and charts	40	interpret patterns in data
				412	interpret patterns in data from tables	57	interpretation of data
				420	interpretation of data from tables	68	interpretation of patterns from data
				444	interpretation of patterns from data		

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I.I.II.02 8	Scientific Thinking and Practice	Understand the processes of scientific investigation and how scientific inquiry results in scientific knowledge.	Describe ways in which science differs from other ways of knowing and from other bodies of knowledge (e.g., experimentation, logical arguments, skepticism).	<p>4 recognize that science is a process of investigation—not a collection of facts</p> <p>11 recognize that science is a process—not facts and formulae</p> <p>18 recognize that science is a process of investigating the natural world</p> <p>19 science is not a bunch of facts but a process of exploring natural world</p> <p>81 recognize that science is a process of investigation—not a collection of facts</p> <p>195 science is a process of investigation of learning about the natural world</p> <p>221 recognize that science is a process of investigating natural world</p> <p>239 limits of scientific knowledge</p> <p>251 science is a process of recognition</p>	

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I.I.II.02 7	Scientific Thinking and Practice	Understand the processes of scientific investigation and how scientific inquiry results in scientific knowledge.	Critique procedures used to investigate a hypothesis.		14 design experiment including selecting equipment 64 collect observational data
I.I.II.03 7	Scientific Thinking and Practice	Understand the processes of scientific investigation and how scientific inquiry results in scientific knowledge.	Analyze and evaluate scientific explanations.		114 analyze hypothesis based on data 168 analyze hypothesis based on evidence

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I.I.II.03 8	Scientific Thinking and Practice	Understand the processes of scientific investigation and how scientific inquiry results in scientific knowledge.	Know that scientific knowledge is built on questions posed as testable hypotheses, which are tested until the results are accepted by peers.	9	observation—senses help to develop awareness of events or objects and their properties	5	recognize that repeatability is necessary
				10	observing—using senses to develop an awareness of events or objects and their properties	6	conducting scientific inquiry by asking questions and formulating hypotheses
				13	observing and using observations		
				16	recognize the repeatability of data is necessary for validation		
				16	recognize the repeatability of data is necessary for validation	9	collaboration and peer review
				52	conduct scientific inquiry through lab investigations	125	recognize repeatability of investigations is necessary for verification of evidence



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I.I.II.1 6	Scientific Thinking and Practice	Understand the processes of scientific investigation and how scientific inquiry results in scientific knowledge.	Understand that scientific knowledge is continually reviewed, critiqued, and revised as new data become available.	<p>4 recognize that science is a process of investigation—not a collection of facts</p> <p>11 recognize that science is a process—not facts and formulae</p> <p>18 recognize that science is a process of investigating the natural world</p> <p>19 science is not a bunch of facts but a process of exploring natural world</p> <p>81 recognize that science is a process of investigation—not a collection of facts</p> <p>195 science is a process of investigation of learning about the natural world</p> <p>221 recognize that science is a process of investigating natural world</p> <p>251 science is a process of recognition</p>	

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I.I.II.2 6	Scientific Thinking and Practice	Understand the processes of scientific investigation and how scientific inquiry results in scientific knowledge.	Understand that scientific investigations use common processes that include the collection of relevant data observations, accurate measurements, identification + control of variables, + logical reasoning to formulate hypotheses and explanations.	4	describe the steps of the scientific method	6	conducting scientific inquiry by asking questions and formulating hypotheses
				4	recognize that science is a process of investigation—not a collection of facts	9	recognizing and controlling variables
				8	describe the steps of the scientific method	114	recognize and control variables
				11	recognize that science is a process—not facts and formulae		
				11	describe the steps of the scientific method		
				14	describe steps of the scientific method		
				18	steps of the scientific method		
				18	recognize that science is a process of investigating the natural world		
				19	science is not a bunch of facts but a process of exploring natural world		
				36	recognizing and controlling variables in observations and experiments		
				37	recognizing and controlling variables		

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				40	
				recognizing and controlling variables in an experiment	
				41	
				recognizing variables	
				43	
				recognizing variables	
				45	
				recognizing variables	
				50	
				recognizing variables	
				52	
				conduct scientific inquiry through lab investigations	
				52	
				recognize variables	
				52	
				steps of scientific method	
				81	
				recognize that science is a process of investigation—not a collection of facts	
				195	
				science is a process of investigation of learning about the natural world	
				221	
				recognize that science is a process of investigating natural world	
				247	
				steps of scientific theory	
				251	
				science is a process of recognition	
				394	
				recognize controlling variables	

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I.I.II.3 6	Scientific Thinking and Practice	Understand the processes of scientific investigation and how scientific inquiry results in scientific knowledge.	Understand that not all investigations result in defensible scientific explanations.	10	interpreting observations and proposing explanations	5	recognize that repeatability is necessary
				16	recognize the repeatability of data is necessary for validation	7	repeatability of investigations is
				20	interpreting observation and proposing explanations	11	analysis of errors in measurement
				22	interpreting observations and posing explanations	12	errors in measurement
				34	analysis of errors in measurement	13	errors in measurement
				50	interpret observations and pose explanations	20	interpret observations
				114	interpret observations and propose explanations	34	calculating error between your barometer and a commercial barometer
				150	proposing explanations	36	interpret observations
				180	proposing explanations	53	interpret observations and propose explanations
				209	interpreting observations	63	interpret observations
				211	interpreting observations	64	interpret observations and pose explanations
				213	interpret observations	66	interpreting observations
				218	interpreting observations	67	interpreting observations
				219	interpreting observations	68	interpreting observations
				220	interpreting observations	78	interpret observations
						81	interpret observations
						84	interpret observations
						95	interpret observations
						99	interpret observations
						116	interpret observations

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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
				372 interpreting observation and proposing explanations  444 proposing explanations	116 proposing explanations  125 recognize repeatability of investigations is necessary for verification of evidence

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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
I.I.III.01 7	Scientific Thinking and Practice	Use mathematical ideas, tools, and techniques to understand scientific knowledge.	Understand that the number of data (sample size) influences the reliability of a prediction.	34 analysis of errors in measurement 52 interpret patterns from data 378 interpretation of patterns in data 380 interpretation of data from graphs and charts 412 interpret patterns in data from tables 420 interpretation of data from tables 444 interpretation of patterns from data	9 interpretation of pattern in data from observation 11 analysis of errors in measurement 12 errors in measurement 13 errors in measurement 22 make predictions based on observations 24 make predictions based on observations 29 determining relationship between temperature of the atmosphere and relative humidity 34 calculating error between your barometer and a commercial barometer 36 make predictions based on observed data 40 interpret patterns in data 48 make predictions 57 make predictions based on data 57 interpretation of data 63 make predictions based on inferences 63 make predictions from data

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					68 make predictions from observations 68 interpretation of patterns from data 72 predict based on observations 96 make predictions based on inferences 102 making predictions 119 making predictions

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I.I.III.01 8	Scientific Thinking and Practice	Use mathematical ideas, tools, and techniques to understand scientific knowledge	Use mathematical expressions and techniques to explain data and observations and to communicate findings (e.g., formulas and equations, significant figures, graphing, sampling, estimation, mean).	15	communication—written	2	averages
				19	communicating is key to scientific process	3	bar graphs
				30	written communication	4	bar graph
				35	communication written	8	graphs
				39	creating and using an algebraic model	9	line graphs
				39	understand that scientific knowledge is often in the form of models	9	constructing and evaluating a graphical model
				39	graphical models	9	interpretation of pattern in data from observation
				41	making graphs from data	20	communication
				41	creating line, pie, and bar graphs	29	determining relationship between temperature of the atmosphere and relative humidity
				42	making graphical model from data	33	constructing a graph from atmospheric pressure
				42	making a graph	34	evaluating the relationship between atmospheric pressure and weather
				43	how to make graphical model from data	36	constructing and evaluating graphical models from data
				43	making graphs—pie, line, and bar	40	interpret patterns in data
				44	making graphical model from data	40	create line graphs
				44	making line graph	43	construct graphical model from data and evaluate
				45	making pie, bar, and line graphs		
				45	constructing a graph		



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				51	constructing graphical models	51	construct and evaluate a quantitative graphical model
				51	line, pie, and bar graphs		
				52	making graphs	57	interpretation of data
				52	scientific knowledge is often in the form of models	58	making graphs
				52	interpret patterns from data	67	creating and evaluating graphical model from data
				52	interpret patterns from data	68	interpretation of patterns from data
				74	making and interpreting graphs	69	communicating
				266	communicating	69	science is often in the form of models
				268	scientific knowledge in form of models	80	reading tables
				281	communication	113	construct and evaluate graphical models
				378	interpretation of patterns in data	116	renewable resources
				380	interpretation of data from graphs and charts	127	construct graphical model from data and evaluate
				394	create and evaluate graph	136	construct graphical model from data and evaluate
				412	interpret patterns in data from tables	150	communicating results is essential to science
				420	interpretation of data from tables	166	lab notebook
				429	communicating written scientific notation	167	making graphs
						167	reading graphs

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				444 interpretation of patterns from data	
				444 construct and evaluate data from graphical model	
				470 understand science is often in the form of mathematical models	
				471 effectively conveying written info is essential to science	

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I.1.III.02 8	Scientific Thinking and Practice	Use mathematical ideas, tools, and techniques to understand scientific knowledge	Create models to describe phenomena.	39	understand that scientific knowledge is often in the form of models	3	bar graphs
				39	graphical models	4	bar graph
				41	making graphs from data	8	graphs
				41	creating line, pie, and bar graphs	9	line graphs
				42	making a graph	9	constructing and evaluating a graphical model
				42	making graphical model from data	33	constructing a graph from atmospheric pressure
				43	how to make graphical model from data	36	constructing and evaluating graphical models from data
				43	making graphs—pie, line, and bar	40	create line graphs
				44	making line graph	43	construct graphical model from data and evaluate
				44	making graphical model from data	51	construct and evaluate a quantitative graphical model
				45	constructing a graph	58	making graphs
				45	making pie, bar, and line graphs	67	creating and evaluating graphical model from data
				51	constructing graphical models	69	science is often in the form of models
				51	line, pie, and bar graphs	113	construct and evaluate graphical models
				52	making graphs	116	renewable resources
				52	scientific knowledge is often in the form of models		

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				74 making and interpreting graphs	127 construct graphical model from data and evaluate
				268 scientific knowledge in form of models	136 construct graphical model from data and evaluate
				394 create and evaluate graph	166 lab notebook
				444 construct and evaluate data from graphical model	167 making graphs
				470 understand science is often in the form of mathematical models	

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I.I.III.03 7	Scientific Thinking and Practice	Use mathematical ideas, tools, and techniques to understand scientific knowledge.	Select and use an appropriate model to examine a phenomenon.	39	understand that scientific knowledge is often in the form of models	3	bar graphs
				39	graphical models	4	bar graph
				41	making graphs from data	8	graphs
				41	creating line, pie, and bar graphs	9	line graphs
				42	making a graph	9	constructing and evaluating a graphical model
				42	making graphical model from data	33	constructing a graph from atmospheric pressure
				43	how to make graphical model from data	36	constructing and evaluating graphical models from data
				43	making graphs—pie, line, and bar	40	create line graphs
				44	making line graph	43	construct graphical model from data and evaluate
				44	making graphical model from data	51	construct and evaluate a quantitative graphical model
				45	constructing a graph	58	making graphs
				45	making pie, bar, and line graphs	67	creating and evaluating graphical model from data
				51	constructing graphical models	69	science is often in the form of models
				51	line, pie, and bar graphs	113	construct and evaluate graphical models
				52	making graphs	116	renewable resources
				52	scientific knowledge is often in the form of models		

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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
				74 making and interpreting graphs	127 construct graphical model from data and evaluate
				268 scientific knowledge in form of models	136 construct graphical model from data and evaluate
				394 create and evaluate graph	166 lab notebook
				444 construct and evaluate data from graphical model	167 making graphs
				470 understand science is often in the form of mathematical models	

**Correlation to New Mexico Science Content Standards**  
***CPO Science Earth Science (Middle School)***

<b>Standard #: Grade</b>	<b>Strand</b>	<b>Benchmark</b>	<b>Performance Standard</b>	<b>Volume 1 Student Text Page</b>		<b>Volume 2 Investigation Manual Page</b>	
I.I.III.1 6	Scientific Thinking and Practice	Use mathematical ideas, tools, and techniques to understand scientific knowledge.	Evaluate the usefulness and relevance of data to an investigation.	10	interpreting observations and proposing explanations	5	recognize that repeatability is necessary
				16	recognize the repeatability of data is necessary for validation	7	repeatability of investigations is
				20	interpreting observation and proposing explanations	9	interpretation of pattern in data from observation
				22	interpreting observations and posing explanations	11	analysis of errors in measurement
				34	analysis of errors in measurement	12	errors in measurement
				50	interpret observations and pose explanations	13	errors in measurement
				52	interpret patterns from data	20	interpret observations
				114	interpret observations and propose explanations	29	determining relationship between temperature of the atmosphere and relative humidity
				150	proposing explanations	34	calculating error between your barometer and a commercial barometer
				180	proposing explanations	36	interpret observations
				209	interpreting observations	40	interpret patterns in data
				211	interpreting observations	53	interpret observations and propose explanations
				213	interpret observations	57	interpretation of data
				218	interpreting observations	63	interpret observations
				219	interpreting observations	64	interpret observations and pose explanations
				220	interpreting observations	67	interpreting observations

**Correlation to New Mexico Science Content Standards**  
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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
				372 interpreting observation and proposing explanations	68 interpreting observations
				378 interpretation of patterns in data	68 interpretation of patterns from data
				380 interpretation of data from graphs and charts	78 interpret observations
				412 interpret patterns in data from tables	81 interpret observations
				420 interpretation of data from tables	84 interpret observations
				444 interpretation of patterns from data	95 interpret observations
				444 proposing explanations	99 interpret observations
					116 interpret observations
					116 proposing explanations
					125 recognize repeatability of investigations is necessary for verification of evidence



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<b>Standard #: Grade</b>	<b>Strand</b>	<b>Benchmark</b>	<b>Performance Standard</b>	<b>Volume 1 Student Text Page</b>		<b>Volume 2 Investigation Manual Page</b>	
I.I.III.2 6	Scientific Thinking and Practice	Use mathematical ideas, tools, and techniques to understand scientific knowledge.	Use probabilities, patterns, and relationships to explain data and observations.	39	graphical models	3	trends from data
				41	making graphs from data	9	constructing and evaluating a graphical model
				42	making graphical model from data	9	interpretation of pattern in data from observation
				43	how to make graphical model from data	24	trends from data
				44	making graphical model from data	29	determining relationship between temperature of the atmosphere and relative humidity
				45	constructing a graph	33	constructing a graph from atmospheric pressure
				51	constructing graphical models	36	constructing and evaluating graphical models from data
				52	making graphs	40	analyze trends from data
				52	interpret patterns from data	40	interpret patterns in data
				74	making and interpreting graphs	43	construct graphical model from data and evaluate
				276	analyze trends from data	51	construct and evaluate a quantitative graphical model
				378	interpretation of patterns in data	57	interpretation of data
				380	interpretation of data from graphs and charts	67	creating and evaluating graphical model from data
				394	create and evaluate graph	68	interpretation of patterns from data
				394	trends in data		
				412	interpret patterns in data from tables		
420	interpretation of data from tables						

**Correlation to New Mexico Science Content Standards**  
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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
				444 analyze trends from data 444 interpretation of patterns from data 444 construct and evaluate data from graphical model	68 analyze trends from data 113 construct and evaluate graphical models 116 renewable resources 127 construct graphical model from data and evaluate 136 construct graphical model from data and evaluate 151 analyze trends from data 166 lab notebook 167 making graphs
II.I.I.08 8	Content of Science	Know the forms and properties of matter and how matter interacts.	Describe various familiar physical and chemical changes that occur naturally (e.g., snow melting, photosynthesis, rusting, burning).	86 common phase changes (i.e. evaporation) 87 common phase changes 160 state changes	
II.I.I.1 6	Content of Science	Know the forms and properties of matter and how matter interacts.	Understand that substances have characteristic properties and identify the properties of various substances (e.g., density, boiling point, solubility, chemical reactivity).	66 distinguish between density and weight 67 what properties are the same regardless of amount of material—density 77 distinguish between form and physical properties	

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II.I.I.2 6	Content of Science	Know the forms and properties of matter and how matter interacts.	Use properties to identify substances (e.g., for minerals: the hardness, streak, color, reactivity to acid, cleavage, fracture).	67	what properties are the same regardless of amount of material—density	91	properties of minerals and ways to identify minerals
				234	know properties of minerals	92	properties of minerals and how to identify them
				257	properties of minerals—rocks		
				286	properties of minerals		
				304	properties of minerals		
				305	properties of minerals (i.e. cleavage)		
				306	properties of minerals (i.e. hardness)		
				316	minerals		
				320	properties of minerals		
				321	properties of diamond		
II.I.II.03 8	Content of Science	Explain the physical processes involved in the transfer, change, and conservation of energy.	Distinguish between renewable and nonrenewable sources of energy.	380	classify resources as renewable or nonrenewable	115	classify resources as renewable or nonrenewable
				382	research and classify resources as renewable or nonrenewable		
				383	classify resources as renewable or nonrenewable		

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<b>Standard #: Grade</b>	<b>Strand</b>	<b>Benchmark</b>	<b>Performance Standard</b>	<b>Volume 1 Student Text Page</b>	<b>Volume 2 Investigation Manual Page</b>
II.I.II.06 8	Content of Science	Explain the physical processes involved in the transfer, change, and conservation of energy.	Understand that vibrations of matter (e.g., sound, earthquakes, water waves) carry wave energy, including: sound transmission through solids, liquids, and gases.	163 wavelength and crest and speed of waves 164 waves transmit energy 164 concept of waves traveling in a medium 165 waves transmit energy 226 seismic waves 227 concept of a wave in a medium 228 concept of a medium supporting a wave 240 oscillation in a medium 241 waves in a medium 275 relationship between earthquakes and seismic waves 276 relationship between earthquakes and seismic waves 277 relationship between earthquakes and seismic waves 278 relationship between seismic waves and earthquakes 296 students know relationship between earthquakes and seismic waves	56 concept of a medium in terms of supporting waves

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<b>Standard #: Grade</b>	<b>Strand</b>	<b>Benchmark</b>	<b>Performance Standard</b>	<b>Volume 1 Student Text Page</b>	<b>Volume 2 Investigation Manual Page</b>

**Correlation to New Mexico Science Content Standards**  
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<b>Standard #: Grade</b>	<b>Strand</b>	<b>Benchmark</b>	<b>Performance Standard</b>	<b>Volume 1 Student Text Page</b>		<b>Volume 2 Investigation Manual Page</b>	
II.I.III.06 8	Content of Science	Describe and explain forces that produce motion in objects.	Know that Earth has a magnetic field.	54	inner structure of Earth	69	model Earth
				198	students know that ocean floor gives evidence for plate tectonics	70	model inner layers of Earth
				225	diagram inner structure of Earth		
				228	diagram inner Earth		
				229	diagram structure of Earth		
				230	diagram inner structure of Earth		
				231	diagram and explain structure of inner Earth		
				232	Earth's inner structure		
				233	diagram inner structure of Earth		
				234	diagram inner structure of Earth		
				234	know features of ocean floor		
				237	diagram of structure of inner Earth		
				238	features of ocean floor		
				238	structures of inner Earth		
				239	structure of inner Earth		
				241	Earth's structure		
				242	structure of inner Earth		

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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
				249	
				250	
				254	
				256	
				259	
				261	
				262	
				263	
				267	
				290	
				293	

**Correlation to New Mexico Science Content Standards**  
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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
				317 sea floor characteristics show evidence of plate tectonics	
II.I.III.1 6	Content of Science	Describe and explain forces that produce motion in objects.	Know that every object exerts gravitational force on every other object dependent on the masses and distance of separation (e.g., motions of celestial objects, tides).	16 gravitation 17 law of gravity 22 law of gravity 27 law of gravity 324 law of gravity 353 law of gravity 374 law of gravity 402 Newton's universal law of gravitation 425 role of gravity in solar system 428 role of gravity in solar system	



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<b>Standard #: Grade</b>	<b>Strand</b>	<b>Benchmark</b>	<b>Performance Standard</b>	<b>Volume 1 Student Text Page</b>	<b>Volume 2 Investigation Manual Page</b>
II.I.III.2 6	Content of Science	Describe and explain forces that produce motion in objects.	Know that gravitational force is hard to detect unless one of the objects (e.g., Earth) has a lot of mass.	16 gravitation 17 law of gravity 22 law of gravity 27 law of gravity 324 law of gravity 353 law of gravity 374 law of gravity 402 Newton's universal law of gravitation 425 role of gravity in solar system 428 role of gravity in solar system	

**Correlation to New Mexico Science Content Standards**  
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<b>Standard #: Grade</b>	<b>Strand</b>	<b>Benchmark</b>	<b>Performance Standard</b>	<b>Volume 1 Student Text Page</b>		<b>Volume 2 Investigation Manual Page</b>	
II.II.I.1 6	Content of Science	Explain the diverse structures and functions of living things and the complex relationships between living things and their environments.	Understand how organisms interact with their physical environments to meet their needs (i.e., food, water, air) and how the water cycle is essential to most living systems.	46	water cycle	25	water cycle model
				82	different types of water on Earth	26	water cycle model
				83	different forms of water on Earth	49	food chains
				86	different forms of water on Earth	116	water cycle
				87	water cycle		
				88	water cycle and types of water on Earth		
				90	describe the water cycle		
				92	water cycle and types of water		
				130	water cycle and types of water on Earth		
				131	types of water on Earth		
				132	types of water		
				365	various forms of water (i.e. surface water)		
				366	water cycle		
				388	describe water cycle		

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II.II.1.2 7	Content of Science	Explain the diverse structures and functions of living things and the complex relationships between living things and their environments.	Explain biomes (i.e., aquatic, desert, rainforest, grasslands, tundra) and describe the New Mexico biome.	142 144	describe land ecosystems land biomes	
II.II.1.2 6	Content of Science	Explain the diverse structures and functions of living things and the complex relationships between living things and their environments.	Describe how weather and geologic events (e.g., volcanoes, earthquakes) affect the function of living systems.	283 339 340	volcanoes change natural habitat Earth changes due to landslides landslides change habitats	

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II.II.I.3 6	Content of Science	Explain the diverse structures and functions of living things and the complex relationships between living things and their environments.	Describe how organisms have adapted to various environmental conditions.	93	adaptations of animals to caves	
				102	adaptations of animals to different environments	
				157	adaptation of animals to ocean environment	
				399	adaptation of animals to different environments	
				420	adaptation of animals to environment	
II.II.II.1 6	Content of Science	Understand how traits are passed from one generation to the next and how species evolve.	Understand that the fossil record provides data for how living organisms have evolved.	215	fossil record helps to understand the history of Earth	
				216	fossil record used to understand Earth's history	
				237	general Earth systems	
				238	lithosphere	

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II.II.II.13 7	Content of Science	Understand how traits are passed from one generation to the next and how species evolve	Know that the fossil record documents the appearance, diversification, and extinction of many life forms.	215	fossil record helps to understand the history of Earth	
				216	fossil record used to understand Earth's history	
				237	general Earth systems	
				238	lithosphere	
II.II.III.1 6	Content of Science	Understand the structure of organisms and the function of cells in living systems.	Explain how fossil fuels were formed from animal and plant cells.	380	formation of fossil fuels	115
				382	research and classify resources as renewable or nonrenewable	classify resources as renewable or nonrenewable
				383	classify resources as renewable or nonrenewable	

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<b>Standard #: Grade</b>	<b>Strand</b>	<b>Benchmark</b>	<b>Performance Standard</b>	<b>Volume 1 Student Text Page</b>		<b>Volume 2 Investigation Manual Page</b>	
II.II.III.2 6	Content of Science	Understand the structure of organisms and the function of cells in living systems.	Describe the differences between substances that were produced by living organisms (e.g., fossil fuels) and substances that result from nonliving processes (e.g., igneous rocks).	6	fossils	81	fossils
				199	types of rock and how they are formed	90	how rocks are formed
				208	explain origin and formation of fossils	94	explain how rocks are formed
				211	how fossils are formed	100	types of rocks and how they are formed
				295	how rocks are formed		
				307	types of rocks and how they are made		
				308	rock cycle and types of rock		
				310	structure of Earth specifically mantle		
				310	igneous rock formation		
				311	how igneous rocks are formed		
				312	how rocks are formed		
				315	how fossils are formed		
				315	explain the origin and formation of fossils		
				315	how sedimentary rocks are formed		
				316	metamorphic rock formation		
				317	formation of metamorphic rocks		
				318	how rocks are formed		

**Correlation to New Mexico Science Content Standards**  
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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
				327 rock cycle 336 types of rock and how they are formed 358 rock formation	
II.III.I.01 8	Content of Science	Describe how the concepts of energy, matter, and force can be used to explain the observed behavior of the solar system, the universe, and their structures.	Understand how energy from the sun and other stars, in the form of light, travels long distances to reach Earth.	443 sun as star 444 Sun as a star 456 explain how stars form and features of life cycle 456 compare the Sun to other stars 457 how stars produce energy 460 how stars form 460 compare sun to other stars 467 how stars form 468 star life cycle	141 using a spectrometer to analyze light sources and compare to light from the Sun 142 spectral analysis of reflected light from the Sun

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II.III.I.02 8	Content of Science	Describe how the concepts of energy, matter, and force can be used to explain the observed behavior of the solar system, the universe, and their structures.	Explain how the properties of light (e.g., emission, reflection, refraction) emitted from the sun and stars are used to learn about the universe, including: distances in the solar system and the universe and temperatures of different stars.	10 how astronomical instruments increase our understanding of the universe 19 describe how astronomical instruments and technology have increased our understanding of the universe 370 describe how astronomical instruments and technology have increased our understanding of the universe 410 astronomical instruments 411 how astronomical instruments help us understand universe 415 how astronomical instruments help us understand the universe 442 astronomical instruments 443 astronomical instruments increase understanding of universe 448 astronomical instruments lead to increased understanding of the universe	120 use of light years



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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
				450 light years and time	
				451 history of the telescope	
				452 types and uses of telescopes	
				453 astronomical instruments increase understanding of universe	
				458 brightness of a star	
				459 the use of spectroscopy to analyze stars	
				460 stages of star's life are determined by balance between gravitational collapse and nuclear fusion	
				463 how astronomical instruments helped us learn about the universe	
				465 light years	
				469 astronomical instruments	
				469 light years	

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II.III.I.03 8	Content of Science	Describe how the concepts of energy, matter, and force can be used to explain the observed behavior of the solar system, the universe, and their structures.	Understand how gravitational force acts on objects in the solar system and the universe, including: similar action on masses on Earth and on other objects in the solar system and explanation of the orbits of the planets around the sun.	16	gravitation	117	orbits of moon and planets
				17	law of gravity	118	orbits of moons and other planets
				22	law of gravity	119	orbits of planets
				27	law of gravity	138	orbits of planets
				113	compare orbits of planets		
				324	law of gravity		
				353	law of gravity		
				374	law of gravity		
				402	Newton's universal law of gravitation		
				403	orbits of moons and planets		
				411	compare orbits of planets in solar system		
				415	orbits of other bodies in the solar system		
				416	other bodies in solar system		
				418	compare orbits of planets and other bodies in solar system		
				423	orbits of planets and moons		
				424	orbits of planets in solar system		
				425	role of gravity in solar system		

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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
				425 compare orbits of planets and moon 428 role of gravity in solar system 430 explain orbit of Earth 432 orbit of moon	
II.III.I.1 7	Content of Science	Describe how the concepts of energy, matter, and force can be used to explain the observed behavior of the solar system, the universe, and their structures.	Explain why Earth is unique in our solar system in its ability to support life.	99 compare Earth's atmosphere with other planets 100 comparison of Earth's atmosphere to other planets 113 compare Earth with other planets with respect to supporting life 408 what makes Earth capable of supporting life 409 compare Earth to Mars in relation to supporting life 412 compare Earth to other planets with respect to supporting life 420 Earth is unique to support life	

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II.III.I.1 6	Content of Science	Describe how the concepts of energy, matter, and force can be used to explain the observed behavior of the solar system, the universe, and their structures.	Describe the objects in the universe, including: <ul style="list-style-type: none"> <li>• billions of galaxies, each containing billions of stars</li> <li>• different sizes, temperatures, and colors of stars in the Milky Way galaxy.</li> </ul>	442 sun's characteristics 447 galaxies 464 features of universe as we currently understand it 465 characteristics of the universe 469 description of galaxy as we know it 474 research and describe astronomical objects	121 general characteristics of universe

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II.III.I.2 7	Content of Science	Describe how the concepts of energy, matter, and force can be used to explain the observed behavior of the solar system, the universe, and their structures.	Explain how energy from the sun supports life on Earth.	99 compare Earth's atmosphere with other planets 100 comparison of Earth's atmosphere to other planets 113 compare Earth with other planets with respect to supporting life 408 what makes Earth capable of supporting life 409 compare Earth to Mars in relation to supporting life 412 compare Earth to other planets with respect to supporting life 420 Earth is unique to support life	

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II.III.I.2 6	Content of Science	Describe how the concepts of energy, matter, and force can be used to explain the observed behavior of the solar system, the universe, and their structures.	Locate the solar system in the Milky Way galaxy.	442 sun's characteristics	

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II.III.I.3 6	Content of Science	Describe how the concepts of energy, matter, and force can be used to explain the observed behavior of the solar system, the universe, and their structures.	Identify the components of the solar system, and describe their defining characteristics and motions in space, including: sun as medium size star, sun's composition and energy production; planets, their moons, asteroids.	113	compare orbits of planets	117	orbits of moon and planets
				399	general structure of solar system	117	place of Earth in solar system
				399	compare planets	118	orbits of moons and other planets
				401	general structure of the solar system	118	Earth's position among planets
				403	orbits of moons and planets	119	orbits of planets
				405	general position of Earth	119	Earth's position among the planets
				407	classifying planets	121	position of Earth among planets
				409	classifying the planets	138	orbits of planets
				409	classify and compare planets	141	using a spectrometer to analyze light sources and compare to light from the Sun
				410	compare planets	142	spectral analysis of reflected light from the Sun
				411	compare orbits of planets in solar system		
				412	comparing planets		
				415	orbits of other bodies in the solar system		
				416	other bodies in solar system		
				418	compare planets		
				418	compare orbits of planets and other bodies in solar system		
				419	compare planets		

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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page	
				420	compare planets	
				423	orbits of planets and moons	
				424	orbits of planets in solar system	
				424	place of Earth in solar system	
				425	compare orbits of planets and moon	
				427	general structure of solar system	
				430	explain orbit of Earth	
				432	orbit of moon	
				440	features and emissions of the sun	
				442	structure of sun	
				443	sun as star	
				444	Sun as a star	
				456	compare the Sun to other stars	
				456	explain how stars form and features of life cycle	
				457	how stars produce energy	
				460	how stars form	
				460	compare sun to other stars	



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				467    how stars form	
				468    star life cycle	

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II.III.I.4 6	Content of Science	Describe how the concepts of energy, matter, and force can be used to explain the observed behavior of the solar system, the universe, and their structures.	Know that the regular and predictable motions of the Earth-moon-sun system explain phenomena on Earth, including: Earth's motion in relation to a year, day, seasons, phases of moon, eclipses, tides, shadows; moon's orbit in relation to phases of moon.	114	explain relationship between Earth, Sun, and patterns of seasons	117	relationship between sun and Earth and day and night
				404	Earth's rotation and patterns of day and night	119	relationship between sun and Earth
				423	relationship of Earth and moon	124	relationship between sun and Earth and days
				423	relationship of sun and Earth	127	phases of the moon
				424	relationship of Earth and sun	131	how Sun and Earth distances cause seasons
				428	tides and Earth and moon's relationship	132	Earth and Sun positions causing seasons
				430	patterns of day and night and years	133	Sun and Earth positions and their relationship with seasons
				432	phases of the moon	133	relationship between Earth sun and light
				433	phases of moon	137	appearance of moon
				434	lunar eclipses	138	appearance of the moon
				435	solar eclipses		
				435	solar eclipses		
				435	solar eclipses		
				436	seasons and relationship between Earth and sun		
				437	identify seasons		
				445	identify seasons		

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II.III.II.01 8	Content of Science	Describe the structure of Earth and its atmosphere and explain how energy, matter, and forces shape Earth's systems.	Describe the role of pressure (and heat) in the rock cycle.	199 types of rock and how they are formed 295 how rocks are formed 307 types of rocks and how they are made 308 rock cycle and types of rock 310 igneous rock formation 311 how igneous rocks are formed 312 how rocks are formed 315 how sedimentary rocks are formed 316 metamorphic rock formation 317 formation of metamorphic rocks 318 how rocks are formed 327 rock cycle 336 types of rock and how they are formed 358 rock formation	90 how rocks are formed 94 explain how rocks are formed 100 types of rocks and how they are formed

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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
II.III.II.02 8	Content of Science	Describe the structure of Earth and its atmosphere and explain how energy, matter, and forces shape Earth's systems.	Understand the unique role water plays on Earth, including: ability to remain liquid at most Earth temperatures and properties of water related to processes in the water cycle: evaporation, condensation, precipitation, surface runoff, percolation.	46 how groundwater figures into water cycle 46 water cycle 82 different types of water on Earth 82 groundwater 83 different forms of water on Earth 86 different forms of water on Earth 87 water cycle 87 relationship between sun and precipitation 87 groundwater 88 groundwater 88 water cycle and types of water on Earth 90 describe the water cycle 92 water cycle and types of water 92 water as universal solvent 99 relationships between sun and water cycle 126 how water cycle affects weather 126 water cycle related to weather	25 explain relationship between solar energy and precipitation and rivers and oceans 25 water cycle model 26 understand relationship between solar energy and water cycle 26 water cycle model 116 water cycle

**Correlation to New Mexico Science Content Standards**  
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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
				130	
				water cycle and types of water on Earth	
				131	
				types of water on Earth	
				132	
				types of water	
				132	
				how water cycle relates to weather	
				137	
				water cycle affects weather	
				141	
				water affects climates	
				142	
				relationship between solar energy and precipitation	
				143	
				water affects temperature	
				156	
				how sun and oceans interact	
				158	
				how water cycle relates to weather patterns	
				158	
				relationship between sun and oceans	
				365	
				various forms of water (i.e. surface water)	
				366	
				water cycle	
				388	
				describe water cycle	

**Correlation to New Mexico Science Content Standards**  
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<b>Standard #: Grade</b>	<b>Strand</b>	<b>Benchmark</b>	<b>Performance Standard</b>	<b>Volume 1 Student Text Page</b>	<b>Volume 2 Investigation Manual Page</b>
II.III.II.03 8	Content of Science	Describe the structure of Earth and its atmosphere and explain how energy, matter, and forces shape Earth's systems.	Understand the geologic conditions that have resulted in energy resources (e.g., oil, coal, natural gas) available in New Mexico	305 economic usage of quartz 308 geologic recycling of rock 320 economic importance of minerals 321 economic importance of diamond 357 how Earth's materials are recycled geologically 358 Earth's materials are recycled geologically	

**Correlation to New Mexico Science Content Standards**  
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<b>Standard #: Grade</b>	<b>Strand</b>	<b>Benchmark</b>	<b>Performance Standard</b>	<b>Volume 1 Student Text Page</b>		<b>Volume 2 Investigation Manual Page</b>	
II.III.II.1 6	Content of Science	Describe the structure of Earth and its atmosphere and explain how energy, matter, and forces shape Earth's systems.	Know that Earth is composed of layers that include a crust, mantle, and core.	54	inner structure of Earth	69	model Earth
				225	diagram inner structure of Earth	70	model inner layers of Earth
				228	diagram inner Earth		
				229	diagram structure of Earth		
				230	diagram inner structure of Earth		
				231	diagram and explain structure of inner Earth		
				232	Earth's inner structure		
				233	diagram inner structure of Earth		
				234	diagram inner structure of Earth		
				237	diagram of structure of inner Earth		
				238	structures of inner Earth		
				239	structure of inner Earth		
				241	Earth's structure		
				242	structure of inner Earth		
				293	inner structure of Earth		
				312	inner workings of volcano		
				392	inner structure of Earth		
				393	inner structure of Earth		

**Correlation to New Mexico Science Content Standards**  
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<b>Standard #: Grade</b>	<b>Strand</b>	<b>Benchmark</b>	<b>Performance Standard</b>	<b>Volume 1 Student Text Page</b>	<b>Volume 2 Investigation Manual Page</b>
II.III.II.1 7	Content of Science	Describe the structure of Earth and its atmosphere and explain how energy, matter, and forces shape Earth's systems.	Understand how the remains of living things give us information about the history of Earth, including: <ul style="list-style-type: none"> <li>• layers of sedimentary rock, the fossil record, and radioactive dating showing that life has been present on Earth for more than 3.5 billion years.</li> </ul>	209 how rocks and fossils are used to determine age of Earth 210 how rocks are used to tell age of Earth 211 how rocks and fossils are used to date Earth 212 fossils used to determine age of Earth 213 how rocks and fossils are used to date Earth 215 fossil record helps to understand the history of Earth 216 fossil record used to understand Earth's history 217 how rocks are used to tell the age of Earth 219 carbon dating 223 explain how rocks are used to determine age of Earth 237 general Earth systems 238 lithosphere 307 how rocks are used to tell age of Earth 359 how rocks can help tell age of Earth	



**Correlation to New Mexico Science Content Standards**  
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<b>Standard #: Grade</b>	<b>Strand</b>	<b>Benchmark</b>	<b>Performance Standard</b>	<b>Volume 1 Student Text Page</b>	<b>Volume 2 Investigation Manual Page</b>
II.III.II.2 7	Content of Science	Describe the structure of Earth and its atmosphere and explain how energy, matter, and forces shape Earth's systems.	Understand how living organisms have played many roles in changes of Earth's systems through time (e.g., atmospheric composition, creation of soil, impact on Earth's surface).	<p>99 compare Earth's atmosphere with other planets</p> <p>100 comparison of Earth's atmosphere to other planets</p> <p>113 compare Earth with other planets with respect to supporting life</p> <p>341 how technology shapes landscape (i.e. erosion)</p> <p>362 how technology shapes Earth's surface</p> <p>408 what makes Earth capable of supporting life</p> <p>409 compare Earth to Mars in relation to supporting life</p> <p>412 compare Earth to other planets with respect to supporting life</p> <p>420 Earth is unique to support life</p>	49 climate change over time and what it would do to currents

**Correlation to New Mexico Science Content Standards**  
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<b>Standard #: Grade</b>	<b>Strand</b>	<b>Benchmark</b>	<b>Performance Standard</b>	<b>Volume 1 Student Text Page</b>	<b>Volume 2 Investigation Manual Page</b>
II.III.II.2 6	Content of Science	Describe the structure of Earth and its atmosphere and explain how energy, matter, and forces shape Earth's systems.	Know that Earth's crust is divided into plates that move very slowly, in response to movements in the mantle.	16 plate tectonics 235 behavior of Earth's crust 246 theory of plate tectonics 247 plate tectonics explains surface features of Earth 248 plate tectonics 253 plate tectonics 254 plate tectonics 267 plate tectonics 268 plate tectonics 269 plate tectonics 273 plate tectonics 318 plate tectonics 384 how human activity affects renewable and nonrenewable resources	80 plate tectonics 81 plate tectonics 87 theory of plate tectonics

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<b>Standard #: Grade</b>	<b>Strand</b>	<b>Benchmark</b>	<b>Performance Standard</b>	<b>Volume 1 Student Text Page</b>	<b>Volume 2 Investigation Manual Page</b>
II.III.II.3 7	Content of Science	Describe the structure of Earth and its atmospher e and explain how energy, matter, and forces shape Earth's systems.	Know that changes to ecosystems sometimes decrease the capacity of the environment to support some life forms and are difficult and/or costly to remediate.	341 effects of agriculture 362 effects of agriculture 377 how human activity affects resources	

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<b>Standard #: Grade</b>	<b>Strand</b>	<b>Benchmark</b>	<b>Performance Standard</b>	<b>Volume 1 Student Text Page</b>	<b>Volume 2 Investigation Manual Page</b>
II.III.II.3 6	Content of Science	Describe the structure of Earth and its atmosphere and explain how energy, matter, and forces shape Earth's systems.	Know that sedimentary, igneous, and metamorphic rocks contain evidence of the materials, temperatures, and forces that created them.	199 types of rock and how they are formed 209 how rocks and fossils are used to determine age of Earth 210 how rocks are used to tell age of Earth 211 how rocks and fossils are used to date Earth 212 fossils used to determine age of Earth 213 how rocks and fossils are used to date Earth 217 how rocks are used to tell the age of Earth 223 explain how rocks are used to determine age of Earth 295 how rocks are formed 307 how rocks are used to tell age of Earth 307 types of rocks and how they are made 308 rock cycle and types of rock 310 igneous rock formation 311 how igneous rocks are formed	90 how rocks are formed 94 explain how rocks are formed 100 types of rocks and how they are formed

**Correlation to New Mexico Science Content Standards**  
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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
				312	how rocks are formed
				315	how sedimentary rocks are formed
				316	metamorphic rock formation
				317	formation of metamorphic rocks
				318	how rocks are formed
				327	rock cycle
				336	types of rock and how they are formed
				358	rock formation
				359	how rocks can help tell age of Earth

**Correlation to New Mexico Science Content Standards**  
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<b>Standard #: Grade</b>	<b>Strand</b>	<b>Benchmark</b>	<b>Performance Standard</b>	<b>Volume 1 Student Text Page</b>	<b>Volume 2 Investigation Manual Page</b>
II.III.II.4 6	Content of Science	Describe the structure of Earth and its atmospher e and explain how energy, matter, and forces shape Earth's systems.	Describe the composition (i.e., nitrogen, oxygen, water vapor) and strata of Earth's atmosphere, and differences between the atmosphere of Earth and those of other planets.	99 components of Earth's atmosphere 99 compare Earth's atmosphere with other planets 100 comparison of Earth's atmosphere to other planets 105 water vapor as part of the atmosphere 108 greenhouse conditions on Earth 113 compare Earth with other planets with respect to supporting life 113 differing greenhouse conditions on Earth, Mars, and Venus 129 water vapor as part of atmosphere 131 water vapor as part of atmosphere 408 what makes Earth capable of supporting life 408 greenhouse conditions on Venus 409 compare Earth to Mars in relation to supporting life	

**Correlation to New Mexico Science Content Standards**  
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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
				412 compare Earth to other planets with respect to supporting life  420 Earth is unique to support life	

**Correlation to New Mexico Science Content Standards**  
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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
II.III.II.5 6	Content of Science	Describe the structure of Earth and its atmospher e and explain how energy, matter, and forces shape Earth's systems.	Understand factors that create + influence weather + climate, including heat, air movement, pressure, humidity, oceans; how clouds form; how weather patterns are related to atmospheric pressure; global patterns of atmospheric movement (El Nino)...	116 hurricanes 117 differential heating of oceans 117 hurricanes 117 how oceans affect weather 122 large scale movement of air and how it affects weather 122 differential heating of Earth causes circulation 122 changes in and causes for weather 123 large movements of air 124 how differential heating of Earth causes air movements 125 how air movement affects weather 125 differential heating of Earth results in circulation of air 126 water cycle related to weather 126 movement of air affects weather 126 how water cycle affects weather	30 changes in weather 40 describe changes in weather 42 causes for tornadoes 44 hurricanes 45 investigate ocean currents 48 differential heating causes circulation of currents



**Correlation to New Mexico Science Content Standards**  
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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
				130 describe changes in weather (i.e. clouds)	
				131 reasons for changes in weather	
				132 changes in weather	
				132 how water cycle relates to weather	
				133 changes in weather	
				133 large scale movement of air causes weather changes	
				134 movement of air affects weather	
				134 reasons for changes in weather	
				135 differential heating of Earth leads to distribution of heat	
				136 causes of severe weather	
				137 changes in weather and causes for storms	
				137 movement of air affects weather	
				137 water cycle affects weather	
				138 reasons for tornadoes	
				139 how oceans affect weather including El Nino	

**Correlation to New Mexico Science Content Standards**  
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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
				141 oceans affect climate	
				141 movement of air affects climate	
				141 water affects climates	
				143 water affects temperature	
				158 movements of air affect weather patterns	
				158 oceans affect climate	
				158 how water cycle relates to weather patterns	
				159 ocean currents	
				160 ocean currents	
				178 ocean currents	
				179 ocean currents	

**Correlation to New Mexico Science Content Standards**  
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<b>Standard #: Grade</b>	<b>Strand</b>	<b>Benchmark</b>	<b>Performance Standard</b>	<b>Volume 1 Student Text Page</b>		<b>Volume 2 Investigation Manual Page</b>	
II.III.II.6 6	Content of Science	Describe the structure of Earth and its atmosphere and explain how energy, matter, and forces shape Earth's systems.	Understand how to use weather maps and data (e.g., barometric pressure, wind speeds, humidity) to predict weather.	103	techniques for atmospheric measurement	30	describe techniques for atmospheric measurement
				116	tools (planes) for atmospheric measurement	31	make a barometer for air pressure readings
				117	techniques for atmospheric measurement	38	use techniques for atmospheric measurement
				148	describe techniques for atmospheric observation	39	use techniques for atmospheric measurement
				149	tools used to measure atmosphere	41	techniques of atmospheric measurement

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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
II.III.II.7 6	Content of Science	Describe the structure of Earth and its atmospher e and explain how energy, matter, and forces shape Earth's systems.	Know that landforms are created + change through a combination of constructive and destructive forces, including weathering of rock + soil, transport, deposition of sediment, + tectonic activity; similarities + diff btwn current + past processes on Earth	5 explain factors that helped shape Earth—volcanism 16 plate tectonics 18 recognize forces that shape Earth—volcanoes 105 temperature and the atmosphere 111 heating Earth's surface 111 heat transfer and Earth's water 118 evolution of land features from gradual changes 157 know major oceans 169 explain how rocks are broken down by the action of water 170 how rocks are broken down and how surface features are affected by water 171 erosion and how surface features change 210 how rocks are broken down and surface features change due to action of water 235 behavior of Earth's crust 246 theory of plate tectonics	35 investigate heating land and water 36 which heats up faster: sand or water? 74 mountain building 80 plate tectonics 81 plate tectonics 87 theory of plate tectonics 102 predict evolution of land features resulting from erosion 104 predict results of erosion 105 predict results of erosion

**Correlation to New Mexico Science Content Standards**  
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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
				247	
				248	
				252	
				253	
				254	
				258	
				267	
				268	
				269	
				273	
				283	
				284	
				292	
				292	
				304	

**Correlation to New Mexico Science Content Standards**  
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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
				308	
				rock gets broken down into soil	
				308	
				forces that shape Earth (erosion)	
				312	
				how volcanoes help shape Earth	
				318	
				plate tectonics	
				318	
				forces like volcanoes and erosion form and shape Earth	
				326	
				predict evolution of land features resulting from gradual changes	
				327	
				how rocks are broken down	
				329	
				how rocks are broken down by water and ice	
				330	
				forces that shape Earth's surface—erosion	
				332	
				forces that shape Earth's surface—erosion	
				332	
				how rocks are broken down and turned back into soil	
				337	
				rocks broken down into soil	
				339	
				evolution of land features from gradual changes	

**Correlation to New Mexico Science Content Standards**  
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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
				340	
					Earth's surface changes because of water
				341	
					forces that shape Earth such as erosion
				342	
					predict evolution of land features because of erosion
				356	
					soil formation
				358	
					forces that change Earth's surface erosion
				358	
					how rocks break down into soil
				358	
					forces that change Earth's surface (erosion)
				359	
					evolution of land features from erosion
				359	
					rocks are broken down into soil
				360	
					how rocks are broken down into soil
				361	
					rocks broken down into soil
				362	
					evolution of land features by erosion
				363	
					how rocks are broken down into soil
				384	
					how human activity affects renewable and nonrenewable resources

**Correlation to New Mexico Science Content Standards**  
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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
				392	volcanism
				392	volcanism
				424	describe Earth's size



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<b>Standard #: Grade</b>	<b>Strand</b>	<b>Benchmark</b>	<b>Performance Standard</b>	<b>Volume 1 Student Text Page</b>	<b>Volume 2 Investigation Manual Page</b>
II.III.II.8 6	Content of Science	Describe the structure of Earth and its atmosphere and explain how energy, matter, and forces shape Earth's systems.	Understand the history of Earth and how information about it comes from layers of sedimentary rock, including sediments and fossils as a record of a slowly changing world; evidence of asteroid impact, volcanic and glacial activity.	209 210 211 212 212 212 213 214 214 216 217 218 219 220 221 223	80 general history on Earth  how rocks and fossils are used to determine age of Earth how rocks are used to tell age of Earth how rocks and fossils are used to date Earth general history of Earth fossils used to determine age of Earth geologic time scale how rocks and fossils are used to date Earth geologic time scale explain general history of life on Earth geologic time scale how rocks are used to tell the age of Earth geologic time scale geologic time scale geologic time scale explain general history of life explain how rocks are used to determine age of Earth

**Correlation to New Mexico Science Content Standards**  
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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
				235 explain ice ages 307 how rocks are used to tell age of Earth 337 ice ages 359 how rocks can help tell age of Earth	
III.I.I.01 8	Science and Society	Explain how scientific discoveries and inventions have changed individuals and societies	Analyze the interrelationship between science and technology (e.g., germ theory, vaccines).	7 science and technology can be used to meet society's needs 47 science helps meet needs of society 73 relationship between science and technology 200 how science and technology meet society's needs 201 how science and technology meet the needs of a society 247 historical and cultural background to a scientific discovery 298 historical perspective of scientific discovery 431 the history of clocks and the division of time	

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<b>Standard #: Grade</b>	<b>Strand</b>	<b>Benchmark</b>	<b>Performance Standard</b>	<b>Volume 1 Student Text Page</b>		<b>Volume 2 Investigation Manual Page</b>	
III.I.1.02 8	Science and Society	Explain how scientific discoveries and inventions have changed individuals and societies	Describe how scientific information can help to explain environmental phenomena (e.g., floods, earthquakes, volcanoes, fire, extreme weather).	116	hurricanes	30	changes in weather
				117	hurricanes	40	describe changes in weather
				122	changes in and causes for weather	42	causes for tornadoes
				130	describe changes in weather (i.e. clouds)	44	hurricanes
				131	reasons for changes in weather	78	geologic basis for earthquakes
				132	changes in weather	82	students know geologic basis for earthquakes
				133	changes in weather		
				134	reasons for changes in weather		
				136	causes of severe weather		
				137	changes in weather and causes for storms		
				138	reasons for tornadoes		
				165	geologic basis for natural hazards		
				226	seismic waves		
				253	know geologic basis for volcanoes		
				260	geologic basis for earthquakes		
				262	location of volcanoes and earthquakes		
				264	geologic basis for volcanoes		

**Correlation to New Mexico Science Content Standards**  
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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
				265 volcanoes are caused by hot spots	
				270 basis of geologic hazards like earthquakes	
				271 know geologic basis for earthquakes	
				272 students know geologic basis for earthquakes	
				273 know why and how earthquakes occur	
				275 geologic basis of earthquakes	
				275 relationship between earthquakes and seismic waves	
				276 relationship between earthquakes and seismic waves	
				277 relationship between earthquakes and seismic waves	
				278 relationship between seismic waves and earthquakes	
				280 geologic basis for earthquakes	
				287 geologic basis for volcanoes	

**Correlation to New Mexico Science Content Standards**  
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Standard #: Grade	Strand	Benchmark	Performance Standard	Volume 1 Student Text Page	Volume 2 Investigation Manual Page
				288 geologic basis for volcanoes	
				289 geologic basis for volcanoes	
				290 geologic basis for volcanoes	
				291 geologic basis for volcanoes	
				292 geologic basis for volcanoes	
				296 students know relationship between earthquakes and seismic waves	
				297 know geologic basis of natural hazards	

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<b>Standard #: Grade</b>	<b>Strand</b>	<b>Benchmark</b>	<b>Performance Standard</b>	<b>Volume 1 Student Text Page</b>	<b>Volume 2 Investigation Manual Page</b>
III.I.I.03 8	Science and Society	Explain how scientific discoveries and inventions have changed individuals and societies	Describe how technological revolutions have significantly influenced societies (e.g., energy production, warfare, space exploration).	40 236 247 298 431	scientific knowledge is often in the form of models appreciation of the broad societal impact of science and technology historical and cultural background to a scientific discovery historical perspective of scientific discovery the history of clocks and the division of time

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<b>Standard #: Grade</b>	<b>Strand</b>	<b>Benchmark</b>	<b>Performance Standard</b>	<b>Volume 1 Student Text Page</b>	<b>Volume 2 Investigation Manual Page</b>
III.I.1.04 8	Science and Society	Explain how scientific discoveries and inventions have changed individuals and societies	Critically analyze risks and benefits associated with technologies related to energy production.	381 compare economic and environmental impacts of using different energy sources 382 analyze efficiency of using other resources 383 compare economic and environmental impacts of using different energy sources 383 investigate the economic and environmental impacts of using different energy sources 384 analyze efficiency of energy conversions in power from fossil fuels 385 efficiency of energy conversions	114 environmental impact of using different energy sources 115 economic and environmental effects of using different resources

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<b>Standard #: Grade</b>	<b>Strand</b>	<b>Benchmark</b>	<b>Performance Standard</b>	<b>Volume 1 Student Text Page</b>	<b>Volume 2 Investigation Manual Page</b>
III.I.1.1 6	Science and Society	Explain how scientific discoveries and inventions have changed individuals and societies.	Examine the role of scientific knowledge in decisions (e.g., space exploration, what to eat, preventive medicine and medical treatment).	7 understand connections between science and technology 7 applications of science can make life better for people 40 scientific knowledge is often in the form of models 236 appreciation of the broad societal impact of science and technology	