Earth and Space Science

Curriculum Guide

Scranton School District

Scranton, PA



Earth and Space Science

Prerequisite:

• Successful completion of General Science and Biology I.

The tenth, eleventh or twelfth grade elective Earth and Space Science course is designed to provide students with an understanding of the matter, the energy, and the processes involved in the origin, formation, location, structures, and functions of the Earth's major spheres. General topics of study include the Earth as a system, models of the Earth, Earth chemistry, rocks and minerals, resources and energy, geological processes, weather, climate, the solar system, and the universe. Earth and Space Science is a full year course.

Year-at-a-glance

Subject: Earth and Space Science	Grade Level: 10 th , 11 th , 12 th	Date Completed: 05/19/2015
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1st Quarter

Topic	Resources	Standards
Introduction to Earth Science	Approved textbook	3.3.12.A8, CC.3.4.11-12.A.,
	PowerPoint/Other Multimedia Presentations	CC.3.5.11-12.AJ., CC.3.6.11-
	Directed Reading Worksheets/ Study Guides	12.A., CC.2.2.HS.C.2.,
	Teacher Prepared Materials	CC.2.4.HS.B.1.
The Earth System: Energy, Structure, and Composition	Approved textbook	3.3.10.A8, 3.3.10.A3, 3.3.10.A1,
	PowerPoint/Other Multimedia Presentations	3.3.10.A4, 3.3.10.A7,
	Directed Reading Worksheets/ Study Guides	3.3.12.A7, CC.3.4.11-12.A.,
	Teacher Prepared Materials	CC.3.5.11-12.AJ., CC.3.6.11-
		12.A., CC.2.2.HS.C.2.,
		CC.2.4.HS.B.1.
Earth Chemistry	Approved textbook	3.3.10.A7, CC.3.4.11-12.A.,
•	PowerPoint/Other Multimedia Presentations	CC.3.5.11-12.AJ., CC.3.6.11-
	Directed Reading Worksheets/ Study Guides	12.A., CC.2.2.HS.C.2.,
	Teacher Prepared Materials	CC.2.4.HS.B.1.
Rocks, Minerals, and the Rock Cycle	Approved textbook	3.3.10.A1, CC.3.4.11-12.A.,
	PowerPoint/Other Multimedia Presentations	CC.3.5.11-12.AJ., CC.3.6.11-
	Directed Reading Worksheets/ Study Guides	12.A., CC.2.2.HS.C.2.,
	Teacher Prepared Materials	CC.2.4.HS.B.1.

2nd Quarter

Topic	Resources	Standards
Energy and Resources	Approved textbook	3.3.12.A2, 3.4.12.E3, CC.3.4.11-
	PowerPoint/Other Multimedia Presentations	12.A., CC.3.5.11-12.AJ.,
	Directed Reading Worksheets/ Study Guides	CC.3.6.11-12.A., CC.2.2.HS.C.2.,
	Teacher Prepared Materials	CC.2.4.HS.B.1.
Geologic History of the Earth	Approved textbook	3.3.12.A3, CC.3.4.11-12.A.,
	PowerPoint/Other Multimedia Presentations	CC.3.5.11-12.AJ., CC.3.6.11-
	Directed Reading Worksheets/ Study Guides	12.A., CC.2.2.HS.C.2.,
	Teacher Prepared Materials	CC.2.4.HS.B.1.
Plate Tectonics	Approved textbook	3.3.10.A1, 3.3.10.A7, CC.3.4.11-
	PowerPoint/Other Multimedia Presentations	12.A., CC.3.5.11-12.AJ.,
	Directed Reading Worksheets/ Study Guides	CC.3.6.11-12.A., CC.2.2.HS.C.2.,
	Teacher Prepared Materials	CC.2.4.HS.B.1.
Geologic Processes that Shape the Earth	Approved textbook	3.3.12.A7, CC.3.4.11-12.A.,
	PowerPoint/Other Multimedia Presentations	CC.3.5.11-12.AJ., CC.3.6.11-
	Directed Reading Worksheets/ Study Guides	12.A., CC.2.2.HS.C.2.,
	Teacher Prepared Materials	CC.2.4.HS.B.1.

3rd Quarter

Topic	Resources	Standards
Earthquakes and Volcanoes	Approved textbook	3.3.12.A7., CC.3.4.11-12.A.,
	PowerPoint/Other Multimedia Presentations	CC.3.5.11-12.AJ., CC.3.6.11-
	Directed Reading Worksheets/ Study Guides	12.A., CC.2.2.HS.C.2.,
	Teacher Prepared Materials	CC.2.4.HS.B.1.
The Earth's Atmosphere	Approved textbook	3.3.12.A1, 3.3.10.A3,
	PowerPoint/Other Multimedia Presentations	3.3.12.A6, 3.2.10.B5,
	Directed Reading Worksheets/ Study Guides	CC.3.4.11-12.A., CC.3.5.11-
	Teacher Prepared Materials	12.AJ., CC.3.6.11-12.A.,
		CC.2.2.HS.C.2., CC.2.4.HS.B.1.
Water in Earth's Atmosphere	Approved textbook	3.2.10.A1, CC.3.4.11-12.A.,
·	PowerPoint/Other Multimedia Presentations	CC.3.5.11-12.AJ., CC.3.6.11-
	Directed Reading Worksheets/ Study Guides	12.A., CC.2.2.HS.C.2.,
	Teacher Prepared Materials	CC.2.4.HS.B.1.
Weather and Climate	Approved textbook	3.3.10.A6, 3.3.12.A1,
	PowerPoint/Other Multimedia Presentations	3.4.10.A2, 3.3.12.A7,
	Directed Reading Worksheets/ Study Guides	3.3.12.A6, 3.4.12.B2,
	Teacher Prepared Materials	3.3.12.A7, 3.3.10.A7,
		CC.3.4.11-12.A., CC.3.5.11-
		12.AJ., CC.3.6.11-12.A.
		CC.2.2.HS.C.2., CC.2.4.HS.B.1.

4th Quarter

Topic	Resources	Standards
The Study of Astronomy	Approved textbook	3.3.10.B2, 3.4.12.A3, 3.4.10.B4,
	PowerPoint/Other Multimedia Presentations	CC.3.4.11-12.A., CC.3.5.11-
	Directed Reading Worksheets/ Study Guides	12.AJ., CC.3.6.11-12.A.,
	Teacher Prepared Materials	CC.2.2.HS.C.2., CC.2.4.HS.B.1.
Planets and Minor Bodies of the Solar System	Approved textbook	3.3.10.B1, 3.3.10.B2, CC.3.4.11-
	PowerPoint/Other Multimedia Presentations	12.A., CC.3.5.11-12.AJ.,
	Directed Reading Worksheets/ Study Guides	CC.3.6.11-12.A., CC.2.2.HS.C.2.,
	Teacher Prepared Materials	CC.2.4.HS.B.1.
The Sun and Stars	Approved textbook	3.3.12.B1, CC.3.4.11-12.A.,
	PowerPoint/Other Multimedia Presentations	CC.3.5.11-12.AJ., CC.3.6.11-
	Directed Reading Worksheets/ Study Guides	12.A., CC.2.2.HS.C.2.,
	Teacher Prepared Materials	CC.2.4.HS.B.1.
The Universe	Approved textbook	3.4.10.A2, 3.3.12.B1, CC.3.4.11-
	PowerPoint/Other Multimedia Presentations	12.A., CC.3.5.11-12.AJ.,
	Directed Reading Worksheets/ Study Guides	CC.3.6.11-12.A., CC.2.2.HS.C.2.,
	Teacher Prepared Materials	CC.2.4.HS.B.1.
Final Exam Review		

General Topic	Academic	Essential Knowledge,	Resources & Activities	Assessments	Suggested Time
	Standard(s)	Skills & Vocabulary			
Introduction to Sciences and	3.3.12.A8	Examine the status of	Approved Textbook	Teacher	6 days
the Scientific Method		existing theories.		prepared tests,	
			Chapter Resource Guides	quizzes, etc.	
		Evaluate experimental			
		information for relevance	Calculators	Series available	
		and adherence to science		assessments	
		processes.	PowerPoint/Other	online.	
			Multimedia Presentations	(Optional)	
		Judge that conclusions			
		are consistent and logical	Directed Reading		
		with experimental	Worksheets/ Study Guides		
		conditions.	,		
			Research Databases		
		Interpret results of			
		experimental research to	Web pages		
		predict new information,	l 11 co pages		
		propose additional	Teacher Prepared Materials		
		investigable questions, or	Teacher Frepared Waterials		
		advance a solution.	Cooperative Learning		
		advance a solution.	Projects		
		Communicate and defend	110,000		
			Mini Lahs/Quick Lahs		
		a scientific argument.	Mini Labs/Quick Labs		

3.3.10.A8	Compare and contrast	Approved Textbook	Teacher	10 days
		Chapter Resource Guides	quizzes, etc.	
	Know that both direct			
		Calculators		
	study the natural world	PowerPoint/Other	online.	
	and universe.	Multimedia Presentations	(Optional)	
3.3.10.A3	Explain how the evolution	Directed Reading		
	of Earth has been driven	Worksheets/ Study Guides		
	the lithosphere,	Research Databases		
	hydrosphere,			
	· · · · · · · · · · · · · · · · · · ·	Web pages		
	энеге:	Teacher Prepared Materials		
		Cooperative Learning		
		Projects		
		Mini Labs/Quick Labs		
		scientific theories. Know that both direct and indirect observations are used by scientists to study the natural world and universe. 3.3.10.A3 Explain how the evolution of Earth has been driven by interactions between the lithosphere,	Scientific theories. Know that both direct and indirect observations are used by scientists to study the natural world and universe. Calculators Calculators PowerPoint/Other Multimedia Presentations Directed Reading Worksheets/ Study Guides Worksheets/ Study Guides Research Databases Web pages Teacher Prepared Materials Cooperative Learning Projects	scientific theories. Know that both direct and indirect observations are used by scientists to study the natural world and universe. Calculators PowerPoint/Other Multimedia Presentations Explain how the evolution of Earth has been driven by interactions between the lithosphere, hydrosphere, atmosphere, and biosphere. Directed Reading Worksheets/ Study Guides Web pages Teacher Prepared Materials Cooperative Learning Projects

Energy in the Earth System	3.3.10.A3	Explain how the evolution	Approved Textbook	Teacher	2 days
		of Earth has been driven		prepared tests,	
		by interactions between	Chapter Resource Guides	quizzes, etc.	
		the lithosphere,			
		hydrosphere,	Calculators	Series available	
		atmosphere, and		assessments	
		biosphere.	PowerPoint/Other	online.	
			Multimedia Presentations	(Optional)	
	3.3.10.A1	Relate geochemical cycles			
		to the conservation of	Directed Reading		
		matter.	Worksheets/ Study Guides		
	3.3.10.A4	Explain how the Earth is composed of a number of	Research Databases		
		dynamic, interacting systems exchanging	Web pages		
		energy or matter.	Teacher Prepared Materials		
		Explain how the Earth's	Cooperative Learning		
		systems and its various cycles are driven by	Projects		
		energy.	Mini Labs/Quick Labs		

Models of the Earth	3.3.10.A7	Interpret and create	Approved Textbook	Teacher	6 days
		models of the Earth's		prepared tests,	
		physical features in	Chapter Resource Guides	quizzes, etc.	
		various mapping			
		representations.	Calculators	Series available	
				assessments	
	3.3.10.A8	Know that both direct	PowerPoint/Other	online.	
		and indirect observations	Multimedia Presentations	(Optional)	
		are used by scientists to			
		study the natural world	Directed Reading		
		and universe.	Worksheets/ Study Guides		
		Formulate and revise explanations and models	Research Databases		
		using logic and evidence.	Web pages		
		Recognize and analyze	Teacher Prepared Materials		
		alternative explanations			
		and models.	Cooperative Learning Projects		
	3.3.12.A7	Interpret and analyze a			
		combination of ground- based observations,	Mini Labs/Quick Labs		
		satellite data, and			
		computer models to			
		demonstrate Earth			
		systems and their			
		interconnections.			
Earth Chemistry	3.3.10.A7	Relate constancy and	Approved Textbook	Teacher	6 days
		change to geochemical		prepared tests,	
		cycles.	Chapter Resource Guides	quizzes, etc.	

Rocks and Minerals	3.3.10.A1	Describe the processes that are responsible for	Approved Textbook	Teacher prepared tests,	5 days
		the formation of igneous, sedimentary, and	Chapter Resource Guides	quizzes, etc.	
		metamorphic rocks.	Calculators	Series available assessments	
			PowerPoint/Other	online.	
			Multimedia Presentations	(Optional)	
			Directed Reading		
			Worksheets/ Study Guides		
			Research Databases		
			Web pages		
			Teacher Prepared Materials		
			Cooperative Learning Projects		
			Mini Labs/Quick Labs		

The Rock Cycle	3.3.10.A1	Describe the rock cycle and the processes that	Approved Textbook	Teacher prepared tests,	5 days
		are responsible for the formation of igneous,	Chapter Resource Guides	quizzes, etc.	
		sedimentary, and metamorphic rocks.	Calculators	Series available assessments	
		•	PowerPoint/Other	online.	
		Relate geochemical cycles to the conservation of	Multimedia Presentations	(Optional)	
		matter.	Directed Reading		
			Worksheets/ Study Guides		
			Research Databases		
			Web pages		
			Teacher Prepared Materials		
			Cooperative Learning Projects		
			Mini Labs/Quick Labs		

Resources and Energy	3.3.12.A2	Analyze the availability, location, and extraction	Approved Textbook	Teacher prepared tests,	13 days
		of Earth's resources.	Chapter Resource Guides	quizzes, etc.	
		Evaluate the impact of	Calculators	Series available	
		using renewable and		assessments	
		nonrenewable energy	PowerPoint/Other	online.	
		resources on the Earth's system.	Multimedia Presentations	(Optional)	
		1	Directed Reading		
	3.4.12.E3	Compare and contrast energy and power	Worksheets/ Study Guides		
		systems as they relate to pollution, renewable and	Research Databases		
		non-renewable resources, and conservation.	Web pages		
			Teacher Prepared Materials		
			Cooperative Learning		
			Projects		
			Mini Labs/Quick Labs		

Geologic History: Absolute and Relative Age	3.3.12.A3	Describe the absolute and relative dating methods	Approved Textbook	Teacher prepared tests,	7 days
		used to measure geologic time, such as index	Chapter Resource Guides	quizzes, etc.	
		fossils, radioactive dating, law of superposition, and	Calculators	Series available assessments	
		crosscutting	PowerPoint/Other	online.	
		relationships.	Multimedia Presentations	(Optional)	
			Directed Reading		
			Worksheets/ Study Guides		
			Research Databases		
			Web pages		
			Teacher Prepared Materials		
			Cooperative Learning		
			Projects		
			Mini Labs/Quick Labs		

Continental Drift and the	3.3.10.A1	Relate plate tectonics to	Approved Textbook	Teacher	25 days
Theory of Plate Tectonics		both slow and rapid		prepared tests,	
		changes in the earth's surface.	Chapter Resource Guides	quizzes, etc.	
			Calculators	Series available	
	3.3.10.A7	Interpret and create		assessments	
		models of the Earth's	PowerPoint/Other	online.	
		physical features in	Multimedia Presentations	(Optional)	
		various mapping			
		representations	Directed Reading		
			Worksheets/ Study Guides		
		Apply an appropriate			
		scale to illustrate major events throughout	Research Databases		
		geologic time.	Web pages		
			Teacher Prepared Materials		
			Cooperative Learning Projects		
			Mini Labs/Quick Labs		

Earthquakes and Volcanoes	3.3.12.A7	Interpret and analyze a combination of ground-	Approved Textbook	Teacher prepared tests,	20 days
		based observations, satellite data, and	Chapter Resource Guides	quizzes, etc.	
		computer models to	Calculators	Series available	
		demonstrate Earth	Dawar Daint /Othor	assessments	
		systems and their	PowerPoint/Other	online.	
		interconnections.	Multimedia Presentations	(Optional)	
		Summarize the use of	Directed Reading		
		data in understanding seismic events.	Worksheets/ Study Guides		
			Research Databases		
			Web pages		
			Teacher Prepared Materials		
			Cooperative Learning Projects		
			Mini Labs/Quick Labs		

Atmospheric Composition and	3.3.12.A1	Explain how parts are	Approved Textbook	Teacher	4 days
Characteristics		related to other parts in		prepared tests,	
		weather systems, solar	Chapter Resource Guides	quizzes, etc.	
		systems, and earth			
		systems, including how	Calculators	Series available	
		the output from one part		assessments	
		can become an input to	PowerPoint/Other	online.	
		another part.	Multimedia Presentations	(Optional)	
	3.3.10.A3	Explain how the evolution	Directed Reading		
		of Earth has been driven	Worksheets/ Study Guides		
		by interactions between			
		the lithosphere,	Research Databases		
		hydrosphere,			
		atmosphere, and	Web pages		
		biosphere.			
			Teacher Prepared Materials		
			Cooperative Learning		
			Projects		
			Mini Labs/Quick Labs		

Solar Energy and Atmospheric Circulation	3.3.12.A6	Explain how the unequal heating of the Earth's	Approved Textbook	Teacher prepared tests,	3 days
Circulation		surface leads to atmospheric global	Chapter Resource Guides	quizzes, etc.	
		circulation changes, climate, local short term	Calculators	Series available assessments	
		changes, and weather.	PowerPoint/Other Multimedia Presentations	online. (Optional)	
		Relate the transfer of	Directed Reading	(Special)	
		energy through radiation, conduction, and convection to global	Worksheets/ Study Guides		
		atmospheric processes.	Research Databases		
	3.2.10.B5	Understand that waves transfer energy without	Web pages		
		transferring matter.	Teacher Prepared Materials		
		Describe the components of the electromagnetic	Cooperative Learning		
		spectrum.	Projects		
	3.3.12.A1	Analyze the processes	Mini Labs/Quick Labs		
		that cause the movement of material in the Earth's systems.			

Water in the Atmosphere	3.2.10.A1	Explain the unique properties of water (polarity, high boiling point, forms hydrogen bonds, high specific heat) that support life on Earth.	Approved Textbook Chapter Resource Guides Calculators PowerPoint/Other Multimedia Presentations Directed Reading Worksheets/ Study Guides	Teacher prepared tests, quizzes, etc. Series available assessments online. (Optional)	7 days
			Research Databases		
Air Masses, Fronts, and Weather Systems	3.4.10.A2	Interpret meteorological data to describe and/or predict weather. Explain the phenomena that cause global atmospheric processes such as storms, currents, and wind patterns. Interpret how systems thinking applies logic and creativity with appropriate comprises in complex real-life problems.	Approved Textbook Chapter Resource Guides Calculators PowerPoint/Other Multimedia Presentations Directed Reading Worksheets/ Study Guides Research Databases Web pages Teacher Prepared Materials	Teacher prepared tests, quizzes, etc. Series available assessments online. (Optional)	6 days
			Cooperative Learning Projects		

Weather Forecasting	3.3.10.A6	Interpret meteorological data to describe and/or	Approved Textbook	Teacher prepared tests,	4 days
		predict weather.	Chapter Resource Guides	quizzes, etc.	
		Explain the phenomena	Calculators	Series available	
		that cause global atmospheric processes	PowerPoint/Other	assessments online.	
		· ·			
		such as storms, currents, and wind patterns.	Multimedia Presentations	(Optional)	
		·	Directed Reading		
			Worksheets/ Study Guides		
			Research Databases		
			Web pages		
			Teacher Prepared Materials		
			Cooperative Learning		
			Projects		
			Mini Labs/Quick Labs		
			iviini Labs/Quick Labs		

Factors that Affect Climate	3.3.10.A6	Explain the phenomena	Approved Textbook	Teacher	3 days
		that cause global		prepared tests,	
		atmospheric processes	Chapter Resource Guides	quizzes, etc.	
		such as storms, currents,			
		and wind patterns.	Calculators	Series available	
				assessments	
	3.3.12.A1	Explain how parts are	PowerPoint/Other	online.	
		related to other parts in weather systems, solar	Multimedia Presentations	(Optional)	
		systems, and earth	Directed Reading		
		systems, including how	Worksheets/ Study Guides		
		the output from one part	,		
		can become an input to	Research Databases		
		another part.			
		another parti	Web pages		
		Analyze the processes	l l en puget		
		that cause the movement	Teacher Prepared Materials		
		of material in the Earth's	l cache i reparea materials		
		systems.	Cooperative Learning		
		Systems.	Projects		
	3.4.10.A2	Interpret how systems	riojects		
	3.4.10.AZ	thinking applies logic and	Mini Labs/Quick Labs		
			Willi Labs/ Quick Labs		
		creativity with			
		appropriate comprises in			
		complex real-life			
		problems.			

Climate Zones	3.3.12.A7	Interpret and analyze a combination of ground-	Approved Textbook	Teacher prepared tests,	2 days
		based observations,	Chapter Resource Guides	quizzes, etc.	
		satellite data, and			
		computer models to	Calculators	Series available	
		demonstrate Earth		assessments	
		systems and their	PowerPoint/Other	online.	
		interconnections.	Multimedia Presentations	(Optional)	
	3.3.12.A6	Explain how the unequal	Directed Reading		
		heating of the Earth's surface leads to	Worksheets/ Study Guides		
		atmospheric global	Research Databases		
		circulation changes,			
		climate, local short term	Web pages		
		changes, and weather.			
			Teacher Prepared Materials		
	3.4.12.B2	Illustrate how, with the			
		aid of technology, various	Cooperative Learning		
		aspects of the	Projects		
		environment can be			
		monitored to provide	Mini Labs/Quick Labs		
		information for decision			
		making.			

Climate Change	3.3.10.A7	Describe factors that contribute to global	Approved Textbook	Teacher prepared tests,	3 days
		climate change.	Chapter Resource Guides	quizzes, etc.	
	3.3.12.A7	Interpret and analyze a combination of ground-	Calculators	Series available assessments	
		based observations,	PowerPoint/Other	online.	
		- I	Multimedia Presentations		
		satellite data, and computer models to	Wuitimedia Presentations	(Optional)	
		demonstrate Earth	Directed Reading		
		systems and their	Worksheets/ Study Guides		
		interconnections.			
			Research Databases		
		Infer how human			
		activities may impact the	Web pages		
		natural course of Earth's			
		cycles.	Teacher Prepared Materials		
		Summarize the use of	Cooperative Learning		
		data in understanding seismic events,	Projects		
		meteorology, and geologic time.	Mini Labs/Quick Labs		

Studying Space	3.3.10.B2	Explain how scientists	Approved Textbook	Teacher	6 days
		obtain information about		prepared tests,	
		the universe by using	Chapter Resource Guides	quizzes, etc.	
		technology to detect			
		electromagnetic radiation	Calculators	Series available	
		that is emitted, reflected,		assessments	
		or absorbed by stars and	PowerPoint/Other	online.	
		other objects.	Multimedia Presentations	(Optional)	
		Describe changes in the	Directed Reading		
		universe over billions of	Worksheets/ Study Guides		
		years.	-		
			Research Databases		
	3.4.12.A3	Explain the scale used to			
		measure the sizes of stars	Web pages		
		and galaxies and the			
		distances between them.	Teacher Prepared Materials		
		Demonstrate how	Cooperative Learning		
		technological progress	Projects		
		promotes the			
		advancement of science,	Mini Labs/Quick Labs		
		technology, engineering			
		and mathematics (STEM).			
	3.4.10.B4	Recognize that			
		technological			
		development has been			
		evolutionary, the result of			
		a series of refinements to			
		a basic invention.			

Planets and Minor Bodies of	3.3.10.B1	Explain how gravity is	Approved Textbook	Teacher	10 days
the Solar System		responsible for planetary		prepared tests,	
		orbits.	Chapter Resource Guides	quizzes, etc.	
		Explain what caused the	Calculators	Series available	
		sun, Earth, and most of		assessments	
		the other planets to form	PowerPoint/Other	online.	
		between 4 and 5 billion years ago.	Multimedia Presentations	(Optional)	
		, ,	Directed Reading		
	3.3.10.B2	Explain how scientists	Worksheets/ Study Guides		
		obtain information about			
		the universe by using technology to detect	Research Databases		
		electromagnetic radiation	Web pages		
		that is emitted, reflected,			
		or absorbed by stars and	Teacher Prepared Materials		
		other objects.			
			Cooperative Learning		
		Describe changes in the	Projects		
		universe over billions of			
		years.	Mini Labs/Quick Labs		

The Sun	3.3.12.B1	Describe the life cycle of	Approved Textbook	Teacher	7 days
		stars based on their mass.		prepared tests,	
			Chapter Resource Guides	quizzes, etc.	
		Analyze the influence of			
		gravity on the formation	Calculators	Series available	
		and life cycles of galaxies,		assessments	
		including our own Milky	PowerPoint/Other	online.	
		Way galaxy; stars;	Multimedia Presentations	(Optional)	
		planetary systems; and			
		residual material left	Directed Reading		
		from the creation of the	Worksheets/ Study Guides		
		solar system.			
			Research Databases		
		Relate the nuclear			
		processes involved in	Web pages		
		energy production in			
		stars and supernovas to	Teacher Prepared Materials		
		their life cycles.			

Stars, Galaxies, and the	3.3.12.B1	Describe the life cycle of	Approved Textbook	Teacher	7 days
Universe		stars based on their mass.		prepared tests,	
			Chapter Resource Guides	quizzes, etc.	
		Analyze the influence of			
		gravity on the formation	Calculators	Series available	
		and life cycles of galaxies,		assessments	
		including our own Milky	PowerPoint/Other	online.	
		Way galaxy; stars;	Multimedia Presentations	(Optional)	
		planetary systems; and			
		residual material left	Directed Reading		
		from the creation of the solar system.	Worksheets/ Study Guides		
		,	Research Databases		
		Relate the nuclear			
		processes involved in	Web pages		
		energy production in			
		stars and supernovas to their life cycles.	Teacher Prepared Materials		
		, , , , , , , , , , , , , , , , , , , ,	Cooperative Learning		
	3.4.10.A2	Interpret how systems	Projects		
		thinking applies logic and			
		creativity with	Mini Labs/Quick Labs		
		appropriate comprises in			
		complex real-life			
		problems.			
Final Exam Review					10 days
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