## **ENVIRONMENTAL SCIENCE CURRICULUM**

## Course 18008

Students in Environmental Science will learn the basic principles of science and environmental studies. They will learn about the makeup of the environment with its living and nonliving components and the interactions between them. The course will also include human influence on the environment and steps humans can take to protect the environment. Major topics will include: basics of environmental studies, origins and makeup of Earth, interactions between organisms, biodiversity, global biomes, human impact, water and energy resources, water and air pollution, feeding the World and sustainability.

## **ENVIRONMENTAL SCIENCE OUTLINE:**

Goals	Skills	Summative Assessments	Time Frame	Main Resources
<ul> <li>Describe why environmental science is important to society.</li> <li>Understanding how climate affects where organisms can live.</li> <li>Explain how biodiversity is an important source of resources.</li> <li>Identify the major types of water and air pollution and their sources.</li> <li>List some of the features of sustainable agriculture.</li> <li>Describe the concept of a sustainable community.</li> </ul>	<ul> <li>Compare and contrast scientific theories.</li> <li>Evaluate experimental information for relevance and adherence to science processes.</li> <li>Interpret results of experimental research to predict new information, propose additional investigable questions, or advance a solution.</li> </ul>	Chapter Tests	1-year	Pearson Environmental Science

## **ENVIRONMENTAL SCIENCE MAP:**

TIME	BIG IDEAS	CONCEPTS	ESSENTIAL	STANDARDS	OBJECTIVES	DIFFERENTIATI	ASSESSMENT
FRAME			QUESTIONS			ON	
Exploring Science and the Environment (Weeks 1-4)	<ul> <li>Environmental science is the study of how living things interact and affect their environment.</li> <li>Energy and materials are needed to support life.</li> <li>Human life on Earth has changed throughout time due to many unique technologies.</li> <li>Earth faces many environmental challenges.</li> <li>Science uses the scientific method to understand problems.</li> <li>Science plays an important role in how our society works.</li> </ul>	<ol> <li>Orderstanding that environmental science includes many different areas of study.</li> <li>Discussing the major things that all living things need to survive.</li> <li>Explaining how life on Earth has changed over time.</li> <li>Understandin g major environmental problems.</li> <li>Listing and describing the steps of the scientific method.</li> <li>Explaining why science is important to society.</li> </ol>	<ul> <li>Describe the difference between natural environment and built environment.</li> <li>Outline what an organism needs for survival.</li> <li>Compare and contrast the agricultural revolution and the industrial revolution.</li> <li>Explain what diversity means.</li> <li>Discuss some of the major environmental issues that Earth faces.</li> <li>Outline the steps of the scientific method.</li> <li>Describe what makes a good scientist.</li> </ul>	Compare and contrast scientific theories. Know that both direct and indirect observations are used by scientists to study the natural world and universe. Identify questions and concepts that guide scientific investigations. Formulate and revise explanations and models using logic and evidence. Recognize and analyze alternative explanations and models. Explain the importance of accuracy and precision in making valid measurements. 3.1.12.A9 Compare and contrast scientific theories. Know that both direct and indirect observations are used by scientists to study the natural world and universe. Identify questions and concepts that guide scientific investigations. Formulate and revise explanations and models using logic and evidence. Recognize and analyze alternative explanations and models. Explain the importance of accuracy and precision in making valid measurements. Explain the importance of accuracy and precision in making valid measurements. Examine the status of existing theories. Evaluate experimental information for relevance and adherence to science processes. Judge that conclusions are consistent and logical with experimental conditions.	<ul> <li>Define environmental science and applied science.</li> <li>Describe the natural environment and the built environment.</li> <li>List different areas of study important to environmental science.</li> <li>List the things that organisms need to survive.</li> <li>Explain where most of Earth's energy comes from.</li> <li>Describe how water, oxygen, energy, and nutrients are important.</li> <li>Discuss how life on Earth has changed over time.</li> <li>Describe the lifestyle of hunter- gatherers.</li> <li>Explain how the agricultural revolution changed the world.</li> <li>Describe how the industrial revolution has affected the environment and people's lives.</li> <li>Describe a sustainable society.</li> <li>List five environmental challenges.</li> <li>Explain why values are important to solving</li> </ul>	students will be given the following: Preferential seating when applicable. Study guides. Guided notes when applicable, Extended time for assignments when needed. Separate testing environment when applicable.	assignments. End of the Chapter Test. Labs and Classroom Activities

		Interpret results of experimental research to predict new information, propose additional investigable questions, or advance a solution. Communicate and defend a scientific argument.	<ul> <li>environmental problems.</li> <li>Understand why scientist use the scientific method.</li> <li>Define each step of the scientific</li> </ul>	
		4.1.10.F Compare and contrast scientific theories. Know that both direct and indirect observations are used by scientists to study the natural world and universe. Identify questions and concepts that guide scientific investigations. Formulate and revise explanations and models using logic and evidence. Recognize and analyze alternative explanations and models.	<ul> <li>method.</li> <li>List three characteristics of a good scientist.</li> <li>Define theory and principle and give an example of each.</li> <li>Describe why environmental science is important to society.</li> </ul>	
		4.1.12.C Research how humans affect energy flow within an ecosystem.		
		Describe the impact of industrial, agricultural, and commercial enterprises on an ecosystem		
		4.5.10.D Evaluate various methods of managing waste as related to economic, environmental, and technological factors.		
		4.5.12.D Evaluate waste management practices.		
		Analyze current solid waste regulations. Research the impact of new and emerging technologies in the use, reuse, recycling and disposal of materials.		

				Evaluate ways that waste could be reduced during the production of specific product.			
Unit 2: The Dynamic Earth (Weeks 5-7)	<ul> <li>The formation of the Earth was a unique process that eventually lead to life.</li> <li>Earth is composed a solid layer, a liquid layer, and a layer of gases.</li> <li>Earth cycles many materials, like water, carbon/oxygen, and element necessary for life.</li> <li>Earth's rotation and the Sun's heat have created unique air patterns that control our weather and climate.</li> <li>Earths plate movement has caused major changes on the surface of the planet as well as changed the climate.</li> </ul>	<ol> <li>Describe the origins of Earth.</li> <li>Identify and describe Earth's three major parts.</li> <li>Describe how water, oxygen, and other elements move through the environment.</li> <li>Define weather and climate.</li> <li>Explain the changed that happen on Earth over short and long time periods.</li> </ol>	<ul> <li>Describe the layers of Earth.</li> <li>Describe early Earth.</li> <li>Compare and contrast the lithosphere, hydrosphere, and atmosphere.</li> <li>Outline the water cycle.</li> <li>Discuss the oxygen/carbon cycle.</li> <li>Compare weather and climate.</li> <li>Explain the air patterns of Earth.</li> <li>Explain what Pangaea was.</li> <li>Discuss some ways to study Earths history.</li> </ul>	<ul> <li>3.3.10.A1 Relate plate tectonics to both slow and rapid changes in the earth's surface.</li> <li>Describe the rock cycle and the processes that are responsible for the formation of igneous, sedimentary, and metamorphic rocks.</li> <li>Relate geochemical cycles to the conservation of matter.</li> <li>Explain how the Earth is composed of a number of dynamic, interacting systems exchanging energy or matter.</li> <li>3.3.10.A2 Analyze the effects on the environment and the carbon cycle of using both renewable and nonrenewable sources of energy.</li> <li>3.3.10.A3 Explain how the evolution of Earth has been driven by interactions between the lithosphere, hydrosphere, atmosphere, and biosphere.</li> <li>3.3.10.A4 Relate geochemical cycles to conservation of matter.</li> <li>Explain how the Earth's systems and its various cycles are driven by energy.</li> <li>3.3.10.A5 Explain how there is only one ocean.</li> <li>Explain the processes of the hydrologic cycle.</li> </ul>	<ul> <li>Describe how and when Earth formed.</li> <li>Name conditions that made the young Earth unwelcoming to life.</li> <li>Explain how some of the earliest life forms created a more livable planet.</li> <li>Describe several efforts of plate movement.</li> <li>Name different part of the hydrosphere.</li> <li>Name several benefits of the atmosphere.</li> <li>Describe the water cycle.</li> <li>Describe the water cycle.</li> <li>Define element and name elements that are critical for life cycles.</li> <li>Define climate and weather.</li> <li>Explain how air circulation contributes to weather patterns.</li> <li>Understanding how climate affects where organisms can live.</li> <li>Give examples of small and large environmental changes.</li> <li>Describe the impacts of ice ages and global warming.</li> <li>Give examples of the ways scientists</li> </ul>	Students will be given the following: Preferential seating when applicable. Study guides. Guided notes when applicable, Extended time for assignments when needed. Separate testing environment when applicable.	Daily assignments. End of the Chapter Test. Labs and Classroom Activities

				Explain the dynamics of oceanic currents and their relationship to global circulation within the marine environment.	learn about the past.		
				3.3.10.A6 Interpret meteorological data to describe and/or predict weather.			
				Explain the phenomena that cause global atmospheric processes such as storms, currents, and wind patterns.			
				3.3.12.A3 Describe the absolute and relative dating methods used to measure geologic time, such as index fossils, radioactive dating, law of superposition, and crosscutting relationships.			
				3.3.12.A6 Explain how the unequal heating of the Earth's surface leads to atmospheric global circulation changes, climate, local short term changes, and weather.			
				Relate the transfer of energy through radiation, conduction, and convection to global atmospheric processes.			
				4.1.10.B Explain the consequences of interrupting natural cycles.			
				4.1.12.B Research solutions to problems caused by interrupting natural cycles.			
Unit 3: How Living Things Interact (Weeks 8-10)	<ul> <li>Organisms interact with each other in unique and challenging ways within ecosystems.</li> <li>Producers use photosynthesis</li> </ul>	<ol> <li>Define ecology and identify biotic and abiotic factors.</li> <li>Describe the parts of an ecosystem.</li> <li>Identify the roles of</li> </ol>	<ul> <li>Compare and contrast the three levels of biodiversity.</li> <li>Explain how biodiversity is measured.</li> </ul>	4.1.10.A Examine the effects of limiting factors on population dynamics. Analyze possible causes of population fluctuations. Explain the concept of carrying capacity in an ecosystem.	<ul> <li>Define biodiversity.</li> <li>Name the three levels of biodiversity.</li> <li>Describe how the three levels of biodiversity are connected.</li> </ul>	Students will be given the following: Preferential seating when applicable. Study guides.	Daily assignments. End of the Chapter Test. Labs and Classroom Activities

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Unit 4: The Diversity of Life (Weeks 11- 13)	<ul> <li>The three levels of biodiversity are connected to each other.</li> <li>Earth has lots of species diversity, which is measured and tracked in many unique ways.</li> <li>Evolution and natural selection have contributed to biodiversity on Earth.</li> <li>Earth is a "web of life" in which all species play an important role in.</li> <li>Earth supplies many ecosystem services which are important to biodiversity.</li> </ul>	<ol> <li>Identify the three levels of biodiversity.</li> <li>Explain how biodiversity is measured.</li> <li>Describe how biodiversity has developed.</li> <li>Understand the concept of a web of life.</li> <li>Explain how biodiversity benefits the planet.</li> </ol>	<ul> <li>Compare and contrast the three levels of biodiversity.</li> <li>Explain how biodiversity is measured.</li> <li>Contrast extinction and endangered.</li> <li>Explain how evolution and natural selection play a part in biodiversity.</li> <li>Compare and contrast the three types of symbiosis.</li> <li>Describe some ecosystem services.</li> </ul>	<ul> <li>4.1.8.D</li> <li>Use the theory of natural selection to examine the causes and consequences of extinction.</li> <li>4.1.10.A</li> <li>Examine the effects of limiting factors on population dynamics.</li> <li>Analyze possible causes of population fluctuations. Explain the concept of carrying capacity in an ecosystem. Describe how organisms</li> <li>become classified as threatened or endangered. Describe how limiting factors cause organisms to become extinct.</li> <li>4.1.10.D</li> <li>Research practices that impact biodiversity in specific ecosystems.</li> <li>Analyze the relationship between habitat changes to plant and animal population fluctuations.</li> <li>4.1.12.A</li> <li>Analyze the significance of biological diversity in an ecosystem. Analyze the differences between natural causes and human causes of extinction. Research wildlife management laws and their effects on biodiversity.</li> <li>4.1.12.D</li> <li>Analyze the effects of new and emerging technologies on biodiversity in specific ecosystems.</li> </ul>	<ul> <li>Define biodiversity.</li> <li>Name the three levels of biodiversity.</li> <li>Describe how the three levels of biodiversity are connected.</li> <li>Give the estimated number of species on Earth.</li> <li>Explain why scientists do not know the exact number of species.</li> <li>Name several ways that scientists learn about new species.</li> <li>Define evolution.</li> <li>Explain how species adapt and evolve.</li> <li>Understand that biodiversity is the result of evolution.</li> <li>Understand the ides of a web of life.</li> <li>Describe some of the ways organisms interact.</li> <li>Explain why the loss of one species can affect many other species.</li> <li>Describe several ecosystem services.</li> <li>Explain how biodiversity is an important source of resources.</li> <li>Describe some ways that biodiversity benefits</li> </ul>	Students will be given the following: Preferential seating when applicable. Study guides. Guided notes when applicable, Extended time for assignments when needed. Separate testing environment when applicable.	Daily assignments. End of the Chapter Test. Labs and Classroom Activities
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		4.1.8.D Use the theory of natural selection to examine the causes and consequences of extinction.			
<ul> <li>Unit 5: Biomes of the World (Weeks 14- 17)</li> <li>Each biome is unique in its amount of precipitation and temperature ranges.</li> <li>Tropical and Temperate rainforest differ in unique ways.</li> <li>Deciduous and coniferous forest differ in unique ways.</li> <li>There are many different grassland biomes on Earth.</li> <li>There are different tundra and desert biomes located on Earth.</li> <li>There are many different and desert biomes located on Earth.</li> <li>There are many different and unique marine biomes on Earth.</li> <li>There are many different and unique marine biomes on Earth.</li> </ul>	<ol> <li>Define biome and compare and contrast terrestrial and aquatic biomes.</li> <li>Describe characteristics and locations of rain forests, coniferous forests. and deciduous forests.</li> <li>Describe characteristics and locations of grasslands, tundra, and deserts.</li> <li>Describe characteristics and locations of grasslands, tundra, and deserts.</li> <li>Describe characteristics and locations of grasslands, tundra, and deserts.</li> <li>Describe characteristics and locations of grasslands, tundra, and deserts.</li> <li>Describe characteristics and locations of marine and freshwater biomes.</li> <li>How does precipitatic and temperatur affect a bio biome.</li> <li>Compare a contrast a deciduous forest biom</li> <li>Discuss th different ty of wetlands and their importance biodiversity</li> </ol>	A.1.7.ADescribe the relationships between biotic and abiotic components of an ecosystem.ome?ome?ome?compare and contrast different biomes and their characteristics Describe symbiotic and predator/prey relationshipsand4.2.10.B Examine how human interactions impact wetlands and their surrounding environments.bbcompare and contrast decisions affect wetlandscharacteristics Describe how land use decisions affect wetlandscharacteristics in a me.ebcharacteristics Describe how land use decisions affect wetlandscharacteristics affect the growth and reproduction of freshwater organisms.4.2.8.B Explain the value of wetlands to other living things.	<ul> <li>Compare and contrast terrestrial and aquatic biomes.</li> <li>Explain the effects of precipitation and temperature on a biome.</li> <li>Explain the effects of latitude and altitude on a biome.</li> <li>Describe how salinity and water depth affect aquatic biomes.</li> <li>Describe the characteristics of rain forest biomes.</li> <li>Describe how rain forest biomes.</li> <li>Describe how rain forest organisms have adapted to survive.</li> <li>Compare and contrast deciduous and coniferous forest biomes.</li> <li>Describe how each forest biome got its name.</li> <li>Describe how species in each forest biome</li> </ul>	Students will be given the following: Preferential seating when applicable. Study guides. Guided notes when applicable, Extended time for assignments when needed. Separate testing environment when applicable.	Daily assignments. End of the Chapter Test. Labs and Classroom Activities

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lakes.		contrast	ponds and
Describe two		lakes.	
		Describe	two
examples of		examples	s of

					freshwater		
Unit 6:	The growth	1. Describe the	Explain the	4.1.10.A	wetlands.     Describe how the	Students will be	Daily
Unit 6: People and the Environment (Weeks 18- 19) • •	<ul> <li>The growth rate of a population increases and decreases due to many factors.</li> <li>Overpopulation of an area can lead to many problems.</li> <li>The rate of consumption affects the environment in many ways.</li> <li>The gap between wealthy and poor nations obtaining and using resources is an issue of equity.</li> </ul>	<ol> <li>Describe the major trends in the world population.</li> <li>Understand the link between population growth and environmental impact.</li> <li>Understand the link between consumption and environmental impact.</li> <li>Describe some ways that people can reduce their impact on the environment.</li> </ol>	<ul> <li>Explain the difference between exponential growth and logistic growth.</li> <li>Describe the factors that affect the growth of a population.</li> <li>Compare the population growth rates between a developing country and an industrialized country.</li> <li>Contrast renewable and non-renewable resources.</li> <li>Explain ways that we can reduce consumption rates on our resources.</li> </ul>	<ul> <li>4.1.10.A Examine the effects of limiting factors on population dynamics.</li> <li>Analyze possible causes of population fluctuations. Explain the concept of carrying capacity in an ecosystem. Describe how organisms become classified as threatened or endangered. Describe how limiting factors cause organisms to become extinct.</li> <li>4.1.10.D Research practices that impact biodiversity in specific ecosystems.</li> <li>Analyze the relationship between habitat changes to plant and animal population fluctuations.</li> <li>4.1.12.A Analyze the significance of biological diversity in an ecosystem. Explain how species adapt to limiting factors in an ecosystem. Analyze the differences between natural causes and human causes of extinction. Research wildlife management laws and their effects on biodiversity.</li> <li>4.3.10.A Evaluate factors affecting the use of natural resources. Evaluate the effect of consumer demands on the use of natural resources. Analyze how technologies such as modern mining,</li> </ul>	<ul> <li>wetlands.</li> <li>Describe how the global population has changed over time.</li> <li>Describe exponential growth.</li> <li>Explain some of the factors that increase and decrease the growth rate.</li> <li>Define overpopulation.</li> <li>Explain regional trends in population growth.</li> <li>Explain how rapid population growth.</li> <li>Explain how rapid population growth can affect human health and biodiversity.</li> <li>Define consumption.</li> <li>Explain how population and consumption rates affect resource use.</li> <li>Describe the links between overconsumption and the environment.</li> <li>Describe an equation for measuring human impact on the environment.</li> <li>Discuss equity and the gaps between wealthy and poor populations.</li> <li>Describe some ways that people are reducing the impact of consumption.</li> </ul>	Students will be given the following: Preferential seating when applicable. Study guides. Guided notes when applicable, Extended time for assignments when needed. Separate testing environment when applicable.	Daily assignments. End of the Chapter Test. Labs and Classroom Activities

		equipment affect the use of our natural resources. Describe how local and state agencies manage natural resources.		
		4.3.10.B Analyze how humans manage and distribute natural resources.		
		Describe the use of a natural resource with an emphasis on the environmental consequences of extracting, processing, transporting, using, and disposing of it. Analyze the impact of technology on the management, distribution, and disposal of natural resources.		
		4.3.12.A Evaluate the advantages and disadvantages of using renewable and nonrenewable resources.		
		Explain how consumption rate affects the sustainability of resource use. Evaluate the advantages and disadvantages of using renewable resources such as solar power, wind power, and biofuels.		
		4.3.12.B Analyze factors that influence the local, regional, national, and global availability of natural resources.		
		Compare the use of natural resources in different countries. Analyze the social, economic, and political factors that affect the distribution of natural resources (e.g., wars, political systems, classism, racism).		

Unit 7:	<ul> <li>Energy comes</li> </ul>	1. Understandin	<ul> <li>Compare and</li> </ul>	3.2.C.A3	Describe potential	Students will be	Daily
Energy	in many forms.	g what energy	contrast kinetic	Describe the three normal states	and kinetic energy.	given the	assignments.
(Weeks 20-	<ul> <li>The laws of</li> </ul>	is.	and potential	of matter in terms of energy.	Explain the first and	followina:	J
22)	energy are	2. Name three	energy.	particle motion, and phase	second laws of	Preferential	End of the
/	important to	fossil fuels	Explain the	transitions.	energy	seating when	Chapter Test.
	understanding	and their	laws of energy		Contrast renewable	applicable.	
	energy use	advantages	<ul> <li>List the</li> </ul>	Identify the three main types of	and non-renewable		Labs and
	<ul> <li>Fossil fuels</li> </ul>	and	nonrenewable	radioactive decay and compare	energy	Study auides.	Classroom
	come in many	disadvantage	and renewable	their properties.	Evolain what fossil		Activities
	forms and	S.	resources		fuels are	Guided notes	
	cause many	3. Describe	Contrast	Describe the process of		when applicable.	
	issues	nuclear	• Contrast	radioactive decay by using	Describe     advantages and	· · · · · · · · · · · · · · · · · · ·	
	<ul> <li>Nuclear energy</li> </ul>	energy and its	with nuclear	nuclear equations and explain	disadvantages and	Extended time for	
	has become	benefits and	fusion	the concept of half-life for an		assignments	
	more important	risks.	Contrast	isotope.	Evoluin the process	when needed.	
	to society but	4. Name five			of nuclear fission		
	it has many	types of	systems with	Compare and contrast nuclear	Describe the	Separate testing	
	issues that	renewable	active solar	fission and nuclear fusion.	Describe the     benefits and risks of	environment	
	need	energy and	systems		puclear energy	when applicable.	
	addressed.	their	Outline ways	4.3.10.A	Describe the		
	<ul> <li>Solar energy</li> </ul>	advantages	we can use	Evaluate factors affecting the use	• Describe the		
	has become	and	alternative	of natural resources.	weaknesses of		
	more important	disadvantage	energy		solar energy		
	to society, but	S.	sources.	Evaluate the effect of	Compare passive		
	it has many	<ol><li>Explain how</li></ol>	List ways that	consumer demands on the use	and active solar		
	issues that	energy	vou can	of natural resources.	systems		
	need	experts	conserve	Analyze how technologies			
	addressed.	expect to	energy.	such as modern mining,	photovoltaic and		
	<ul> <li>There are</li> </ul>	meet future	5 5 55	harvesting, and transportation	how they are used		
	many	energy		equipment affect the use of our	today		
	alternative	demand.		natural resources.	Describe		
	energy sources			Describe how local and state	bydropower and		
	that need			agencies manage natural	wind power		
	addressed for			resources.	Explain what		
	their			4.0.40.0	deothermal energy		
	usefulness and			4.3.10.B	is and how itis		
	risks.			and distribute natural resources	used.		
	<ul> <li>Everyone has</li> </ul>			and distribute natural resources.	Describe biomass		
	the			Describe the use of a patural	energy.		
	responsibility to			resource with an emphasis on	Describe several		
	conserve			the environmental consequences	methods of		
	energy.			of extracting processing	conservina enerav.		
				transporting using and	Give several		
				disposing of it	examples of energy		
				Analyze the impact of	conservation.		
				technology on the management	Describe advances		
				distribution, and disposal of	in technology that		
				natural resources	could meet energy		
					needs.		
				4.3.12.A			

		Evaluate the advantages and		
		disadvantages of using		
		renewable and nonrenewable		
		resources.		
		Evaluin how consumption rate		
		Explain now consumption rate		
		Evaluate the advantages and		
		disadvantages of using		
		renewable resources such as		
		solar power, wind power, and		
		biofuels.		
		4.3.12.B		
		Analyze factors that influence the		
		local, regional, national, and		
		163001063.		
		Compare the use of natural		
		resources in different countries.		
		Analyze the social, economic,		
		and political factors that affect		
		the distribution of natural		
		resources (e.g., wars, political		
		systems, classism, facism).		
		437A		
		Explain how products are derived		
		from natural resources.		
		Describe the process of		
		converting raw materials to		
		Differentiate between		
		renewable and nonrenewable		
		resources		
		4.3.7.B		
		Explain the distribution and		
		management of natural		
		resources.		
		Differentiate between resource		
		uses: conservation. preservation.		
		and exploitation		
		4.3.8.A		
		Compare and contrast alternative		
		sources of energy.		

Resources, and Water Pollution (Weeks 22- 24)Features, that are peing the stended.Earth's water resources, that to life on Earth, are being threatened.Earth's water important, to life on Earth, are being threatened.Research solutions addressing usatersheds of PA.people and wildlife use water.poole and wildlife use water.group hand to life on Earth, are being threatened.Earth's water important, water is used and how it's manage their water subal ocomes in many of our water supplies.Earth's water, the major supplies.Beasearch solutions addressing human impacts on ecosystems over time.people and wildlife use water.group hand to life on Earth, watershed.Earth's water, the major supplies.people and wildlife use water.group hand to life on Earth, water supplies.group hand the major supplies.group hand the major supplies.group hand the major supplies.group hand the major supplies.group hand the major supplies.group hand the major supplies.group hand the major supplies.group hand the major supplies. <t< th=""></t<>
and Water Pollution (Weeks 23- 24)re important to life on Earth, are being threatened.resources and why they are important and how its an ange their wateris the major water stude and how its manage their manage their of our water of our water supples.is the major water is used and how its manage their of water pollution.is the major water is used and how its managed.is the major managed.is the major water is used and how its managed.is the major major source and pollution.is the major major source and pollution.is the major major source and pollution.is the major and prevent and prevent and prevent water supplies.is the major major sources.is the major major sources.is the major major sources.is the major and prevent and prevent water supplies.is the major major sources.is the major and prevent water supplies.is the major and prevent water supplies.is the major and p
Pollution (Weeks 23- 24)to life on Earth, are being threatened. • Humans must learn to properly managet their water suster is used found in many of our water supplies. • Humans have set up laws to help control and prevent pollution and conserve and water.water susters and set is used to life on Earth, 2. Identify the managed their water suster suster suster of water pollution, down and is supplies. • Humans have set up laws to help control and prevent pollution and conserve and water.watersheds of PA. Compare and surface water water sustersover time. PA. Compare and surface water water sustersever time. PA. Compare and surface water managed. Contrast point- sources.ever time. PA. Compare and surface water managed. Contrast point- sources and protect waterever time. PA. Contrast point- sources and protect water resources.ever time. PA. Contrast point- sourcesever time. PA. Contrast point- sourc
(Weeks 23- 24)are being threatened. + Humans must learn to properly manage their water resources.PA. - Compare and contrast surface water water is used and how its surface water managed.PA. - Compare and contrast surface water with and how its surface water with a watershed.is distributed on is distributed on surface water water is used and how its people into and protect water resources.PA. - Compare and contrast surface water water surfacePA. - Compare and contrast surface water with and how its use water.Surface water watershed.is distributed on is distributed on is distributed on the control and provent pollution and conserve water.PA. - Compare and contrast surface water water supplies.PA. - Compare and compare and protect water resources.PA. - Compare and compare and protect water resources.Compare and compare and protect water resources.Surface water main ways water supplies.Compare and compare and protect water resources.Compare and compare and protect water resources.PA. - Compare and compare and protect water resources.PA. - Compare and compare and compare and protect water resources.Surface water and is insport on the water supplies.Surface water main environmental laws related to land use management and regulations at various governmental levels on water quality.Surface water surface water and analyze the effects of policies and regulations at various governmental levels on water quality.Surface water seating watershed.Compare a
24)       threatened.       2. Identify the main ways water is used and how it is main ways water is used and how it is managed.       2. Identify the main ways water is used and how it is managed.       4.2.10.A       Earth.       applicable.       Labs and Classroom Activities         water is used and how it is managed.       3. Define three major sources of water pollution.       3. Define three major sources of water pollution.       Corntrast point-sources and is found in many pollution.       Describe how togetation affects water runoff.       Describe how togetation affects of land use on the quality of water in a watershed.       Describe the wreen adjuste and analyze the pollution.       Describe the wreen adjuste and analyze the pollution.       Explain how main uses of water.       Explain how mater is important to aquuatic ecoserve and pollution.       Secribe how togetation affects of land use on the quality of water in a watershed.       Describe the wreen main uses of water.       Separate testing environmental laws malagement and its impact on the water quality and flow within a watershed.       Name several ways humans use water shed.       Separate testing environmental laws pollution and human health.       Describe how togetation and is togetation and is impact on the water quality and flow within a watershed.       Describe healthin a watershed.       Separate testing environmental laws or water gollution and neglet.       Separate testing environmental laws or water shed.       Separate testing environmental laws or water shed.       Separate testing environmental laws or water shed.       Separate testing environmental ways water can be conserved.       Separate testing envin
<ul> <li>Humans must learn to properly manage their resources.</li> <li>Water pollution comes in many forms and is supplies.</li> <li>Define three major sources of water supplies.</li> <li>Water pollution.</li> <li>Explain how groundwater.</li> <li>Define three major sources of water pollution.</li> <li>Explain how groundwater.</li> <li>Contrast surface water, pollution.</li> <li>Explain how groundwater.</li> <li>Contrast surface water, pollution.</li> <li>Explain how people can conserve and protect water</li> <li>Contrast surface water, pollution.</li> <li>Explain how people can conserve and protect water</li> <li>Explain how people can conserve and protect water</li> <li>Contrast point- source and conserve and protect water.</li> <li>Contrast point- source and protect water</li> <li>Explain how people can conserve and protect water</li> <li>Exercise how topography influences the flow of water run of: help control and prevent water.</li> <li>Use several pollution and conserve water.</li> <li>Use several pollution and conserve water.</li> <li>Contrast point- source and protect water water supplies.</li> <li>Contrast point- source and found in our water supplies.</li> <li>Contrast point- sources.</li> <li>Contrast point- source and disting pact on the water quality and flow within a watershed.</li> <li>Labs and Classroom</li> <li>Describe how topography influences the flow of water in a water supplies.</li> <li>Name several ways humans manage water systems.</li> <li>Describe the link between water pollution and human health.</li> <li>Identify the major sources.</li> <li>Explain the difference between pollution and their sources.</li> <li>Explain the difference between pollutions and their sources.</li> <!--</td--></ul>
<ul> <li>learn to properly managed their water</li> <li>Define three major sources.</li> <li>Water pollution comes in many of our water supplies.</li> <li>Humans have set up laws to help control and prevent water.</li> <li>Humans have set up laws to help control and prevent water.</li> <li>Just several supplies.</li> <li>Humans have set up laws to help control and prevent water.</li> <li>Just several supplies.</li> <li>Humans have set up laws to help control and prevent water.</li> <li>Just several supplies.</li> <li>Humans have set up laws to help control and prevent water.</li> <li>Just several conserve water.</li> <li>Just several pollution.</li> <li>Just several pollution and conserve water.</li> <li>Just several pollution and provermental levels on water pollution and provermental levels on water pollution and provermental levels on water pollution and their sources.</li> <li>Explain the difference between pollution and their sources and conductions proteing pollutions proteing pollution pol</li></ul>
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<ul> <li>manage their water</li> <li>manage their water</li> <li>a. Define three major sources of water pollution.</li> <li>comers in many of our water supplies.</li> <li>Humans have set up laws to help control and protect water.</li> <li>beliating conserve water.</li> <li>conserve water.</li> <li>and prevent pollution and conserve water.</li> <li>conserve water.</li> <li>and prevent water.</li> <li>and prevent water.</li> <li>and prevent quality.</li> <li>conserve water.</li> <li>and prevent quality.</li> <li>conserve water.</li> <li>conserve du and recent and regulations at various govermental levels on water quality.</li> <li>conserve water.</li> <li>conserve du and recent and regulations at various govermental levels on water quality.</li> <li>conserve water.</li> <li>conserve du and recent and regulations at various govermental levels on water quality and flow within a watershed.</li> <li>conserve du and recent and regulations at various govermental levels on water quality and flow governmental levels on water quality conserve du and regulations at various govermental levels on water quality.</li> <li>conserve water.</li> <li>conserve du and recent and regulations at various gover mental levels on water quality.</li> <li>conserve water.</li> <li>conserve water.</li> <li>conserve water.</li> <li>conserve du and recent and regulations at various gover mental levels on water quality.</li> <li>conserve du and recent and regulations at various gover mental levels on water quality.</li> <li>conserve du and recent and regulations at various gover mental levels on water quality.</li> <li>conserve du and recent and regulations at various gover mental levels on water quality.</li> <li>conserve du and recent regulations at various gover mental levels on water quality.</li> <li>conserve du and recent regulations at various gover regulations at various gover regulations t</li></ul>
<ul> <li>water resources.</li> <li>Water pollution, comes in many forms and is upplies.</li> <li>Humans have set up laws to help control and prevent pollution and conserve water.</li> <li>Humans have set up laws to help control and prevent pollution and crosserve awater.</li> <li>Outline several water.</li> <li>A. Explain how people can conserve and protect water resources.</li> <li>Humans have set up laws to help control and prevent pollution and conserve water.</li> <li>A. Explain how people can conserve and protect water resources.</li> <li>A. Explain how people can conserve and protect water resources.</li> <li>A. Explain how people can conserve and protect water resources.</li> <li>A. Explain how people can conserve and protect water resources.</li> <li>A. Explain how people can conserve and protect water resources.</li> <li>A. Explain how people can conserve and protect water resources.</li> <li>A. Explain how people can conserve and protect water resources.</li> <li>A. Explain how people can conserve and protect water resources.</li> <li>A. Explain how people can conserve and protect water resources.</li> <li>A. Explain how people can conserve and protect water resources.</li> <li>A. Explain how people can conserve and and prevent pollution and conserve water.</li> <li>A. Explain distribution.</li> <li>A. Explain how people can conserve and gauge transfered.</li> <li>A. Explain distribution.</li> <li>A. Explain help dim our water spectral ways water can be conserved.</li> <li>A. Explain the difference between polition and their sources.</li> <li>Explain the difference between polition and their sources.</li> </ul>
<ul> <li>resources.</li> <li>Water pollution, comers in many forms and is supplies.</li> <li>Humans have set up laws to help control and prevent pollution and conserve water.</li> <li>Humans have set up laws to he conserved.</li> <li>Humans have set up laws to help control and prevent pollution and conserve water.</li> <li>Humans manage water supplies.</li> <li>Humans manage mage and maly prevent pollution and human health.</li> <li>Here the effects of policies and regulations at various governmental levels on water quality.</li> <li>Assess the intended and unitended effects of public and regulations at various governmental levels on water quality.</li> <li>Here the effects of public and regulations at various governmental levels on water quality.</li> <li>Here the effects of public and regulations relations end pollution and their sources.</li> <li>Here the effects of public pollution and their sources.</li> </ul>
<ul> <li>Water pollution comes in many forms and is use water.</li> <li>Explain how people can protect water set up laws to help control and prevent pollution and conserve water.</li> <li>Humans have set up laws to help control and prevent pollution and prevent water.</li> <li>Use water.</li> <li>Use water.</li> <li>Contrast point-source and rompoint- source and rompoint- source and recharged.</li> <li>List several pollutants found in our water supplies.</li> <li>Outine several ways neared.</li> <li>Outine several ways neared.</li> <li>Outine several ways neared.</li> <li>Conserve water.</li> <li>Outine several ways neared.</li> <li>Conserve.</li> <li>Water supplies.</li> <li>Outine several ways neared.</li> <li>Conserve.</li> <li>Water supplies.</li> <li>Outine several ways neareshed.</li> <li>Conserve.</li> <li>Water supplies.</li> <li>Outine several ways neareshed.</li> <li>Conserve.</li> <li>Water supplies.</li> <li>Outine several ways neareshed.</li> <li>Conserve.</li> <li>Water supplies.</li> <li>Outine several ways set cran be conserved.</li> <li>Assess the intended and unintended effects of policies and regulations at various governmental levels on water quality.</li> <li>Conserve and their source and molytopic regulations are and regulations and recharged.</li> <li>Explain the major types of water pollution and human health.</li> <li>Identify the major types of water pollution and their sources and regulations are and regulations are</li></ul>
comes in many forms and is found in many of our watercollution.Contrast point- source and nonpoint- source and protect waterContrast point- source and nonpoint- source and pollution.Describe how vegetation affects water runoff. Investigate and analyze the effects of land use on the quality of water in a watershed.recharged.assignments when needed.• Humans have set up laws to help control and prevent pollution and conserve water.• Contrast point- source and pollutiants found in our water supplies.• Contrast point- source pollution.• Contrast point- source and nonpoint- source• Describe the three main uses of water.• Separate testing environment aquatic ecosystems.• Difference sources• Describe the interpoint- source• Describe the three main uses of water.• Separate testing environment aquatic• Difference be conserved.• Outline several ways water can be conserved.• 2.12.A• Name several ways humans manage water systems.• Name several ways humans manage water systems.• Describe the link between water pollution and human health.• Difference between quality.• Assess the intended and unintended effects of public pollution and their sources.• Describe the main acosystems.• Describe the link between water pollution and human health.• Difference between pollution and their sources.• Assess the intended and unintended effects of public pollutions eraliting• Explain the adition and the agint in the difference between pollutions arelating<
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supplies.protect water resources.pollution.of water in a watershed.is important to aquatic ecosystems.environment waquatic ecosystems.• Humans have set up laws to help control and prevent pollution and conserve water.• List several pollutants found in our water supplies.• Of water in a watershed.is important to aquatic ecosystems.environment waquatic ecosystems.• Outline several water.• Outline several ways water can be conserved.• Outline several ways water can be conserved.4.2.12.A Examine environmental laws related to land use management and its impact on the water quality and flow within a watershed.• Name several ways humans manage water systems.• Describe the link pollution and human health.• Leits several governmental levels on water quality.• Describe the link human health.• Describe the link human health.• Identify the major types of water pollution and their sources.• Sasess the intended and unintended effects of public polices and regulations end regulations end regulations end regulations end regulations• Explain the difference between point-source and point-source and
<ul> <li>Humans have set up laws to help control and prevent pollution and conserve water.</li> <li>Uist several pollutants found in our water supplies.</li> <li>Outline several ways water can be conserved.</li> <li>Uitine several ways water can be conserved.</li> <li>Uitine several ways water can be conserved.</li> <li>A.2.12.A</li> <li>Examine environmental laws related to land use management and its impact on the water quality and flow within a watershed.</li> <li>Describe the link between water pollution and negulations at various governmental levels on water quality.</li> <li>Assess the intended and unintended effects of public pollution and their sources.</li> <li>Explain the difference between politics and regulations at various governmental levels on public pollution and their sources.</li> </ul>
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<ul> <li>and prevent pollution and conserve water.</li> <li>Outline several ways water can be conserved.</li> <li>Outline several ways water can be conserved.</li> <li>Outline several ways water can be conserved.</li> <li>A.2.12.C Analyze the effects of policies and regulations at various governmental levels on water quality.</li> <li>Idented to fail due final due</li></ul>
<ul> <li>Outline several ways water can be conserved.</li> <li>Outline several water conserved.</li> <li>Outline several various governmental levels on water quality.</li> <li>Identify the major types of water pollution and their sources.</li> <li>Explain the difference between point-source and po</li></ul>
conserve water.ways water can be conserved.quality and now within a watershed.• Describe the link between water pollution and human health.4.2.12.C Analyze the effects of policies and regulations at various governmental levels on water quality.• Describe the link between water pollution and types of water pollution and their sources.• Explain the difference between point-source and
water.       be conserved.       watershed.       between water pollution and human health.         4.2.12.C       Analyze the effects of policies and regulations at various governmental levels on water quality.       Identify the major types of water pollution and their sources.         Assess the intended and unintended effects of public policies and regulations relating       Explain the difference between point-source and
<ul> <li>4.2.12.C</li> <li>Analyze the effects of policies and regulations at various governmental levels on water quality.</li> <li>Assess the intended and unintended effects of public polices and regulations relating</li> <li>Explain the difference between point-source and</li> </ul>
Analyze the effects of policies and regulations at various governmental levels on water quality. Assess the intended and unintended effects of public policies and regulations at various governmental levels on water quality. Assess the intended and unintended effects of public policies and regulations relating
<ul> <li>Identify the major types of water governmental levels on water quality.</li> <li>Assess the intended and unintended effects of public polices and regulations relating</li> <li>Identify the major types of water pollution and their sources.</li> <li>Explain the difference between point-source and</li> </ul>
governmental levels on water quality. Assess the intended and unintended effects of public polices and regulations relating
quality.       pollution and their sources.         Assess the intended and unintended effects of public polices and regulations relating       • Explain the difference between point-source and
Assess the intended and unintended effects of public polices and regulations relating point-source and
Assess the intended and unintended effects of public polices and regulations relating point-source and
unintended effects of public difference between polices and regulations relating point-source and
polices and regulations relating point-source and
polices and regulations relating
to water quality.
poliution.
4.2.7.A • Describe now
Explain how water enters, moves inorganic chemical
through, and leaves a watershed.
Explain the concept of stream Pascribe several
Order.
Describe factors that affect ways that notices,
the flow and water quality within farms can conserve
a watersned water.
• Explain how
4.2.0.A legislation has
quality of ground and surface helped protect
waters water resources.

				4 5 40 0			· · · · · · · · · · · · · · · · · · ·
				Analyze real-world data and	<ul> <li>Give two examples of how technology</li> </ul>		
				explain how point and non-point	can protect water		
				source pollution can be detected	resources.		
				and eliminated.			
				Compare and contrast the			
				environmental effects of different			
				industrial strategies.			
				4 5 12 0			
				Analyze the costs and benefits of			
				means to control pollution.			
				Analyze the role of technology			
				in the reduction of pollution.			
				Research and analyze the			
				local, state, and national laws			
				that deal with point and non-point			
				Explain mitigation and its role			
				in maintaining environmental			
				health.			
				4.5.12.E			
				Analyze how consumer demands			
				promote the production of			
				politianis that affect human			
				neann.			
				4.5.7.C			
				Explain how human actions			
				affect the health of the			
				environment.			
				Identify regidential and			
				industrial sources of pollution			
				and their effects on			
				environmental health.			
				4.5.8.C			
				Describe how humans can			
	A.1. 17 - 1	A Famlat 1 (		reduce pollution.		Otostanta III.	Della
Unit 9: Alf	Air pollution	<ol> <li>Explain what</li> </ol>	<ul> <li>Compare and contract</li> </ul>	4.5.10.C	Define air pollution.	Students WIII be	Dally
Weeks 25-	maior problem	are and where	nrimary and	explain how point and non-point	<ul> <li>Give examples of natural and human</li> </ul>	following:	ລວວາງເທັກປາແວ.
26)	in our	they come	secondarv air	source pollution can be detected	sources of air	Preferential	End of the
-,	atmosphere.	from.	pollution.	and eliminated.	pollution.	seating when	Chapter Test.
	<ul> <li>Air pollution</li> </ul>	2. Describe four	<ul> <li>Compare and</li> </ul>		<ul> <li>Describe how air</li> </ul>	applicable.	-
	comes in many	major forms of	contrast indoor	Compare and contrast the	pollutants get into		Labs and
	forms.	urban air		environmental effects of different	-	Study guides.	Classroom
		pollution.		industrial strategies.			Activities

<ul> <li>Acid rain is an issue that affects many of our environmental resources.</li> <li>The greenhouse effect has caused global climate issues which affect people and ecosystems.</li> </ul>	<ol> <li>Explain how acid rain forms and what effect it has.</li> <li>Describe global warming and climate change.</li> <li>Explain some of the ways to reduce air pollution.</li> </ol>	<ul> <li>and outdoor air pollution.</li> <li>Compare and contrast industrial and photochemical smog.</li> <li>Explain how noise and light are air pollutants.</li> <li>Explain how rain becomes acid rain.</li> <li>Describe the greenhouse effect and what causes it.</li> </ul>	<ul> <li>4.5.10.D Evaluate various methods of managing waste as related to economic, environmental, and technological factors.</li> <li>4.5.10.E Describe the impact of occupational exposure to pollutants.</li> <li>Analyze laws and regulations designed to protect human health.</li> <li>Analyze efforts to prevent, control, and/or reduce pollution through cost and benefit analysis and risk management.</li> <li>4.5.12.C Analyze the costs and benefits of means to control pollution. Research and analyze the local, state, and national laws that deal with point and non-point source pollution.</li> <li>Explain mitigation and its role in maintaining environmental health.</li> <li>4.5.7.C Explain how human actions affect the health of the environment.</li> <li>Identify residential and industrial sources of pollution and their effects on environmental health.</li> <li>4.5.8.C Describe how humans can reduce pollution.</li> </ul>	<ul> <li>and out of the atmosphere.</li> <li>Describe what smog is and where it occurs.</li> <li>Explain what an urban heat island is.</li> <li>Explain how noise cna be a type of pollution.</li> <li>Give examples of how light can pollute.</li> <li>Describe the major sources of acid rain.</li> <li>Explain why acid rain affects places far from its source.</li> <li>Describe problems with and solutions to acid rain.</li> <li>Define global warming and climate change.</li> <li>Describe the greenhouse effect and how it contributes to global warming.</li> <li>Name several impacts of climate change on people and ecosystems.</li> </ul>	Guided notes when applicable, Extended time for assignments when needed. Separate testing environment when applicable.	
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and Hazardous Waste (Weeks 27- 28)forms and has many characteristics.solid waste. solid waste.contrast biodegradable and non- biodegradable waste.Analyze rear-world data and explain how point and non-point source pollution can be detected and eliminated.• Give examples of different types of solid waste.given the following: Preferential seating when applicable.28)• Solid waste is disposed of in many ways, biodegradable• Compare and open dump to many explicited attaction• Give examples of different types of solid waste.• Give examples of different types of solid waste.Preferential seating when applicable.E28)• Solid waste is disposed of in many ways, biodegradable• Compare and open dump to environmental effects of different environmental effects of different industrial attactacion• Give examples of different types of solid waste.• Diodegradable and eliminated.• Describe the disposed of in many ways, biodegradable• Compare and open dump to environmental effects of different industrial attactacion• Give examples of different types of solid waste.• Diodegradable and eliminated.• Describe the different types of solid waste.• Describe the biodegradable• Describe the biodegradable </th <th>End of the Chapter Test. Labs and Classroom Activities</th>	End of the Chapter Test. Labs and Classroom Activities
Waste (Weeks 27- 28)       many characteristics.       2. Explain four ways solid waste.       2. Explain four ways solid waste.       and non- biodegradable waste.       source pollution can be detected and eliminated.       solid waste.       Preferential seating when applicable.       Preferential seating when applicable.       E         28)       Solid waste is disposed of in many ways, biodegradable       and non- biodegradable waste.       Compare and contrast the open dump to environmental effects of different industrial etratagion       Describe the biodegradable and non-biodegradable       E	End of the Chapter Test. Labs and Classroom Activities
(Weaks 27- 28)       2. Explain four characteristics.       2. Explain four ways solid ways so	Labs and Classroom Activities
28)       • Solid waste is disposed of in managed.       • Ways solid waste is disposed of in managed.       • Describe the managed.       • Descr	Labs and Classroom Activities
<ul> <li>Solid waste is disposed of in managed.</li> <li>Describe the main gen dump to pen dump to hath prepare</li> <li>Compare and contrast the environmental effects of different industrial atratagion.</li> <li>Compare and contrast the environmental effects of different industrial atratagion.</li> </ul>	Labs and Classroom Activities
disposed of in many ways,     3. Describe the main twose of main two set main two s	Classroom Activities
many ways, 5. Describe the open dump to environmental elects of different non-biodegradable Study guides. C	Activities
	ACIIVILLES
both proper induitives of a samitary industrial strategies. Waste, Au	
and improper. Inazardous inandiii. • Describe three Under onlice black	
• Hazardous waste. • Describe three 4.0.10.0 main ways waste is when applicable,	
waste comes in 4. Orderstallue types of Evaluate validus inertificus of managed.	
many forms several ways nazardous initiality wase as related to Explain the pros Explain the pros assignments	
and has many to prevent and waste. Economic, enfortmental, and and cons of burying assignments	
• Describe intervented	
waste need to waste management Describe the impact of environment	
the expressional the management. Decupational exposure to recycling, when applicable	
pollutants.	
a Integrated	
Analyze laws and regulations	
designed to protect human	
has become a	
new and Analyze efforts to prevent, becaute a subscription of the sector	
unique way of control, and/or reduce pollution	
through cost and benefit analysis	
solid waste and risk management.	
4.5.12.C	
Analyze the costs and benefits of bousehold and	
means to control pollution.	
Analyze the role of technology waste	
in the reduction of pollution.	
Research and analyze the Dofine source	
local, state, and national laws	
that deal with point and non-point	
source pollution.	
Explain mitigation and its role bazardous waste	
In maintaining environmental	
health.	
people die dollig to	
4.5.12.D Help address solid	
practices.	
Analyze current solid waste	
regulations.	
Research the impact of new	
and emerging technologies in the	

				use, reuse, recycling and disposal of materials. Evaluate ways that waste could be reduced during the production of specific product. 4.5.12.E Analyze how consumer demands promote the production of pollutants that affect human health. 4.5.7.C Explain how human actions affect the health of the environment. Identify residential and industrial sources of pollution and their effects on environmental health. 4.5.7.D Describe the wastes derived from using resources, how the waste is managed, and the potential impact on the environment. 4.5.8.C			
Unit 11: Feeding the World (Weeks 29- 31)	<ul> <li>Agriculture has changed and developed over the years.</li> <li>Soil is formed by many factors.</li> <li>Soil is affected by farming and many other factors.</li> <li>The world population requires many nutrients in order to survive.</li> <li>There are many different</li> </ul>	<ol> <li>Understandin g the environmental impacts of agriculture.</li> <li>Describe the causes and impacts of soil erosion.</li> <li>Explain how the world food supply is distributed and some problems this causes.</li> <li>Describe sustainable approaches to agriculture.</li> </ol>	<ul> <li>Explain subsistence agriculture.</li> <li>Outline the major soil forming factors.</li> <li>Discuss how farming techniques affect soil.</li> <li>Explain the dietary requirements for a human.</li> <li>Explain how organic farming is a sustainable farming practice.</li> </ul>	<ul> <li>reduce pollution.</li> <li>4.4.10.A</li> <li>Explain the relationships between and among the components of the food and fiber system.</li> <li>(i.e., production, processing, research and development, marketing, distribution, and regulations.)</li> <li>4.4.10.B</li> <li>Analyze the effects of agriculture on a society's economy, environment, standard of living, and foreign trade.</li> <li>4.4.10.C</li> <li>Analyze how agricultural sciences and technologies strive</li> </ul>	<ul> <li>Describe subsistence agriculture.</li> <li>Describe industrial agriculture.</li> <li>Explain some of the benefits and environmental impacts of agriculture.</li> <li>Explain how soil forms.</li> <li>Describe soil erosion and its environmental impacts.</li> <li>Name several ways to reduce soil erosion.</li> </ul>	Students will be given the following: Preferential seating when applicable. Study guides. Guided notes when applicable, Extended time for assignments when needed. Separate testing environment when applicable.	Daily assignments. End of the Chapter Test. Labs and Classroom Activities

	types of	5. Describe	Discuss the	to increase efficiency while	<ul> <li>Explain what the</li> </ul>		
	sustainable	current trends	different fishing	balancing the needs of society	world food supply		
	agriculture.	in world	methods and	with the conservation of our	is.		
	<ul> <li>The world's</li> </ul>	fisheries.	their impacts	natural resources.	<ul> <li>Understand what</li> </ul>		
	fisheries are		on the		causes malnutrition.		
	important, but		environment.	4.4.10.D	Describe some		
	have major			Evaluate the use of technologies	ways of addressing		
	impacts on the			to increase plant and animal	world hunger.		
	environment.			productivity.	Describe the goals		
					of sustainable		
				4.4.12.A	agriculture.		
				Research and analyze the social,	List some of the		
				political, economic, and	features of		
				environmental factors that affect	sustainable		
				agricultural systems.	agriculture.		
					Give some		
				4.4.12.D	examples of		
				Describe how policies,	sustainable		
				regulations, and laws affect the	agriculture.		
				technologies adopted in	Describe some		
				agriculture.	environmental		
				4.4.7.0	impacts of large-		
				4.4.7.B	scale fishing		
				Describe the economic	methods.		
				importance of agriculture to	<ul> <li>Describe the</li> </ul>		
				society.	strengths and		
				4470	weaknesses of		
				4.4.7.D	aquiculture.		
				effects of technology used in	<ul> <li>Give examples of</li> </ul>		
				agriculture and its effects on the	sustainable fishing		
				food and fiber system and the	methods		
				environment over time			
Unit 12 <sup>.</sup>	<ul> <li>Extinction of</li> </ul>	1 Describe the	Outline the	4 1 12 F	Describe the	Students will be	Daily
Protecting	organisms has	major threats	major causes	Research solutions addressing	current mass	given the	assignments
Biodiversity	heen an	to biodiversity.	of biodiversity	human impacts on ecosystems	extinction and its	following:	doolginnontoi
(Weeks 32-	ongoing	2. Explain the	loss	over time.	causes	Preferential	End of the
34)	problem.	maior causes	Explain habitat		Describe the major	seating when	Chapter Test.
- /	The main	of habitat	fragmentation	4.3.12.A	threats to	applicable.	
	cause of	destruction.	Discuss the	Evaluate the advantages and	biodiversity.		Labs and
	extinction of	3. Explain how	impacts af	disadvantages of using	Describe the main	Study guides.	Classroom
	species is	habitat loss is	introducing a	renewable and nonrenewable	causes of habitat		Activities
	habitat loss.	connected to	species to a	resources.	loss.	Guided notes	
	<ul> <li>Introducing a</li> </ul>	species	new		Explain the	when applicable,	
	species to an	extinction.	environment.	Explain how consumption rate	problems		
	area can	4. Describe how	<ul> <li>Discuss the</li> </ul>	affects the sustainability of	associated with	Extended time for	
	disrupt the	nonnative	views on	resource use.	habitat	assignments	
	natural process	species affect	wildlife.	Evaluate the advantages and	fragmentation.	when needed.	
	of an area.	biodiversity.	Outline some	disadvantages of using	Define		
	The trade of	5. Explain how	ways that	renewable resources such as	deforestation and	Separate testing	
	wildlife and its	wildlife trade	wildlife is being	solar power, wind power, and	explain how it is	environment	
				biofuels.		when applicable.	

	<ul> <li>become a cause of concern.</li> <li>Protecting biodiversity for the future is a process that needs addressed.</li> </ul>	biodiversity. 6. Describe strategies for preventing biodiversity loss.	the future.	4.3.12.B Analyze factors that influence the local, regional, national, and global availability of natural resources. Compare the use of natural resources in different countries. Analyze the social, economic, and political factors that affect the distribution of natural resources (e.g., wars, political systems, classism, racism).	<ul> <li>biodiversity.</li> <li>Define introduced species.</li> <li>Explain how organisms are transported to new environments.</li> <li>Describe three ways introduced species have contributed to biodiversity loss.</li> <li>Define wildlife trade.</li> <li>Explain how wildlife trade contributes to biodiversity loss.</li> <li>Describe how values and perception affect wildlife trade and other biodiversity issues.</li> <li>Describe four ways that people are helping to protect biodiversity.</li> <li>Describe how efforts to protect individual species compare to efforts to protect entire ecosystems.</li> <li>Describe how legislation helps protect biodiversity.</li> </ul>		
Unit 13: A Sustainable World (Weeks 35- 36)	<ul> <li>Sustainability of resources in important and needs to be measured to be successful.</li> <li>Economic growth can be measured in many ways, such as gross domestic product (GDP).</li> </ul>	<ol> <li>Define sustainability and its application to natural resources.</li> <li>Describe elements of a sustainable global community.</li> <li>Describe features of</li> </ol>	<ul> <li>Outline ways in which sustainability can be measured.</li> <li>Compare natural capital and financial capital.</li> <li>Define gross domestic product.</li> <li>Outline some indicators of a</li> </ul>	4.3.10.A Evaluate factors affecting the use of natural resources. Evaluate the effect of consumer demands on the use of natural resources. Analyze how technologies such as modern mining, harvesting, and transportation equipment affect the use of our natural resources.	<ul> <li>Explain what happened to the Easter Island civilization.</li> <li>Describe the main goals of sustainability.</li> <li>Explain what an indicator of sustainability is and how the indicators are used.</li> <li>Explain the strengths and</li> </ul>	Students will be given the following: Preferential seating when applicable. Study guides. Guided notes when applicable,	Daily assignments. End of the Chapter Test. Labs and Classroom Activities

• Sustainable   sustainable   good   Describe how local and state   weaknesses of the   Exte	tended time for
communities communities. sustainable agencies manage natural gross domestic assig	signments
are 4. Explain the community. resources. product. when	nen needed.
communities roles of	
that build government, governments, 4.3.10.B that people Sepa	parate testing
around the science, scientists, Analyze how humans manage measure economic envir	vironment
ideals of business, and businesses, and distribute natural resources. growth. when	ien applicable.
sustainability of citizens in and citizens • Understand the	
our resources. creating a help create a Describe the use of a natural concept of natural	
Governments, more sustainable resource with an emphasis on capital.	
scientists, sustainable world society. the environmental consequences • Describe the	
businesses, world. Or extracting, processing, concept of a	
and citizens all transporting, using, and sustainable	
play an community.	
in croating a	
distribution and disposal of	
society	
4.3.12.A Sustainable	
Evaluate the advantages and	
disadvantages of using indicators	
renewable and nonrenewable	
resources.	
help protect the	
Explain how consumption rate environment.	
affects the sustainability of     • Define corporate	
resource use. social responsibility	
Evaluate the advantages and and explain what	
disadvantages of using businesses are	
doing to create a	
biofuels more sustainable	
society.	
4 3 12 B • Describe the role	
Analyze factors that influence the scientists play in	
local, regional, national, and	
global availability of natural	
resources.	
List four ways that	
Compare the use of natural	
resources in different countries.	
Analyze the social, economic, problems	
and political factors that affect	
the distribution of natural	
resources (e.g., wars, political	
systems, classism, racism).	
4 4 12 B	
Research and evaluate laws and	
policies that affect the food and	
fiber system.	

		4.5.10.A Explain how public policy encourages or discourages the sustainable use of natural		
		Research laws and policies that address the sustainable use of natural resources (e.g., solid and liquid waste management, industry, agriculture and enterprise).		
		4.5.10.E Describe the impact of occupational exposure to pollutants.		
		Analyze laws and regulations designed to protect human health. Analyze efforts to prevent, control, and/or reduce pollution through cost and benefit analysis and risk management.		
		4.5.12.A Research how technology influences the sustainable use of natural resources.		
		Analyze how consumer demands drive the development of technology enabling the sustainable use of natural resources.		
		4.5.12.E Analyze how consumer demands promote the production of pollutants that affect human health.		