LIFEPAC®

Health Quest

Student Book

Unit 5

Alpha Omega Publications®

HEALTH QUEST PENTATHLON
LIFEPAC FIVE
CONTENTS

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HEALTH QUEST PENTATHLON: FIVE

OBJECTIVES

Read these objectives. The objectives tell you what you should be able to do when you have successfully completed this Health Quest LIFEPAC®.

1. You will learn to explain why Christians should practice responsible habits for preserving and protecting the environment.
2. You will learn to explain how the environment can affect health.
3. You will learn to identify sources of air, water and land pollution.
4. You will learn how you can stop further pollution in your own household.
5. You will be able to name some ways in which drugs are used properly.
6. You will learn to list the fives types of drugs and their effects.
7. You will be able to explain the long- and short-term effects of alcohol abuse on the body.
8. You will be able to describe tobacco's harmful effects on the body.

VOCABULARY

Study these new words. Learning the meanings of these terms is a good study habit and will improve your learning success in this LIFEPAC.

addiction The state of being totally overcome by the desire for a something, particularly a drug.

biodegradable Waste that will decompose naturally without causing harm to the environment.

consume To eat or drink.

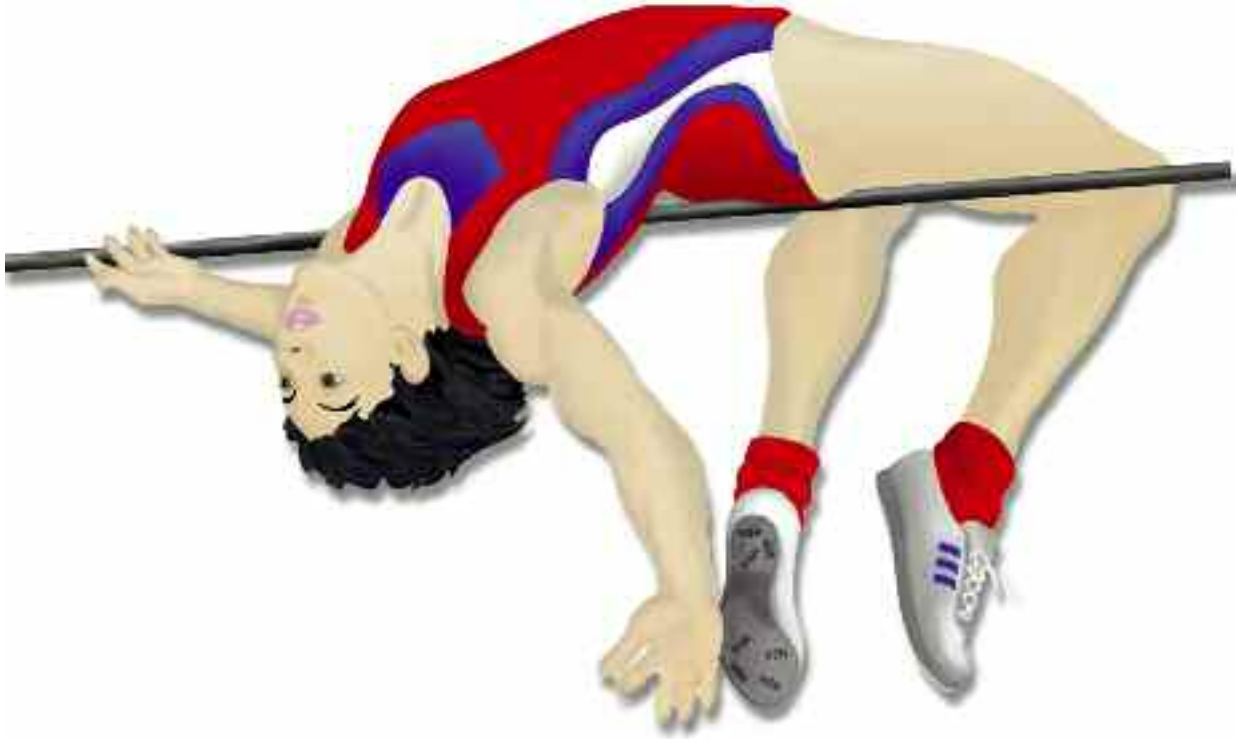
drug A chemical substance that is taken to change bodily functions.

inhabitant A person or animal that lives in a particular place.

intoxication Drunkenness.

Introduction. Welcome back!! Can you believe it? You've arrived at the last track event. You've successfully completed the 100-meter dash, the discus throw, the hurdles, and the long jump. You've made it 4/5 of the way around the track! Are you ready for your fifth and final event?

Esther and Chester are over at the track right now. Let's join them at the high jump pit where the fifth LIFEPAC event will take place.



The high jump event dates back to about 1840. It was not one of the original events in the ancient games. Athletes competing in the high jump event train to defy gravity as they leap over a crossbar set at increasingly higher standards. Once a height is cleared, the bar is raised higher until the jumpers are gradually eliminated as they fail to achieve the new height. Each athlete is given three attempts to clear each height.

The athletes who choose to compete in this event must combine multiple strengths to achieve such heights. They must stay keenly aware of their entire body throughout the jump to avoid knocking the bar down and disqualifying themselves. Speed, power, self-control, and the ability to relax while in the midst of the jump are all key factors to achieving great heights in this event.

So, how does this event prepare you for the life up ahead of you? Obeying the Lord and seeking to fully glorify Him will require great strength over the course of your life. Just like the athlete training in the high jump, self-control of both your body and soul will be required. You will need to keep close watch over your attitudes and actions, your words and your thoughts. Coordinating all of the mental and physical actions at once in order to gracefully leap over the crossbar will be your challenge again and again. You will face high jump challenges in your life in your relationships with others, in your studies and, eventually, in God's calling. Careful training now can prepare you to attain great heights in the future.

Before each HQP quiz in this LIFEPAC, you will find activities relating to what you've just learned. Doing these activities will earn you stickers that will complete the event in this LIFEPAC.

Locate the high jump event on your Health Quest Pentathlon poster. As you move through the LIFEPAC activities, you will earn stickers to complete your circuit around this portion of the track.

By the end of LIFEPAC 5 and completion of the activities, your high jumper will be fully prepared for competition and you will have officially completed the Health Quest Pentathlon. You will have arrived at the finish line and will be ready to enter the winner's circle. Work to join Chester and Esther as HQP finalists.

Complete Genesis 1:26–31.

1.1 "And God said, Let us make _____ in our _____, after our likeness: and let them have dominion over the _____ of the _____, and over the _____ of the air, and over the _____, and over all the earth, and over every _____ thing that creepeth upon the _____.

So God _____ man in his own image, in the image of _____ created he him; _____ and _____ created he them.

And God _____ them, and God said unto them, Be _____, and multiply, and replenish the earth, and _____ it: and have dominion over the _____ of the sea, over the fowl of the _____, and over every _____ thing that _____ upon the earth.

And God said, Behold, I have given you every _____ bearing seed, which is upon the face of all the earth, and every _____, in the which is the fruit of a tree yielding seed; to you it shall be for _____.

And to every _____ of the _____, and to every fowl of the _____, and to every thing that _____ upon the earth, wherein there is _____, I have given every _____ herb for _____: and it was so.

And _____ saw every thing that he had made, and, _____, it was very good. And the _____ and the _____ were the sixth _____."

Adult check _____
Initial Date

I. STEWARDSHIP OF GOD'S CREATION

Environment and Health. Why did God make us responsible? The condition of the environment greatly effects the health of its inhabitants. Pollution in the environment affects living things. For example, if the soil is polluted with harmful chemicals, the plants will not grow, and if the plants do not survive, then the animals that eat them will also die. Think of the animals you love. God has made you responsible to care for the earth so that they can live without being poisoned by the environment around them. By preserving and protecting the environment, we protect them and ourselves. With a healthy environment comes healthy plants, healthy animals, and healthy people.

The Air You Breathe. Breathe in. Breathe out. Your body needs oxygen to function properly. The air you breathe contains oxygen. Today, you will breathe in and out about 2,000 gallons of air. That's a lot of air, but air is not purely oxygen. There are many other types of gases and particles in the air or *atmosphere*. Some of these gases and particles can be harmful to your health. The presence of harmful substances in the earth's atmosphere is called air pollution. It is important that we find ways to reduce air pollution because good quality air is so vital to our health.

The Atmosphere. The atmosphere is a combination of gases that encases and protects the earth. It is made up of five layers, and each of the different layers varies in temperature, composition, and height.

The *troposphere* is the first layer of the earth's atmosphere. All of the earth's living things and all weather conditions exist within this layer. It reaches 5–10 miles up from the earth's surface.

The *stratosphere* is the next layer, ranging from 5–30 miles above the earth. The Concorde and some military planes can fly within this layer. A layer called the ozone is

contained within the stratosphere. The ozone protects the earth from most of the sun's ultraviolet radiation.

The *mesosphere* is the third layer of the earth's atmosphere. It reaches from 30–50 miles above the surface. This is the highest layer a weather balloon will go.

The *thermosphere* is the fourth layer. It extends from 50–300 miles. Meteors can be spotted as they travel through this layer and are subsequently vaporized.

The *exosphere* is the outermost layer of the earth's atmosphere. It extends from 300 miles to outer space.

Answer *true* **or** *false.*

1.2 _____ After creation, God pronounced that the earth and everything in it was very good.

1.3 _____ The condition of the environment has no affect on its inhabitants.

1.4 _____ Pollution in the environment affects living things.

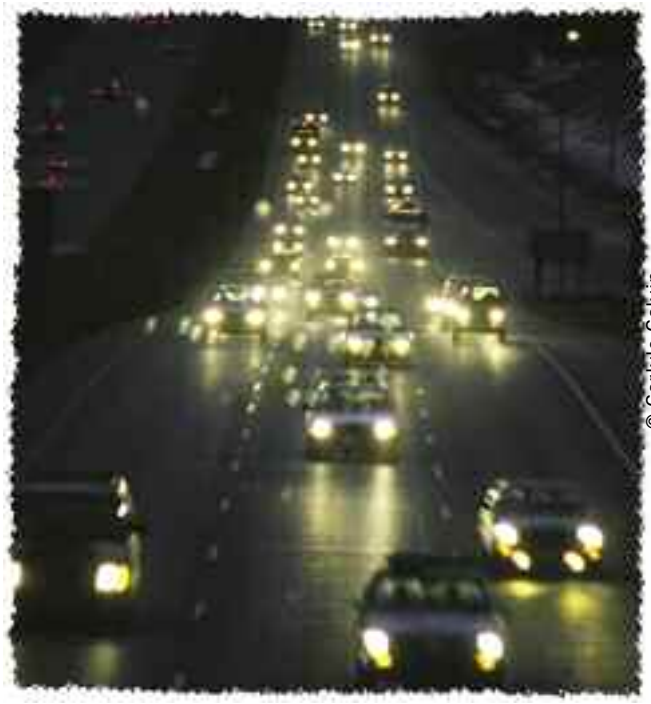
1.5 _____ Your body does not need oxygen to function properly.

1.6 _____ Air pollution is the presence of harmful substances in the earth's atmosphere.

1.7 _____ The atmosphere is a combination of gases that encases and protects the moon.

1.8 _____ All of the earth's life and weather exists within the stratosphere.

1.9 _____ The ozone layer is contained within the troposphere.



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Air Pollution. Americans love cars. We love the freedom they afford us, but that freedom comes with a price. Cars are the greatest cause of air pollution. Gasoline and diesel burning engines cause approximately 90 percent of the carbon monoxide pollution found in the earth's atmosphere. Industry, power plants burning fossil fuel, and residential furnaces are other leading causes of air pollution. They are the source of approximately 80 percent of sulfur dioxide, a deadly gas, in the earth's atmosphere.

Causes. Carbon monoxide and sulfur dioxide are just a few of the pollutant gases that plague the earth's atmosphere. Chlorofluorocarbons (CFC's), methane, and nitrogen oxides also pollute the air. Chlorofluorocarbons (CFC's) are used in air conditioners and aerosol cans. Methane is

released into the atmosphere by livestock, garbage dumps, and forest fires. Burning gasoline and the use of some fertilizers create nitrogen oxides.

Effects. The effects of these gases in the air can cause damage to people's health and to the appearance of cars and buildings. Smog is the most visible effect of air pollution. The brownish gray haze is known to cause headaches, watery eyes, and coughing. Smog can prove to be deadly to those with heart and lung problems because of its aggravating effects on the respiratory system. Smog is caused by sulfur dioxide as it mixes with particles in the air.

CFC's are known to reduce the level of ozone. According to scientific theories, if enough CFC's are released into the atmosphere then the ozone layer will be depleted. This would leave the earth unprotected from the sun's harmful rays. Higher annual temperatures and increased cases of skin cancer could result from a reduction of ozone. Improper disposal of freon can increase the amount of CFC's in the atmosphere.

"A variety of styles have been used to high jump over the last 160 years. One technique required athletes to jump feet first. Others such as the scissors, eastern cut-off, and headfirst style have been utilized in long jump competitions. Most jumpers today use the style known as the Fosbury Flop."

Prevention. Though you might not be the president of the United States or the CEO of an international oil company, you can do things to help prevent air pollution. As stated earlier, cars are one of the leading causes of air pollution. Using other means of transportation, like riding your bike or using public forms of transportation, can help to reduce the amount of carbon monoxide-creating engines on the road. Using less electricity at home also helps to reduce air pollution. How is that? Remember that power plants that produce electricity run on fossil fuels. When fossil fuels are burned, they release pollution-causing gases into the atmosphere. Reducing our need for electricity will reduce air pollution. So turn that light off and breathe easier!

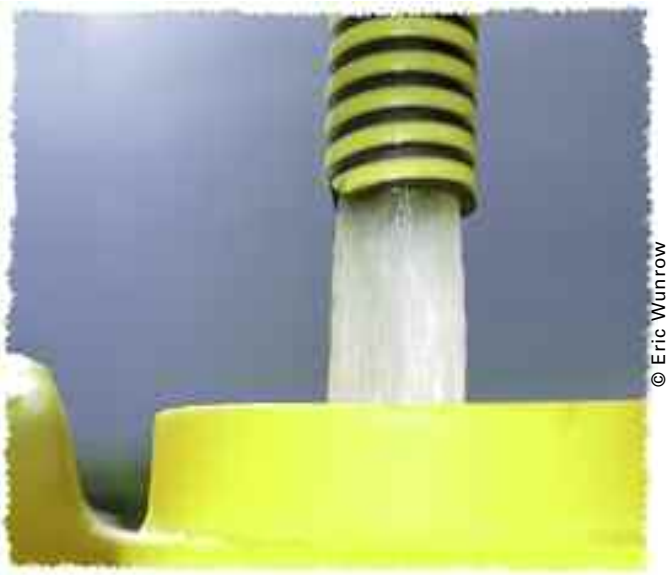
Circle the correct answer in each statement.

1.10 Cars are the greatest cause of [**water, air, land**] pollution.

1.11 [**Oxygen, Air pollution, Ozone**] can cause damage to people's health as well as to the outward appearance of cars and buildings.

1.12 According to scientific theories, if enough CFC's are released into the [**ocean, soil, atmosphere**] the ozone layer will be depleted.

1.13 Using other means of [**transportation, exploration, pollution**], like riding your bike, can help to reduce the amount of carbon monoxide-creating engines on the road.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"I need water! Clean water!" Without water you will die. And without clean water, you will become very sick. In America we tend to take for granted the availability of clean water.

The average person in America uses about 100 gallons of water each day. Whether we need water to brush our teeth or wash the car, all we need to do is turn on the faucet. Do you ever think about what has to be done to the water in order to make it safe for your use? Do you think about where used or unused water goes? Water pollution not only affects the appearance of ocean shorelines and lakes, it also affects what comes out of your bathroom sink faucet. Clean sources of water are becoming more difficult to find.

Water Basics. Every living thing on earth needs water to survive. That is why God created the earth with over 350,000 cubic miles of water, which means that over three-quarters of the earth's surface is covered with water. Besides oceans, lakes, swamps, and rivers, there are underground springs and also water vapor in the air that adds to the earth's water supply.

Water is constantly moving in a cycle between the soil and the atmosphere. The vapor in the atmosphere becomes rain or snow. Rain or snow falls to the ground and is absorbed into the soil or runs off into a river or stream. The water that is absorbed by the soil is used by plants for nourishment or filters down into underground wells.

Evaporation of moisture from leaves, rivers, oceans, and lakes starts the cycle all over again by returning water in the form of vapor into the atmosphere. Through this cycle water pollution not only affects the earth's water supply but the soil as well.

Water Pollution. The main sources of water pollution are homes, businesses, agriculture, and industry. Sewage is wastewater that comes from the use of bathrooms and kitchens in residential and commercial places. Sewage, if not properly disposed of and treated, can spread deadly bacteria. If you are told not to drink the water in a specific area or country, it probably means that sewage is not properly treated and was allowed to pollute the water supply. Agricultural pollution occurs when livestock waste is not properly disposed of. Animal waste seeps into the soil and contaminates nearby rivers and underground water supplies. The main source of industrial water pollution is waste dumped directly into the ocean. Oil spills are another source of industrial pollution that can be devastating to marine life. Chemicals and oil dumped into the ocean kill animal life as well as contaminate their bodies, making them unfit for human consumption.

Effects. There is a reason why you're not supposed to drink water from streams or rivers. Though the water might look as clear as the water that comes out of your faucet, it might contain bacteria or chemicals that could make you very sick. The effects of drinking water that is contaminated by bacteria or chemicals can range from a temporary case of diarrhea to death. Diseases like hepatitis and typhoid fever tend to occur more frequently in countries with little or no type of waste management. Animals and plants are not immune to the effects of water pollution. In fact, they are often the first to suffer from its effects.

Prevention. The reduction of water pollution starts with prevention. And one of the easiest ways to prevent water pollution is to conserve it. Conserving means to use less. When you use less, you pollute less. Conserving water is not hard to do. All it usually takes is turning the water off when you are not using it. For example, if you're brushing your teeth, don't let the water run. Only turn the faucet on to wet or rinse your toothbrush and to get a drink of water. Taking showers instead of baths is another way to conserve water. Washing dishes in a dishwasher actually cuts in half the amount of water needed to clean them. Washing full loads of clothes instead of small loads also helps to reduce the amount of water used.

Taking care to properly dispose of household cleaning agents and engine oil is another way to reduce water pollution. Do not dump detergents and dirty oil in your yard. The chemicals can seep into the ground or run off into a stream or river and enter the water cycle, so dispose of them properly. Many gas stations will take your dirty oil and will recycle it.

agricultural	atmosphere	conserve
cycle	diarrhea	gallons
sewage	soil	water

Complete these sentences

1.14 The average person in America uses about 100 _____ of water each day.

1.15 Every living thing on earth needs _____ to survive.

1.16 Water is constantly moving in a _____ between the soil and the atmosphere.

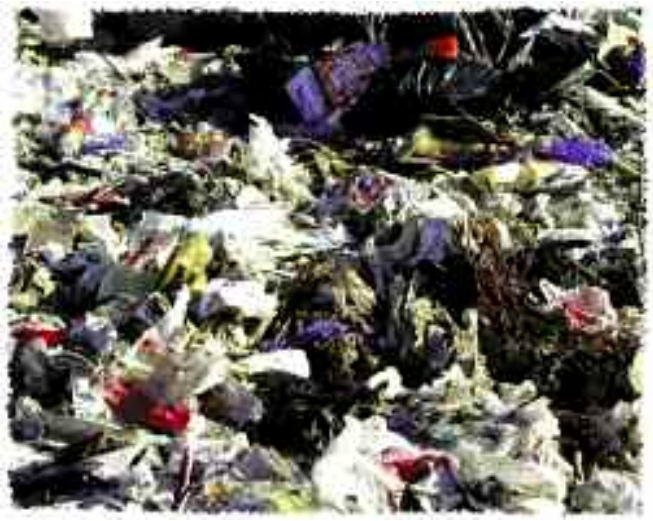
1.17 Water pollution not only affects the earth's water supply but also the _____.

1.18 _____, if not properly disposed of and treated, can spread deadly bacteria.

1.19 _____ pollution occurs when livestock waste is not properly disposed of.

1.20 Drinking water that is contaminated by bacteria or chemicals can cause _____.

1.21 One of the easiest ways to prevent water pollution is to _____it.



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Land Pollution. Try to count the all the things you threw into the trash yesterday. Did your list include things like scraps of paper, candy wrappers, gum wrappers, paper bags, tissue paper, styrofoam cups, and plastic soda bottles? The average American throws away 3 pounds of trash each day. That's 1,095 pounds per year. This comes to a total of 76,650 pounds in a lifetime. If you take into consideration that the population of America is about 250 million people, it's hard to imagine the amount of trash that needs to be disposed of year after year. There's only so much space. Land also needs to be used to supply its inhabitants with food to eat and materials for shelter. Land is a valuable resource that must be used wisely.

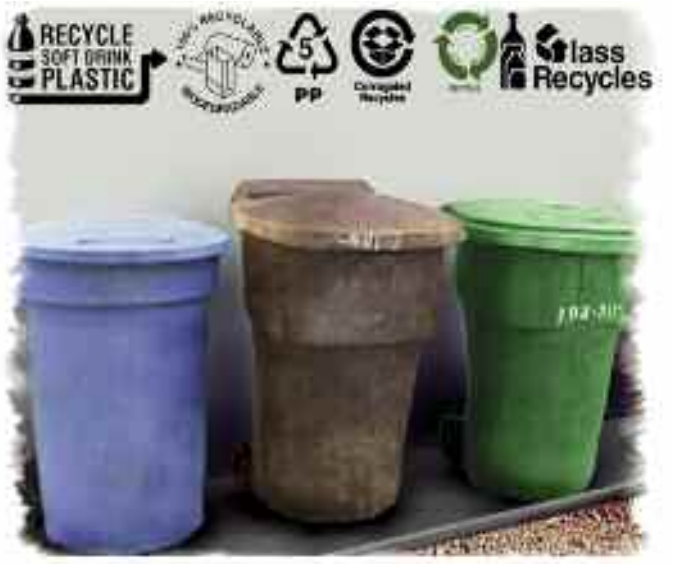
Land pollution is usually termed solid waste. Both animal and human activities contribute to its accumulation. Solid wastes can be useless, unwanted or hazardous materials, and all need to be disposed of properly. Some useless and unwanted solid wastes are considered biodegradable. Biodegradable means that the waste will decompose naturally without causing harm to the environment.

A banana peel is an example of biodegradable waste. On the other end of the spectrum is hazardous waste. Hazardous wastes are dangerous and must be disposed of in a special manner or harm will come to the environment and the surrounding animals and humans. Hazardous wastes include toxic chemicals, ignitable, radioactive, and corrosive substances.

Effects. Solid waste that is not disposed of properly can and will pollute the soil and water. Soil acts as a filter to the water, so any type of hazardous substance that is present in the soil will contaminate the water. Hazardous wastes cause a variety of health problems for animals and humans. Some toxic substances can cause cancer, kidney problems, and birth defects.

Prevention. Everyone creates waste. That means it is everyone's responsibility to reduce the production of solid waste. Like our careless use of water, we tend to take advantage of the fact that whatever waste we create will be taken care of. The frightening fact is that if we are not careful with the way we use solid materials, one day we might have a garbage dump for a backyard. Using materials that are biodegradable or that can be recycled is a positive step towards reducing the amount of solid waste. Items such as paper, glass, plastic, and metal can be recycled; but in most areas, recyclable items must be disposed of separately. Your local grocery store usually provides a special bin for the disposal of glass, plastic, and aluminum.

Conclusion. Pollution is everyone's problem. However, it is a problem that can be controlled. Prevention is the first step to being a good steward of what God has given you. By working to prevent further pollution, you are subduing the earth and giving it the chance to be fruitful.



Circle the correct answer(s) in each statement.

1.22 Both [**plant, animal, mineral**] and human activities contribute to land pollution.

1.23 [**Hazardous, Biodegradable**] means that the waste will decompose naturally without causing harm to the environment.

1.24 [**Hazardous, Biodegradable**] wastes are dangerous and must be disposed of in a special manner.

1.25 A [**hazardous, biodegradable**] substance present in the soil will contaminate the water.

1.26 Paper, glass, plastic, and metal can be [**destroyed, recycled, decomposed**].

1.27 Pollution is [**no one's, everyone's, some people's**] problem.

HEALTH QUEST PENTATHLON ACTIVITIES

It's time to put into practice a few things you've been learning about environmental health. Complete each activity and earn stickers to complete the high jump event in this LIFEPAC.

Complete these activities.

1.28 Discovering pollutants and eliminating them from your home can help each family member become healthier.

a. Learn from a parent if your home's air handling unit requires a filter. Learn where the filter is and how to check it. Typically, filters should be changed monthly to keep the air clean and free from pollutants. Does it need to be changed? Assist your parent in changing it and remembering to replace it monthly.

b. Determine where your family's lawn and yard chemicals are stored.
___ Are they in a well-ventilated area?
___ Are they out of the reach of pets or little children?
___ Do chemical odors from any of the products sting your eyes or nose as you approach the area?

Discuss with a parent how to make this area safer. Seek their help if you determine to move them.

After touching the products, WASH YOUR HANDS!

c. Look under the counters or in closets where cleaning supplies are stored.
___ Are the products safely out of the reach of pets and small children?
___ Are the cleaning supplies clean, without any poisons dripping out?
___ Are the products stored in well-ventilated areas?
___ Determine if any changes need to be made. Discuss these with a parent.

After touching any products, WASH YOUR HANDS!

Adult check _____
Initial Date

1.29 Are you familiar with how to recycle the materials your family uses? Milk cartons, plastics, glass, aluminum, and newspapers should be separated from the other garbage your family members produce.

a. Locate the storage containers for recyclable items in your home.

b. If these recycling containers are not labeled, do so. **NEWSPAPERS, GLASS, PLASTICS, ALUMINUM.**

c. Help your family to more efficiently recycle by placing the recycling containers in convenient-to-use places.

d. Either take these separate items to a recycling center or set them out separately for garbage removal.

The extra effort of recycling will reduce the amount of natural resources you use.

Adult check _____

Initial Date

1.30 Conserving water, electricity and other natural resources is a positive way of caring for the world God created. Consider your personal habits like showering, brushing teeth, washing the car or dishes, use of electricity, pencils, paper, and plastics. Write down 6 steps that you intend to take to conserve these items then share these with a parent so they can help you do them! We each have a responsibility to care for the world God created.

Write down 6 steps that you intend to take to conserve these items.

a. _____.

b. _____.

c. _____.

d. _____.

e. _____.

f. _____.

Adult check _____

Initial Date

Review the material in this section in preparation for the Self Test. The Self Test will check your mastery of this particular section. The items missed on this Self Test will indicate specific areas where restudy is needed for mastery.

SELF TEST 1

Answer *true* **or** *false* (each answer, 3 points).

1.01 _____ The atmosphere is a combination of gases that encases and protects the moon.

1.02 _____ The ozone layer is contained within the troposphere.

1.03 _____ After creation, God pronounced that the earth and everything in it was very good.

1.04 _____ The condition of the environment has no effect on its inhabitants.

1.05 _____ Air pollution is the presence of harmful substances in the earth's atmosphere.

1.06 _____ Your body does not need oxygen to function properly.

1.07 _____ All of the earth's life and weather exists within the stratosphere.

1.08 _____ Pollution in the environment affects living things.

Circle the correct answer in each statement (each answer, 3 points).

1.09 According to scientific theories, if enough CFC's are released into the [**ocean, soil, atmosphere**] the ozone layer will be depleted.

1.010 Using other means of [**transportation, exploration, pollution**], like riding your bike, can help to reduce the amount of carbon monoxide-creating engines on the road.

1.011 [**Oxygen, Air pollution, Ozone**] can cause damage to people's health as well as to the outward appearance of cars and buildings.

1.012 Cars are the greatest cause of [**water, air, land**] pollution.

1.013 Both [**plant, animal, mineral**] and human activities contribute to land pollution.

1.014 Pollution is [**no one's, everyone's, some people's**] problem.

1.015 [**Hazardous, Biodegradable**] wastes are dangerous and must be disposed of in a special manner.

1.016 [**Hazardous, Biodegradable**] means that the waste will decompose naturally without causing harm to the environment.

1.017 Paper, glass, plastic, and metal can be [**destroyed, recycled, decomposed**].

1.018 A [**hazardous, biodegradable**] substance present in the soil will contaminate the water.

agricultural	atmosphere	conserve
cycle	diarrhea	gallons
sewage	soil	water

Fill in the blanks with the correct answers from the word list (each answer, 3 points).

1.019 _____ , if not properly disposed of and treated, can spread deadly bacteria.

1.020 One of the easiest ways to prevent water pollution is to _____ water.

1.021 Drinking water that is contaminated by bacteria or chemicals can cause _____.

1.022 Water pollution not only affects the earth's water supply but also the _____.

1.023 The average person in America uses about 100 _____ of water each day.

1.024 _____ pollution occurs when livestock waste is not properly disposed of.

1.025 Water is constantly moving in a _____ between the soil and the atmosphere.

1.026 Every living thing on earth needs _____ to survive.

Complete Genesis 1:26–28, 31a (each answer, 1 point).

1.027 "And _____ said, Let us make _____ in our _____, after our _____: and let them have _____ over the fish of the sea, and over the _____ of the air, and over the _____, and over all the _____ , and over every _____ thing that creepeth upon the earth. So God _____ man in his own image; in the _____ of God created he him; _____ and _____ created he them. And God _____ them, and God said unto them, Be _____ , and multiply, and replenish the earth, and _____ it: and have _____ over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the _____ . And God saw every thing that He had made, and, behold, it was very _____ ."

78/97

My Score _____

Adult check _____
Initial Date