

Part 16: Processed or unprocessed?

Age 10-11

THEMATIC STATEMENT

God is a Wise Creator

God can heal through miracles, but he also heals through foods from his garden, which build our immune system. As we show wisdom in choosing the right foods, we can live a healthier life and live a long time.

AIM

To emphasize the health benefits of natural foods and to encourage students to choose food for health.

OBJECTIVES: The student will -

Knowledge & Understanding Objectives

- understand the difference between good fats and bad fats.
- understand the problem with eating too much sugar and salt.
- understand the problems caused by some food additives.
- understand that chemicals can have good or bad effects on our health.

Skills & Processes Objectives

- define 'processed' and 'unprocessed'.
- define the word 'chemical'.
- read and analyze food labels.
- explain the problem with certain food additives.
- design a weekly meal planner.

Attitudes & Values Objectives

- show wisdom and responsibility.
- make well-reasoned choices.
- advise others in making healthy food choices.

BIBLE STORIES AND KEY PASSAGES

1	Genesis 1 - God created food for us. Exodus 15:26 - If you pay attention to my commandments, I will put none of these diseases upon you. I am the Lord who heals you.
2	Leviticus 11 - Health laws that God gave to the Israelites. 2 Kings 5 - Naaman was healed by obeying instructions.
3	1 Corinthians 10:23 - All things are lawful but not all things are expedient – (As Christians we have freedom to choose, but some choices will benefit us more than others.)

	1 Corinthians 7:23 - We have been bought with a price, the blood of Jesus – therefore we are precious to God, so why not look after ourselves?
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MEMORY VERSES

1	Proverbs 3:5-6 Trust in the Lord with all your heart and lean not on your own understanding. In all your ways acknowledge him and he will make your paths straight.
2	Proverbs 3:7-8 Do not be wise in your own eyes, fear the Lord and shun evil. This will bring health to your body and nourishment to your bones.
3	Proverbs 2:11 Discretion will protect you, and understanding will guard you.

ACTIVITIES

week	Learning and Teaching Activities
1	<p>Discussion: What is healthy food? What is junk food? What makes food healthy or unhealthy? What do we mean by ‘processed’ and ‘unprocessed’ food? What information do we need to know about food products?</p> <p>Activity Sheet 16a - What are chemicals? Discussion based on Activity sheet 16a: What is a chemical? Does an apple contain chemicals? Are all chemicals in food safe? What's wrong with refined sugar and refined salt? What are good fats and bad fats and where do they come from?</p> <p>Activity Sheet 16b - Be a detective Students can collect labels and packaging of processed foods, particularly junk foods. They can use the <i>NEWSTART Food Additive Decoder</i> to identify food additives and discover their level of safety.</p> <p>The periodic table Students can look at the periodic table and find some of the minerals needed by our body (e.g. calcium, magnesium and phosphorus for bones; iron for the blood).</p>
2	<p>Activity Sheet 16c - Our bodies and their marvellous defence mechanisms</p> <p>How much fat? Use a hot iron and brown paper (from a brown paper bag) to demonstrate the fat content some of the following foods: a slice of bread; a piece of lettuce; a piece of chocolate; a French Fry; a potato crisp, a slice of cheese.</p> <p>Place the food in between 2 sheets of brown paper and press with a hot iron. Allow time for any water content to dry. For foods containing fat, a fat stain will be left on the brown paper. The larger the stain, the more fat the food contains.</p> <p>How much salt and sugar? Students can read ingredients on food packets and work out which products have highest sugar and salt content. Which is the healthiest breakfast cereal?</p>

	<p>Make a table Students can classify processed foods into:</p> <ol style="list-style-type: none"> 1. Fatty foods 2. Sugary foods 3. Salty foods 4. Foods with artificial colourings and flavourings <p>Discuss good fats and bad fats. e.g. Why is the fat in avocado ‘good’, but the fat in French Fries bad?</p> <p>Make a list of healthy snacks Ask students for suggestions. Use the recipe section and make some healthy snacks.</p> <p>Make some popcorn Discussion: Why does the corn pop? Popcorn can be a healthy or unhealthy snack, depending on what you add to it. What would make it an unhealthy snack?</p> <p>States of matter Students can observe changes in states of matter when cooking. e.g.</p> <ul style="list-style-type: none"> • Solid to liquid (melting butter) • liquid to solid (boiling an egg) • liquid to gas (boiling water)
3	<p>Activity Sheet 16d – My personal eating plan Students can take a personal record of the food they might eat in a typical day. They can suggest how they may improve their diet.</p> <p>Interviews Ask each student to prepare a questionnaire and then interview another class member to find out what this person eats and drinks in an average day. They can then write a report, outlining the good things about the person’s diet, and also give some suggestions as to how the diet could be improved.</p>

ASSESSMENT TASKS

1	What are chemicals? - Activity Sheet 16a
2	Describe the process of making popcorn
3	Write some suggestions for improving a diet – Activity Sheet 16d

RESOURCES AND EQUIPMENT

<ul style="list-style-type: none"> • a selection of food and food packets/wrappers - both healthy food and junk food • samples of sugar, salt and different kinds of fats • an iron and some brown paper • a copy of the periodic table

INTEGRATION WITH KEY LEARNING AREAS

<p>Literacy – problem solving; writing observations and reports Maths – calculating and comparing salt and sugar content of breakfast cereals</p>

Part 17: The Great Temptation

Age 10-11

THEMATIC STATEMENT

God is Truth

There are many voices of persuasion, trying to pull us in different directions. It is important to know the truth and stand firm in our beliefs. This applies not only to our faith, but our beliefs and opinions expressed in the media. We need to be able to discern where there is deception, not be gullible, and understand when the voices around us are not telling the truth.

AIM

To analyze advertisements and claims on food packaging and labeling, and to discern whether these are true or false.

OBJECTIVES: The student will -

Knowledge & Understanding Objectives

- understand the problems with some food additives.
- understand the problems associated with added sugar, salt and hydrogenated oils.

Skills & Processes Objectives

- assess food advertisements for the degree of honesty and persuasion.
- assess ingredients lists on processed foods for 'healthiness'.
- define junk food.
- make some healthy junk food alternatives.
- identify persuasive advertising tactics.

Attitudes & Values Objectives

- discern the truth.
- have courage to stand up for the truth.
- show wisdom and responsibility.
- discern the best quality food available to us.

BIBLE STORIES AND KEY PASSAGES

1	Matthew 7:15-21 Wolf in sheep's clothing. John 14:6-7 Jesus, the ultimate truth.
2	John 10:1-8 The Good Shepherd. The sheep recognize his voice.
3	Ephesians 4:1 Live a life that measures up to the standard God set when he called you (GNB) 1 Corinthians 3:16 Don't you know that your body is the temple of the Holy Spirit?

MEMORY VERSES

1	John 18:37 – Everyone who is of the truth hears my voice.
2	Proverbs 12:19 – Truthful lips endure forever, but a lying tongue lasts only a moment.
3	James 1:5 - If any of you lacks wisdom, he should ask God, who gives generously to all without finding fault, and it will be given to him.

ACTIVITIES

week	Learning and Teaching Activities
1	<p>Discussion: What are the influences on our choice of food? Do advertising companies always tell the truth? Why do they want to mislead you? Can you think of an advertisement that is misleading? Where could we go to get correct information on food? How do friends influence our choice of food? What tempts us to buy junk food?</p> <p>Students can: Collect food advertisements from newspapers, magazines or TV. Mime current TV food commercials, or devise new ones. Design advertisements in two categories: helpful and misleading. Activity Sheets 17a Who's telling the truth?</p>
2	<p>Play the truth game Prepare a selection of real and artificial items. e.g. wool/synthetic; fruit juice/fruit drink; leather/vinyl; a drinking glass/a clear plastic tumbler; real plant/imitation plant. From a distance, guess which is real.</p> <p>Conduct surveys on the type of food products people choose.</p> <p>Analyse food packets for sugar, salt and fat content. e.g. breakfast cereals and muesli bars. Remember that 'glucose' equals sugar. Note that the first ingredient listed is the highest content and the last is the lowest.</p> <p>Make a list of junk food alternatives and design ways to advertise them. Activity Sheet 17b Food advertisements Activity Sheet 17c Sugar, fat, salt</p>
3	<p>Make a list Students can make a list of the junk food they currently eat, and decide on some healthier alternatives. Some of these can be home-made. Make some healthy snacks from the recipe section</p>

ASSESSMENT TASKS

1	Design a TV commercial.
2	Explain the problems with sugar, salt and certain fats. Suggest alternatives.
3	List persuasive advertising techniques.

RESOURCES AND EQUIPMENT

- food advertisements from newspapers, magazines or TV.
- food packaging/ processed foods.
- food additives decoding sheet (provided).

INTEGRATION WITH KEY LEARNING AREAS

Art – design food advertisements

Drama – design and mime food commercials

Literacy – express opinions on whether commercials are expressing the truth; look for bias in the media

Maths – work out percentages of sugar, salt, fat in processed foods

Part 18: Traditional Foods

Age 10-11

THEMATIC STATEMENT

God is a Generous Provider

God has provided enough food for the whole world, but people go hungry because of the uneven distribution of food. People who have more than enough can do their part in providing for people who do not have enough. Giving and sharing is an outworking of our love for God.

AIM

To experience a wide range of foods from different cultures and to assess the nutritional value of different cultural foods.

OBJECTIVES: The student will -

Knowledge & Understanding Objectives

- have a knowledge of traditional foods and their health benefits.
- understand the problems of food shortage that exist in some countries.

Skills & Processes Objectives

- understand that there is food shortage in some countries.
- appreciate the wealth of first world countries.
- use problem solving to offer some solutions.
- appreciate the taste of foods from different cultures.
- assess the food value of different cultural dishes.
- devise ways of saving money by deleting unnecessary foods from our weekly food budget.
- construct a plan for giving to a country where there is food shortage.
- identify cultural foods in the community.
- compare the typical Western diet with traditional diets.

Attitudes & Values Objectives

- understand the importance of being generous.
- understand the importance of sharing.
- have compassion.
- appreciate traditions of other cultures.

BIBLE STORIES AND KEY PASSAGES

1	John 6:1-14 The boy who shared his lunch with Jesus
2	Mark 12:41-44 The widow's gift
3	Matthew 25:35-40 I was hungry and you gave me food. I was thirsty and you gave me drink

	<p>Isaiah 58:7-11 Share your food with the hungry and open your homes to the homeless and poor. (GNB)</p> <p>Proverbs 21:13 If a man shuts his ears to the cry of the poor, he too will cry out and not be answered.</p>
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MEMORY VERSES

1	Luke 6:38 Give, and it will be given to you. A good measure, pressed down, shaken together and running over, will be poured into your lap. For with the measure you use, it will be measured to you.
2	Matthew 10:8 Freely you have received, freely give.
3	Proverbs 22:9 Be generous and share your food with the poor. You will be blessed for it (GNB).

ACTIVITIES

week	Learning and Teaching Activities
1	<p>Discussion: What foods can you think of that are eaten by different cultural groups? How has the fast food and junk food industry changed traditional eating habits around the world? What is the Western diet? How does it compare with other traditional diets, such as Asian, Indian and Mexican? How is today's Western diet different from that of 100 years ago? Is there enough food for the whole world? Why do some people go hungry? How can we help?</p> <p>Activity Sheet 18a God provides enough for the whole world</p> <p>Students can:</p> <p>Play the "Famine Battle" game Activity Sheet 18b</p> <p>Conduct a bean sharing exercise Take a packet of dried beans (available from the supermarket), and share them out into glasses. Label glasses with names of countries, each glass representing a country. e.g. Australia, U.S.A., Mexico, Uganda. Students decide on how many beans each glass should receive, as a representation of availability of food in each country.</p> <p>Find out about the work of an organization such as <i>World Vision</i> or <i>Tear Fund</i>.</p> <p>Visit local restaurants that specialize in traditional foods.</p>
2	<p>Make charts or tables showing main foods traditionally eaten by the following cultures: Indian; Mediterranean; Asian; Mexican; Middle Eastern and Australian Aboriginal.</p> <p>Make a chart showing typical Western diet.</p> <p>Compare typical Western diet with traditional diets. Explain why many traditional diets are healthier than the typical Western diet.</p> <p>Prepare traditional meals from a selection of traditional cultures. (see recipe section).</p>

	<p>Look up food prices from supermarket catalogues, or a list of prices provided by the teacher. Students then decide which are the most expensive/cheapest foods in terms of nutritional value for money. This would mean that junk food is expensive because it has no nutritional value. Lentils and rice are cheap because a packet of lentils or rice when cooked, can provide a good number of serves.</p> <p>Compare different national/traditional diets for health and cost. Work out how much a quantity of cooked rice, dried beans, lentils or potatoes would compare to the same quantity of meat. What are some of the advantages and disadvantages of different diets?</p> <p>Plan fund-raising activities for the benefit of people in need.</p> <p>Activity Sheet 18c Traditional foods around the world</p>
3	<p>Activity Sheet 18d – Traditional grains</p> <p>Make bread (see recipe section). Students can observe the chemical changes. Explain why bread rises. Draw the stages in making bread.</p> <p>Different types of bread Students can make a list of all the different types of bread, e.g. pita bread, rye bread, focaccia, bagels, fruit bread, bread with seeds on top, bread rolls, scones, damper, potato bread. They can include traditional breads from around the world, draw them and indicate which grains are used.</p> <p>The Squash Test Compare the nutritional value of the average white sandwich loaf with healthier breads. Squash a loaf of refined white bread and see how small it can be made. Discuss the presence of air.</p> <p>Discuss: Why is it better to eat wholemeal bread than white bread?</p> <p>Grind a grain of wheat Demonstrate using a mortar and pestle to show how flour is made.</p> <p>Experiment with rising agents Place yeast and baking powder in separate jars of warm water and note the bubbles which form on top.</p> <p>Preservative 282 (Calcium Propionate) Students can assess labels on bread packets and research the problem with this preservative. (Use the Food Additive Decoder). Some brands of bread do not contain preservative 282.</p> <p>Activity Sheet 18e – God provides the things we need</p>

ASSESSMENT TASKS

1	Work in a group and present research on a country that suffers from famine.
2	Make a poster on a traditional diet of one country. Include food sources and recipes.
3	Make a table comparing the typical Western diet with a contrasting traditional diet.

RESOURCES AND EQUIPMENT

- pictures, artefacts, music and traditional clothing from different cultural groups
- ingredients for various cultural dishes
- dried beans for the bean sharing game

INTEGRATION WITH KEY LEARNING AREAS

Maths – calculating cost of food

Art – art from related cultures

Literacy- research; oral and written presentations

Part 19: A balanced meal

Age 11-12

THEMATIC STATEMENT

God is Provider and Healer

God provides food plants to keep our body healthy, and for healing.

AIM

To help students understand the importance of a balanced diet and to guide students in planning their own healthy balanced diet.

OBJECTIVES: The student will -

Knowledge & Understanding Objectives

- understand that different categories of food provide different benefits.
- understand how to create a balanced diet.
- understand that the Food Pyramid shows food categories but does not give guidance on food quality.

Skills & Processes Objectives

- design a balanced healthy diet
- list the properties of foods in terms of carbohydrates, proteins, fats, vitamins, minerals, fibre and water.
- identify the foods for energy, growth and healing or protection against illness
- classify foods according to their health benefits
- use the Food Pyramid wisely, selecting only quality foods.

Attitudes & Values Objectives

- show responsibility and wisdom
- trust God for healing and good health, while at the same time observing the rules for healthy living

BIBLE STORIES AND KEY PASSAGES

1	1 Kings 17:2-6 Elijah fed by ravens 1 Kings 17:10-16 Provision of oil for the widow of Zarephath.
2	2 Kings 4:1-7 God uses Elisha to provide for another widow. 2 Kings 4:42-44 Elisha multiplies bread
3	Mark 6:30-44 The loaves and the fishes

MEMORY VERSES

1	Revelation 22:2 On each side of the river stood the tree of life, bearing twelve crops of fruit, yielding its fruit every month. And the leaves of the tree are for the healing of the nations.
2	Exodus 15:26 For I am the Lord that heals you.
3	3 John 2 I pray that you may enjoy good health and that all may go well with you.

ACTIVITIES

week	Learning and Teaching Activities
1	<p>Discussion: What is a balanced diet? Why do I need balance in my diet? Why do we need guidelines for eating? How long can we stay alive without food/water? Why must I eat a variety of foods? What is the relationship between what I eat and my health?</p> <p>Prepare a balanced meal (See recipe section)</p> <p>Draw a food pyramid Students decide on the healthiest foods and draw them in the appropriate sections of the food pyramid. They can add labels, e.g. home-made healthy treats at the top; unprocessed meats, (not processed meats); wholemeal and rye bread, (not white bread); fresh fruit and vegetables, (not frozen or canned).</p> <p>Activity Sheet 19a The miraculous power of plant foods</p>
2	<p>Activity Sheet 19b Properties of foods: Students identify foods containing carbohydrates, proteins, vitamins, minerals, fats, fibre and water. Discuss:</p> <ul style="list-style-type: none"> • what each of these does for our body. • the amounts we need for good health. • the problems caused by too much of one and too little of another. <p>Draw a table of foods and their health properties:</p> <ul style="list-style-type: none"> • Students can draw up four columns: 1 - Carbohydrates for energy; 2 - Protein foods for building muscles; 3 - Good fats for energy; 4 - Fruits and vegetables to keep us healthy. • In each column they can list/draw the foods with these properties. <p>Discuss the difference between good and bad fats; refined and unrefined carbohydrates. What are the advantages and disadvantages of each?</p>
3	<p>Design a balanced weekly eating plan Activity Sheet 19c A balanced diet</p>

ASSESSMENT TASKS

1	Draw a large circle to represent a dinner plate. On the plate, draw and label a balanced main meal, selecting only the best foods from the Food Pyramid.
2	List the food sources and benefits of carbohydrates, fats, proteins and fruits/vegetables.
3	Draw up a balanced weekly eating plan.

RESOURCES AND EQUIPMENT

- an enlarged diagram of the *Healthy Food Pies* (see Activity Sheet 19c)
- a selection of healthy foods, or pictures of foods that match the *Healthy Food Pies*

INTEGRATION WITH KEY LEARNING AREAS

Art – drawing a balanced meal; drawing the food pyramid.
Literacy – Activity Sheets

Part 20: Body systems (1)

Age 11-12

THEMATIC STATEMENT

God is Protector

God has created our bodies with built-in protective mechanisms. Three body systems that offer protection are the circulatory system, the immune system and the skeletal system. Faith in the shed blood of Jesus protects the Christian from all spiritual adversaries. Blood is a powerful symbol of life and protection. Blood serves a number of functions in the human body. One of its principle roles is protection. God has designed our body with an incredible capacity for self-healing, given the right care.

AIM

To study three body systems that play a protective role: the circulatory system, the immune system and the muscular-skeletal system

OBJECTIVES: The student will -

Knowledge & Understanding Objectives

- have a brief understanding of the circulatory system, immune system and muscular-skeletal systems.
- understand some basic principles in maintaining healthy body systems.
- know the rules for healthy living.

Skills & Processes Objectives

- understand that God protects our health by the defensive action of our blood .
- explain the functions of the blood and the immune system.
- explain how living a healthy lifestyle can build a strong immune system and protect us against disease.
- appreciate the need to practice hygiene rules.
- list ways of maintaining good heart health, immune health and skeletal health, including the role of food and exercise in keeping these body systems healthy.

Attitudes & Values Objectives

- show responsibility
- take care of the body
- thank God for the protective ability of the human body.

BIBLE STORIES AND KEY PASSAGES

1	<p>Genesis 3 Sin enters the world, (the reason for sickness and disease). Exodus chapters 7-11 God's rescue plan for the Israelites. Every family was instructed to kill a lamb and place the blood over the door posts, as protection from the plague that would pass over Egypt. The angel of death passed over the doors of the Israelites, and the Jews today still celebrate this event in history. The blood over the doors was symbolic of the blood of Jesus that would be later shed, as a rescue plan for the human race. John 3:16 God's rescue plan for us. Psalm 91 No plague shall come near your dwelling.</p>
2	<p>Exodus chapters 12 –14 God rescues His people from slavery; the blood over the door-posts gave protection from the angel of death. Hebrews 13:20 The blood of Jesus began the agreement that God made with His people. Luke 22:7-20 The cup of the new covenant is Jesus' blood poured out for us; protection from sin, Satan and eternal alienation from God. Ephesians 1:7 In Him we have redemption through His blood, the forgiveness of our sins, according to the riches of His grace.</p>
3	<p>Deuteronomy 7:12,15; Exodus 15:26 If you pay attention to my commands I will put none of these diseases upon you. I am the Lord who heals you. Leviticus 22:4 - 8 Ceremonial health laws concerning infectious skin disease, touching a dead body, eating of meat torn by wild animals. These laws were given for the protection of the Jews, long before other cultures knew that disease was passed on by germs, carried by blood, and transferred from animal to man.</p>

MEMORY VERSES

1	<p>Exodus 15:26 If you listen carefully to the voice of the Lord your God and do what is right in his eyes, if you pay attention to his commands and keep all his decrees, I will not bring on you any of the diseases I brought on the Egyptians, for I am the Lord, who heals you.</p>
2	<p>John 3:16 For God so loved the world that he gave his one and only Son, that whoever believes in him shall not perish but have eternal life.</p>
3	<p>Psalm 91:11 For he will command his angels to guard you in all your ways; they will lift you up in their hands so that you will not strike your foot against a stone.</p>

ACTIVITIES

week	Learning and Teaching Activities
1	<p>Discussion: How does our body protect itself? How important is blood to life? What examples of the shedding of blood can we find in the Old Testament? How was this a symbol of what was to come? Why do you think God chose blood as a symbol of protection from evil?</p> <p>Activity Sheets 20a & 20b The circulatory system</p> <p>Students can:</p> <ul style="list-style-type: none"> • Research the circulatory system. • Draw the heart and show the direction of blood flow. Use red for arteries and blue for veins.

	<ul style="list-style-type: none"> • Describe and draw different types of blood cells. • Report on blood types if known. • Research the functions fulfilled by the blood: transport of food, waste, oxygen, hormones and chemical messengers; anti-bacterial action of white blood cells, clotting capacity to prevent bleeding, temperature control. • Use a microscope to identify different blood cells. (Prick finger and examine blood smear.) • Participate in exercise for the cardiovascular system. • Take pulse rate before and after exercise.
2	<p>Activity Sheet 20c The immune system</p> <p>Students can:</p> <ul style="list-style-type: none"> • Define the immune system. • List the functions of the immune system. • Investigate the role diet plays in building the immune system. • Discuss the impact of bacteria and viruses on the human body. • Construct a list of rules for health and hygiene. • Investigate health rules of the Old Testament, particularly Leviticus 22 4-8, and compare them to the hygiene knowledge of today. • List the eight rules for healthy living (NEWSTART).
3	<p>Activity Sheets 20d The skeletal and muscular systems</p> <p>Students can:</p> <ul style="list-style-type: none"> • Take a brief look at the skeletal system, and its role in protecting vital organs. • Discuss food for bone building, (including vegetables). • Draw the skeleton and label the major bones. • Make a cut-out of a human skeleton and join the pieces together with needle and cotton so that the skeleton can move at the joints. • Study a copy of an x-ray. • Participate in weigh-bearing exercises. • Experiment with different body positions and discover parts that give support. • Discover and discuss good posture when standing, sitting and walking. • Research the way that muscles work in pairs. • Research the role of joints.

ASSESSMENT TASKS

1	Label veins, arteries and the direction of blood flow around the body, (Activity Sheet 20a)
2	List the eight rules for healthy living
3	Label the major bones of the body (Activity Sheet 20d)

RESOURCES AND EQUIPMENT

Illustrations/diagrams of body systems (anatomy books)

INTEGRATION WITH KEY LEARNING AREAS

Maths – Compare pulse rates of students in the class. Draw a graph to show pulse rates.

Literacy – Activity Sheets

Art – making a model of the human skeleton

Part 21: Body Systems (2)

Age 11-12

THEMATIC STATEMENT

God is a Loving Creator

We are created in God's image. Each person is special to God. We are wonderfully made, a masterpiece of his handiwork. God wants us to accept ourselves as he made us and see ourselves as he does. We must thank God for the gifts he has given us and use those gifts to serve him.

AIM

To study the following body systems: digestive, urinary, respiratory, reproductive systems and to be aware of maintaining optimal health, with reference to each of these body systems.

OBJECTIVES: The student will -

Knowledge & Understanding Objectives

- have a brief understanding of the digestive, urinary, respiratory, reproductive systems.
- understand some basic principles in maintaining healthy body systems.
- know the rules for healthy living.

Skills & Processes Objectives

- label drawings of the body systems.
- explain some of the physiological principles of the body systems.
- give a simple definition of digestion.
- describe the passage of food through the digestive system.
- explain why the body needs food and water.
- describe the path taken by air during breathing.
- describe the role of hormones.
- explain some ways of maintaining good health of body systems.
- list the rules for healthy living.

Attitudes & Values Objectives

- show self-confidence.
- accept and value themselves as God made them.
- be diligent in using the gifts God has given us

BIBLE STORIES AND KEY PASSAGES

1	Genesis 1 God created man. Acts 17:28 In him we live and move and have our being.
2	Psalm 139 We are wonderfully made.
3	Matthew 25:14-30 We all have different gifts and talents that we can use for God. Romans 12:12-27 We are all different.

MEMORY VERSES

1	Genesis 1:26 Then God said, "Let us make man in our image, in our likeness."
2	Psalm 139:14 I praise you because I am fearfully and wonderfully made. Your works are wonderful.
3	Ephesians 2:10 For we are God's workmanship, created in Christ Jesus to do good works, which God prepared in advance for us to do.

ACTIVITIES

week	Learning and Teaching Activities
1	<p>Discussion: What do we mean by a body 'system'? Different parts work together to make a system, and the systems work together to keep the body functioning. Relate this to Romans 12:12-27. What does it mean to be valued? What does God say about the value of each individual?</p> <p>Activity Sheet 21a How much are you worth? Activity Sheet 21 b The digestive system Students can:</p> <ul style="list-style-type: none"> • Draw the digestive system and label body parts: mouth, esophagus, stomach, small intestine, large intestine, anus • Make a cut-out of the parts of the digestive tract and join them together like a jig-saw puzzle. • List foods that help or hinder digestion (refined white products compared with food containing fiber). • Explain what happens to a mouthful of food as it makes its way through the digestive system.
2	<p>Activity Sheet 21c The respiratory system Students can:</p> <ul style="list-style-type: none"> • Define respiration. (The use of oxygen, to produce energy and carbon dioxide). • Draw the respiratory system and label body parts: diaphragm, lungs, nose, trachea, bronchi, bronchioles, alveoli. • Observe chest expansion and contraction when breathing. • Measure own breathing rate and breathing rate of other students. Calculate the average breathing rate in breaths per minute. • Discover whether there is any relationship between pulse rate and breathing. (Measure both pulse rate and breathing rate before and after exercise). • Measure how long they can blow through a straw into water after breathing in. • Watch a DVD showing the dangers of smoking, and what it does to the lungs. • Observe water vapor content of breath. Explain how the air we breathe in collects water

	<p>vapor.</p> <ul style="list-style-type: none"> • Blow up a balloon to illustrate the alveoli. • Discuss the problems faced by people with asthma.
3	<p>Activity sheet 21d The urinary system Students can:</p> <ul style="list-style-type: none"> • Draw the urinary system and label body parts: kidneys, ureters, urethra • Discuss the importance of drinking water, and the damage that dehydration can do to the kidneys. <p>Activity Sheet 21e The reproductive system Students can:</p> <ul style="list-style-type: none"> • Draw the male and female reproductive systems and label body parts: uterus, vagina, ovaries, uterine tubes, mammary glands; scrotum, penis, testes, prostate gland. • Explain the role of hormones. • Discuss the dangers of man-made chemicals in upsetting the balance of hormones.

ASSESSMENT TASKS

1	Label the parts of the digestive system.
2	Draw a diagram of the lungs.
3	Write a paragraph on the importance of drinking water.

RESOURCES AND EQUIPMENT

Diagrams of body systems (books) Visual aids to show effects of smoking on lungs

INTEGRATION WITH KEY LEARNING AREAS

<p>Literacy – Activity Sheets Art – make cut-out model of digestive tract. Maths – Measure breathing rates of class members and record in graph form.</p>
