God is Pure and Holy Teacher's Topic Guide Year 5

Topic: Fitness and Food Choices **Duration: 4 weeks**

Spiritual Awareness
Our bodies are temples of the Holy Spirit. Each individual is extremely valuable. It is therefore our responsibility to look after ourselves, to think ahead and act wisely for our own protection.

Just as we need to look after our bodies for physical health, loving and obeying God gives us spiritual health.

Bible stories and passages
Matthew 10:29-30; Luke 12:6-7 We are of more value than many sparrows.
Exodus 15:26; Deut 7:15 In obeying health laws, God promised to protect the Israelites from the diseases of the Egyptians.
Genesis ch 1 God rested on the Sabbath.
Exodus 34:21 Rest on the seventh day.
Exodus ch 20 the Ten Commandments: God's people had to obey rules.
Exodus ch 16 God provided manna in the wilderness. Verse 17 tells us what happened when the people didn't obey the rules about collecting the manna.
Matthew 22:37-39 Love your neighbour as yourself. (What is meant by love of *self*?')
Galatians 5:22 But the fruit of the Spirit produces love, joy, peace, patience, kindness, goodness, faithfulness, gentleness and self-control. (We can show self-control in eating the right foods, in spending less time in front of the TV or computer and doing adequate exercise.)
Philippians 3:14 I run straight towards the goal in order to win the prize, which is God's call through Jesus Christ (GNB). (Just as we should try our best for Jesus to live the Christian life, loving others and sharing the gospel, we should also try hard to look after our bodies. Keeping fit can be like running towards the goal. It takes hard work.)

Bible verses:
1 Corinthians 6:19-20 Don't you know that your body is a temple of the Holy Spirit?
Proverbs 4:20 & 22 Listen to my words. Remember them and keep them in your heart. They will give life and health to anyone who understands them.
Proverbs 3:7-8 Never let yourself think you are wiser than what you are; simply obey the Lord and refuse to do wrong. If you do, it will be like good medicine, healing your wounds and easing your pains (GNB).
Luke 2:52 Jesus grew both in body and in wisdom (GNB).
Proverbs 13:13 If you refuse good advice you are asking for trouble; follow it and you are safe (GNB).

Key Questions
Why should we take care of our bodies?
How can we keep our bodies fit and healthy?
Which foods are the best foods?

Why does God want us to follow rules?
What is the meaning of 'fit'?
How can we keep our bodies fit?

Outcomes

Knowledge

- study the requirements for health and fitness
- know the requirements for spiritual health
- Understand the benefits of regular exercise
- Know the best foods to eat for a healthy body
- Understand the meaning of wisdom and self-control when caring for their bodies

Skills

- analyze their own lifestyle and identify strengths and weaknesses
- develop surveys and questionnaires around health issues
- collate, graph, summarize findings
- plan a personal health program and address areas of personal weakness
- Devise a personal exercise program

Values

- appreciate the body as the temple of the Holy Spirit
- care for self
- be responsible and accountable for one's own actions

Activities

- Make a list of rules for good health
- Discuss some of the Old Testament health laws.
- Discuss importance of exercise and rest.
- Test and measure personal fitness levels.
- Make a list of exercise options.
- Survey students regarding exercise habits.
- Survey the school community about types of food most commonly eaten.
- Discuss food requirements for a healthy body.
- Keep a diary of food consumed over a certain period of time. Suggest improvements / healthy substitutes for junk food.
- Devise a healthy meal plan.
- Collect, make and sample healthy food.
- Discuss the implications of wise or unwise choices that affect our health.

- **Devise an exercise plan**

Each child chooses favourite forms of exercise. They can draw up a weekly plan for out-of-school exercise. Example:
Monday 4 p.m. Play with the dog
Tuesday 4 p.m. Skipping

- **Conduct surveys and make graphs**

Children can take surveys on 'out-of-school' fitness activities that class members are involved in, and graph results, e.g. football, swimming, playing active games with friends.

Create definition of food for fitness

e.g. foods from nature; food to help our muscles grow (fish, meat, milk, lentils); food to give us energy (vegetables, fruit and fats); food that contains many *nutrients*. Nutrients are things in our food that make us grow and keep us alive and well.

Some more definitions

Natural food: Also called 'unprocessed food'. These are foods directly from nature, such as fruit, vegetables, nuts, meat, fish and eggs. Some dried or tinned foods can be classified as natural foods if they do not have food additives, e.g. dried beans, lentils, rice, butter, milk, tinned tomatoes.
Fast food: Convenience food from outlets. Ready-to-eat foods such as hamburgers, hot dogs, fried chicken and chips. These have some nutritional value but contain ingredients that are not good for our health. Should be eaten rarely.
Food additives: Chemicals added to give artificial colour or flavour, or to preserve the food.
Processed food: These are foods that are changed from their natural state and sold in packets, cartons and cans. Some have nutritional value. Some have additives. Food labels should be checked and assessed for health benefits.
Junk food: food with no nutritional value and food that may be bad for our health. These include sweets, sugary foods, savoury snacks such as potato crisps, and soft drinks or imitation fruit drinks. Should be consumed rarely.

There are some foods we should not eat too much of. What are these? What does it mean to show "self-control" with foods that may be tasty but not good for us?

Food additives

Food additives are chemicals added to the food for colour, flavour or as a preservative.
Name some foods that contain artificial colours. (Artificial means not from nature.)
Name some foods that contain artificial flavours.
Name some foods that contain preservatives (chemicals to make the food last longer).
We don't know exactly the bad effects of artificial food additives. But many children have allergies like asthma. Some people think that this is because there are too many different kinds of man-made chemicals around us.
We can avoid eating man-made chemicals by eating natural foods. However we should wash fruit and vegetables in case they have been sprayed with pesticide.

Look at the colours in some processed foods, such as fizzy drinks and coloured sweets. You can take a bottle of food colouring used to colour icing. Place a few drops in water for the students to see.
Then look at the colours of fruits and vegetables - e.g. spinach, carrot. Which colours are the healthiest – natural or artificial colours?

Good fats, bad fats

Why are fats such as butter and coconut oil 'good' fats? (They are from nature.)

Why are the fats in fried chips from fast food places 'bad' fats? (The answer is that most bottled processed cooking oils and margarine have been heated to high temperatures and they are not good for our health. The exception is olive oil which can withstand high temperatures without spoiling).

Too much sugar
List some reasons why sugar is not good for us, e.g. causes tooth decay, is a processed food (unless you suck on the natural sugar cane), makes our bodies weak and unable to fight off sicknesses like colds and flu. Too much sugar can cause diabetes.

Too much starchy food
What is starchy food? (potato, cassava, taro, flour, cake, bread, rice, pasta). This is food for energy.
These foods are good to eat if we are active. When we run around the starchy foods get used up inside our bodies. But if we are not active, the starchy food turns to sugar inside us and gets stored as fat. We need to eat plenty of coloured vegetables as well the starchy foods. We also need foods for growth and developing our muscles. That means we need foods like meat, fish, milk, eggs and lentils. If most of our diet is white starchy food we will not get all the nutrients we need. People can also become overweight and may develop diabetes from eating too much starchy food.

Too much salt
Salt from the sea contains valuable nutrients.
But white salt that you buy in the shops has most of the nutrients taken away and too much of it can cause health problems.

Make a table of problem foods
Students can make a list of processed /junk foods and then write them in a table:
1. Foods with the wrong kind of fat
2. Foods with too much sugar
3. Foods with too much salt
4. Foods with artificial colourings and flavourings

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.

They should include:
5 different types of coloured vegetables
2 different fruits
Foods for growth and building muscles: e.g. meat, chilcken, fish, milk, eggs, lentils
Some good fats: e.g. butter, olive oil, coconuts
Some starches such as rice, potato, yams

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 for improvement.

Make a list of healthy snacks
Ask students for suggestions.

A healthy breakfast
Why is it important to eat breakfast?
What are some unprocessed, natural foods that we can eat for breakfast?
Take a look at breakfast cereal packets.
Why are most breakfast cereals a waste of money?
Many breakfast cereals contain added salt and sugar. Asses breakfast cereals for salt, sugar, colourings and flavourings.

Learning Connections
English: discussions on wise actions
Mathematics: Collate and graph results of surveys.
Art: safety posters; healthy food art, e.g. fruits and vegetable prints or drawings
History: What was food like 100 years ago? Compare with today.
Biography: Eric Liddell

The NEW START eight rules for healthy living

- Discuss the importance of each of the following eight rules for healthy living and decide how these can be implemented.
- Children can make an illustrated chart of the rules for healthy living.

NEW START stands for:

- **N**utrients – are the parts of food that makes us grow, and stay healthy. Only healthy foods do this.
- **E**xercise – at least half an hour every day
- **W**ater – 6 glasses a day, (not fruit juice or fizzy drink)
- **S**unlight – for vitamin D for strong bones.
- **T**oxin-free – avoid artificial food additives and avoid toxic chemicals in the environment
- **A**ir – get fresh air every day
- **R**est – don't stay up late
- **T**hink happy thoughts and trust in God

Quiz game - rules for healthy living
Cut these questions into paper strips and place them in a box. Draw out questions for a quiz game. This can be played as a 'buzzer' game with two teams. The first team to 'beep' gets to answer the question.

1. Name a healthy food for building muscles.
2. Why do we need to exercise?
3. Name three exercise activities.

4. How many glasses of water should you drink per day?
5. Why is water the best drink?
6. Why do we need sunlight?
7. Name two foods that could contain artificial colourings or flavourings.
8. Name two foods that contain no food additives.
9. Why do we need fresh air?
10. Name two ways to provide the body with fresh air.
11. Why should we avoid staying up late?
12. What does sleep do for the body?
13. Why should we think happy thoughts?

Values education Year 5
God is Pure and Holy
Self-control

God has given us His Holy Spirit, who works in the lives of Christians, producing patience and self-control.

Self-control is…

- controlling *myself*
- being careful about what I do and say
- not doing the wrong thing when I *know* it is wrong
- being careful about the way I use my time
- not losing my temper
- not being greedy
- knowing when to stop
- saying 'no'
- being in charge of the things I do
- choosing to do the right thing

Activities

1. Self-control in the things I do

a) What are some things that you can say 'no' to?
b) What can you do when you are tempted to do wrong things?

2. Self-control with time

a) How do you like to spend time?
b) What would happen if you spent all your time just doing the things you liked?
c) Sometimes we can spend too much time doing one thing. We need self-control to say "enough" when there are other important things to be done. Make up a list of ways you can spend your time outside of school hours. Keep a record of how much time you spend on each one over a period of a week. (Do not include holiday times).

Here is an example to show how to set it out:

How I use my time

Date	**Activity**	**Amount of time**
	watching TV	
	computer, phone or electronic games	
	hobbies	
	sport	
	reading and homework	
	helping	

d) How could the person in the example improve their use of time?
How can you improve your use of time?

3. Self-control with food and things

a) Why is it important to have self-control with food?
b) Write down any material goods that you get tempted by. It is not wrong to have material things but it may be wrong to have too many. Why?
c) Work with a group. Sit in a circle and make up a continuous story about a boy, or a girl or a family, who wanted every new and exciting thing. The story grows as each person adds a sentence.

4. Self-control in what I say

What can happen when you lose your temper?
How can we hurt people with words?

What does the Bible say about self-control?

Galatians 5:22-23 Self-control is a fruit of the Spirit.
Ecclesiastes 7:9 Do not be quickly provoked.
Titus 2:6, 11 Be self-controlled. Say "no" to ungodliness.
Hebrews 13:5 Be content with what you have.
James 3 Controlling the tongue
Ephesians 4:26 Do not let your anger lead you into sin.

Year 5 Practical Science 1

Fitness

Check your pulse rate

http://www.cyh.com/HealthTopics/HealthTopicDetailsKids.aspx?p=335&np=285&id=1467

Your heart is a pump which pumps blood out around your body through your arteries. You can feel the blood pumping where the arteries are close to your skin. These are your pulse points, and if you feel gently with your fingertips, you can count how fast your heart is beating.

The idea of aerobic exercise is to get your heart pumping faster, which will exercise and strengthen your heart.

Learn how to take your pulse, and you will be able to see how well you are doing in your aerobic exercises.

How to take your pulse

You can find your pulse in several places. Here are two of the easiest places to find it.

To find your pulse:

1. in your neck

Put three fingers of your left hand onto your Adam's apple in your throat (that's the bit that sticks out and goes up and down when you swallow.) Feel gently to the side of it, and you will find your pulse beating (you can feel it going up and down).

2. in your wrist

Hold your hand in front of you. Stick your thumb up in the air and turn the palm towards you.

With the first two fingers of your other hand, stroke from the top of your thumb down the side until your fingers reach your wrist. Let your fingers slide downwards onto the inside of your wrist, and gently feel for your pulse.

When you have found a steady beat, count how many beats in 15 seconds (use a watch or clock with a second hand). Multiply your score by 4, and that will tell you your pulse rate per minute.

To see how well you are exercising, you need to:

- Take your pulse before you start - this is your 'starting pulse'.
- Take your pulse after you have been doing high level exercise. You should be aiming for over 150 beats a minute (if you are fit and well). Aim to keep it at the higher rate for 15 minutes.
- Take your pulse when you have finished your cooling down exercises. It should be the same as, or a bit lower than your starting pulse.
- To really improve your stamina and endurance, you should do 20-40 minutes of aerobic exercise at least three times a week.

Don't forget to do your warm up and stretching exercises before starting high energy exercise. You will notice that your recovery time (how quickly your pulse gets back to normal) gets shorter the fitter you get.

Practical Science 2

Kitchen chemistry

Blow up a balloon with yeast

http://www.sciencebob.com/experiments/yeast.php

You will need

- A packet of yeast (available in the grocery store)
- A small, clean, clear, plastic water bottle
- 1 teaspoon of sugar
- Some warm water
- A small balloon

What to do

1. Fill the bottle up with about one inch of warm water. (When yeast is cold or dry the microorganisms are resting.)
2. Add all of the yeast in the packet and gently swirl the bottle a few seconds. (As the yeast dissolves, it becomes active - it comes to life! Don't bother looking for movement - yeast is a microscopic fungus organism.)
3. Add the sugar and swirl it around some more. Like people, yeast needs energy (food) to be active, so we will give it sugar. Now the yeast is "eating!"
4. Blow up the balloon a few times to stretch it out then place the neck of the balloon over the neck of the bottle.
5. Let the bottle sit in a warm place for about 20 minutes. If all goes well the balloon will begin to inflate!

How does it work?

As the yeast eats the sugar, it releases a gas called carbon dioxide. The gas fills the bottle and then fills the balloon as more gas is created. We all know that there are "holes" in bread, but how are they made? The answer sounds a little like the plot of a horror movie. Most breads are made using YEAST. Believe it or not, yeast is actually living microorganisms! When bread is made, the yeast becomes spread out in flour. Each bit of yeast makes tiny gas bubbles and that puts millions of bubbles (holes) in our bread before it gets baked.
Naturalist's note - The yeast used in this experiment are the related species and strains of

Make it an experiment

The project above is a DEMONSTRATION. To make it a true experiment, you can try to answer these questions:

1. Does room temperature affect how much gas is created by the yeast?
2. Does the size of the container affect how much gas is created?
3. What water/room temperature helps the yeast create the most gas?
4. What "yeast food" helps the yeast create the most gas? (try sugar, syrup, honey, etc.)

Science experiment with warm water, sugar and yeast. The gas is blowing up our balloons!!!! (See photograph)

Practical Science 3

Kitchen chemistry

Lava in a cup

What you will need

- A clear drinking glass
- 1/4 cup vegetable oil
- 1 teaspoon salt
- Water
- Food coloring (optional)

What to do

1. Fill the glass about 3/4 full of water.
2. Add about 5 drops of food coloring (Red is good for giving a lava look.)
3. Slowly pour the vegetable oil into the glass. See how the oil floats on top.
4. Now sprinkle the salt on top of the oil.
5. Watch blobs of lava move up and down in your glass!
6. Add another teaspoon of salt to keep the effect going.

How does it work?

So what's going on? First of all, the oil floats on top of the water because it is lighter than the water. Since the salt is heavier than oil, it sinks down into the water and takes some oil with it, but then the salt dissolves and back up goes the oil!

Make it an experiment

The project above is a DEMONSTRATION. To make it a true experiment, you can try to answer these questions:

1. How long will the effect go on if you keep adding salt?

2. Do different kinds of food oil give different effects?

3. Will other substances (sand, sugar. etc.) work the same as salt?

4. Does the height or shape of the glass affect the experiment?

Practical Science 4

Kitchen chemistry

Mixing Oil and Water

http://www.sciencekids.co.nz/experiments/oilandwater.html

Oil and water do not normally mix. Find out how bringing oil and water together can help you do your dishes.

What you'll need:

- Small soft drink bottle
- Water
- Food colouring
- 2 tablespoons of cooking oil
- Dish washing liquid or detergent

Instructions:

1. Add a few drops of food colouring to the water.
2. Pour about 2 tablespoons of the coloured water along with the 2 tablespoons of cooking oil into the small soft drink bottle.
3. Screw the lid on tight and shake the bottle as hard as you can.
4. Put the bottle back down and have a look, it may have seemed as though the liquids were mixing together but the oil will float back to the top.

What's happening?

While water often mixes with other liquids to form solutions, oil and water does not. Water molecules are strongly attracted to each other, this is the same for oil, because they are more attracted to their own molecules they just don't mix together. They separate and the oil floats above the water because it has a lower density.

If you really think oil and water belong together then try adding some dish washing liquid or detergent. Detergent is attracted to both water and oil helping them all join together and form something called an emulsion. This is extra handy when washing greasy dishes. The detergent takes the oil and grime off the plates and into the water!

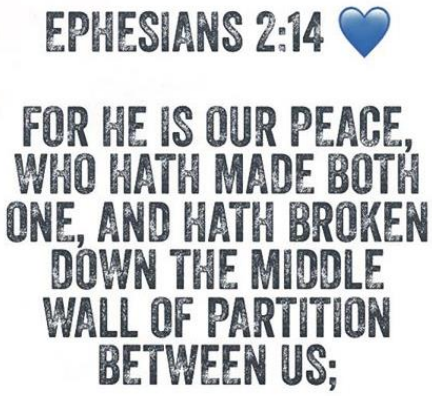
Year 5 Art

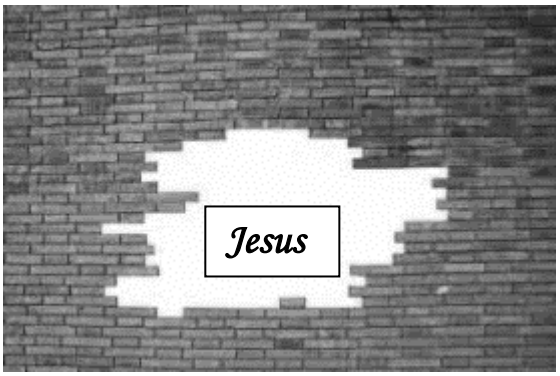
God is Pure and Holy

Fitness and Food choices

Bible verse and wall display: Ephesians 2:14 He is our peace. He has broken down the wall.

Students can make a display of large wall, and show how Jesus has broken that wall of sin.





Fitness art

Students can draw figures of people in action, e.g. running, jumping, walking, climbing etc.

Food art

Students can

- draw still life fruits and vegetables
- design a menu
- make a healthy food collage

Thinking Skills

Year 5 Pure-Holy

Fitness 1 . Make 2 lists under 2 headings: • Games that are dangerous • Games that are not dangerouS	**Fitness 2** Create a word pattern using names of sports. The next word must begin with the last letter of the previous word, e.g. fishing o l f……..
Fitness 3 Invent a game that uses a bucket, a ball and a piece of rope.	**Fitness 4** The handle of your tennis racquet has broken. Work out a way to fix it, so that it is still effective. Show the steps of how you would fix it in a series of drawings with labels..
Fitness 5 Think of 3 uses for a rugby ball, apart from using it to play rugby.	**Fitness 6** You are going to set up an obstacle course for a physical education exercise. Draw a map of the course. Draw and label the different activities.