God is Pure and Holy Yr 5
Fitness & food choices
God gives us health rules to obey

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.

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?

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. Soccer
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: 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: Ready-to-eat foods such as hamburgers, hot dogs, fried chicken and chips. These 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.

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.

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.

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 you 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 Saccharomyces cervisiae. (I'm sure you were wondering about that.) Anyway, when the bread gets baked in the oven, the yeast dies and leaves all those bubbles (holes) in the bread. Yum.

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!!!!

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!

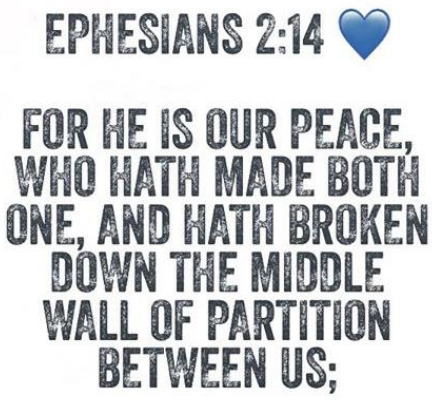
Year 5 Art

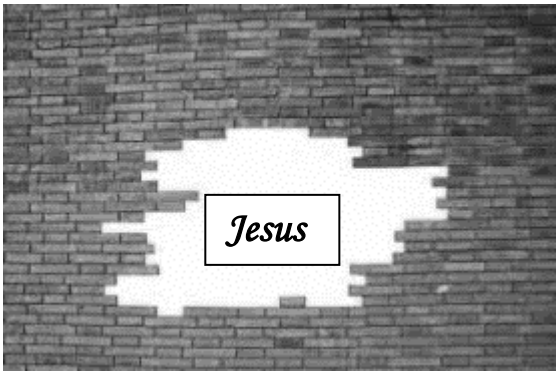
God is Pure and Holy

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

Eric Liddell

Biography

Eric Henry Liddell was born in1902 in China. His parents were missionaries there. He spent his early childhood playing among the Chinese children. He spoke their language perfectly.

His parents brought Eric Liddell home to England for his high school and university education. During that time, he enjoyed running and was a very fast runner.

He trained for the 1924 Olympic Games and was chosen to represent England. He was scheduled to run in the 100-meter, but the race was going to take place on a Sunday. Eric knew the Ten Commandments and wanted to keep Sunday as a day of worship. He decided not to run.

However, God honoured this decision and he was given the opportunity to run in 400-meter instead. He ran this in record time and won a gold medal.

After the Olympic games, he married and believed God that he was to return to China. It was a dangerous time because the Japanese soldiers had invaded China and were treating the Chinese people badly. They killed many of them, burned their villages, and destroyed their crops. Despite these difficulties, Eric stayed. He was sure God had called him to China.

He began teaching at a British-run Chinese college. He loved teaching the boys and challenging them in sports. However, life in China was becoming more difficult. The mission board decided to relocate Eric to the area he had grown up in.

Eric worked long hours travelling in the war-torn area preaching and tending the sick. Many times, he had to carry the injured to the hospital on his bike over rough roads while dodging gunfire. In the meantime, the Japanese were taking over more of the country and there was talk that all foreigners would be locked up.

All foreigners were forced to move into an overcrowded prison camp. They lived in very bad conditions. There was no running water, the bathrooms did not work and they were given only a small bowl of soup and bread at each meal. Eric ran church services in the prison, schooled the children and helped take care of the sick. He became the most respected person in the prison because of his good attitude.

He was in the camp for 2 years when he became very sick. He had a stroke and was unable to walk. He died in the Chinese prison camp in 1945, age 43. When the news reached Scotland, the entire country mourned Eric Liddell's death as their beloved athlete had died at a young age.

Eric's devotion to God and commitment to spread the story of Jesus would be remembered around the world.

Activities

1. Why did Eric Liddell give up running?
2. How did he first help the Chinese people?
3. What kind of difficulties did Eric find in China?
4. What were the conditions like in the prison camp?
5. What was Eric able to accomplish while he was living in the prison camp?

Fitness & food choices 1

Student activities

Choosing healthy foods

Draw a healthy breakfast.

Try to choose foods other than packaged cereals. Here are Some foods you might choose:

- fresh fruit
- porridge
- milk,
- yoghurt
- egg

Now draw a healthy school lunch.

Try to include:

- vegetables
- fruit

Draw a healthy home-cooked main meal:

Here are some foods you might choose:

- potatoes or yams
- rice
- fish
- meat
- cooked vegetables
- raw salad vegetables
- lentils (dahl)
- cooked dried beans (legumes)

Fitness & food choices 2
Can you help?

Here is a list of food that a boy eats in one day. Make a new list for him, giving some suggestions for improving his diet. Also think about how much water he should be drinking.

Breakfast
1 glass of chocolate milk
2 slices of white toast with jam

Mid-morning
2 sweet biscuits
1 fruit juice in a packet

Lunch
sandwiches made with white bread
2 sweet biscuits

After school
Fizzy drink
1 packet potato crisps

Evening meal
1 pizza from the shop
1 serving of hot chips
1 corn on the cob
1 piece of cake

Fitness & food Choices 3
8 rules for fitness: NEW START

Nutrients: Choose foods that as close to nature as possible.

Exercise: Exercise is good for our heart. Fast activity gets the heart pump rapidly and gets blood flowing around our body faster. Exercise is also good for building muscles and strengthening our bones.

Water:
Drink 6 glasses per day. Drink less fruit juice and keep fizzy drinks for only very special occasions.

Sunlight:
We need sunlight for vitamin D, which makes our bones grow strong.

Toxin-free:
Choose foods and drinks that contain no artificial chemicals like colours, flavours or preservatives. Another good rule for "T" is *traditional diet.*

Air: Play outdoors and get plenty of fresh air.

Rest: Go to bed early. Don't stay up late. The body needs sleep for growth and good health.

Think happy thoughts and trust in God. Bad thoughts, like anger, hatred and unforgiveness will make us feel unhappy and stressed.

Make a poster showing the 8 rules for healthy living

Fitness & food choices 4
NEW START QUIZ

1. Name a healthy energy food.
2. Name a healthy food for building muscles.
3. Why do we need to eat a variety of fruit and vegetables?
4. Why do we need to exercise?
5. Name three exercise activities.
6. How many glasses of water should you drink per day?
7. Why is water the best drink?
8. Why do we need sunlight?
9. Name two foods that could contain artificial colourings or flavourings.
10. Name two foods that contain no artificial food additives.
11. Why do we need fresh air?
12. Name two ways to provide the body with fresh air.
13. Why should we avoid staying up late?
14. What does sleep do for the body?
15. Why should we think happy thoughts?

Fitness & food choices 5
Fats

There are good fats and bad fats

Good fats

The best fats are straight from nature. We get good fat from butter, fish, meat, nuts and coconuts.

Bad fats

The bad fats are the ones that have been processed in a factory.
These are:
Margarine
Cooking oil in plastic bottles

Margarine and cooking oil from plastic bottles can create toxins in our bodies. Toxins are poisonous substances. Now you may be thinking that these toxins would make you sick. Actually, they don't make you feel sick. The amount of toxins you take into your body with bad fats in one meal might be very small, and your body doesn't notice it straight away. However, after a long time, the toxins build up, and can cause health problems.

Where do we find them?
In the supermarket: margarine and bottled cooking oil
In processed foods such as chips, crisps and pastries

List some good fats

List some bad fats

Fitness & food choices 6
White table salt

White table salt, used in most foods that we buy, is called refined salt, and contains no goodness. That's because it has been processed in a factory. It actually contains chemicals that are not good for our bodies. It is important not to eat too much salty food.

Where do we find white table salt?
Apart from on the table, we find it in packaged food like potato crisps, most breakfast cereal, tinned foods, cracker biscuits, bought bread, tomato sauce, hamburgers, sausages, hot dogs and many other foods.

What can I eat instead?
Make your own healthy snacks. If you make your own food, then you can use less salt.

1. Name some processed foods that contain lots of salt.
2. List some healthy snack foods that you could make or buy.

Sugar

Sugar comes from sugar cane. If we could cut the sugar cane and such the sugar from the cane we would be getting some healthy nutrients.

But the sugar we buy from the supermarket has been processed. This type of sugar is called refined sugar, unlike the sugar you would find naturally in a piece of fruit. Refined sugar is made out of the liquid cane sugar. It has been heated and cooled until crystals are formed. These sugar crystals now have no nutrients. Sugar also causes tooth decay.

Our bodies have to work hard to break down refined sugar. People who eat a lot of sugar have less energy and can catch colds more easily. Sugar causes people to gain too much weight. Too much sugar causes diabetes.

Where do we find it?
Refined comes in three types, white, brown and raw. It is found in sweet foods and soft drinks and packaged fruit drinks. It is also added to many processed foods, even tinned food and bread.

What can I eat instead?
Eat fruit in which there is natural fruit sugar. The body can use this type of sugar more easily. You can also eat a little honey, but remember to clean your teeth because all sweet things can promote tooth decay.

1. Give two reasons why sugar is not good for health.
2. Think of some supermarket foods that contain sugar.
3. List some supermarket foods that don't contain sugar.

Choose the healthy foods

Write down the foods that contain **no** refined salt, no processed sugar, and **no** bad vegetable oils.

sausages apples bananas dried beans home-cooked-meat potato crisps

hamburgers carrots coconuts pumpkin potato rice margarine

tinned soup biscuits ice-cream cheese home-cooked-fish avocado

Packaged breakfast cereals
Packaged breakfast cereals contain added sugar and salt. It tells you this on the packet.

Traditional foods are much better than packaged cereals and bread. For example, eggs, fish, rice, vegetables, dhal.
If the cereal contains:

Write a list of healthy foods that your family could eat for breakfast.