INTRODUCTION
HONOUR REQUIREMENTS

- Describe the basic function of the following parts of the circulatory system: heart, blood vessels, blood, and lungs.

- Describe the major difference between arteries and veins. What is a capillary and what is its function?
Identify two locations for measuring your pulse. Demonstrate your ability to accurately take someone's pulse.

Record your resting pulse rate, then exercise strenuously (ie jog, swim laps, climb stairs, etc.) for 10 minutes. Retake your pulse immediately after exercising, and then again after five minutes. Do this each day for one week recording your results on a chart or a graph. Did the exercise affect your heart rate?
Make a simple stethoscope and listen so someone's heart beat.

List at least five things you can do to keep your heart healthy. Put these into practice if you have not been doing so already.

What is cholesterol and how is it related to arteriosclerosis?
What is a heart attack and what are its symptoms? How can CPR help?

What is an ECG and how is it used by a doctor?

Find five verses in the Bible that refer to your heart. Memorise two of them.
HEART & CIRCULATION
What are some of the things you know about the heart?
What is the main function of the heart?
The main function of the heart is to pump blood around the body.
DESCRIBE THE BASIC FUNCTION OF THE FOLLOWING PARTS OF THE CIRCULATORY SYSTEM: BLOOD VESSELS,
Blood vessels are tubes that carry blood around our bodies.
DESCRIBE THE BASIC FUNCTION OF THE FOLLOWING PARTS OF THE CIRCULATORY SYSTEM: BLOOD
Blood is the transport media of nearly everything within the body. It transports hormones, nutrients, oxygen, antibodies, and other important things needed to keep the body healthy.
DESCRIBE THE BASIC FUNCTION OF THE FOLLOWING PARTS OF THE CIRCULATORY SYSTEM: LUNGS
Lungs facilitate the exchange of gases
WHAT ARE THE MAJOR DIFFERENCE BETWEEN ARTERIES AND VEINS?
carry oxygen-rich blood away from the heart

thick elastic walls, and small lumen
- carry deoxygenated blood to the heart
- larger lumen than arteries and have thinner walls
- have valves
WHAT IS A CAPILLARY AND WHAT IS ITS FUNCTION?
- Capillaries are the smallest vessels
- Thin permeable walls
WHAT ARE SOME OF THE PLACES YOU CAN TAKE SOMEONE’S PULSE?
(1) Carotid. This site is most commonly used during CPR in an adult as a pulse check site.
Radial. It is most commonly used as the site to count a heart rate.
Record your resting pulse rate, then exercise strenuously {jog, swim laps, climb stairs, etc} for ten minutes. Retake your pulse immediately after exercising, and then again after five minutes. Do this each day for one week, recording your results on a chart or a graph. Did the exercise affect your heart rate?
- Your resting heart rate is the average heart beats per minute measured when you are inactive or relaxed for several minutes.

- Children 10 years and older: 60 to 100 beats per minute
What are some of the ways we can measure our heart rate?
MAKE A SIMPLE STETHOSCOPE AND LISTEN SO SOMEONE’S HEART BEAT.
Cap

Balloon

Aluminium Wire

Insulation tape

Tubing
What are five things you can do to keep your heart healthy?
- Eat lots of vegetables
- Regular physical activity
- Use less saturated fat
- Don’t smoke or
- Manage your weight
WHAT IS CHOLESTEROL AND HOW IS IT RELATED TO ARTERIOSCLEROSIS?
Cholesterol is a fatty substance which is made in the liver. It’s found in some foods too.
Too much can clog up your arteries and lead to health problems in the future.
WHAT IS ARTERIOSCLEROSIS?
Arteriosclerosis is the hardening of the blood vessels and atherosclerosis is one of the causes of the arteriosclerosis.
Normal artery

Blood flow

Artery narrowed by atherosclerosis

Plaque
WHAT IS A HEART ATTACK?
A heart attack is a medical emergency. It happens when there’s a sudden loss of blood flow to a part of the heart muscle. Without enough blood and oxygen your heart can be seriously damaged.
WHAT ARE SOME SYMPTOMS?
Chest pain or discomfort that suddenly occurs and doesn’t go away. It may feel like pressure, squeezing or heaviness in your chest.

Pain that may spread to your left or right arm or may spread to your neck, jaw, back or stomach.

Feeling sick, sweaty, light-headed or short of breath.
Sudden feeling of anxiety that can feel similar to a panic attack

Excessive coughing or wheezing due to a build up of fluid in the lungs.

Pain levels can also vary from person to person. For some people the pain or tightness in their chest is severe, while other people just feel uncomfortable, or pain similar to indigestion.
What should you do if you suspect someone is having a heart attack?
Do you know the medical services in your country to call?
Call 999 for an ambulance immediately
Start CPR
Ask someone to get the defibrillator
Defibrillators

Defibrillator Heart Restarter

Anyone can use it
No training necessary

For an unconscious person
NOT breathing normally

Call 999 Start CPR Switch on defibrillator Follow its instructions

Call 999 for access code
WHAT CPR STANDS FOR?
CPR STANDS FOR CARDIOPULMONARY RESUSCITATION.
HOW CAN CPR HELP?
By performing chest compressions (because of COVID-19 no rescue breaths), you are taking over the role of their heart and lungs, pumping blood and oxygen around their body.
WHAT IS AN ECG?
An electrocardiogram - or ECG - is a simple and useful test which records the rhythm, rate and electrical activity of your heart.
Take Your First ECG

Recording an ECG typically takes 30 seconds.

First, open the ECG app on your Apple Watch.
Rest your arms on your lap, and hold your Digital Crown.

Note: To take an accurate ECG, your Apple Watch needs to be snug on the wrist selected in Settings.
An electrocardiogram - or ECG - is a simple and useful test which records the rhythm, rate and electrical activity of your heart.
FIND FIVE VERSES IN THE BIBLE THAT REFER TO YOUR HEART. MEMORISE TWO OF THEM.
“What is man, that You should exalt him, That You should set Your heart on him,” Job 7:17 NKJV
“Oh, that they had such a heart in them that they would fear Me and always keep all My commandments, that it might be well with them and with their children forever!” Deuteronomy 5:29 NKJV
“I will praise You, O LORD, with my whole heart; I will tell of all Your marvelous works.” Psalms 9:1 NKJV
“And you shall love the LORD your God with all your heart, with all your soul, with all your mind, and with all your strength.’ This is the first commandment.” Mark 12:30 NKJV
“that I have great sorrow and continual grief in my heart.” Romans 9:2 NKJV
Completing your honour

Download your worksheet from http://youth.adventistchurch.org.uk/e-club-pathfinders {if you cannot print, write on a sheet}

Complete it
Add it to your folder
Ensure club Director checks and sign off
Wear your honour proudly
- Completing your honour

- [https://www.heartuk.org.uk](https://www.heartuk.org.uk)
- [https://www.bhf.org.uk](https://www.bhf.org.uk)
- [https://www.nhs.uk/conditions/first-aid/cpr/](https://www.nhs.uk/conditions/first-aid/cpr/)