



HEALTH SCIENCES

Health and well-being

Grade 10



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Health Sciences

Term 1

2017 - 2018





"Extensive knowledge and modern science must be acquired. The educational process we see today is in an ongoing and escalating challenge which requires hard work.

We succeeded in entering the third millennium, while we are more confident in ourselves."

H.H. Sheikh Khalifa Bin Zayed Al Nahyan

President of the United Arab Emirates





استلهمت ألـوان العـلم. من الـبيت الشهير للـشاعرصفي الدّين الحلّي:

بيضٌ صَنائعُنا خُضْرٌ فَرابِعُنا سودُ وَقائعُنا حُمْرٌ مَواضينــا



يرمز إلى النَّمَاء والازدمار والبيلة الخَصْراء، والنَّمَضَة الخضاريّة في الدّولة.

يرمز إلى تضحيات الجيل الشابق لتأسيس الاتُحاد. وتضحيات شعداء الوطن لحماية فنجزاته ومكتسباته.

رؤية دولة الإمارات العربية المتحدة 2021

متحدون في المسؤولية

- الصَّلات الاجتماعيَّة المَّويَّة والحيويَّة.

2. متحدون في المصير

- - أمن وسلامة الوطن.

4. متحدون في الرخاء

- حياة صحية مديدة
- نْظَامْ، تَعْلَيْمَيَّ مَنْ الطرازَ الأَوْلَ، اسلوب خياة مَتْكامل،

3. متحدون في المعرفة

Introduction



The Health Sciences curriculum will introduce you to a wide range of topics, from health and well-being, to dealing with accidents and emergencies, including administering First Aid. Throughout the Health Sciences curriculum you will learn to become a healthier and happier young woman. The content within this book will equip you with the knowledge and skills to keep yourself, your family and your community safe whilst leading a healthier lifestyle.

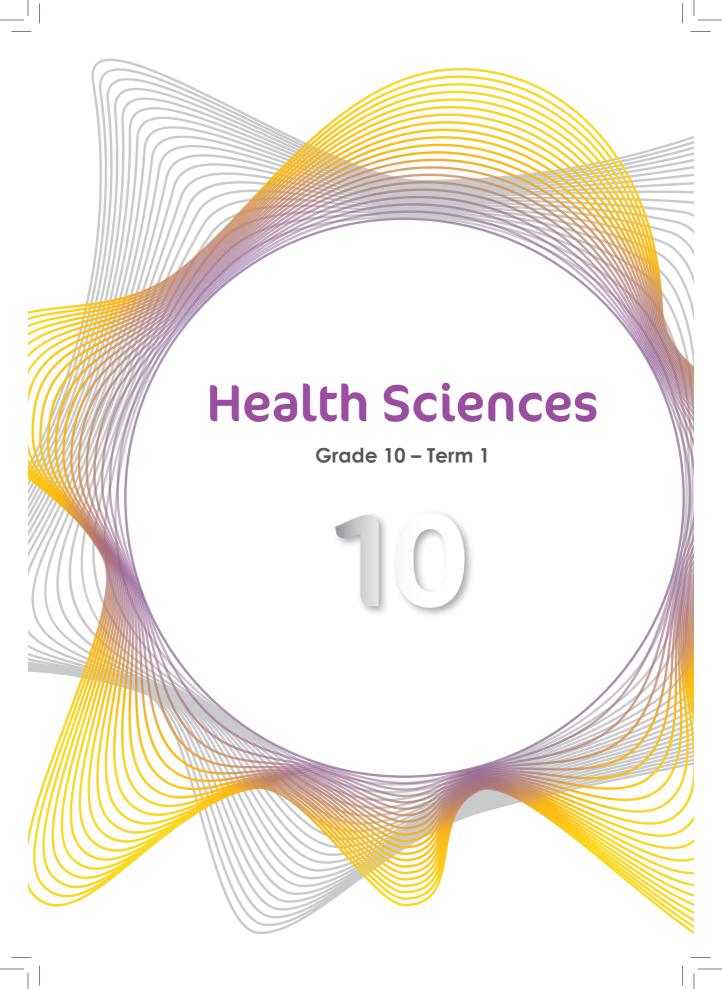
This term you will learn about the basics of health and well-being and understand how to make positive lifestyle changes to improve your health and well-being. You will gain a deeper knowledge of the developmental changes that will occur throughout your life and learn how to effectively manage these changes.

Have you ever wondered what impact the food you eat has on your body and how food choice can impact your health? You will find out what calories are, how to read food labels, and how to achieve a healthy balanced diet for optimum health.

In addition to learning how to lead a healthier lifestyle, you will gain the skills and knowledge to effectively deal with accidents and emergencies. Unfortunately, accidents do happen, so it is important to develop the skills, knowledge and confidence to effectively deal with these situations. This will ensure that you are a valuable member of your community, and equip you with the skills to ensure the safety of your family, friends and others.

First Aid is a vital skill to develop. Throughout the Health Sciences curriculum you will learn a wide range of First Aid techniques and how to deal with accidents and emergencies in an effective manner. These skills will make you a valuable member of your community and may even help you can save a friend or family members life one day!







حقوق الطبع والنشر والتوزيع محفوظة لوزارة التربية والتعليم بدولة الإمارات العربية المتحدة

الطبعة الأولى: 2017-2018 م

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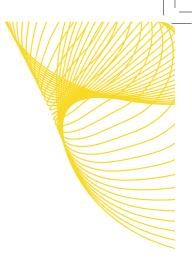


It is important to have a good level of health and well-being throughout your lifetime to enable you to live a full and happy life without any restrictions. To achieve this, your lifestyle should include the following; regular exercise, balanced diet, good sleeping pattern and healthy relationships with others. It is also important to conduct regular health checks to reduce the chances of developing preventable diseases.

Health and well-being is not just something to study and leave in the classroom. It is something that should form a positive habit in your day to day life. Health and well-being are essential elements for quality of life and are fundamental for learning and development.

Often, the importance of good health and well-being can be overlooked. In this unit, you will learn about the three dimensions of health and well-being; physical, social and emotional health, including factors that may influence your overall health and well-being. You will also explore how to make positive changes and learn how to set goals to improve your lifestyle.

Learning Outcomes



Unit 1: Health and well-being

- 10.1.1 Explore the concept of health and well-being, including ways to bring actual health and well-being to an ideal state.
- 10.1.2 Explain what is meant by the term health and well-being.
- 10.1.3 Describe how the 3 dimensions of health (physical, social, and emotional) overlap and interconnect.
- 10.1.4 Explain how general wellbeing is dependent on the continual growth and development in all 3 dimensions.
- 10.1.5 Discuss how and why health and wellbeing are constantly changing states.
- 10.1.6 Analyse factors that can influence health such as family, culture, media and technology.
- 10.1.7 Explain how health and wellness is dependent on the capacity to bring actual health and wellbeing as close as possible to an ideal state.
- 10.1.8 Reflect on personal health practices and develop a goal to reach a real-life goal.
- 10.1.9 Demonstrate the ability to use goal-setting skills to enhance health.



	Word	Form	Definition
	Behaviour	Noun	The way in which a person acts.
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Blood pressure	Noun	The pressure of the blood within the arteries, produced by the contraction of the heart. Recorded in systolic (when the heart beats) and diastolic (when the heart relaxes).
/ord	Blood sugar level	Noun	The amount of glucose (sugar) in the blood.
lossary of key words	Body Mass Index (BMI)	Noun	A measure of whether someone's weight is healthy. It is calculated by dividing weight in kilograms by height in metres squared: Weight (kg) ÷ Height (metres) squared.
Sary	Communication	Noun	Exchanging of information by speaking, writing, or using some other method.
Glos	Emotional health	Adjective	Relating to a person's emotions or feelings.

Word	Form	Definition
Goal setting	Noun	The process of identifying something that you want to achieve and setting measurable goals and timeframes.
Habits	Noun	Something you do on a regular basis, it is often something that is hard to give up or change.
Heart rate	Noun	The speed at which the heart beats. Measured in beats per minute (BPM).
Lifestyle	Noun	The way in which a person lives.
Physical health	Adjective	Relating to the body rather than the mind.
Relationships	Noun	The way in which two or more people are connected, or the state of being connected.
Social health	Noun	How you get along with other people, how other people react to you, and how you interact with society.

What is health?

What is health?

The World Health Organisation (WHO) defines health as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity". This definition was created in 1948. This is now outdated because of the increase in chronic disease. Based on this definition, most of us would be considered as unhealthy most of the time. This shows that health is a very individual thing based on your own life and medical conditions.

For example, someone who has diabetes, which is controlled by insulin, can still think of themselves as healthy when their diabetes is under control. Someone who has a serious chronic disease may feel that they are healthy on days when they are able to get out of bed. Others may feel that they are healthy when they are able to run long distances.





Activity 1: What is health?

What does being healthy mean to you?



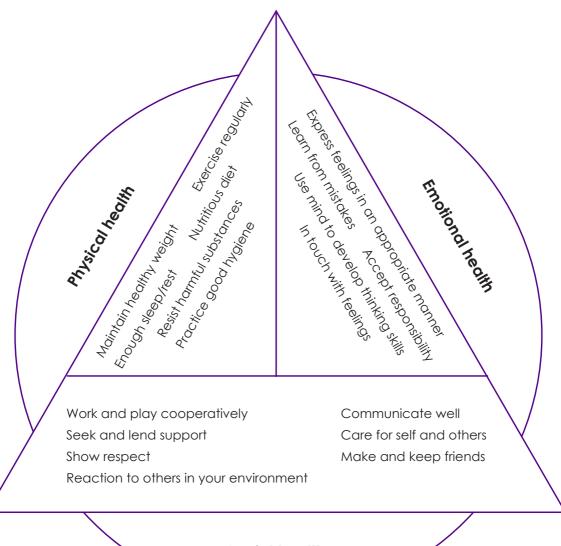
Now, create your own definition of health which is relevant to you.

Health is _

1.2 The dimensions of health

The dimensions of health

There are lots of different aspects of health that contribute to total health. These include physical health, emotional health and social health.



Social health

Activity 2: Balloon game

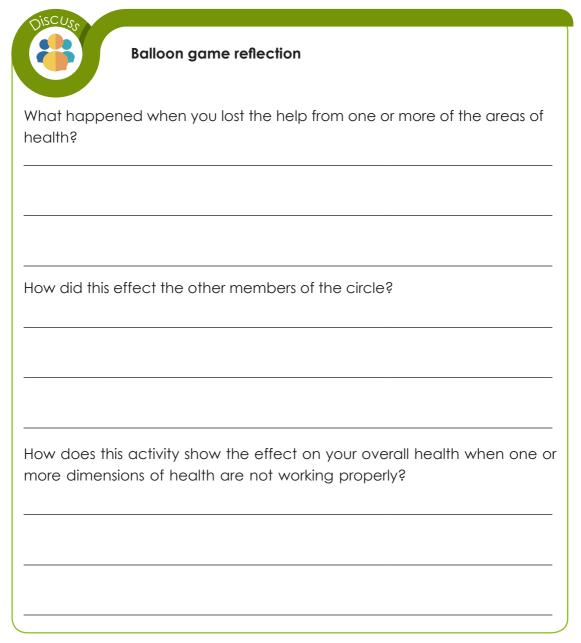


Get into groups of 6 and stand in a circle holding hands. You will each be given the title of social, physical or emotional health. Your teacher will give you a balloon. Your task is to stop the balloon from touching the ground. To start with, you will all work together to keep the balloon off the ground, then

your teacher will call out one of the dimensions of health. If you were given this dimension at the start of the activity, you are no longer allowed to help the rest of your group and your hands must remain at your side. Your teacher may call out more areas of health who need to stop helping keep the balloon in the air.



1.2 The dimensions of health



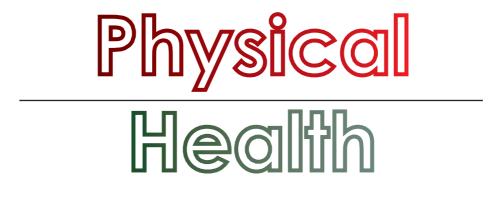


Remember: When one aspect of our health stops, it affects other areas of our overall health.

Physical health

Physical health is the part of health that refers to how well your body works. When you are physically healthy you have enough energy to carry out everyday tasks. Physical health also includes not doing things that may hurt your body because this will help to reduce your chance of getting illness and disease. Ways to improve your physical health include eating right, getting enough exercise and maintaining your recommended body weight.

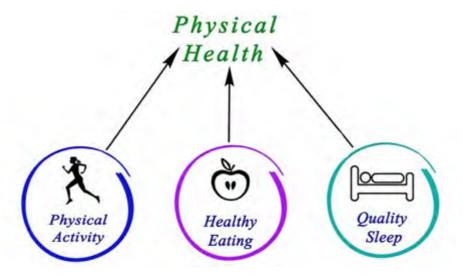
Physical health is very important for overall well-being, and is the most visible dimension of health. Some of the most serious signs that we are unhealthy are seen physically. This dimension of health is important for anyone trying to improve overall health and well-being.





Defining physical health

Traditional definitions of **physical health** would have classified someone as physically healthy if she did not have a serious illness. However, today's definition can consider everything from the absence of disease to fitness level.



These are the key areas of physical health:

- physical activity includes strength, flexibility, and endurance
- nutrition and diet includes nutrient intake, fluid intake, and healthy digestion
- avoiding things that will harm your body including smoking and harmful substances
- medical self-care includes looking after minor injuries and getting medical care when needed
- rest and sleep includes rest and relaxation, as well as getting enough good sleep

Each of these key areas of physical health can be improved through healthy lifestyle changes.



Physical activity: Healthy children and adults should be active every day. This should be both leisurely physical activity and structured exercise. Examples of leisurely physical activity include hiking, biking, and walking. Examples of more structured forms of exercise include strength training, running, and sports.



Activity 3: Ways to increase your physical activity

How often do you exercise?
What sort of exercise do you do?
Think of ways that you could do more exercise, such as doing more of what you already do, or trying something new. Write your ideas below.



Nutrition and diet: A well-balanced diet should contain carbohydrates, proteins, fats, vitamins, and minerals. Limiting certain foods should not be done unless it is due to a medical condition. You should drink plenty of water. Meals and snacks should be eaten throughout the day and portion sizes should not be too large. We will look at nutrition and diet in more detail in Unit 3.



Activity 4: Your diet

Do you think you currently have a healthy diet?
Why/why not?
How do you think you could improve your current diet?





Harmful substances: Substances that change mood or other bodily processes should not be used.

Medical self-care: Basic items, such as bandages, pain killers, and over-the-counter medications, should be easy to find and use from home, so that you can treat minor injuries and illnesses yourself. Long-term illnesses that do not get better should be looked after by seeing a doctor. You should get emergency treatment when signs and symptoms are significant or life-threatening.



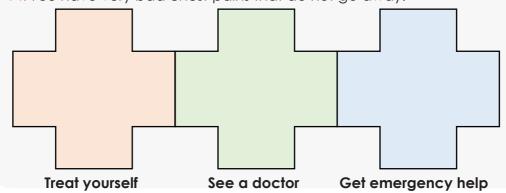




Activity 5: Treating illness/injury

Look at the illnesses and injuries below and put each number into the correct box to show if you should treat yourself, see a doctor, or get emergency treatment.

- 1. You have a cough or cold.
- 2. You have a chest infection that is not going away.
- 3. You tripped and hurt your ankle, it is swollen and you cannot put any weight on that leg.
- 4. You twisted your ankle at the gym 2 weeks ago and it is not getting any better.
- 5. You cut your finger and it is bleeding a little.
- 6. You cut your finger and it is bleeding heavily and will not stop.
- 7. You banged your head and now feel sick, dizzy and confused.
- 8. You have had sickness and diarrhoea for 12 hours.
- 9. You have had sickness and diarrhoea for 5 days.
- 10. You have a fever.
- 11. You collapse on the floor.
- 12. You fall over and graze your knee.
- 13. You have indigestion after eating.
- 14. You have very bad chest pains that do not go away.



Rest and sleep: Letting your body rest is very important. As well as sleeping, you should spend time relaxing to help refresh the body. Sleep should take place in a quiet, dark place and you should try to get 7-9 hours of sleep every night. Missing sleep, or getting poor quality sleep for a long period of time can have a negative effect on your health.



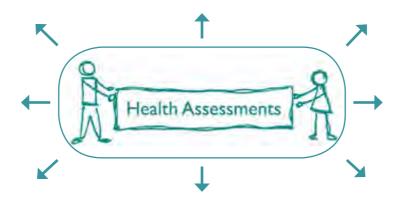


Physical health assessments

If you have visited a doctor or nurse lately, they may have carried out some sort of physical health assessment.



Think of some tests that a doctor or nurse may carry out that will test your physical health.







The following measurements can be used to test certain aspects of physical health:

- General assessments includes weight, body mass index (BMI), and reflex tests
- Disease risk factor assessments includes blood pressure, cholesterol, and blood sugar level tests
- Fitness assessments includes body composition (body fat percentage), flexibility, muscular strength, and endurance tests

There are also some simple ways you can assess your own physical health:



Body temperature: Normal body temperature is approximately 37 degrees. A high temperature (above 38 degrees) signals a fever caused by an infection or illness.

Grip strength: If you find it hard to open jars or hang on to objects for more than a few seconds, this could be a sign that your muscle strength is low. Many hospitals, clinics, and health clubs have dynamometers that measure your grip.





Toe touch: Bending at the waist and reaching for your toes can be a great test of your flexibility and physical health. The further you are from reaching your toes, the more likely it is that your physical health is poor.



Activity 7: Touch your toes

Stand up and try to touch your toes now. How close did you get?

Heart rate: This can be taken by pressing lightly on the underside of the wrist on the thumb side.

The average adult has a heart rate between 60 and 100. Lower heart rates may show high levels of fitness. Heart rates outside of this range, combined with feeling tired, shortness of breath, or dizziness, may be signs of a problem.





Activity 8: Check your pulse



You are now going to check your own heart rate. Your teacher will show you where exactly on your wrist you need to press to find your pulse. Once you have found your pulse count the number of beats you feel in 30 seconds, then double it to get BPM (beats per minute).

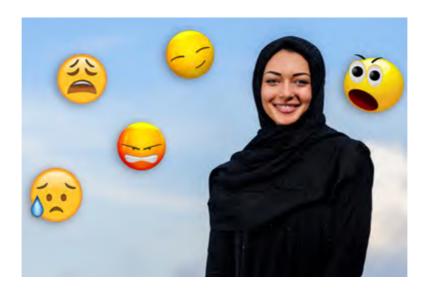
Number of beats felt in 30 seconds: _____ X 2 = ____ BPM.



Activity 9: Quick quiz

- 1. Which of the following is considered a normal body temperature?
- O 35 degrees
- O 37 degrees
- O 39 degrees
- 41 degrees
- 2. Which of the following conditions should be addressed by a health professional?
- low water intake
- o a deep cut
- o lack of sleep
- o a headache
- 3. A well-balanced diet must contain all of the following except:
- sugar
- o fats
- vitamins
- carbohydrates
- 4. Which of the following is considered a fitness assessment?
- cholesterol
- reflex test
- blood pressure
- flexibility

1.4 Emotional health



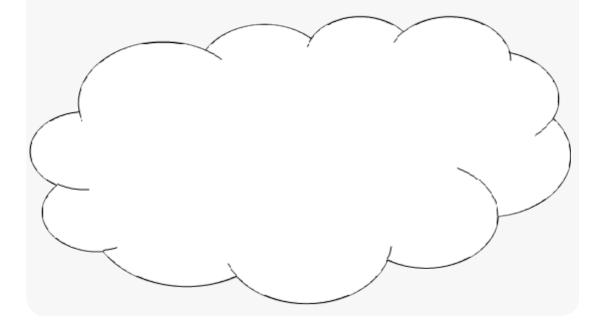
Emotional Health: Emotional well-being is how you feel about yourself and your ability to manage your feelings as you deal with challenges in life. Being emotionally balanced can have a big effect on your overall emotional and physical health. Being emotionally healthy is more than being free from depression, anxiety, or other emotional issues. It also means having positive characteristics, such as:

- the ability to adapt to change
- a sense of purpose
- a feeling of completeness and contentment
- the ability to create fulfilling relationships
- a feeling of self-confidence and positive self-esteem
- the ability to have fun and enjoy yourself
- resilience in the face of difficulties



Activity 10: Emotions

Think of as many words as you can to do with emotions. Write them in the cloud below.



Ways to improve your emotional well-being include knowing your emotions, developing resilience and showing your feelings in a good way.

An important step in improving your emotional health is to understand your own emotions and to understand what they mean. All emotions are important because they are part of you. That does not mean they are all good for you long-term. We should not have to sit back and let feelings hurt us. Instead, we can develop emotional intelligence, to identify emotions and use them well. This leads to us to being able to control emotions, and adjust our mindset and behaviour.

1.4 Emotional health



Activity 11: Managing emotions

Think of something that has happened to you that made you upset or angry
What was the situation?
What emotions/feelings did you have in this situation?
How did you deal with the situation?
How do you think you could deal with a situation like this better in future?



Improving emotional health and well-being is ongoing and includes not only identifying emotions but also changing how we think about them and how we act on them.

Some tips for improving your emotional health include:

- identifying personal strengths, and building on them
- learning optimism (thinking positively), seeing the positive in even bad situations
- developing the courage to shape and live a good life
- becoming more resilient; the ability to learn from and bounce back from setbacks, as well as dealing with challenges
- seeing the good in yourself and developing a healthy self-concept
- building a social network of good friends
- creating a set of coping skills for dealing with emotional health difficulties and external stress
- living life with a sense of purpose
- making time for hobbies and leisure
- being creative in your hobbies and leisure time

1.4 Emotional health

Mood

Do not worry if you are not always in a good mood, a bad mood sometimes might even be good for you. Here are some ways that a little negativity might be good for you:

Improved memory: People in a bad mood are better at remembering than people in a good mood.

Better judgment: A negative mood can help you better understand certain social situations.

More motivated: People in a negative mood are more likely to stay with a hard task, and less likely to see failure, but people in a positive mood are more likely to give up on a hard task.

Knowing the difference between a bad mood and long-term depression

There is a big difference between a bad mood and depression. Depression is linked with feelings of sadness and hopelessness that will not go away. It may affect your sleep, eating and your daily life.

Long term stress or unhappiness is bad for your body. It can go on to affect your physical health as well as emotional health.

Emotional health is about finding positive ways to deal with challenges in your life and keeping our emotional balance.



Activity 12: Good mood

Think of some ways that you could get back in a good mood when you are feeling down, and how you can deal with challenges you may face. Write some key words in the face below.

Hint: Think of things that put you in a good mood or make you smile. Try doing these things next time you are feeling down.



1.5 Social health

Social Health

Social health is the part of health that refers to how well you get along with others. Healthy social wellness focuses on creating and maintaining healthy, supportive relationships with family, friends and peers. Having a social support network protects you against many physical health problems. Each relationship you have with



someone should include strong communication, caring for others and a sense of responsibility. Ways to improve social wellness includes planning time with friends and family, enjoying the time you spend with others, keeping positive, rewarding relationships and ending negative relationships.

There are many benefits that come from having strong relationships with others. Let's learn more about how to develop and maintain relationships and how social health can be just as important as physical health.

Developing relationships

To develop relationships and keep good social health, you must be willing to:

- 1. Give yourself: This could include the giving of your time, effort, energy or money.
- 2. Have good levels of self-esteem: Being mentally and emotionally secure with yourself can help with healthy relationships.
- 3. Establish a sense of identity: Don't change who you are, or your characteristics, or your relationships may suffer. Being yourself will make for better relationships.

All relationships will have some level of emotional involvement. Knowing how emotionally involved a relationship is will become very important to long-term social health. While people you know or other students at school may have very little emotional involvement, family members and very close friends often have emotional involvement levels high enough to be considered love.

Characteristics of a healthy relationship include:

- Trust those involved trust in each other and will do what is best for the relationship.
- Compassion the physical and emotional well-being of others in the relationship is considered important.
- Respect sacrifices made for the relationship such as time, effort and money are acknowledged and valued.
- Acceptance you should not have to change your personality; a true friend should accept and like you for being yourself.
- Give and take within a relationship should be equal.



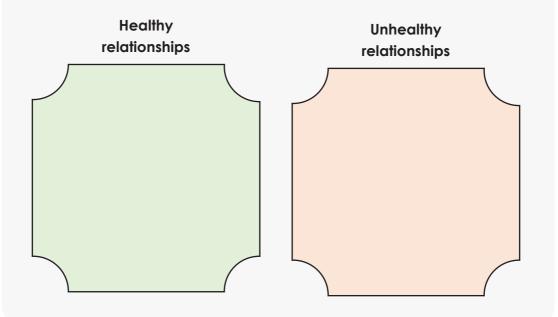
1.5 Social health



Activity 13: Healthy or unhealthy relationships

Look at the characteristics below and decide if these would be in a healthy or unhealthy relationship.

fairness/equality shared interests mutual respect lack of responsibility aggressive dishonesty arrogance manipulation low empathy trust separate identities unstable unreliable good communication reliable honesty poor communication support immaturity



The importance of communication in relationships



One of the best ways to develop and maintain relationships is through effective communication. Both verbal and non-verbal methods of communication should be considered, and you should listen clearly to the other person. Active listening is a non-verbal skill that involves continual eye contact, gestures such as head nodding, and feedback only when the other person finishes speaking.

The following communication skills are important for every relationship:

- 1. Don't criticise.
- 2. Don't become defensive.
- 3. Don't use hatred.
- 4. Don't obstruct (or avoid questions).
- 5. Do calm down.
- 6. Do complain (politely).
- 7. Do speak non-defensively.
- 8. Do back up the other person.

Overall, social health is very important to well-being. By developing skills such as communication and conflict resolution, you can enjoy healthy relationships.

1.5 Social health



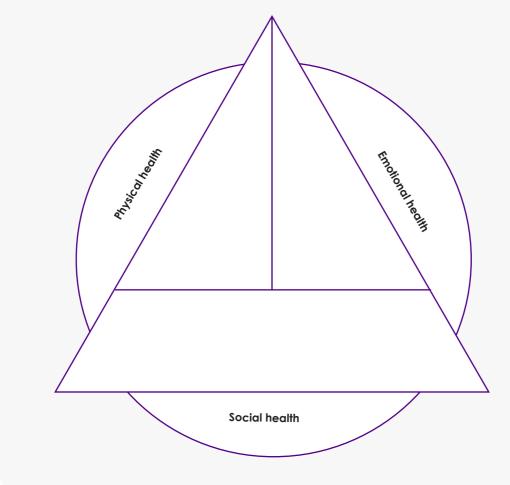
Activity 14: Quick quiz

- 1. Social health is defined as:
- o a level of emotional involvement.
- when those involved have faith in each other and will do what is best for the relationship.
- o a non-verbal skill that involves eye contact, gestures, such as head nodding and feedback only when the other person finishes speaking.
- the ability to form satisfying interpersonal relationships with others.
- 2. Which of the following is not recommended to develop a healthy relationship?
- o having high levels of self-esteem.
- putting forth effort.
- o sacrificing important personal characteristics.
- O having an established sense of identity.
- 3. Which of the following should be avoided in a healthy relationship?
- o lack of respect.
- honesty.
- o trust.
- o support.
- 4. How could you improve you social health and well-being?
- O Keep yourself isolated from others.
- Go out with friends.
- O Stay at home and watch television.
- O Never make the effort to make new friends.



Activity 15: Your health

Now you understand the three main dimensions of health, complete the diagram to show what you are doing personally to maintain good health in each of the three aspects of health. Include things that you are doing already in one colour, and things that you could do to improve your health in a different colour.



1.5 Social health



Fill in the blanks using the words provided:

social

physical

emotional

- 1. Eating a healthy diet is a good way to maintain your _____ health.
- 2. Being a good friend is one example of _____ health.
- 3. Having a positive outlook in difficult situations is one way to maintain your _____ health.

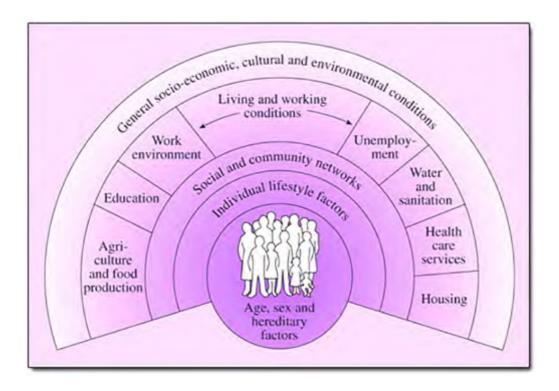


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1.6 Factors that influence your health and well-being

Factors that influence your health and well-being

To maintain or improve your health it is important to understand what affects your health. The following diagram shows the main points that control your health.



This diagram shows that lots of different factors affect your health. The centre of the diagram shows factors that you can't change such as age, gender and hereditary factors. The next layer shows lifestyle factors that affect health, these include diet, exercise and smoking. Moving outwards, the diagram highlights relationships with family, friends and others within the local community. The next layer focuses on working and living conditions – housing, employment, access to healthcare services and so on. The outer layer shows socio-economic, cultural and environmental factors, such as economic development, welfare systems, political change, social forces and structures.

1.6 Factors that influence your health and well-being



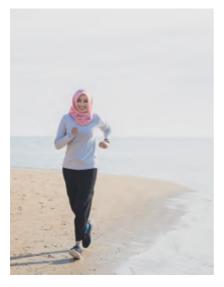
Activity 17: Shaping health

Select one of the important factors from the 'living and working conditions' layer of the diagram and explain why you think that factor is important in shaping health.



Daily habits like the foods you eat, the time you go to sleep and how much activity you get throughout the day have a big effect on your health. A healthy lifestyle is about more than just focusing on habits that deal with a health problem. By adopting healthy behaviours every day, you can ensure that your whole body stays as healthy as possible for as long as possible.





A healthy lifestyle can affect many areas of your health, including:

- your ability to maintain a healthy weight
- the aging process, including how your emotional and physical health change with age
- your risk of developing chronic disease

Developing a healthier lifestyle now can have a lasting benefit on your life. Certain healthy behaviours can reverse the onset of disease, increase your energy levels and improve your mood.

1.7 How a healthy lifestyle can improve your health



Activity 18: Lifestyle changes

What sort of lifestyle changes do you think you could make to improve your health and well-being?



Here are some lifestyle choices that might be effecting your health:

- **Nutrition habits:** The foods we eat effect our health and well-being.
- **Hydration habits:** To stay healthy you need to drink plenty of water. A minimum of 2.2 liters (9 cups) per day is recommended for women, but this should be even more when it is hot.
- **Physical activity:** Staying physically active can help you maintain a healthy weight and body composition, reducing the risk of weight-related medical conditions. It can also help you to maintain healthy muscles, bones and joints.
- Stress management: Stress triggers a survival response that can help us in the short-term but should read can be harmful to health if it continues long term. Learning how to control your stress levels can help you improve your mental and physical health.
- Sleeping habits: The amount of sleep you get every night effects your energy levels, mental alertness and concentration and ability to maintain a healthy weight. You should try to get between seven and nine hours of sleep every night.





Activity 19: Improve your health

Which habits do you think you need to change to improve your health?



What do you need to do to live a healthy lifestyle?

Living a healthier lifestyle means long term changes in several areas of your life. To become healthier, you'll have to work on behavioural changes and dietary changes.

You may not realise that your everyday choices and lifestyle could be affecting your health. The first step to making healthy lifestyle changes is knowing your current unhealthy habits. Then, you can make small, slow changes to replace unhealthy habits with healthier behaviours.



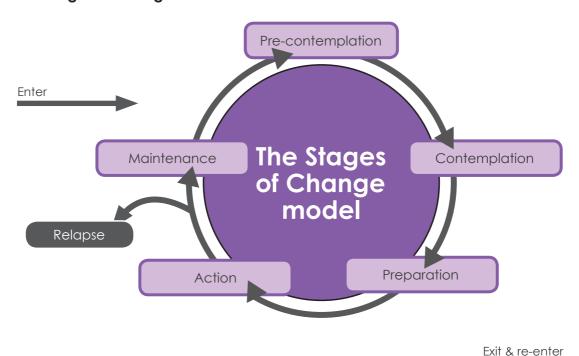
Activity 20: Changes to health

Think about your current habits, and consider ways that you can make changes in your life to improve your health. You have already highlighted an area to change, so focus on how you can improve in that area.

It only takes three weeks to create a healthy habit. By focusing on small behavioural changes you can make big improvements to your health.

An important part of making changes or improvements to your lifestyle and health is through behavioural change. You need to change an unhealthy habit or behaviour for a healthier one. It is important that you understand how to change a behaviour. There has been a lot of research and different theories around behaviour change, but we are just going to focus on two of these theories; the stages of change model and the theory of planned behaviour.

The Stages of Change model



The stages of change model above show the different stages that you go through when changing a behaviour. The cycle is ongoing and shows that you can leave it at any time, either through relapse or maintenance and re-enter it again when you decide to go back to the changed behaviour.

at any stage

As you can see, there are different stages of the model (and the behaviour needed when making a change):

- **Pre-contemplation:** This is the stage before you start to think about making a change, where there is no goal of changing behaviour; at this stage, you may not know that there is a problem, or that a change is needed.
- **Contemplation:** At this stage, you know that there is a problem or need for change, but have not yet decided to change.
- Preparation / determination: At this stage, you plan on making a change and believe that a change is both needed and possible. You start planning how to can make changes.
- Action: At this stage, you have started to make a change and alter your behaviour.
- Maintenance: Long term change occurs and the new behaviours have now replaced the old ones.
- Relapse: You fall back into old habits and behaviours.





Activity 21: Matching activity

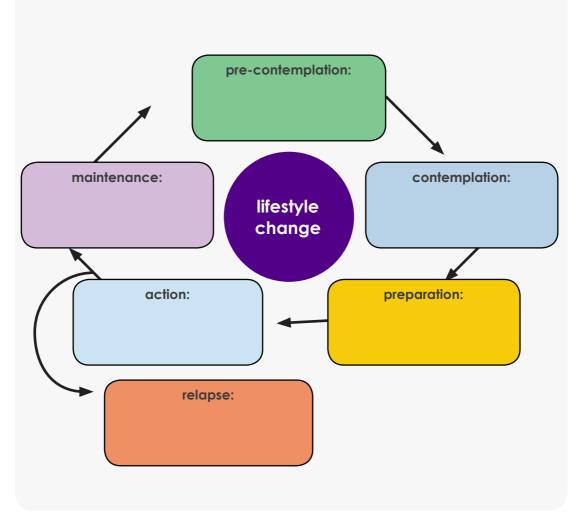
Match the stage of change on the left to the correct description on the right.

pre-contemplation You go back to old habits. contemplation You plan to make changes. You know you need to preparation make a change. You are unaware that a action change is needed. You have started to maintenance make changes. New behaviours have relapse replaced the old ones. How can you apply this model to making lifestyle changes to improve your health?

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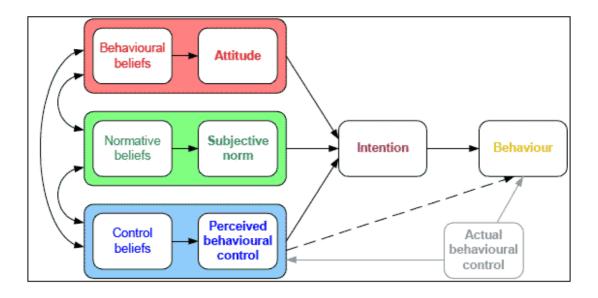
Complete this model below based on a lifestyle change you want to make, showing how this theory would help to you make this change.



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Theory of planned behaviour

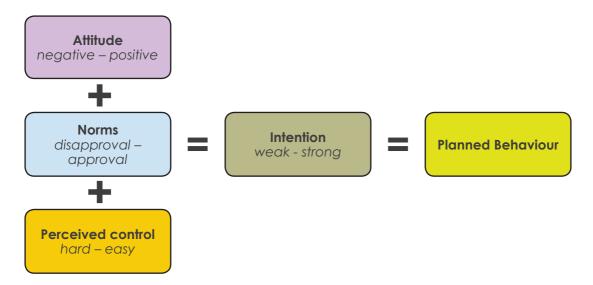
The theory of planned behaviour highlights the fact that attitude towards a behavior, subjective norms, and perceived behavioural control, shape your behavioural intentions and actions.



This theory suggests that changes to behaviour are controlled by three factors: "behavioural beliefs," "normative beliefs," and "control beliefs."

According to this theory, the best prediction of whether you will carry out a behaviour change or not is based on your intention to do so. In other words, to predict you are going to do something, you need to know what you intend to do. This may seem obvious, after all, if you intend to do something, you'll do it, right? Well, not always. Intention doesn't always correctly predict behaviour when there is a reflex or conditioned response involved. For example, if you have a fear of something, you may intend to stay calm when faced with your fear, but may end up having a panic attack instead.

The equation below shows the important parts of the theory of planned behaviour. Intention is believed to be determined by three things: attitude, perceived control, and subjective norms.



Attitude is assessment / evaluation of ideas, events, objects, or people. Attitudes can be positive or negative. For example, if you wanted to go to a movie, do you think you would enjoy it? Maybe you think it would be boring? Would it make you feel good or bad?

Norms are attitudes and behaviours that are considered normal, typical, or average. Other people's approval or disapproval of the behaviour also adds to what you might think. What would others think if you went to see a certain movie? How is this movie viewed by others? What would others think of you for seeing that movie?

Perceived control is the belief of the amount of control you have over the environment. It tells you if the job will be easy or difficult to do. How easy would it be to go to the cinema? How much effort is involved? Do you have transportation? Will there be traffic? Is it far away?



Activity 23: Quick quiz

- 1. Which of the following is one of the determining factors of intention, according to the Theory of Planned Behaviour?
- o attitude.
- o subjective norms.
- o perceived norms.
- O all of the above.
- 2. Which of the following affects others' approval or disapproval of our behaviour, and affects our intentions to behave a certain way?
 - o ritual.
 - o norms.
 - o attitudes.
 - o perceptions of control.
- 3. The Theory of Planned Behaviour is used to...?
- change someone's unintentional behaviour based on their attitudes, norms, and perceived control.
- o predict someone's unintentional behaviour.
- change someone's intentional behaviour based on their attitudes, norms, and perceived control.
- o predict someone's intentional behaviour.

SMART targets

The best way to make lifestyle changes is by making small, slow changes to your current lifestyle by setting yourself goals you can easily reach. This can be done using SMART targets.

S

Specific:

What exactly do you want to achieve? Explain this is as much detail as possible.

M

Measurable:

How will you measure how successful you are? Use weight, measurements etc.



Achievable:

Will you be able to achieve this goal? Set small goals that you will be able to achieve.

R

Realistic:

Is this goal relevant for your overall aim? Your goal should help you achieve your long-term aim.

Т

Timely:

How long are you giving yourself to achieve your goal? Create a time frame.



Activity 24: Fill in the blanks

Fill in the blanks using the words below.

	\mathcal{C}			V
specific	SMART	goal	timely	achievable

When you set a	you should	always follow	the
principle. This means that	vour anals	are	, measurable,
	,	<u></u>	
, realistic	, and		



Activity 25: SMART goals

Identify which of the following statements is a SMART goal.

I want to get fitter.	
I will lose 2kg in weight before December 2017.	
I will lose weight.	
I will lose 10kg in the next 2 weeks.	

How do you set a SMART goal?

There are many things you should think about when you set SMART goals. You should always write down your goals as this helps to keep you focused. A goal is only a dream until you start working towards it. Consider the goal setting process and then follow the steps below.

Identify your goal: You should identify what it is that you want to achieve. It is best to write down your goal and put it somewhere where you can see it so that you will not forget it. This will motivate you to achieve your goal.





Phrase your goal: You should phrase your goal in a positive way. It is better to phrase a goal as, 'I will achieve'... rather than 'I want to achieve'... When you phrase your goal as though you will achieve something it helps increase motivation.

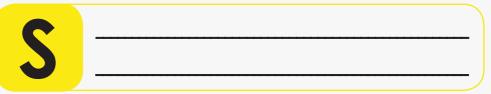
Plan your goal: Planning your goal is a very important step. You must follow the SMART principle when planning so you are able to do it. You can plan short, medium, and long-term goals. This is a good way to plan, as it lets you measure your progress and provides easy steps to achieve any long-term goals. The timescale you decide to set is your choice, but make sure you consider all the things that could affect your progress.

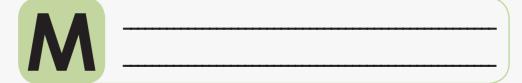
Pursue with passion: If you want to achieve your goal, you must pursue it with passion. When setting a goal, make sure you are passionate about it. If you do not pursue something you are passionate about, it is difficult to stay motivated to achieve the goal.



Activity 26: Set your own goals

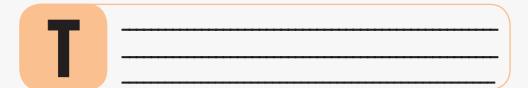
Using SMART targets set a goal to make the lifestyle change that you highlighted in a previous lesson.







R



Now write an overall goal, making sure is covers all parts of the SMART goal.



Remember, a lifestyle change isn't going to happen overnight, but if you make small achievable goals you are much more likely to achieve and maintain these changes. Focus on your achievements and the progress you have made, rather than worrying about how much more you need to do.

I STILL HAVE A LONG WAY TO GO

11 - 3 - 3 - -

BUT I'M ALREADY SO FAR FROM WHERE I USED TO BE



AND I'M PROUD OF THAT.



Activity 27: Achieve your goals

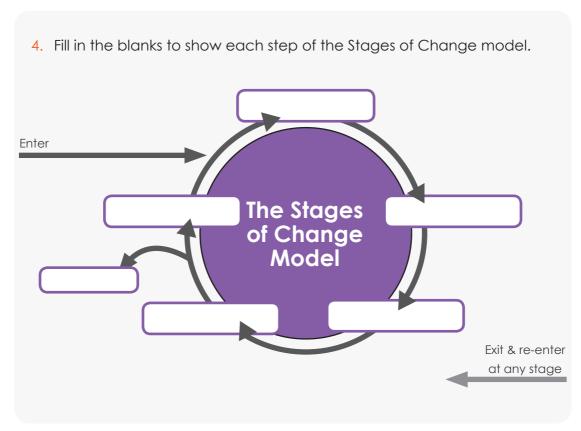
In the table below, identify things that can help you to achieve your goals, such as your motivation, family, and friends. Also, identify things that may prevent you from achieving your goals, such as other commitments. Thinking about what will help you and knowing what may hold you back will make you more likely to succeed in achieving your goal.

Things that may help me achieve my goal:	Things that may stop me from achieving my goal:

Review

Review - Unit 1

1.	What are the three main dimensions of health? Explain each of them in your own words.
2.	Name three tests/assessments that can help assess your physical health.
3.	What does SMART stand for with regards to target setting.
S	
M	
Α.	
R	
Τ.	



Student's comments
Things to think about:
What did you enjoy?
What did you perform well?
What do you need to improve?
Additional comments:





Human development is a lifelong process of physical, behavioural, cognitive, and emotional growth and change. This process will take place throughout your lifetime. Look at a picture of yourself from one year ago. Do you look the same? Do you feel like the same person? Different stages of growth and development have taken place during this period and will continue to do so. Gaining an understanding of these changes will allow you to effectively deal with your emotions and the changes taking place.

As you mature from a young girl into a woman during adolescence (teenage years), there are many important things to consider regarding your health and development. You will study these changes in more detail throughout this unit.

Maintaining personal hygiene is important for a young woman's health. You may also notice that your development differs from that of your friends. To maintain good relationships with others, recognising and respecting these differences is extremely important. Building and maintaining positive relationships is key to social development and you will learn more about how to do so, throughout this unit.

Learning Outcomes



Unit 2: Growth and development

- 10.2.1 Explore some of the individual differences and changes associated with being a young adult.
- 10.2.2 Explain the different stages of the life cycle.
- 10.2.3 Recognise that individuals differ in terms of their growth and development and physical appearance.
- 10.2.4 Describe the changes associated with being a young adult including the physical, social and emotional dimensions in particular.
- 10.2.5. Advocate to others, the importance of respect for individual differences in young adults.
- 10.2.6 Explore the behavioural traits expected at each stage of the life cycle.

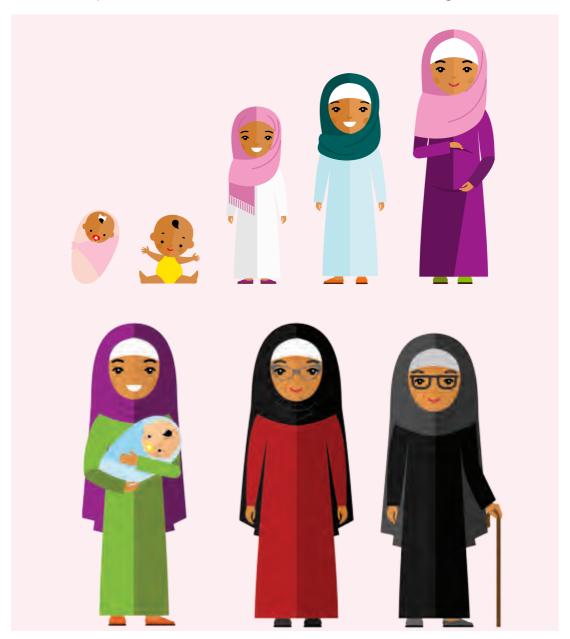
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	Word	Form	Definition
	Adolescence	Noun	The period during which a young person develops from a child into an adult (teenage years).
	Behavioural traits	Noun	Characteristics that are consistently demonstrated regardless of changing circumstances or environment.
	Communication	Noun	Exchanging of information by speaking, writing, or using some other medium.
Development		Adjective	The process in which someone or something grows or changes and becomes more advanced.
y wo	Emotional	Adjective	Relating to a person's emotions or feelings.
lossary of key words	Growth	Noun	The process of change, increasing in size.
Sary	Hormones	Noun	A regulatory substance produced in the body.
Mood swings		Noun	An abrupt and unaccountable change of mood.

Word	Form	Definition	
Peers	Noun	People who you associate with regularly, such as your classmates.	
Personal hygiene	Noun	The practices performed by an individual to care for their physical health and wellbeing, through cleanliness.	
Physical maturity	Noun	When the body has fully developed into an adult.	
Puberty	Noun	The period during which adolescents reach physical maturity.	
Respect	Noun	A feeling of deep admiration for someone or something based on their abilities, qualities, or achievements.	
Self-compassion	Noun	Having kindness towards yourself in times of failure or general suffering.	
Self-confidence	Noun	A feeling of trust in your own abilities, qualities, and judgement.	
Sensitive	Adjective	Quick to detect or respond to slight changes, signals, or influences.	

Stages of human life cycle

The human life cycle is divided into the following stages: foetal development, birth, infancy, childhood, adolescence, adulthood and old age.





Activity 1: Development

As you look at each stage, explain what the main behavioural traits are at this stage. What skills/tasks are you expected to be able to do?



Stage 1: Foetus in the womb

An egg from the mother is fertilised by a sperm from the father. It goes into an embryo inside the mother's womb. At first, this creation looks like a group of cells. By about eight weeks, this group of cells gradually turns into the shape of the human body. This is called the

foetus. The foetus totally depends on its mother as it cannot breathe, drink or eat by itself.

Main behavioural traits:	
Skills/tasks expected at this stage:	



Stage 2: Baby – birth to 1 year

After nine months in the mother's womb, the baby is born. Babies from birth to 1 year are also known as infants. Newborn babies can breathe, suck, swallow and cry. They do this when they feel hungry, cold and hot temperatures or any uncomfortable situation. This is

how they communicate as they still cannot talk. Babies are usually fed their mother's milk.

Main behavioural traits:	
Skills/tasks expected at this stage:	

Stage 3: Childhood

The baby grows into a child. It slowly learns to crawl and then walk, talk, run and jump. It learns to eat by itself, identify things in its surroundings and communicate properly. It can also read and write, make friends and do many more childhood activities. In the childhood stage, children can be divided into; toddlers (1 - 3 years), pre-schoolers (3 - 5 years) and primary school children (5 - 12 years).



a toddler 1 – 3 years



a pre-schooler 3 – 5 years



a primary school girl 5 –12 years

Main behavioural traits:	
Skills/tasks expected at this stage:	
skiis/rasks expected at this stage.	



Teenage girl 13 - 19 years

Stage 4: Adolescence

At this stage, the child grows into an adolescent, through a period called puberty. Puberty usually takes place during the teenage years, starting from 13 years up to 19 years of age. Therefore, adolescents are also called teenagers. During puberty, rapid growth and changes of the body take place. These include changes of the body shape and growing hair on some parts of the body. At this stage, your behaviour patterns and attitudes will change as you become more independent.

Main behavioural traits:			
Skills/tasks expected at this stage:			

Stage 5: Adulthood



a young adult 20 - 29 years

People who are aged from 20 to 65 years old are called adults. Adults can reproduce, make their own families and so continue the life cycle. Adults can be divided into; young adults (20 - 36 years), middleaged adults (36 - 55 years) and older adults (55 - 65 years).

Main behavioural traits:	
Skills/tasks expected at this stage:	



Stage 6: Old person

When a person reaches 65 years of age, she is known as an old or elderly person. The average life expectancy of a person can vary from 70 to 85 years. It totally depends on the health of a person, as some die before 70 years, whereas some die after 85 years. However, the human life cycle ends at this stage.

Old person 65+ years
Main behavioural traits:

Skills/tasks expected at this stage:



Adolescence

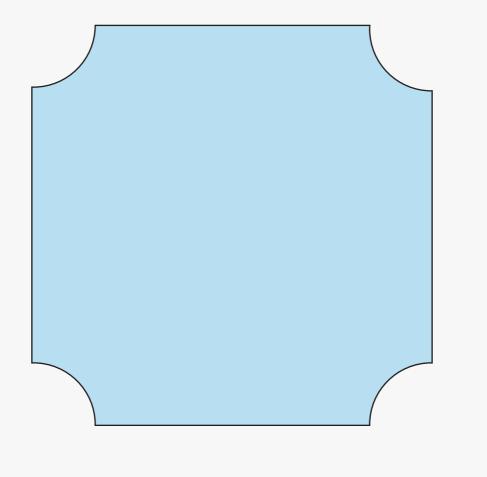
Your teenage years are also called adolescence. Adolescence is a time for growth spurts and puberty changes. You may grow several inches in several months. You could then have a period of very slow growth. This could then lead to fast growth. Changes with puberty may occur gradually or several signs may become visible at the same time.

There is a great amount of variation in the rate of changes that may occur. Some teenagers may experience these signs of maturity sooner or later than others.



Activity 2: Changes

A lot of you will have already gone through a lot of the changes that happen during adolescence. Think about the changes that have happened to your body and the changes to come. Write some of these changes in the area below.



What changes occur during puberty?

Physical maturity that occurs during puberty is a result of hormonal changes. Girls experience puberty as a sequence of events. However, your changes usually begin before boys of the same age. All girls are different and may progress through these changes differently. The following are average ages when puberty changes may occur:

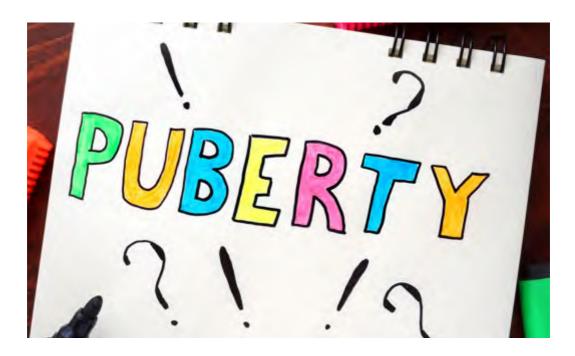
beginning of puberty: 8 to 13 years

first pubertal change: breast development

pubic hair development: shortly after breast development

• hair under the arms: 12 years old

menstrual periods: 10 to 16.5 years old





During your teenage years, many changes happen, not only physically, but also emotionally and socially. You increase your ability to think abstractly and may start to make plans and set long-term goals. Everyone progresses at a different rate and may have a different view of the world. In general, the following are some changes you may feel emotionally:

- develop the ability to think abstractly
- be concerned with philosophy and social issues
- think long-term
- set goals
- compare with classmates
- want independence from parents
- classmate influence and acceptance becomes very important

Emotional changes during adolescence

During your pre-teen and teen years, lots and lots of changes take place, emotionally as well as physically. Let's look at some of the emotional changes that happen.





It is entirely normal for you as an adolescent to become very **self-conscious**. In other words, you may begin to care a great deal about what you look like, and what others think of you. Teenagers often compare themselves (especially physically) to others their age. Therefore, you may want to dress and talk the same way your friends do.



Adolescents are also much more **sensitive**. It is common, at this age, for you to take more notice of the facial expressions, body language, or voice tones of others. While learning to figure out these various cues, you may misread someone's expressions or tone of voice.



Mood swings, or the extreme highs and lows can be common. You may go from feeling very high and happy to very low and sad, to very high again. This can often happen multiple times within the same day! Relax, this is also normal. Basically, at this stage, your brain is learning to process and control emotions in a more grown-up way. It is expected that these 'glitches' will happen.



You may go through stages where you feel that you are **invincible**, or that nothing bad will ever happen. It can be fun to feel 'ten feet tall and bulletproof'. However, acting on this behaviour is sometimes not a good idea and can lead to problems.



Remember: all the emotions above are normal. It is all just part of your body growing up!



Activity 3: Changes still to come

Think about changes that you have gone through since childhood. Also, think about the ones you still haven't experienced. List them in the correct column.

Emotional	Social	Physical

The following things will help you cope with the changes that you go through. How can you make the most of the changes?

- Take on new challenges.
- Don't lose your identity, you don't need to be the same as your friends.
- Talk to a trusted adult about problems or concerns.
- Find ways to manage and handle stress that works for you.

Recognising unhealthy emotions



So, how do you know, exactly, when 'normal' isn't normal?

There are going to be mood swings when you are a teenager. There are going to be times when you feel invincible. There will also be some degree of self-consciousness. However, it is time to call in some help when these things go to the extreme. In other words, when the moodiness goes beyond ups and downs and you feel intensely depressed, or when you are acting 'ten feet tall and bulletproof' all day every day.

Help can come in the form of a **school counsellor**, who deals

with teens in the school setting and can make a referral if necessary. Also, a **medical doctor** or nurse who specialises in adolescent behaviour can help. These professionals know which behaviours are normal adolescent emotions and which are extreme.



Activity 4: Quick quiz

- 1. Who can help a teenager deal with emotionally overwhelming feelings and behaviours?
- o a medical doctor
- o a school counsellor
- o a nurse
- o all the answers are correct
- 2. A teenager is driving without her seat belt and is insisting that, 'nothing bad will happen to me!' What type of emotional behaviour is this an example of?
- o invincible
- mood swing
- o none of these answers are correct
- o self-conscious
- 3. When is it normal for teens to experience mood swings?
- never
- only when they are told 'no'
- all the time, as long as they aren't constantly depressed or overlymanic
- o always, no matter how extreme the mood swings are
- 4. When an adolescent is very aware of her appearance and wants to look and dress like others her age, what do we call this?
- being self-conscious
- abnormal emotional development
- o acting 'ten feet tall and bullet proof'
- mood swings

- o adolescence
- torture
- late childhood
- infancy



2.2 Personal Hygiene

Personal Hygiene

As you have learnt, some of the physical changes you experience during adolescence will involve increased body odour. Therefore, it is even more important to think about your personal hygiene.



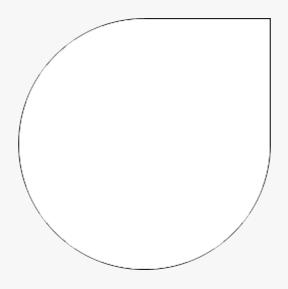
Why is personal hygiene important?

- to kill bad bacteria (germs)
- avoid bad breath and body odour
- good health and prevent illness



Activity 5: Personal hygiene

Think about your personal hygiene. Discuss all the different things you do that regularly contribute towards it.



You wake up in the morning, brush your teeth, take a shower, wash your hair and body, and put on clean clothes. Why do you do these things? Chances are you don't think about what you are doing because it is a routine you were taught at a young age. However, these habits help you in many ways. What you are doing is practising good **personal hygiene**.



Hygiene refers to clean living habits that keep us healthy. **Personal hygiene** refers to the things we do to clean and care for our bodies. Dirt, bodily secretions, food particles, and even germs can build up on our bodies if we don't clean ourselves regularly. Making habits that help us stay clean not only prevents this build up, but also provides added personal and social benefits.

2.2 Personal Hygiene



Personal benefits of good hygiene

Imagine the girl you sit next to in school has a cold, and she sneezes on your hand while you are working together. You should wash your hands as soon as possible so you are less likely to also become sick.

One personal benefit of good hygiene is having better **health**. Keeping your body clean helps prevent illness, and infection from bacteria or viruses. The simple act of washing your hands regularly is an effective way to keep germs from spreading. You are more likely to get sick if you do not wash your hands properly.



Maintaining good hygiene also helps you have better **self-esteem**. In other words, when you take care of how you look, you feel better about yourself. When you don't take care of your personal hygiene, it can also make you feel less confident and unmotivated. Unfortunately, when a person is depressed or has low self-esteem, they are more likely to neglect their personal hygiene. Have you ever had someone tell you to get up and take a shower and you would feel better? It is worth a try because it just might work!

Social benefits

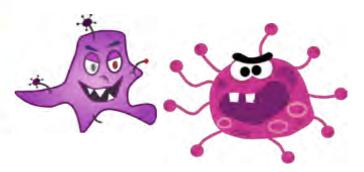
Maintaining good hygiene habits can also have social benefits. Especially in situations where being clean is expected, like school or work. It isn't fun to be the girl no one wants to sit by at school. When you take care of your body, it improves the view that other people have of you. In other words, practising good hygiene makes you less likely to smell or have an appearance that makes other people uncomfortable.

Germ Farm

Scrub'em!

Washing your hands

Keeping hands clean is one of the most important steps you can take to avoid getting sick and spreading germs to others. Many diseases and conditions are spread by not washing hands with soap and clean, running water.



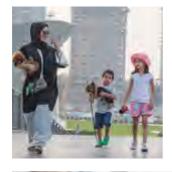


Activity 7: How do you wash your hands?

2.2 Personal Hygiene

You need to wash your hands:

- before, during, and after preparing food
- before eating food
- before and after caring for someone who is sick
- before and after treating a cut or wound
- after using the toilet
- after changing nappies or cleaning up a child who has used the toilet
- after blowing your nose, coughing, or sneezing
- after touching an animal, animal feed, or animal waste
- after handling pet food or pet treats
- after throwing out rubbish















How you should wash your hands:

- Wet your hands with clean, running water, turn off the tap, and apply soap
- Lather your hands by rubbing them together with the soap. Be sure to lather the backs of your hands, between your fingers, and under your nails
- Scrub your hands for at least 20 seconds
- Rinse your hands well under clean, running water
- Dry your hands using a clean towel or air dry them



2.2 Personal Hygiene



Activity 8: Order the steps

Put the steps of hand washing in the correct order by numbering the statements 1 to 6.

Apply soap to your hands.

Rinse hands for 10 seconds.

Dry your hands.

Turn off the tap.

Wet your hands.

Lather and scrub your hands for 20 seconds.





Did you wash them?







Hand washing stops the spread of germs.



Activity 9: Quick quiz

- 1. How could poor personal hygiene affect you socially?
- Others could have a negative perception of you if you don't take care of yourself.
- Your untidy appearance could make people around you feel uncomfortable.
- O You could smell bad and make people around you uncomfortable.
- All the answers are correct.
- 2. What do we mean when we say, 'good personal hygiene'?
- o to do something to improve our intelligence.
- all the answers are correct.
- caring for and cleaning our bodies to promote good health and happiness.
- helping others.
- 3. Which of the following is a false statement about good personal hygiene?
- All the answers are false.
- Maintaining good personal hygiene has no effect on a person's mood.
- Maintaining good personal hygiene has both social and personal benefits.
- O Maintaining good personal hygiene helps keep you healthy.
- 4. What is a benefit of practising good personal hygiene?
- o others will have a better idea of who you are.
- o improved confidence.
- o better health.
- o all the answers are correct.

2.3 Healthy relationships for health and well-being

Healthy relationships for health and well-being

Healthy relationships are essential for health and well-being. Good friends are good for your health. Friends can help you celebrate good times and provide support during bad times. Friends prevent loneliness and give you a chance to offer needed companionship, too. Friends can also:

- increase your sense of belonging and purpose
- boost your happiness and reduce your stress
- improve your self-confidence and self-worth
- help you cope with bad things that may happen in your life, such as serious illness, poor exam results or the death of a loved one

Let's Talk Healthy Relationships

 encourage you to change or avoid unhealthy lifestyle habits, such lack of exercise

You can develop healthy relationships with anyone. This includes family, friends and classmates. It takes time, energy, and care to develop positive, healthy relationships. Healthy relationships with others should have good communication, respect, sharing, and trust. In healthy relationships, we must maintain the freedom to be ourselves. It is important to maintain an individual identity and not just become the same as your friends.





Activity 10: Important relationships

On the table below, list your most important relationships. Think about how each of these relationships are positive, and how they can benefit your health and well-being. In what ways can you improve each relationship to increase the positive impact it has on your health and well-being? Remember that relationships are a 2-way situation. If a relationship needs improving, it is often a good idea to look at how you can personally change behaviours and attitudes to improve the relationship. You can then also look at how the other member can change their behaviour and attitude.

Important relationship (who is it with?)	What are some of the positive things about your relationship with this person?	How does this relationship benefit your health and well-being?	What can you do to improve this relationship?

2.3 Healthy relationships for health and well-being

Characteristics of healthy relationships:

- Mutual respect. Respect means that each person values who the other is and understands the other person's boundaries.
- Trust. Friends should trust each other and give each other the benefit of the doubt.
- Honesty. Being honest builds trust and makes the relationship stronger.
- Compromise. Not always getting your own way. Each friend should recognise different points of view and be willing to do what others would like to do.



- Be your own person. Friends should not have to compromise who they are. Her identity should not be based on a friend's personality. You should support your friends when they want to take up new hobbies or make new friends.
- Good communication. Each friend should speak honestly and openly to avoid miscommunication. If one person needs to sort out her feelings first, the other friend should respect those wishes and wait until she is ready to talk.
- Anger control. We all get angry, but how you express it can affect your relationship with others.



- Fighting fair. Everyone argues at some point. However, those who are fair, stick to the subject and avoid insults are more likely to come up with a possible solution.
- Problem solving. Friends can learn to solve problems and identify new solutions by breaking a problem into small parts or by talking through the situation.
- Understanding. Each friend should take time to understand what the other might be feeling.
- Self-confidence. When you have confidence in yourself, it can help your relationship with others.
- Being a role model. You can inspire each other.



2.3 Healthy relationships for health and well-being



Activity 11: Healthy relationships

Think about the characteristics of a healthy relationship that we have just discussed. Choose 3 of these characteristics and give examples of actions that reflect these characteristics in a friendship.

Characteristic:
Actions that show this:
Characteristic:
Actions that show this:
Chargataristia
Characteristic:
Actions that show this:

2.4 Self-compassion



Self-compassion

Self-compassion means accepting yourself as the imperfect person that you are. When you accept the idea that you'll never be perfect, you can accept mistakes as an important part of life that add to who you are. Being kinder to yourself also boosts your resiliency and makes you kinder and more compassionate toward others.

The brain is designed to seek out threat, keep you safe from danger and protect you. As a result, your brain focuses on the negative; it highlights what is wrong instead of what is right. It remembers negative events and feelings more than positive ones.

How can we avoid this natural tendency to being negative? One answer is self-compassion. Talking to yourself in a positive way during difficult times can make you stronger. It can also make you able to deal better with challenges instead of worrying about your failures.



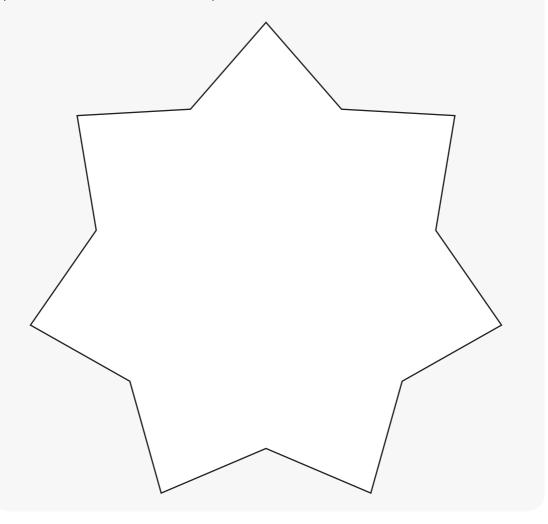
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2.4 Self-compassion



Activity 12: Your positives

Instead of focusing on negatives try to think about the positives of yourself. Below write down your positives; good things about yourself or things that you have achieved and are proud of.



Review



1. Name the 7 stages of the human life cycle.

2. Describe some of the physical changes that happen during puberty.

3. Describe some of the emotional changes that happen during puberty.

Review

 Describe three characteristics of a healthy re three characteristics of an unhealthy relation 	
Healthy relationship	
Unhealthy relationship	

Student's comments

Things to think about:

What did you enjoy?

What did you perform well?

What do you need to improve?

Additional comments:

Teacher's feedback

Things to think about:

Did the student participate?

What was the student's attitude like towards activities?

Did the student display safe and appropriate behaviour?

Additional comments:





According to the World Health Organisation (WHO), "Nutrition is the intake of food, considered in relation to the body's dietary needs". Nutrition is about eating a healthy and balanced diet. Food and drink provide the energy and nutrients your body needs to be healthy and function effectively. Understanding about nutrition and key terms associated with nutrition will make it easier for you to make better food choices.

Food plays a very big role in your daily life and your food choices are often influenced by family, friends, culture and the media. To make the right food choices, it is important to understand healthy nutritional practices and to understand what makes up a balanced diet.

In this unit, you will learn about the Food Dome and the Dietary Guidelines for the UAE. You will be able to compare your dietary intake with the recommended daily servings and become aware of what adjustments you may need to make. You will also learn about information on food labels which will allow you to identify healthier foods.

Learning Outcomes

Unit 3: Introduction to nutrition

- 10.3.1 Demonstrate healthy nutritional practices including ways to access valid and reliable health information, products and services.
- 10.3.2 Explore the meaning of nutrition.
- 10.3.3 Highlight the 3 different food groups and their importance.
- 10.3.4 Research and discuss the practical use of current research-based guidelines for a nutritionally balanced diet.
- 10.3.5 Explore the link between diet habits and chronic diseases.
- 10.3.6 Understand the importance of healthy food choices.
- 10.3.7 Describe how to use nutrition information on food labels to compare products.
- 10.3.8 Formulate a healthy food plan.
- 10.3.9 Describe dietary guidelines, food groups, nutrients and serving sizes for healthy eating habits.
- 10.3.10 Explain the importance of variety and moderation in food selection and consumption.
- 10.3.11 Use effective strategies when shopping for food including planning, comparing brands, nutritional value and price.
- 10.3.12 Recognise that chronic disease such as heart disease, obesity, cancer, diabetes, hypertension and osteoarthritis can be the result of poor eating habits.

Glossary of key words

Word	Form	Definition
Calorie	Noun	A unit of energy.
Carbohydrate	Noun	Foods such as potatoes, bread, rice and pasta. Carbohydrates come in simple forms such as sugars and complex forms such as starches and fibre.
Chronic disease	Noun	A long-term condition that generally cannot be prevented by vaccines or cured by medication, nor do they just disappear.
Fat	Noun	Foods such as oil, butter and lard. Fat is a major source of energy in the diet. Dietary fat is different to body fat.
Food based dietary guidelines	Noun	A recommendation of the food type and quantity you should be eating each day.
Food label	Noun	Information on the package of food which contains a variety of information about the nutritional value of the food item.
Heart disease	Noun	Something that has a negative effect on the heart.

Word	Form	Definition
Hypertension	Noun	High blood pressure. Usually higher than 140/90 mmHg.
Nourishment	Noun The food necessary for growth, health and good condition.	
Nutrients	Noun	A substance that provides essential nourishment for the maintenance of life and for growth.
Nutrition	Noun	The process of providing or obtaining the food necessary for health and growth.
Protein	Noun	Foods such as meat, eggs and beans that are made up of many amino acids joined together. It is essential for normal cell structure and function.
Serving size	Noun	Recommended portion of food to be eaten. Often referred to as portion size.
Wholegrains	Noun	Less processed than refined grains and contain the entire grain. Examples include whole wheat, oats/oatmeal, rye, barley, corn, brown rice, wild rice, buckwheat and quinoa.

3.1 A healthy, balanced diet

A healthy, balanced diet

A healthy, balanced diet is important for good health as it can help you to reach and maintain a healthy weight, reduce your risk of chronic diseases like heart disease and cancer, and improve your overall health and well-being.



A balanced diet is one that gives your body the nutrients it needs to function correctly. In order to get the proper nutrition from your diet, you should get the majority of your daily calories from the following foods:

- fresh fruits
- fresh vegetables
- whole grains
- legumes
- nuts
- lean proteins



What are calories?

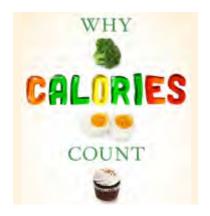


Activity 2: What are calories?

Have you heard people talk about calories, or have you ever talked about them yourself? What do you think a calorie is and how many should you have? Discuss as a class. Make some notes in the box below.



3.1 A healthy, balanced diet



Calories are energy. The number of calories in your food is a measurement of the amount of energy in that food. Your body uses calories (energy) from food for walking, thinking, breathing and other important functions. As a female, you need to eat approximately 2,000 calories per day to maintain your weight. However, your exact daily calorie intake can vary depending on age, gender and physical activity level.

Calories aren't bad for you. Your body needs calories for energy. But eating too many calories can lead to weight gain.

All foods contain calories. Some foods, like lettuce, contain a low number of calories (one cup of shredded lettuce has less than 10 calories). Other foods, like peanuts, contain a lot of calories (half a cup of peanuts has 427 calories).



You can find out how many calories are in a food by looking at the nutrition facts label.

Here is how many calories are in one gram of each food group:

- carbohydrate 4 calories
- protein 4 calories
- fat 9 calories

To find out how many calories are from a certain food group, you need to multiply the number of grams by the number of calories per gram of that food type. For example, if a serving of crisps has 10 grams of fat, you would calculate 10 x 9 which equals 90. This means 90 calories are from fat.



Activity 3: How many calories?

For each of the following foods, you need to work out how many calories come from a certain food group. Feel free to use a calculator if you need to.



Remember: carbohydrates = 4 calories per gram, protein = 4 calories per gram, fat = 9 calories per gram



Mars bar: 10 grams of fat

_x ___ = ___ calories from fat



hummus: 8 grams of protein

 $_x _ = _$ calories from protein



ice cream: 18 grams of fat

_ x ___ = ___ calories from fat



manakeesh: 35 grams of carbohydrates

___x ___ = ___ calories from carbohydrates

3.1 A healthy, balanced diet

Empty calories

The type of foods you get your daily calories from are just as important as the number of calories you consume. You should try not to eat too many 'empty calories,' or foods that have little or no nutritional value. Empty calories come from sugars and solid fats, such as butter, and are found in things like cakes, biscuits, sweets, doughnuts, fizzy drinks, ice cream and fast food.

Empty-calorie foods versus nutrient-dense foods



calories – high nutritional value – low impact on health – negative



calories – low nutritional value – high impact on health – positive



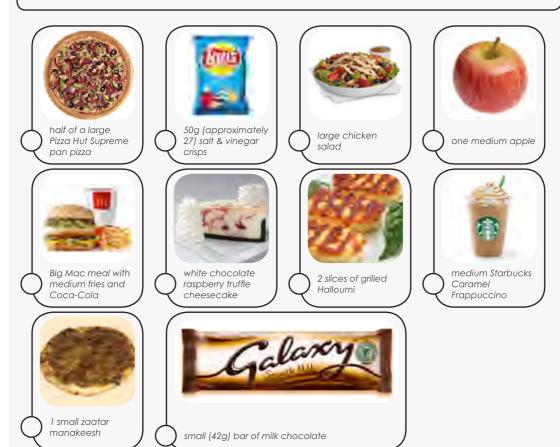


Activity 3: How many calories?

Match the following foods to the correct number of calories by putting the correct letter in each circle.

A) 80 calories B) 229 calories C) 1,413 calories D) 270 calories E) 200 calories

F) 930 calories G) 420 calories H) 1,440 calories I) 171 calories J) 344 calories



Now that you have discussed the correct answers as a class, do any of the answers surprise you?

O Yes O No

Try to think more about nutritional content when making food choices.

3.1 A healthy, balanced diet

'Everyday' foods and 'sometimes' foods

If you eat a healthy, balanced diet, there is no reason to completely avoid any foods. Certain foods should be eaten regularly, and certain foods more occasionally. Foods with lots of nutritional value, such as vegetables, lean proteins, whole grains and high-fibre foods, should be 'everyday' foods. Foods with little nutritional value and a high number of calories, such as sweets, chocolate, cakes and crisps, should be 'sometimes' foods.





Activity 5: Everyday or sometimes?

Put the following foods in the correct category depending on whether you think they are 'sometimes' foods or 'everyday' foods.

grilled chicken	tomatoes	chips
biscuits	doughnuts	broccoli
fish	pizza	brown rice
low-fat milk	ice cream	chocolate
fizzy drinks	apples	fried chicken
wholegrain bread	salad	grilled fish

'Everyday' foods	'Sometimes' foods

Now add some more foods of your own to each column, foods that you eat regularly.

How many of the foods that you eat regularly did you put in the 'everyday' foods column and how many did you put in the 'sometimes' foods column?

If you put lots of foods that you eat regularly in the 'sometimes' foods column, try to have these foods less often and eat more of the 'everyday' foods.

3.2 Cooking methods

Cooking methods

As well as the type of food, you need to think of how food is cooked. For example, boiled potatoes and jacket potatoes would be classed as 'everyday' foods; however, chips and crisps would be 'sometimes' foods. In the same way, grilled, baked or steamed chicken would be an 'everyday' food but fried chicken and chicken nuggets/chicken dippers would be a 'sometimes' food.





Activity 6: Think of some foods...

Can you think of any other examples of foods that can be both healthy and unhealthy depending on the way they are cooked?



Activity 7: Cooking methods

Look at the different cooking methods below and talk about what each one means. Then decide if you think the cooking method is healthy or unhealthy.

steam boil deep fry gril shallow fry poach bake roast

Healthy

Unhealthy



As well as the cooking method you use, you need to think about how much fat/oil you use. Remember, fat contains nine calories per gram. One tablespoon is approximately 13.6 grams, meaning just one tablespoon of oil contains around 120 calories. Add as little oil as possible to avoid increasing the calorie and fat content of your food.

3.3 Healthy changes to your diet

Healthy changes to your diet

Even for people at a healthy weight, a poor diet can lead to major health problems that can cause illness and even death. These include heart disease, hypertension (high blood pressure), Type 2 diabetes, osteoporosis (weak bone disease) and certain types of cancer. By making healthy food choices, you can reduce your chance of developing these health problems.

Small changes can make a big difference to your health. Try some of the small changes below to help improve your overall diet. Try introducing one new healthy eating goal each week over the next few weeks.



Make half your plate fruits and vegetables

Try to have as many different colours of vegetables with your meals as you can. The more colourful your meals are, the more likely you are to get the vitamins, minerals and fibre your body needs to be healthy.



Make at least half the grains you eat whole grains

Eat wholewheat bread, rice and pasta instead of white varieties. Look for things like brown rice, bulgur, buckwheat, oatmeal, rolled oats, guinoa or wild rice



Switch to fat-free or low-fat (1%) milk

Both have the same amount of calcium and other essential nutrients as whole milk, but fewer calories and less fat.



Choose a range of lean protein foods

Meat, poultry, seafood, beans, eggs, nuts and seeds are considered part of the protein food group. Select leaner cuts of meat (those containing less fat).



Drink water instead of sugary drinks

Cut calories by drinking water or unsweetened drinks. Fizzy drinks, energy drinks and sports drinks have a lot of added sugar and calories.



Eat more seafood

Seafood has protein, minerals and omega-3 fatty acids (healthy fats).



Cut back on unhealthy fats

Eat fewer high-fat foods such as cakes, chocolate, doughnuts, ice cream and other desserts as they are often made with butter, margarine or shortening. Also eat fewer processed and fatty meats.



Activity 8: Improve your diet

After discussing the healthy changes a person can make to their diet, think about what changes you can make yourself to improve your current diet.

What changes are you going to try to make?

How do you think you can make these changes?

3.3 Healthy changes to your diet

Recommended dietary guidelines

Food-based dietary guidelines (FBDG) are simple messages on healthy eating. Most countries have food-based dietary guidelines. However, they vary slightly from place to place. It is suggested that you follow these guidelines in order to have a healthy balanced diet.

Common recommendations include eating plenty of fruits, vegetables and complex carbohydrates, and choosing foods which are lower in saturated fat, salt and sugar. The use of food groups makes sure that all the basic foods are included and gives positive messages about what we should be eating as well as some information to help us avoid eating too much of certain foods.





The UK uses the Eatwell Plate which is divided into five different groups: fruits and vegetables, and the starchy food groups should each make up one third of the diet; milk and dairy foods, and meat, fish, eggs, beans and other non-dairy protein sources should be eaten in moderate amounts; food and drinks that are high in fat and/or sugar should only be eaten in small amounts.

The German healthy eating model is a 3-D nutrition pyramid. At the bottom of the pyramid is a nutrition circle, which is similar to the Eatwell Plate. It shows the proportions of different food groups that should be consumed. Foods at the bottom of the triangles should be eaten more often than those at the top.



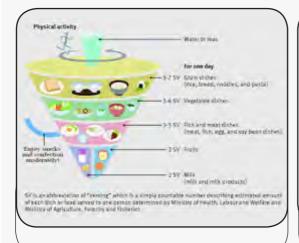
Activity 9: Match the guidelines

Can you match the food-based dietary guidelines to the correct country? There are some more guidelines on the next page.

Germany Italy USA Canada Japan Netherlands China Australia









3.3 Healthy changes to your diet









Although different countries use different healthy eating models, they all have consistent messages.

Similar messages include:

- Eat plenty of fruits and vegetables.
- Eat plenty of starchy foods, including bread, potatoes, rice and pasta.
- Have a moderate intake of foods of animal origin, including meat, fish, eggs and dairy products.
- Choose more fish.
- Choose less fatty meats and meat products.
- Choose healthy oils and fats.
- Limit intake of foods that are high in fat and/or sugar.



3.3 Healthy changes to your diet

The following has been suggested as a guideline for Arab countries:

FOOD DOME

Dietary Guidelines for Arab Countries



Practise medium activity like walking 30 minutes most days				
Meat, eggs and legumes	Vegetables	Cereals and their products	Fruit	Milk and dairy products
Choose low fat or lean meat Consume legumes at least 3 times a week Consume more fish	Eat more dark green vegetables like spinach and orange vegetables like carrots	Eat at least half of cereals of wholegrain Eat more fortified cereals and their products	Eat variety of fruit Choose fruit during their seasons Drink fresh fruit juice	Consume low fat milk and their products Consume milk fortified with Vitamin D
		Suggested daily servings		
2 - 4 servings/ day	3 - 5 servings/ day	1-6 servings/ day	2 - 4 servings/ day	2 - 3 servings/ day
One serving =	One serving =	One serving =	One serving =	One serving =
50 - 80g meat, chicken or fish 1/2 cup cooked legumes, one egg	1 cup raw vegetables, 3/4 cup vegetables juice	1 slice, 1/4 Arabic bread, 30g cornflakes, 1/2 cup cooked cereals	1 medium piece of fruit, 3/4 cup fruit juice	1 cup of milk, 45g cheese, 1 tbs cream cheese



Activity 10: Food dome

Look at the fo	ood dome. Discuss what you think the key messages are. Write ces below.
- <u></u>	
Do you think y	you already follow these suggested diet guidelines?
O Yes	○ No
	o, what changes can you make to get your diet closer to the ed guidelines? If yes, how?
_	

3.4 Food labelling

Food labelling



It is extremely important to understand food labels as it is often hard to know what is actually in packaged foods without reading the label.

Packaged foods should have a part on the label called 'Nutrition Facts'. This gives you information about how many calories are it, and from which nutrients.

Most nutrients are measured in grams, also written as g. Some nutrients are measured in milligrams, or mg. Milligrams are very tiny. There are 1,000 milligrams in one gram.

Other information on the label is given in percentages. The percent daily value on a food label tells you how much of the recommended daily amount of a certain nutrient this food will give you based on a 2000 calorie-per-day diet.



Activity 11: What is on the label?

Look at the food label and work out how many calories, grams of fat, protein and carbohydrates are in this food per **recommended serving**.

Nutrition Information				
Serving(s) Per Package: 1 Serving Size: 200g				
	Per 100 g	Per Package		
Energy	54 kcal	107 kcal		
Protein	0.7 g	1.4 g		
Fat, Total - Saturated fatty acids - Trans fatty acids	0.0 g 0.0 g 0.0g	0.0 g 0.0 g		
Carbohydrates - sugars	11.9 g 10.6 g	23.7 g 21.3 g		
Sodium	0 mg	0 mg		

calories: _____g

fat: _____g

carbohydrates: ____g

protein: ____g

Knowing how to read food labels means that you can compare different labels to see which food is healthier. You get lots of different options for the same type of food so it is helpful to be able to quickly work out the healthier option.





3.4 Food labelling



Activity 12: Which is healthier?

Look at the following food labels. They are different labels for the same type of food. Pick which one would be the healthier option.

Nutrition Facts

Serving Size: 2 tbsp (32 g)

Calories 210	Calories from Fat 150
	% Daily Value
Total Fat 17 g Saturated Fat 3 g	26% 15%
Trans Fat 0 g	
Polyunsaturated Fe	at 4 g
Monounsaturated	Fat 9 g
Cholesterol 0 mg	09
Sodium 140 mg	69
Potassium 190 mg	5%
Total Carbohydrates	6 g 2%
Dietary Fibre 2 g	8%
Sugars 3 g	
Protein 8 g	
Vitamin A	09
Vitamin C	0%
Calcium	09
Iron	0 mg

calorie diet.

Product formulations and packaging may change. For the most current information regarding a particular product, please refer to the product package.

Nutrition Facts

Serving Size: 2 Tbsp (32 g)

Amount per serving

Calories	200
Calories from Fat	140
	% Daily Value *
Total Fat 17 g Saturated Fat 3 g	25% 12%
Trans Fat 0 g	
Cholesterol 0 mg	0%
Sodium 105 mg	4%
Total Carbohydrate 6 g	2%
Dietary Fibre 2	9%
Total Sugars 1 g	

Protein 8 g 8%	
Calcium 0 mg	0%
Iron 0.36 mg	2%
Vitamin A 0 IU	0%
Vitamin C 0 mg	0%

^{*} The % Daily Value tells you how much a nutrient in a serving of food contributes to a daily diet. 2000 calories a day is used for general nutritional advice.

peanut butter 1

peanut butter 2

Which option do you think is better, and why?

Nutrition Facts

Serving Size 1 oz (28g/About 31 chips)

Amount per serving **Calories**

120

	% Daily Value	
Total Fat 3.5 g	4%	
Saturated Fat 0g	2%	
Trans Fat 0g		
Polyunsaturated Fat 2g		
Monosaturated Fat 1g		
Cholesterol 0mg	0%	
Sodium 160mg	7%	
Total Carbohydrate 22g	8%	
Dietary Fibre 1g	5%	
Total Sugars 2g		
Includes 2g Added Sugars	s 3%	
Protein 2g		

Vitamin D 0mcg	0%
Calcium 6mg	0%
Iron 0mg	0%
Potassium 226mg	4%

^{*} The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

potato crisps 1

Nutrition Facts

Serving Size 1 oz (28g/About 31 chips)

Amount per serving

Calories 160 Calories from Fat 90

	% Daily Value
Total Fat 10g	15%
Saturated Fat 1.5g	7%
Trans Fat Og	
Polyunsaturated Fat 5g	
Monosaturated Fat 2.5g	
Cholesterol 0mg	0%
Sodium 270mg	11%
Total Carbohydrate 15g	5%
Dietary Fibre 1g	4%
Total Sugars 2g	
Includes 2g Added Suga	rs 3%
Protein 2g	
Vitamin A 2%	Vitamin C 0%
Calcium 0%	Iron 0%
Vitamin E 6%	Vitamin B6 2%

calorie	diet. Your daily ver depending on	values may t	e higher
	Calories	2,000	2,500

	- Comprises	2,000	2,000
Total fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	30mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total carbohydrate		300g	375g
Dietary fibre		25g	30g

Calories per gram: Fat 9 . Carbohydrate 4 Protein 4

potato crisps 2

Which option do you think is better, and why?

3.4 Food labelling

yoghurt 1

Nutrition Facts

Serv.Size1 Container (170g) 1 Container (170g) Calories 100 Fat Cal 0

* Percent Daily values (DV) are based on a 2,000 calorie diet.

Amount/Servin	%DV*	Amount/Serving	%DV*
Total Fat 0g	0%	Total Carb. 7g	2%
Sat. Fat 0g	0%	Fibre 0g	0%
Trans Fat 0g		Sugars 7g	
Cholest. 10mg	3%	Protein 18g	36%
Sodium 65mg	3%		
Vitamin A 0%			Vitamin C 0%
Calcium 20%		•	Iron 0%

Nutrition Facts Serving Size 1 Container (150g)

Serving Size 1 Container (150g) Servings Per Package 4

Amount Per Serving	
Calories 130	Calories from Fat 0
	% Daily Value *
Total Fat 0 g Saturated Fat 3 g	0% 0%
Trans Fat 0 g	
Cholesterol <5m	1%
Sodium 55 mg	2%
Potassium 180mg	5%
Total Carbohydrate 21g	7%
Dietary Fibre 0g	0%
Sugars 20g	
Protein 12g	24%
Vitamin A 0%	Vitamin C 0%
Calcium 15% . Iron 0	

Which option do you think is better, and why?

yoghurt 2

Nutrition Facts

Serving Size: 2 Tbsp (33g) Un (Makes 3.5 Cups Popped) Servings Per Bag: About 3 (About 10 Cups Popped

Amount/serving	As Pkg 2 Tbsp. Unpopp	•	1 Cup Popped
Calories	160		45
Calories from Fa	at 110		25
	%DV*		%DV*
Total fat 12g	19%	3g	4%
Sat. Fat 3g	14%	0.5g	3%
Trans Fat 4g		lg	
Cholest. 0mg	0%	0mg	0%
Sodium 330mg	14%	85mg	4%
Total Carb. 14g	5%	4g	1%
Dietary Fibre 3	12%	<1g	3%
Sugars <1g		0g	
Protein 2g		<1g	
Vitamin A	0%		0%
Vitamin C	0%		0%
Calcium	0%		0%
Iron	2%		0%

^{*} Percent Daily Values are based on a 2,000 calorie diet. Tour daily values may be higher or lower depending on your calorie needs:

	Calories	2,000	2,500
Total fat Sat Fat Cholesterol Sodium Total carboh Dietary fib		65g 20g 30mg 2,400mg 300g 25g	80g 25g 300mg 2,400mg 375g 30g

Nutrition Facts

Serving Size 2 Tbsp (33g) Unpopped Makes About 4 Cups Popped Servings Per Bag About 3 Servings Per Box About 8

Calories 130	Calories from Fat 25
	% Daily Value*
Total fat 2.5g	4%
Saturated Fat 1g	5%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 190mg	8%
Total Carbohydrate. 23	g 8%
Dietary Fibre 3g	12%
Sugars <1g	

Protein 3g

Vitamin A 0%	Vitamin C 0
Calcium 15%	Iron4%

* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

	Calories	2,000	2,500
Total fat Sat Fat	Less than Less than	65g 20g	80g 25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total carbohydrate		300g	375g
Dietary fibre		25g	30g

popcorn 1

popcorn 2

Which option do you think is better, and why?

3.4 Food labelling

bread 1

Nutrition Facts

Servings Per Container 9

Amount Per Serving	
Calories 130	Calories from Fat 15
	% Daily Value*
Total fat 2g	3%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 350mg	15%
Total Carbohydrate. 23g	8%
Dietary Fibre 2g	8%
Sugars 0g	

Protein 4g

Vitamin A 0%	•	Vitamin C 0%
Calcium 6%		Iron 6%
* Percent Daily	Values are	based on a 2 000

calorie diet. Your daily values may be higher or lower depending on your calorie needs.

	Calories	2,000	2,500
Total fat		65g	80g
Sat Fat		20g	25g
Cholesterol		300mg	300mg
Sodium		2,400mg	2,400mg
Total carboh		300g	375g
Dietary fib		25g	30g

Calories per gram: Fat 9 . Carbohydrate 4 . Protein 4

Which option do you think is better, and why?

Nutrition Facts

Serving Size 1 slice (34g) Servings Per Container About 20

Calories 80 Calories from Fat 5Calories from Saturated Fat 0

* Percent Daily Values are based on a 2,000 calorie diet

Amount/Servin	%DV*	Amount/Serving	%DV*
Total Fat 0g	1%	Total Carb. 15g	5%
Saturated Aft 0g	1%	Fibre 0g	10%
Trans Fat 0g		Sugars 0g	
Cholesterol 0mg	0%	Protein 4g	8%
Sodium 65mg	0%	Potassium 75mg	

*This is a Condensed Nutritional Facts Panel: For more Nutritional Information Please Contact Us Sometimes the words on the list of ingredients may be confusing; there can be lots of different names for things like fat, sugar and salt. Use the table below to help you identify the more confusing names for sugar, fat and salt.

Names for fat	Names for sugar	Names for salt
beef fat	brown/raw sugar	celery salt
butter	corn syrup	chicken salt
coconut oil	cane sugar	garlic salt
cocoa butter	dextrose	rock salt
copha	disaccharides	sea salt
diglycerides	glucose	sodium
dripping	golden syrup	table salt
hydrogenated vegetable oil	honey	vegetable salt
lard	invert sugar	
monoglycerides	lactose	
olive oil	malt	
palm oil	malt extract	
shortening	maltose	
tallow	molasses	
	sorbitol	
	sucrose	



3.4 Food labelling



Activity 13: Label A or label B?

Your teacher will show you two different food labels. Write the name of the food labels you are using:

Name of food label A:	
Name of food label B:	

Circle the correct answer:

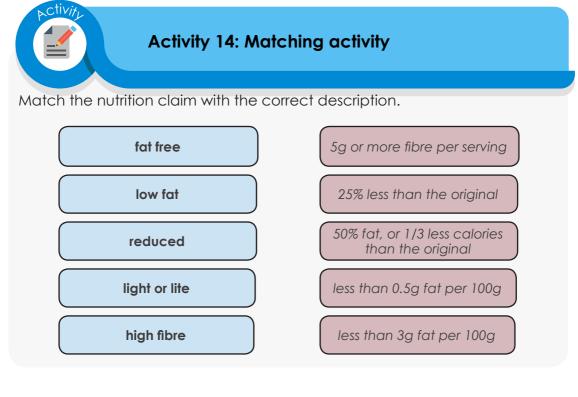
1. More sodium/salt per serving	Label A	Label B
2. More carbohydrates per serving	Label A	Label B
3. More saturated fat per serving	Label A	Label B
4. Less sugar per serving	Label A	Label B
5. More calories from fat	Label A	Label B
6. More fat per serving	Label A	Label B
	Label A	Label B
7. Less sodium	Label A	Label B
8. Fewer calories per serving	Label A	Label B
9. More protein per serving	Label A	Label B
10. More fat per serving	Label A	Label B
11. More Vitamin A	Label A	Label B
12. More calcium	Label A	Label B

Nutrition claims on food labels



Sometimes you will see nutrition claims on food labels such as 'low fat', 'reduced fat', 'low salt', 'light', 'natural' or 'no added sugar'. Be careful not to assume that, just because it says one of these things, it is healthy. Claims such as fat free or low fat mean it has to contain less than 0.5g per 100g (fat free) or 3g of fat per 100g (low fat). Labels such as 'reduced' or 'lighter' mean it has

to have 25% less than the original. However, if the food was extremely high in fat to start with, even with 25% less fat, it can still be high in fat. Be aware of labels such as 'natural' as, just because something is natural, that does not mean it is healthy. After all, fat and sugar can both be natural. When something is low fat or fat free, check the sugar content because often, when fat has been removed, it is replaced with something else unhealthy like sugar.



3.4 Food labelling

Suggested serving size on food labels

Food labels will tell you the nutrition information per serving. It is very important to check what is classed as a serving. You may assume it is the whole pack but that might actually class as four or more servings. This would mean that, if you ate the whole pack, you need to multiply everything by four to get the correct nutrition information.

What is the serving size?



Activity 15: Serving size

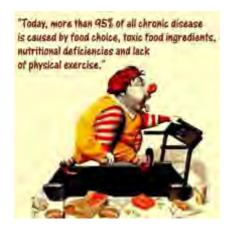
Look at the food label.

	about 6
Amount Per Serving Calories 130 Fat (Cal 100
	ly Value
Total Fat 11g	179
Saturated Fat 8g	409
Cholest. 30mg	10%
Sodium 120mg	59
Total Carb. 2g	19
Dietary Fiber Og	0%
Sugars 1g	
Protein 7g	
Vitamin A 8% • Vita	min C 09
Calcium 25% •	Iron 0%

<u> </u>
If you ate the whole pack, how many
servings would you have eaten?
Look at the calorie information. What is the
calorie count for one serving?
If you ate the whole package, how many
calories would you have eaten?
(calories per serving) x
(number of conjugation address) -
(number of servings in package) =
(nomber of servings in package) – (total calories)

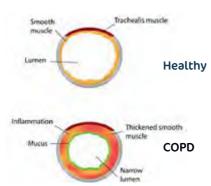
3.5 A healthy diet and chronic disease

A healthy diet and chronic disease



chronic condition, is a condition that develops slowly and typically worsens over time. It can be prevented, to some degree, by healthy eating and exercise. You are at a higher risk of developing a chronic disease by having a poor diet (the food and drink you regularly consume), and poor or incorrect exercise. Eating right can actually prevent several types of cancers, diabetes to some degree, and various heart and cardiovascular problems.

Chronic disease, sometimes referred to as a



Chronic Obstructive Pulmonary Disease, or COPD, is a disease that interferes with airflow making it difficult to breathe. Good nutrition can help a person with COPD handle infections and breathe more easily. A diet higher in fat and lower in carbohydrates may help a person with COPD breathe more freely.

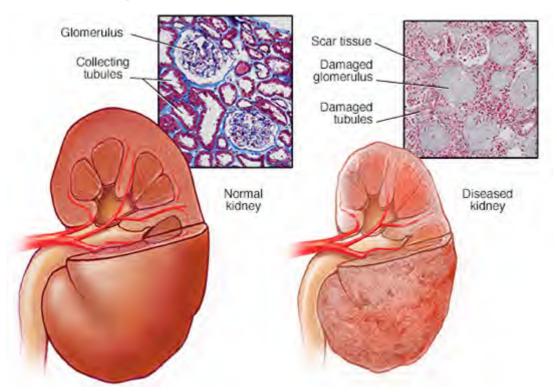
Nutritional guidelines recommended for people with COPD:

- Choose healthy fats and limit foods that contain unhealthy fats.
- Include good sources of protein at least twice a day.
- Choose complex carbohydrates and limit simple carbohydrates (sugars).
- Drink plenty of water.



3.5 A healthy diet and chronic disease

Chronic kidney disease



Chronic kidney disease is the progressive loss of kidney function. As kidney function reduces, the kidneys struggle to remove waste and excess fluids from the blood. These wastes can build up to dangerous levels.

- Dietary changes, such as limiting the intake of certain nutrients, can reduce the stress on the kidneys and prevent the build-up of waste products in the blood.
- A person with chronic kidney disease may need to monitor their intake of sodium (salt), protein, potassium and phosphorus (important minerals from your food).

Review - Unit 3

- 1. This should be consumed throughout the day to help keep mucus thin.
- o fibre
- caffeinated coffee
- o milk
- water
- o protein
- 2. Chronic conditions typically start off ____ and ___ over time.
- o quickly; worsen
- o quickly; improve
- o slowly; worsen
- slowly; improve
- 3. A person with COPD may find it easier to breathe if they follow this recommendation.
- Eat a diet higher in fat and lower in carbohydrates
- O Eat a low-fat diet that is very high in protein
- None of these diet recommendations help with breathing
- Eat a low-protein diet that is rich in carbohydrates
- Eat a diet higher in carbohydrates and lower in fat
- 4. This nutrient supports the muscles needed for respiration and is found in foods like eggs and fish.
- polyunsaturated fat
- trans fat
- carbohydrate
- o fiber
- o protein

Review

- 5. This is a progressive disease that interferes with airflow making it difficult to breath.
- O ALS
- o CHD
- o COPD
- o CF
- O CAD

Things to think about: What did you enjoy? What did you do well? What do you need to improve? Additional comments:

Student's comments

Teacher's feedback

Things to think about:

Did the student participate?

What was the student's attitude like towards activities?

Did the student display safe and appropriate behaviour?

Additional comments:



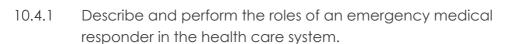
First Aid: Dealing with accidents and emergencies

Learning First Aid is an important skill to develop. This skill will allow you to become a valuable member of your community. First Aid skills can be used to help someone who has been in an accident or emergency until full medical treatment is available.

This chapter will provide you with skills that may make it possible for you to save lives. Remember, practice makes perfect. The more you practice, the more confident you will feel when giving First Aid treatment. In an emergency, there is no time to read instructions, so you need to develop your skills and confidence to be effective in these situations.

In this unit, you will learn about a wide range of basic First Aid skills. It is important to learn these skills so that you can deal with accidents and emergencies. An accident or emergency can happen at any moment, often when you least expect it! The type of emergency can vary from minor and easy to deal with, to severe and even life-threatening. It is important that you have the skills and confidence to deal with emergency situations so that you can protect yourself and keep others safe within your community.

Learning Outcomes



- 10.4.2 Recognise the benefits of being a certified emergency medical responder and being able to respond in an emergency.
- 10.4.3 Understand the procedure to follow to become a certified emergency medical responder.
- 10.4.4 Demonstrate an understanding of what a first aid kit is, what the contents are and how it can be used in an emergency.
- 10.4.5 Identify different types of emergency and determine how an emergency medical responder can respond and help in different emergency situations.
- 10.4.6 Display an understanding of the process of attending the scene of an emergency, first response steps and how to ask for help from the emergency services.
- 10.4.7 Display an understanding of the role of a Paramedic and their importance in the health care system.
- 10.4.8 Give an account of the reasons why protective clothing is so important when dealing with casualties.
- 10.4.9 Demonstrate an understanding of how to properly assess a casualty.
- 10.4.10 Demonstrate an understanding of the best course of action if a casualty is unconscious but breathing.
- 10.4.11 Identify the different types of injuries that an emergency medical responder could treat.
- 10.4.12 Demonstrate an understanding of how to treat different types of injuries.
- 10.4.13 Display an understanding of when it is necessary to contact the emergency services.

Word	Form	Definition
Accident	Noun	A sudden event (such as a crash) that causes damage or injury.
Assess	Verb	To judge or understand something.
Airway	Noun	Passage from the throat where air passes to and from the lungs to allow breathing.
Bandage	Noun	A covering that protects or supports part of the body.
Breathe	Verb	To move air into and out of your lungs; inhale and exhale.
Blood	Noun	Red liquid that flows through the body.
Circulation	Noun	The movement of blood around the body that is caused by the heart pumping.
Compression	Noun	The act of pressing something.
Condition	Noun	The way something is or how it works.
Conscious	Adjective	Awake and able to understand what is happening around you.
Crisis	Noun	A dangerous event or situation.
Hazardous	Adjective	Describes a potential risk or danger.
Immediate	Adjective	Happening or done without delay.
Incident	Noun	A serious or violent event, such as an accident.

Glossary of key words

Word	Form	Definition
Injury	Noun	Harm or damage to a person's body.
Laceration	Noun	A deep cut or tear to the flesh or skin.
Medication	Noun	A drug or other form of medicine that is used to treat or prevent disease.
Prevention	Noun	The action of stopping something from happening.
Procedure	Noun	A series of actions that are done in a certain way or certain order.
Protective	Adjective	Keeps someone or something safe from harm.
Recovery	Noun	The time when someone is getting healthier after an illness or injury.
Response	Noun	A spoken or written answer.
Resuscitation	Noun	Bringing someone or something back to life.
Scene	Noun	A place where an event or action takes place.
Secure	Adjective	Describes somewhere or something that is safe and unthreatened.
Sterile	Adjective	Completely clean and free from bacteria.
Unconscious	Adjective	A person who is not awake due to an illness or injury.

4.1 What is basic first aid?

What is basic first aid?

First aid is the emergency help given to a sick or injured person until they can get full medical treatment. First aid is an important skill to have. It can help a casualty recover quickly and fully. Understanding what to do when someone is injured or unwell could save a person's life.



If you are trained in first aid, you can help and respond in an accident or an emergency. Most of the time you will give first aid for minor illnesses or injuries; however, you may also give first aid for a more serious illness or injury. A certified medical responder knows basic medical treatments and can help with a small amount of kit. These steps can help to save lives until expert medical help arrives. If you give first aid, you must be certain that your actions will cause no further harm to the victim.

The skills and knowledge you will learn in this unit will support you to successfully complete a certified first aid course.



Activity 1: What is first aid?

Circle the words you think relate to first aid.

blood

shopping

cut

accident

car

ambulance

help

bandage

chair

meeting

CPR

broken bone

emergency

ρlay

injury

4.2 The benefits of learning first aid

The benefits of learning first aid

Here are some positive points to think about if you want to become certified in first aid.



Benefit to your community - The more people trained in first aid, the safer your local area will be. Your first aid skills could become a real help to your community, friends and family. If ever there was an incident or accident, you would be prepared and ready.



Lifelong skills - The skills and benefits that you will get in your first aid course will be useful for your whole life. First aid training will give you the skills to help if there is an accident or an emergency. These skills can be used at home and at work.



Save lives - The skills you learn could one day stop further injury or they could even help to save a person's life. The person could be a stranger or a family member. Imagine how it would feel to be a real-life superhero!



Improved confidence - First-aid training can provide you with the skills to deal with accidents and emergencies. This will give you more confidence, and you will be able to stay calm in the unlucky event of an emergency. This confidence will also transfer to other areas of your life.



Activity 2: Benefits of first aid

Write below	two more	benefits (of becomir	ig certified	in firs	t aid,	and	then
discuss in yo	ur groups.							

1.		

2.	



Who can perform first aid?

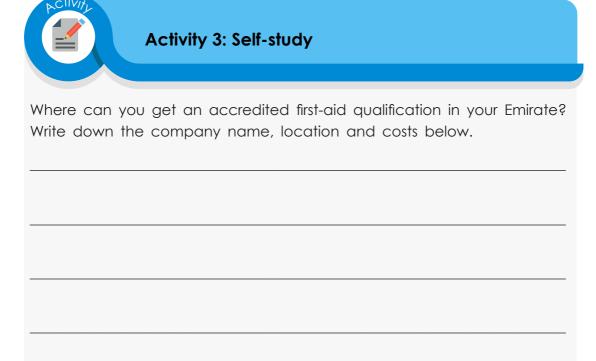
To give first aid to other people, you must be certified. If the casualty is conscious, you should always ask if it is ok to help before providing first aid. If the casualty is unconscious, you can ask their family member.

How to become certified

Dr Omar Al Sakaf of the Dubai Centre for Ambulance Services says that people certified by their emirate can practise first aid on a casualty.

He says that people should find out who gives certification in their Emirate, and try to get an accredited certificate through them. For example, in Dubai, the Dubai Corporation for Ambulance Services (DCAS) certifies people.

4.2 The benefits of learning first aid





Save-A-Life First Aid & CPR

A first aid kit

A first aid kit has supplies you might need in an emergency.

A basic first aid kit should contain:

20 plasters in different sizes

8 gauze dressings in different sizes1 sterile eye pad

8 sterile wound dressings (6 medium, 2 large)

6 triangular bandages

2 crêpe, rolled bandages

6 safety pins

disposable gloves

tweezers

scissors

cleansing wipes

sticky tape

thermometer

clean water

You should always:

- keep the supplies in a box that is clearly labelled and waterproof.
- know where the first aid kit is.
- replace what you use so the kit will be ready for the next emergency.
- check the kit for supplies that are out of date to make sure it is full and ready for an emergency.



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Activity 4: What is in a first aid kit?



In pairs, name six of the items that you can see from this first aid box



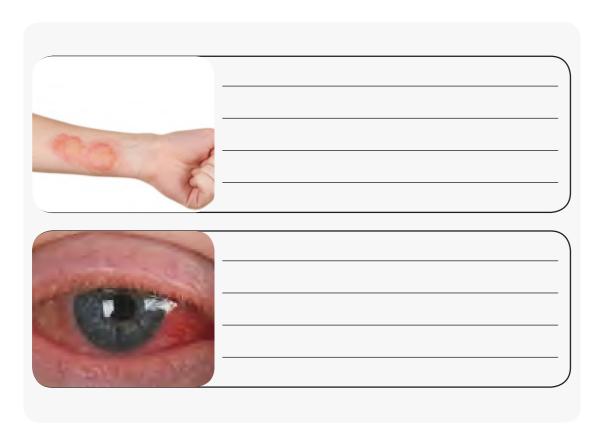
Activity 5: Pair work

Look at the images of different injuries. What equipment from a first aid kit do you think you will need for each one? Look at the list on the previous page. Write your answers next to each picture.









How can an emergency medical responder help in an emergency?



Activity 6: Is this an emergency?

Circle the pictures that you think look like emergencies.























EMERGENCIES



Activity 7: Class Discussion

Emergency Action Plan



Being ready for accidents and emergencies can make a big difference. It can help avoid illness and injury. Discuss the following questions as a class.

What is an emergency?

What are the different types of emergencies you can think of?
Have you ever experienced an emergency? What kind of emergency was it?
How did you deal with the emergency? Who helped (police, ambulance, fire fighters, etc.)?
What can you do to be ready for an emergency?



Examples of emergencies:

- Someone is badly injured or very unwell.
- Your life or somebody else's life is in danger.
- A serious accident/incident or crime is taking place.

First aid priorities



Assess the situation

Quickly and calmly assess the scene. You may have to give first aid in dangerous places. Before helping anyone else, you must put your own safety first. Make sure the area is safe for you to enter and that you are not putting yourself at risk by helping others.

Look for people who can help you. If possible, get someone else to phone for an ambulance (999). This way you can carry on helping the injured casualty until medical help arrives.

Look to see who is injured. Count how many people are hurt and try to see what happened.



Protection from infection

It is important to protect yourself and the casualty from cross infection as well as injury. Infection is a risk even with minor injuries, especially with wounds. Usually, washing your hands and wearing gloves is enough to keep you safe.



Protect yourself and any casualties from danger

Look out for danger to you and the injured person. Move the injured person only if they are in danger, or if you need to move them to provide first aid.



Assess the casualty

Stay calm as you introduce yourself and ask if you can help. Identify the type of injury or illness and check if the casualty is responsive. Ask them about their family or friends.

If a casualty refuses help, but you think they need urgent medical attention, call 999 or 998. Tell the emergency services that you offered your help but it has been refused.



Give early treatment

Treat the casualties with the most serious injuries first. Remain calm and confident as you help. Listen to the casualty and keep instructions simple. Ensure they understand what you are saying. You must think about the impact of your actions and be sure to prevent further injury. Always stay with the casualty. Do not leave someone that is badly injured alone, except to call for help. If possible, write down information that you gather about the casualty, and hand any useful information to the emergency services.

Arrange for emergency medical help

You should phone for an ambulance (999 or 998) and ask for help whenever:

- someone is seriously ill or injured
- you are not sure what to do in an emergency
- you are not qualified to give first aid

Get as much information as possible about the incident. Be as exact and detailed as possible when speaking to the emergency response operator. This is so they can get help to you as quickly as possible.



Examples of someone who is seriously ill or injured include a person who:

- does not respond
- has chest discomfort
- has a problem breathing
- has a severe injury or burn
- is bleeding heavily
- has a seizure
- suddenly cannot move or feel a part of their body
- has received an electric shock
- has been poisoned



Comfort and reassure

Make casualties feel safe at all times. Talk to them and let them know what is happening and that help is on the way. If you have a calm and confident manner, this will help to make the casualty feel that they are safe.



Activity 8: Group work

In groups, read the following scenario:

You are on your way to meet your friends to go shopping. As you walk towards the mall, you see a woman who has been hit by a car. She is sitting at the side of the road. She tells you that she is in a lot of pain. You think she may have broken her leg.

What do you think you should do to help the injured woman?

Role play

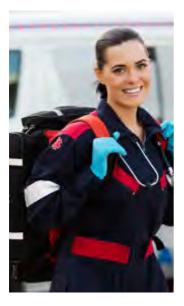
- Your teacher will split you into groups of 5-7.
- You need to plan a role play of the scenario described above.
- You should follow the steps that your group decided on above. Make sure each step is clear for the rest of the class to see. The rest of the class will make notes of your role play.
- Later, as a class, you will discuss the steps that each group took.
- You will see which group came up with the correct steps and in the correct order. The teacher will write the correct order on the board.

Write the correct order, according to your teacher, in the space below.

The responsibilities of a paramedic



A paramedic is usually the most skilled health-care professional at the scene of an accident. They respond when members of the community make emergency calls for help. It is important that a paramedic is physically, mentally and emotionally able to meet the demands of her role. The ambulance driver supports the paramedic by driving, they also assist at the scene.



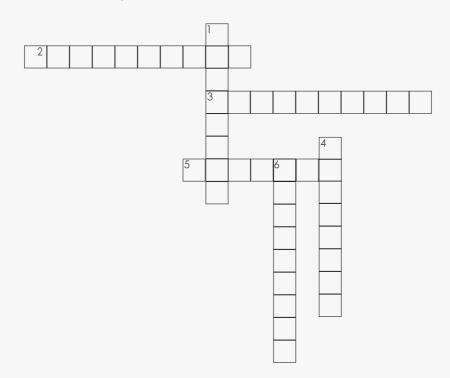
The role of a paramedic is to:

- give advanced medical care in medical emergencies
- respond straight away to emergency medical calls
- assess the scene
- assess how bad each casualty's injuries are
- provide reliable patient care throughout
- make decisions about the emergency care of casualties
- give treatment at the scene of an accident
- transport the injured or ill to the hospital
- complete paperwork and provide the hospital with a report



Activity 9: Crossword

Read the clues and complete the crossword below. All of the answers are related to the role of a paramedic.



Across

- 2.This is used to ease the casualty's pain
- 3.A person who responds in an emergency
- 5.Something used to cover a bleeding wound

Down

- 1.The ambulance driver takes the casualty here
- 4.The position for an unconscious casualty
- 6.Transport used by paramedics



Paramedics usually respond to either medical or trauma situations.

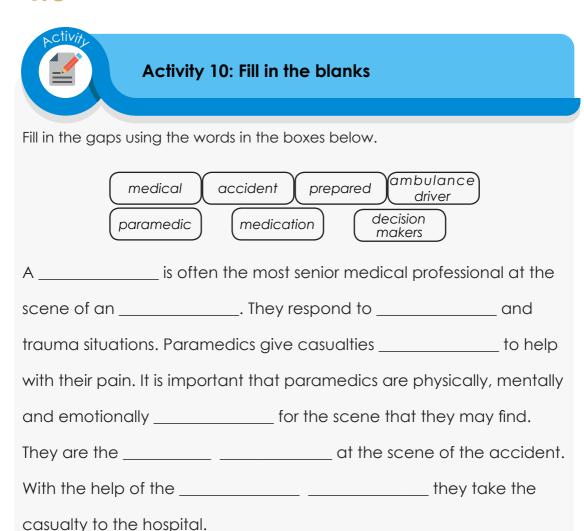
Emergency medical calls usually involve scenarios like heart attacks, severe allergic reactions, child labour, delivery and shock. Paramedics can administer a wide variety of medications to help with the patient's symptoms until they arrive at a hospital.

Trauma calls usually involve an accident or physical injury. Paramedics will often respond to the scenes of car crashes, falls and sports injuries.

Paramedics may be required to:

- perform cardiac support for heart attack victims
- perform emergency respiratory procedures for people with blocked airways
- give IV (intravenous) fluids
- bandage wounds

- stabilise head and neck injuries
- stabilize broken bones
- resuscitate drowning victims
- perform emergency childbirth procedures
- assess health situations
- give medications

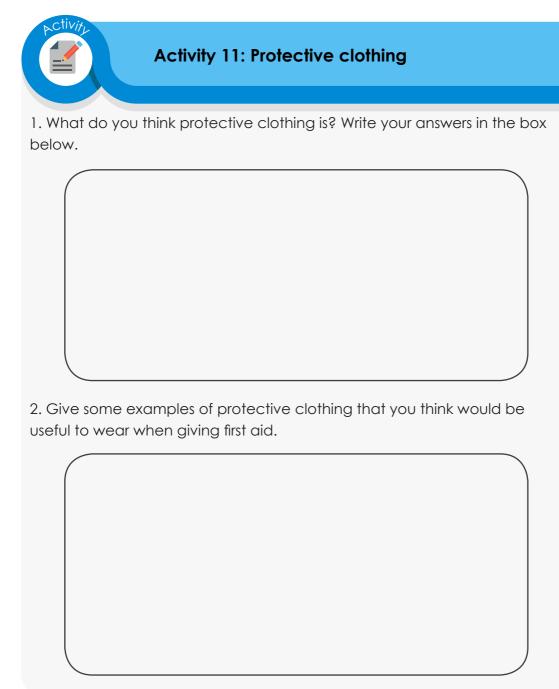




4.4 How to safely assess a casualty

How to safely assess a casualty

Protective clothing when dealing with blood



4.4 How to safely assess a casualty



Activity 12: Pick a picture

Which type of protective clothing would an emergency medical responder wear? Circle the correct picture.







Protective clothing for first aid can include gloves, gowns, masks and eye protection.

Gloves protect you from diseases that can be caught through handling blood or other bodily fluids. Due to their small size and how cheap they are, protective gloves are usually found in most first aid kits.

The use of gloves also protects your casualty from the germs on your hands contaminating their wound.

Some important points to remember:

- Always wear gloves when treating a casualty (even if you cannot see any blood).
- Change your gloves with each use.
- Wash your hands straight away after removing your gloves.
- Remove and discard your gloves in the correct way.
- Do not wear the same gloves when treating different patients.

The correct removal of gloves and the washing of hands is important. It will reduce your risk of contact with the casualty's blood or bodily fluid. This helps to reduce the chance of contracting a disease.



Proper Glove Removal



Watch this video to learn the correct technique for removing gloves.

4.4 How to safely assess a casualty



Use the step-by-step pictures to make notes on how to correctly remove protective gloves.

Notes:	
1)	
2)	
3)	
4)	
5)	
6)	



Activity 14: Fill in the blanks

Fill in the blanks using the words in the boxes below.

protective	disease	wash
skin	gloves	contamination

When helping at the scene of an accident, I should always use	
my clothing. Using protective clothing, such as	
, can protect me from contracting a	<u>_</u> .
The patient will also be protected from After I	
correctly remove my gloves, I should immediately	my
hands. This will remove any blood or bodily fluids that may have me	ade
contact with my	

Primary assessment of a casualty

Airway/Breathing/Circulation – When an accident happens that can cause injury to a person, or when a person becomes ill, it is important to check a number of things as soon as possible.

- The first thing to ensure is that there is no danger in the area that could harm you or the casualty.
- You should then check to see if the condition or the injuries are lifethreatening. You will need to make a quick assessment to see whether the casualty is responding to you or is unresponsive. To do this, you can ask the casualty questions. If there is no response, gently shake the casualty's shoulder. If it is a child, you can tap their shoulder or foot.
- Always remember the ABC method. This method of treating a casualty should be applied to every casualty you attend to.

4.4 How to safely assess a casualty



A is for AIRWAY – Check that the casualty's airways are clear. If the person is talking, it is clear. If they are unresponsive, you may need to move their tongue from the back of their throat.

B is for **BREATHIN**G – Oxygen is vital to support life. Check that the casualty is breathing. Do this by looking at their chest to see if it is moving up and

down, or by placing your ear over their mouth to listen and feel for breathing. If an unresponsive casualty is not breathing, their heart will stop. You must start chest compressions and rescue breaths (CPR) straightaway.

C is for **CIRCULATION** – Blood circulates oxygen around our bodies giving cells the oxygen needed to keep us alive. Oxygen must travel around the body. Severe bleeding can cause blood loss from the circulatory system, causing shock to the body. Major wounds need to be treated very quickly.



Activity 15: Order the stages

If you come across an injured person, what should you do?

Order the stages that you should take from 1 to 4. Number 1 will be the first thing that you should do and number 4 will be the last thing.

Stages	Order
Check the airway.	
Check for danger.	
Check for circulation.	
Check for breathing.	

Secondary assessment of a casualty



Once you have completed the primary assessment and handled any life-threatening conditions, start the methodical process of asking what happened. Find out if the casualty has any current conditions and what symptoms the casualty is experiencing. Then you should carry out a detailed check for other injuries or illnesses by performing a head-to-toe examination.

Event history

- * Find out what happened.
- * Question the casualty as well as the people that were around.
- * Look for clues.

Medical history

- * This can give a clue to the cause of an illness or injury.
- * Look for a medical bracelet.
- * See if there is medication with the casualty's personal possessions.

Head-to-toe examination

- Put on your protective gloves.
- Use all of your senses to carry out an examination of the casualty.
- Start at the head. Check for bleeding and swelling.
- Speak to the casualty and check for a response.
- Examine the head (both eyes, the nose for fluids, and look in the mouth).
- Look at the skin.
- Loosen clothing around the neck.
- Examine the chest; check that their ribcage is not harmed and that breathing is not causing pain.
- Examine the abdomen, the collarbone and shoulders; ask the casualty to bend and straighten each joint.

4.4 How to safely assess a casualty

- Examine the hips; put hands on either side of the body and apply light pressure. If it hurts, stop here. If not, move the hips side to side and look for unusual movement.
- Examine the bones of the arms and legs.
- Check movement and feeling in the toes. Ensure that there are no unusual feelings in the feet or toes.



Activity 16: Role play

Your teacher will put you into groups of three. One person will pretend to lie injured on the floor. Another student should give her a head-to-toe examination, going through all of the steps. The third person in the group should make notes on what checks were completed.

Use the box below to make notes:



Activity 17: Class Discussion

Your teacher will start a discussion about the head-to-toe examinations and the steps that were followed.

The recovery position



Activity 18: Pick a picture

Which position do you think would be the most useful position to put a casualty in to prevent further harm or injury? Circle the correct picture.









Write down the reasons why you chose that picture.

If a person is still breathing but does not respond (unconscious), you must put them into the recovery position.

4.4 How to safely assess a casualty

What does it mean to be unconscious?

When a person is unconscious, it means that they are not responding and will not wake up. It is different to being asleep as the person cannot wake up. This is a medical emergency and steps should be taken to save the person's life.



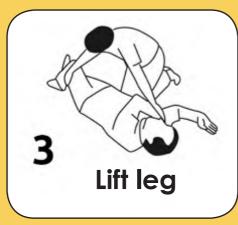
The recovery position helps because it:

- keeps the airway open
- keeps the casualty comfortable
- allows for drainage of bodily fluids
- keeps the body stable
- prevents swallowing of the tongue or vomit
- uses the hand to support the head
- uses the bent leg to stop the body from rolling over

See the pictures below for an easy way to remember the recovery position.











4.4 How to safely assess a casualty



Activity 19: Order the steps

Use the tips above and the numbered pictures below to place the descriptions in the correct order in the chart below.

Action	Order
Bend the casualty's far leg at the knee so that the foot is flat on	
the ground; this will help you to roll her over. Pull the casualty	
from just above the knee. Support the casualty's head and	
neck. Keep the casualty's other hand against his/her cheek.	
Place the casualty's other arm across her chest with the hand	
against her cheek.	
Roll them the casualty onto her side so that the bent knee	
touches the ground. Ensure her head is tilted back slightly.	
Kneel at the side of the casualty; place her arm closest to you	
at a 90-degree angle.	





Activity 20: Practise in pairs

Work with a classmate. Practise following the steps to put each other into the recovery position. Your teacher will come around and check that your final position is correct.



Head injuries





The skull protects the brain. Hitting it does not usually result in injuries to the skull. But if the force is great, the neck, back and soft tissues inside the head can be injured.

If a casualty with a head injury is unconscious, call 999 or 998. If the injured area is bleeding, treat it the same way as any other cut. Ensure to have it checked by a medical professional as there may be internal injuries. Putting ice on a small bump can help to reduce the swelling.

Do not leave the casualty alone, especially if they feel sleepy. Try to keep them awake and have them answer simple questions to make sure there is no brain injury, such as a concussion.

Call 999 or 998 if the victim has seizures, dizziness, vomiting, loss of balance, nausea, slurred speech or obvious changes in behaviour.



Activity 21: True or false

Decide If you think the statement below is true or false. Circle your answer.

If a person bumps their head and then starts to act differently, you should take them to hospital straightaway.







Choking

When a person is choking, they cannot cough strongly, speak or breathe, and their face may turn red or blue. Call 999 or 998 straight away.

If the casualty is over one year old, get them to lean forward and, using the palm of your hand, strike their back between the shoulder blades five times. If that doesn't work, stand behind the casualty, place one fist above the casualty's belly button, cup the fist with your other hand, and then push in and up toward the ribs five times.



Poisoning

Possible household dangers include cleaning supplies, carbon monoxide and pesticides. Bites and stings can also be poisonous to some people.

If a person is unconscious or having trouble breathing, call 999 or 998. You will need to tell the operator what substance the casualty took, how much was taken and when, as well as the age and approximate weight of the victim.



Cut or bleed

Veins and arteries help to move blood around the body. Blood is vital for the body as it contains nutrients from food, oxygen from the air we breathe, and white blood cells to fight infection. Therefore it is important not to lose too much blood from a cut. Cuts can vary from a minor graze that can be treated with a small plaster, to a deep cut that that required pressure to be applied to slow the bleeding and stitched to hold the wound together.

Laceration

Laceration means a deep cut or tear in the skin or flesh. These types of wounds involve bleeding. Most of the time, it will involve damage to a vein, capillary or artery. You need to deal with a person who is bleeding, it is important to know what type of damage you are dealing with.

Capillary damage	If a person has cut through a capillary, the cut will usually clot and stop bleeding by itself after a short time.
Vein damage	If a person has cut through a vein, it is a more serious injury. In rare situations, it could result in death if not treated. Generally, you will have a few hours to seek medical attention. If needed, the person will need to get the wound stitched.
Artery damage	This is a very serious injury. A cut artery will bleed very fast. It will not clot, and the person could lose consciousness within minutes. This is because the blood pressure becomes low. If untreated, the person could be dead within minutes!

Act Fast



In the event of artery damage, you must act fast!



Activity 22: Identify the cut

What type of cut do you see in the pictures below? Write your answer beside the picture.



There are a few ways we can quickly assess what type of injury we are dealing with. To do this, we can look at:

- 1. The way blood looks vein blood is usually dark red. Artery blood is normally bright red. However, the difference is not always easy to see.
 - If you cannot tell by the colour, you can look at:
- 2. How the blood acts blood from a vein will ooze from a wound. Blood from an artery will spurt from the wound.

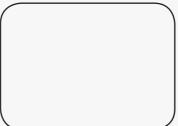
TIP	artery	blood spurting	blood will gush out in a sudden and forceful stream
	vein	blood oozing	blood will slowly trickle or seep out



Activity 23: Artery or vein?

Look at the blood in the picture below. What kind of wound do you think it is? Write your answer in the box next to it.





How to treat deep lacerations

Lots of accidents and injuries involve bleeding wounds. It is very important to know how to deal with these sorts of injuries. If a casualty is bleeding a lot, follow these steps:



1. Wear protective gloves.

Make sure you protect yourself and the casualty from infection. Try to find protective gloves when dealing with a casualty who is bleeding.



2. Remove any small objects from the wound.

Use clean tweezers to remove small objects from the wound. If the object is large, do not remove it. Instead, apply pressure around it and wait for medical help to arrive. If the object is hard to remove, leave it in place for removal by a doctor.



3. Apply pressure using a clean dressing.

Apply pressure where the blood is coming out. Pressure will reduce the flow of blood, and help prevent the casualty becoming unconscious. It will also help ensure that the casualty does not lose too much blood and go into shock. Ask alert casualties to hold the gauze with firm pressure. Ask them to hold their limb above heart level.



A sterile dressing should be large enough to totally cover the bleeding from a major wound or to absorb any fluids from a minor wound.



If it is hard to apply pressure, wrap a bandage tightly around the dressing. Wrap in a circular motion until the wound and gauze are fully covered with no gaps. Tuck it in at the end, or tie it in a knot to secure it. Be careful that it is not too tight. You do not want to cut off the circulation to the rest of the limb.

If the wound is too large to apply pressure, try to stem the flow of blood. You can do this by applying pressure to the side of the wound that is closest to the heart. Once the flow of blood is reduced, pack the wound out with some clean material. You can use a clean/sterile cloth or gauze. Continue to apply pressure at all times.

4. Get medical attention.

If you think it is an artery that is damaged, call 999 or 998 as soon as you can. If you cannot make the call, get someone else to call the emergency services for you. If you think it is a vein but bleeding has not stopped after 15 minutes, call 998 or 999. If the bleeding has stopped, take the casualty to a hospital for professional help.



Activity 24: Group work

Discuss in a group what materials you think could be used if you did not have any bandages or gauze available. Write your answers in the box below.



Activity 25: Word search

Find the words below.

Injuries

Α	S	N	Z	Ε	G	S	E	Ι	R	Ε	T	R	Α
T	0	N	S	T	S	L	R	T	L	R	L	Ι	Α
G	T	E	I	Ε	L	Α	I	Ε	Y	U	S	N	S
D	E	С	0	٧	R	U	G	Т	N	U	Т	s	T
W	R	s	L	Ε	С	Α	L	Т	E	E	U	G	T
0	R	E	0	Ι	D	Α	D	0	0	L	В	Α	S
u	Т	R	S	N	U	N	В	Z	I	I	L	U	Α
N	Т	G	Α	S	S	L	I	N	G	W	N	Z	Α
D	N	В	Α	c	Ι	Ι	U	В	V	D	N	E	Ε
A	I	c	U	S	Ε	N	Т	R	U	Ε	L	D	s
S	U	Т	ν	R	I	ν	G	A	T	R	Α	E	Н
I	N	J	U	R	Υ	S	E	N	0	В	R	G	S
Ε	S	P	L	Ι	N	Т	R	Ι	N	Z	γ	В	G
S	Z	٧	S	Α	S	Ε	٧	0	L	G	0	U	Т

arteries	bones	gauze	
bandage	cut	gloves	FIND THE WORD
blood	dressing	heart injury	
splint	sling	veins	wound

Burns

First-degree burns produce redness; second-degree burns cause blisters; third-degree burns result in broken or blackened skin.

A burn should be placed under cool running water, submerged in a bath, or have wet towels put onto it. A second-degree burn can be loosely bandaged for protection.



Do not put an ice pack on major burns. Ice can damage the skin and worsen the injury. Do not pop blisters or apply antibiotic creams because it can lead to infection.

Call 999 or 998 for third-degree, electrical and chemical burns, or if the victim is coughing, has watery eyes or is having trouble breathing. Go to the hospital for a second-degree burn that is larger than your palm as treatment may stop the casualty from scarring.



Broken bones

A broken bone happens when a bone becomes cracked or broken into pieces. It is also known as a fracture. Broken bones often happen because of a sports injury, accident or fall. They are not usually life-threatening, but they do require medical care straightaway.

A broken bone can cause one or more of the following signs and symptoms:

- intense pain in the injured area that gets worse when you move it
- numbness in the injured area
- discolouring, swelling or visible deformity in the injured area
- bone sticking out through the skin
- heavy bleeding

If you think that someone has a broken bone, provide first-aid treatment and help her get medical care.

- Stop any bleeding If she is bleeding, elevate and apply pressure to the wound using a sterile bandage, a clean cloth or a clean piece of clothing.
- 2. **Secure the injured area** If you think the casualty has broken a bone in her neck or back, help her stay as still as possible. If you think the casualty has broken a bone in one of her limbs, secure the area using a splint or sling.
- 3. **Apply cold to the area** Wrap an ice pack or bag of ice cubes in a piece of cloth and apply it to the injured area for up to 10 minutes at a time.
- 4. **Treat the casualty for shock** Help casualties get into a comfortable position, encourage them to rest and comfort them.
- 5. **Get professional help** Call 999 or help the casualty get to an emergency department for professional medical care.



Medical shock

Medical shock should not be confused with emotional shock (like when your friend tries to scare you).

Medical shock is a life-threatening condition which happens when the body does not have enough blood flow. This means that cells do not get enough oxygen for them to work properly. This can lead to the damage of vital organs, such as the heart and brain.

Any condition that reduces blood flow can cause a patient to go into shock. You should always be looking for the signs of shock when giving first aid to such injuries.



Activity 26: Medical shock



The picture above shows someone who is suffering from medical shock. Discuss with a partner why this happens. Write your answers below.

Causes of shock:

- heart problems, such as a heart attack, or heart failure
- severe internal or external bleeding
- loss of bodily fluids from dehydration, diarrhoea, vomiting or burns
- severe allergic reactions and severe infection

What to do:

- Treat the original injury first. Attend to the injury that caused the shock in the first place. For example, if there is a bleeding wound, apply direct pressure and a bandage.
- 2. Once you have treated the original injury, look for signs of shock, as mentioned previously. If you suspect shock, do the following:



Raise the legs

Raise the person's legs. Lie them down with their head low, with her legs up and supported. This increases the flow of blood to the casualty's head. Do not raise an injured leg.



Call for help

Call 998 or 999. Say you think the person is in shock, and explain what you think caused it (such as bleeding or a heart attack).



Loosen tight clothing

Loosen any tight clothing around the neck, chest and waist to make sure it doesn't restrict blood flow.



Prevent loss of body heat

Keep the person warm and comfortable using blankets to put underneath and over her.



Monitor

Monitor the person. Keep checking her breathing and level of response.



Activity 27: Symptoms of shock

What are the correct symptoms of shock? Circle your answers.

talking very fast	paleness of the face
confusion	runny nose



Activity 28: Order the steps

Put the steps in the correct order to show the process of treating a person in shock.

Keep the casualty warm and calm.	
Raise his/her legs.	
Treat the initial injury.	
Monitor breathing and response.	
Look for signs of shock.	
Call 998 or 999.	



Activity 29: Quiz time

In groups, write down your answers to the questions below. The teacher will check your answers.



- 1. What is happening inside the body during shock?
- 2. Name some causes of shock.
- 3. Name some symptoms of shock.
- 4. Describe some actions to take when treating shock.

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Emergency services

Before you call for an ambulance, you need to assess the casualty. To do this, follow the ABC steps to see if they have any life-threatening or other serious conditions.

If the area isn't safe for you to assess the casualty, call an ambulance straightaway.

It is important to know when calling an ambulance is necessary and when it is not needed. You should not call an ambulance for minor injuries. This could take up valuable ambulance time which may be required for someone else in a life-threatening condition.

However, if someone's condition is life-threatening or very serious, you should call 999 or 998 for medical help.





Activity 30: Scenarios

Look at the following situations and decide if you think emergency services should be called. Write your answers in the table below, then discuss the reasons for your answer.

A girl has fallen out of a tree and cannot move.	
A little girl has fallen over and scraped her knee on	
the ground.	
A girl has been bitten by a dog.	
A girl has banged her toe on a footpath.	
A girl has tipped a pot of boiling	
water onto herself.	
Your mother has run the bath too hot and it stung	
your sister as she got in the bathtub.	
Grandad has fallen down and you cannot wake	
him up.	
A girl fell into a pool and she can't swim. Now she is	
lying on the ground and not breathing.	
Your mother cut her finger while chopping	
vegetables and it's bleeding a little.	
Your father twisted his ankle playing tennis but he	
can still walk.	
A car has crashed into a telephone pole and the	
driver is badly injured.	
A girl has been knocked off her bike by a car and	
we can't wake her up.	
Your father fell off the roof and he cannot move.	

Review

Review - Unit 4 List 5 items that you will find in a first aid kit. 2. What does ABC stand for and how should this be used in an emergency? Explain how and when this will be used _____

3. Look at the cuts below and identify whether it is likely to be a bleed from a capillary, artery or vein.



True / False	A burn should be placed under cool running water.
True / False	You should apply an ice pack on major burns.
True / False	Pop blisters that form from a burn.
True / False	Apply wet towels to a burn.
True / False	Bandage second degree burns for protection.
True / False	Apply antibiotic cream to burns.

5. Explain in your own words the steps you would take to move someone into the recovery position, and why you should put them into this position.

Review

Student's comments
Things to think about:
What did you enjoy?
What did you perform well?
What do you need to improve?
Additional comments:

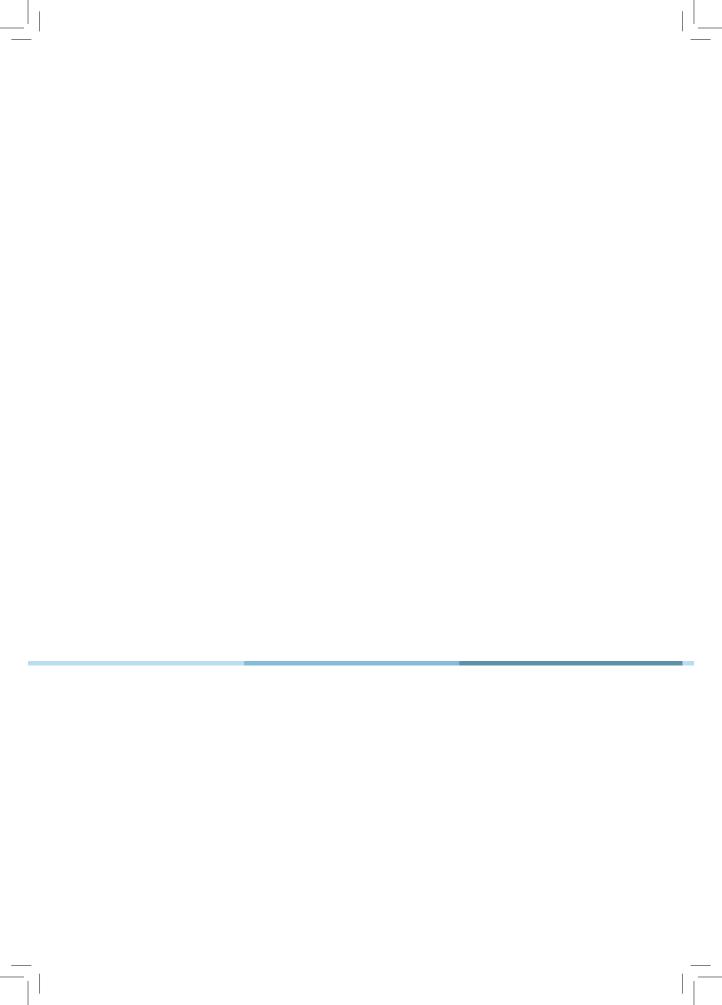
Things to think about:

Did the student participate?

What was the student's attitude like towards activities?

Did the student display safe and appropriate behaviour?

Additional comments:



Designed by:



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Health Sciences

Grade 10

