

# 1

## Let us build a healthy society

You are an important member of your family, school and the society. As you grow older your social circle enlarges. In the early part of your life your family and your school has a major influence on you. As you grow older the community at large will influence on you and you will also contribute to the community. Therefore, you must develop the skills needed to promote health in your community.

In previous grades you have learnt on promoting a healthy environment in your family and school.

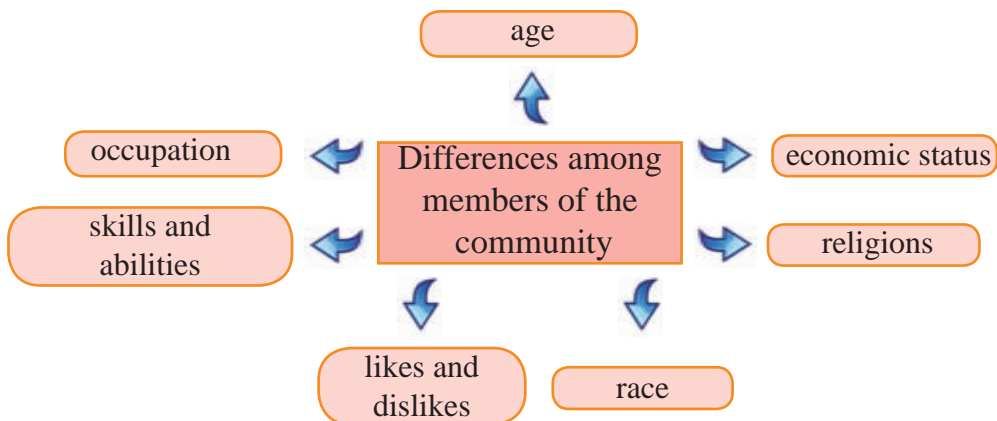
In this chapter we will discuss about the factors that affect the health of the community as well as health promotion and how we can contribute to promote the health of the community.

### Our community

Our community consists of the people around us and our environment.

There are differences among individuals in a community. However their basic needs are the same. It is the duty of all of us to ensure that the needs of all the members of our community are fulfilled.

Diagram 1.1



## Activity

Identify the skills you need, to associate with different people in the society. What are the advantages of developing such skills?

Different factors affect the health of our community. Among these the maintenance of the health standard and the balance in the environment are very important. For this, we need to develop qualities like healthy attitudes, obeying rules, being ethical and caring about the environment.

## Health of the individual

Health is a state of being free of disease and disability, and having physical, mental, social and spiritual wellbeing.

- |                  |   |
|------------------|---|
| Physical health  | - The state of being free from disease and being physically fit                                   |
| Mental health    | - The ability to face challenges successfully and be a productive and happy member of the society |
| Social health    | - The ability to maintain healthy relationships   |
| Spiritual health | - To have a meaning in life, and be able to maintain healthy relationships                        |

In a healthy community each member has good physical, mental, social and spiritual health.



Figure 1.1 - Maintaining physical, mental and social health



## Additional knowledge

### Benefits of maintaining good interpersonal relationships

Quantitative	Qualitative
■ Widens social network	■ Moral development
■ Reduces loneliness	■ Associates with groups that have a positive influence
■ Able to share knowledge	■ Develops healthy ways of thinking
■ Better security	■ Does not engage in anti-social activities
■ Develops communication skills	■ Engages in religious activities
■ Gets support when making decisions	■ Engages in social welfare

## Health problems in our community

Protecting our environment as well as maintaining of our own health is necessary to safeguard the health of the society. Therefore all the problems related to individual health and the environment, can be considered as community health problems.

Some of the most important community health issues are given below

1. Environmental pollution
2. Communicable and non-communicable diseases
3. Use of alcohol, tobacco and other drugs
4. Accidents and disasters
5. Abuse and exploitation

### 1. Environmental pollution

Environmental pollution is defined as the process which makes our environment unsuitable for living for humans and animals. Pollution alters the natural state of the environment.

Environmental pollution is caused by human actions and it results in health problems.

## Aspects of environmental pollution.

- Air pollution
- Water pollution
- Land / soil pollution
- Noise pollution



### Activity

Describe examples of environmental pollution found in your village or town.

## Air pollution

Air pollution is the change in the atmospheric composition due to contamination with toxic or harmful substances.



Figure 1.2 - Air pollution due to smoke emitted from factories

Air pollution results in;

- diseases of the respiratory tract
- cancers
- skin problems

## Water pollution

Water pollution is the change in the natural composition of water due to contamination by toxic or harmful substances.

Water pollution result in;

- cholera
- diarrhoea
- skin problems
- mosquito borne diseases
- allergies
- cancer
- renal diseases



Figure 1.3 - Water animals are destroyed due to water pollution

## Land pollution

Land pollution is the degradation of land so that it is no longer usable.

When the land becomes unclean it results in;

- breeding of mosquitos and flies
- spread of diseases
- lose of soil nutrients
- landslides and other natural disasters



Figure 1.4 - Land pollution due to improper disposal of garbage

## Sound pollution

Sound pollution is the emission of sound at harmful intensities.

Sound pollution can result in;

- hearing problems
- stress
- difficulty in concentration
- loss of tranquility



Figure 1.5 - Sound pollution due to noise from motor vehicles

## Activity

List illnesses that can be caused by environmental pollution.

### **Causes of environmental pollution**

- Destruction of forests
- Improper disposal of garbage
- Chemicals and other non-degradable waste released from factories
- Burning coal, fossil fuels, plastic and polythene
- Haphazard use of agrochemicals
  - Large scale, unregulated construction

### **Preventive methods of environmental pollution**

- Preservation of forests
- Proper management of garbage
- Enacting laws to prevent environmental pollution
- Following proper standards in the use of agrochemicals
  - Ensuring standards when constructing buildings

## **2. Communicable and non-communicable diseases**

Communicable diseases can be spread from one infected person to another eg: dengue, malaria, diarrhoea, tuberculosis and sexually transmitted diseases.

Diseases, which cannot be transmitted from one person to another, are known as non-communicable diseases.

eg: hypertension, diabetes, mental illnesses, cancers and stroke.

Illness causes many problem situations like disability, reduction in level of activity, reduction in life span and mental distress. It also affects areas like education, work, day to day functioning and economic status of the individual and the country.

We can prevent illness by maintaining good hygiene, immunization, prompt treatments of illnesses, keeping environment clean and adopting a healthy life style.

We will discuss in detail about illness in Chapter 21.



### 3. Use of tobacco and related drugs

Use of tobacco and drugs cause many social problems. Use of them directly or indirectly results in heart disease, respiratory illness, cancers, crimes, conflicts and other anti-social behaviours, disrupting family relationships, disregard for cultural norms, mental and physical problems and reduction in life span.

Passive smoking which is inhalation of smoke from other smokers can result in illness. The foetus can be harmed due to inhalation of cigarette smoke by pregnant mothers. Therefore smoking should be banned in public places and people who do so should be penalized.

We need to educate the public about the negative effects of tobacco and other drug use, enforce laws, be aware of media portrayals, rehabilitate users and engage in sports and cultural activities in order to prevent use of tobacco and other illegal drugs.

### 4. Accidents and disasters



Figure 1.6 - Home accidents

Accidents and disasters can happen anywhere. Home accidents, road accidents, animal attacks, occupational injuries, food poisoning and sports injuries are examples of accidents. Floods, drought, tsunami and wars can result in disasters. Accidents and disasters cause injury, illness, mental distress, damage to property, environmental pollution and even death.

We can prevent accidents and disasters by learning about the causes of accidents and disasters, taking precautions and following rules. We need to know how to prevent accidents and disasters and about the first-aid we can administer in such situations. We can reduce the negative consequences by proper intervention.



## 5. Abuse and coercions

Abuse is defined as behaviours which harm someone, against accepted social morals. Coercion is to encourage someone by using force or threat to engage in antisocial activities.

We should all aim at getting rid of abuse and coercions from the society. You must develop the skills necessary to protect yourself from those who try to abuse or coerce you. You must also ensure that you do not engage in activities which abuse or coerce others.

Sexual abuse, employing of under-aged children as domestic workers, verbal abuse, neglect and physical and mental abuse are examples of abuse and coercions.

Abuse and coercion can result in illness, mental distress, sexually transmitted diseases, unwanted pregnancies and endanger the life.

Those who have been abused or coerced can be directed to various institutions that could help them. Department of Probation and Child Care, Children and Women's Bureau desks in Police stations are examples of such institutions. These institutions provide safety for those who are abused or coerced and they maintain confidentiality of information.



Figure 1.7 - Employment of under-age children as domestic workers

### Activity

Discuss how you can protect yourself from abuse and coercions.  
Recall what you have learnt in previous grades.

## Community Health Promotion

Community health promotion enables people to improve their health by controlling the factors which influence their health.

We can prevent environmental pollution, illness, tobacco and other drug use, accidents and disasters, abuse and exploitation by community health promotion. We can make use of life skills, which we learnt about previously to help us in these activities.



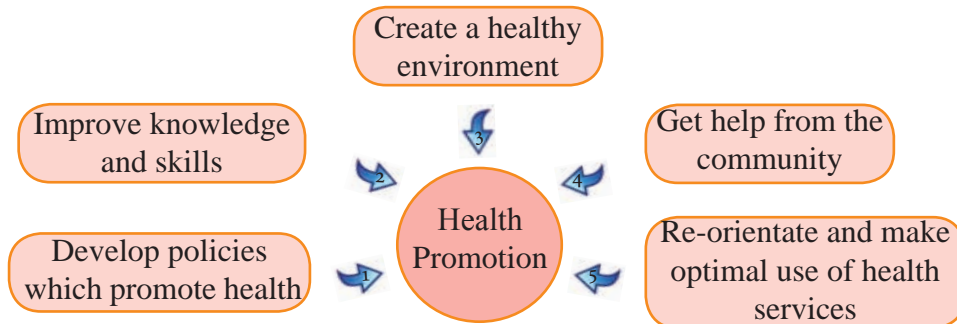
### Activity

Display a list of life skills in your class room.

## Community health promotion activities

We learnt five themes, which can be used to promote the health of our family and our school. We can use the same themes for community health promotion.

Diagram 1.2



### 1. Develop policies which promote health

This is one of the main strategies of health promotion. We need to identify the main factors which affect our health and develop appropriate policies. We can develop policies at individual, institutional, regional and national levels.

Eg: Daily exercising, maintaining a healthy canteen, providing subsidies, adding iodine to salt and maintaining food standards.

## Activity

Identify a few policies which can be easily implemented and promote health in your area. Educate your relatives and neighbours about them.

## 2. Improve knowledge and skills

Acquisition of knowledge necessary to cope with life and the development of life skills are important in health promotion. We can improve knowledge on health for all the age categories through schools or other educational institutions. We also can implement community activities, which improve such knowledge and skills.

Eg. Conducting sports competitions, aesthetic activities, health and education workshops and distributing books which contain information about health.



Figure 1.8 - Health workshops

## 3. Create a healthy environment

The physical, mental and social environment should be healthy. It should provide your needs.

Eg: Basic needs, love and protection, facilities for sports, medical facilities and clean environment

## 4. Get help from the community

Individuals and the community must take responsibility for health promotion. The entire community must contribute to health promotion. The family, schools, shops, work places, temples, churches, different societies etc must all contribute to community health promotion.

Eg: Shramadana activities, making the environment attractive, replanting forests, conducting of health camps, dengue prevention activities

## 5. Reorientate and make optimal use of health services

Shortcomings of the health services should be identified and health services should be reorientated to meet the health needs of the society.

Eg: Identifying shortcomings in hospitals, ensuring availability of investigations, mobile health facilities, counselling services.



Figure 1.9 - Mobile health facilities



### Activity

Discuss with your friends how you can contribute to health promotion.

## Advantages of health promotion

- Reduction of communicable and non-communicable diseases
- Reduction of health care expenditure
- Ensuring a pleasant environment
- Developing good social relationships
- Minimizing conflicts
- Improved quality of life

## Summary

The people and the environment around us are a part of our community. The society or the community consists of different types of individuals.

It is important to ensure the health of individuals and maintain a healthy environment to ensure the health of the community.

Environmental pollution, communicable and non-communicable diseases, use of tobacco and harmful drugs, accidents and disasters, abuse and coercions are examples of major health problems.

Community health promotion is the process of enabling the people to control the issues which affect their health and to improve the health standard of the community.

The five main themes of community health promotion are developing policies which promote health, developing personal knowledge and skills, creating healthy environments, getting help from community and reorientating and making optimal use of health services.

Health promotion results in economic and social benefits and improves quality of life.



## Exercise

1. Discuss the differences between individuals in a community
2. What are the two main components of community health promotion?
3. What are the major health problems that affect our society?
4. How can you prevent communicable diseases in your community?
5. What are the negative consequences of tobacco and other drug use?
6. Name the different types of accidents and disasters which can happen in your community
7. Define abuse and coercion
8. Name the five themes of health promotion

# Let us achieve towards self actualization

You may have noticed that your needs have changed from simple to complex as you grew up from a child to an adolescent. When you were a baby your parents provided you with food to satisfy your hunger and clothes to keep you warm. In addition to these when you could understand a little more you would have expected love, protection and to be provided with toys for your entertainment. Between childhood and adolescence other than education and self esteem you would have had other needs. Therefore human needs gradually change to higher needs over a period of time. When the basic needs are met, secondary needs arise and when these are met another level of needs arise.

In previous grades you learnt about basic needs, psychological needs and need of self-esteem.

This chapter will teach you about self actualization which is a higher need than self esteem. Self actualization is a complex concept but try to understand it as it will help you in your life.

## The hierarchy of human needs

Abraham Maslow a psychologist who did a lot of experiments on human needs described the hierarchy of human needs shown below.

Diagram 2.1 - The hierarchy of human needs (Abraham Maslow)





## What is self-actualization?

Principal :- Mr Suranimala, the day of our prize giving is getting closer, isn't it? Who is going to announce on that day? Who is going to prepare the invitation cards for our invitees? We need to have a pandal at the entrance and also have to decorate the hall. In addition, we need to have a pooja dance and some special items. What shall we do?

Mr Suranimala :- Don't worry about them sir I have organized everything. I have chosen Jagath from grade 9 to do the announcing. He is a good announcer. Jagath did the announcing at the flower auction held at the village temple recently. He is doing announcing at village functions, too. He also did the announcing at the last year's sports meet. He is capable of doing a good job.

I have asked Kumudu to be in charge of the invitation cards. She has started working on it. She does beautiful creations. Thamali and Thusitha of grade 9 will help her with it. They too can draw well and have nice hand writing. It won't be a problem.

I have chosen a few grade 10 students to construct the pandal and decorate the hall. Nimal, one student in this group is a sculptor. A few others will help him to do this. I have also made arrangements to get items needed to make it. They have already started on the work.

We will ask each grade to present an item. We will ask the grade nine students to do the pooja dance. There are some talented students in that grade. They will do a good performance.

Principal:- Mr Suranimala, Lal the student who won an all-island prize for creations should have a special place at the prize giving doesn't he? Let us make arrangements for the invitees to watch the model of the electric lift he designed.

Mr Suranimala:- Yes sir we'll do it that way.

Read the dialogue several times.

You would have noticed that teacher Suranimala identified each person's talents and given them fair opportunities to develop them further. After having read the dialogue you too should be able to identify people with different talents. Such abilities or talents can be divided into different groups.

- Physical skills
- Mental skills
- Social skills
- Aesthetic skills
- Behavioural skills



Figure 2.1 - Displaying Aesthetic skills



### Activity

Identify your abilities. Identify the highest position you can attain by using these abilities. On identifying their talents make a list of highest positions your friends can reach.

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>■ Professional singer</li> <li>■ Professional artist</li> <li>■ Professional dancer</li> <li>■ Professional sportsman</li> <li>■ Professional announcer</li> <li>■ Writer / composer of songs, stories, poems</li> <li>■ Inventor</li> <li>■ Actor</li> </ul> | <ul style="list-style-type: none"> <li>■ Orator</li> <li>■ Mathematician</li> <li>■ Script writer</li> <li>■ Farmer</li> <li>■ Carpenter</li> <li>■ Electrician</li> <li>■ Doctor</li> <li>■ Engineer</li> </ul> |
|--|--|



Figure 2.2 - Being a professional sportsman

By developing one or more of your abilities, you can be a professional in that field. Every person has talents that are unique to him. These abilities are inherent. According to the inherent strengths we have, we should identify a target and strive to achieve it without obstructing others. You can bring honour and glory to your community and the country by developing your abilities. The satisfaction, joy and pride you get by this is known as self actualization.

According to the above, self actualization can be explained in this way.

**“self actualization is to use our creative abilities to serve the society to the maximum and lead a satisfying, righteous and peaceful life”**

Despite having many talents we might not be able to identify them. If we are to identify our hidden talents we need to engage in different activities. There are times that we may not be able use our talents despite identifying them. This might be an obstacle to achieve self actualization. Therefore we should strive to identify our talents and look for opportunities to use them instead of waiting for such situations to arise. We should use our talents for the good of ourselves as well as others. The hallmark of people who have attained self actualization is the joy and satisfaction they receive for their good deeds.

### Activity

Get together with your friends and list the professions they wish to be in. Identify the talents they have, to serve in the chosen profession.

## The qualities needed to attain self-actualization

Despite possessing many talents one should have the following qualities to reach self actualization.

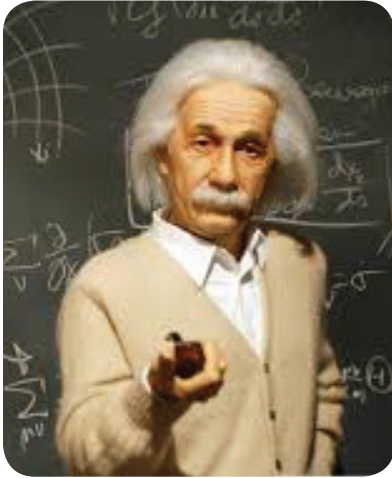


Figure 2.3 - Use talents for the betterment of Society (Albert Einstein)

1. Be a master in the area studied
2. Use talents for the betterment of society
3. Do not engage in social work expecting popularity
4. Be satisfied with what you have
5. Get used to a simple life style
6. Be a law abiding person
7. Respect others
8. Build good interpersonal relationships
9. Have good principles
10. Be sensitive and flexible
11. Good time management
12. Face challenges successfully

Although self actualization was described as a complex concept, at your age as well as an adult you can get close to achieving it.

Religious leaders such as Lord Buddha, Jesus Christ, prophet Mohammed and special characters such as Mahatma Gandhi, Mother Theresa, Arthur C Clarke, Dr. Ambedkar, Rabindranath Tagore, Abraham Lincoln are known to have had good qualities other than their talents and reached self actualization.

### Summary

When human needs are rated, self-actualization is at the highest level.

Every person has inborn talents and abilities. These talents and abilities are known as the inner strength people possess.

Self-actualization is known as identifying our inner strengths and using them to serve the society to give us satisfaction and a peaceful life.

People who have attained self-actualization have had many special qualities.

By identifying the unique talents you possess and identifying a goal will help you towards self actualization.

Using good qualities and working with dedication and effort will help you towards achieving this.



### Exercise

1. List the human needs in a hierarchical order.
2. Describe self-actualization in a simple way using your own words.
3. What are the qualities of a person who has reached self-actualization?
4. Make a list of the people who you think have reached self-actualization.
5. Make a chart of things you need to do to achieve self-actualization.

# 3

## Let us identify physical deformities which prevent good posture

We engage in many activities throughout the day. Each of these activities is associated with a specific posture. Maintaining good posture is necessary to carry out our tasks efficiently, for a healthy life and to have a pleasant and attractive appearance. Illnesses and bad habits can lead to bad posture. Maintaining a bad posture results in injury and physical deformity. Physical deformities will affect maintaining correct posture. Therefore, it is important to identify physical deformities early in life and to treat them early to develop good posture.

In previous grades we discussed about the good postures that should be adopted during sitting, walking and marching.

This lesson will focus on identifying deformities that would prevent good posture.

### What is a good posture?

Good posture is proper alignment of the body during a movement or when in a still position. This enables us to carry out activities easily, efficiently and, to move our limbs and joints properly.

### Benefits of maintaining good posture

1. Less energy is spent during an activity
2. Feels less tired during an activity
3. Increased efficiency
4. Maintains optimal physical fitness
5. Prevents illness and injury
6. Less body aches and pains
7. Becomes healthy
8. Looks pleasant and attractive





### Activity

Stand in front of a mirror so that you can see your full body. Hunch your body by rounding your shoulders, hanging the hands in front and extending the neck forward. Observe yourself in this position. Then adopt the proper posture for standing which you learnt in Grade 7. See the difference in appearance.

You may have observed that, when you are in the proper posture your appearance is more attractive.

## Deformities which prevent good posture

Deformities can occur due to;

1. Congenital factors
2. Environmental factors

These conditions can be acute (short term) or chronic (long term).

### Deformities caused by Congenital factors

These diseases can arise due to genetic defects or due to harmful conditions, which affect the foetus. Genetic defects are inherited. Infections and nutritional deficiencies during pregnancy are factors which can affect the foetus. The features of congenital diseases are present from birth.

Eg: Genetic defects leading to abnormalities in bone and muscle development.



Figure 3.1 - A child with a spinal deformity due to a genetic abnormality

## Deformities caused by environmental factors

Unhealthy habits, improper life style, nutritional deficiencies, diseases and bad posture are environmental factors that can cause physical deformity.

### 1. Nutritional deficiencies

Nutritional deficiencies can affect bone and muscle growth.

Eg:

- Vitamin D is needed for growth and maintenance of bones. Vitamin D deficiency prevents proper absorption of calcium. Vitamin D deficiency during childhood causes rickets. In rickets the bones become weak. This can result in fractures and deformity. People living in cold countries who have inadequate exposure to sunlight can develop vitamin D deficiency. It is not very common in Sri Lanka. Vitamin D deficiency can arise due to improper diet and also due to renal diseases.
- Calcium and protein is essential for bone growth. Calcium and protein deficiency during childhood can slow bone growth and cause deformities. In adults, calcium deficiency causes osteoporosis. This leads to weakening of bones, bone pain and fractures.

### 2. Diseases

Bones and muscles can be affected by different diseases

Eg:

- Bone infections
- Osteoporosis caused by hormone imbalances

### 3. Bad posture

Prolonged use of bad posture during daily activities and wrong posture adopted during use of equipment can cause injury.

Eg:

- Incorrect postures of sitting and standing

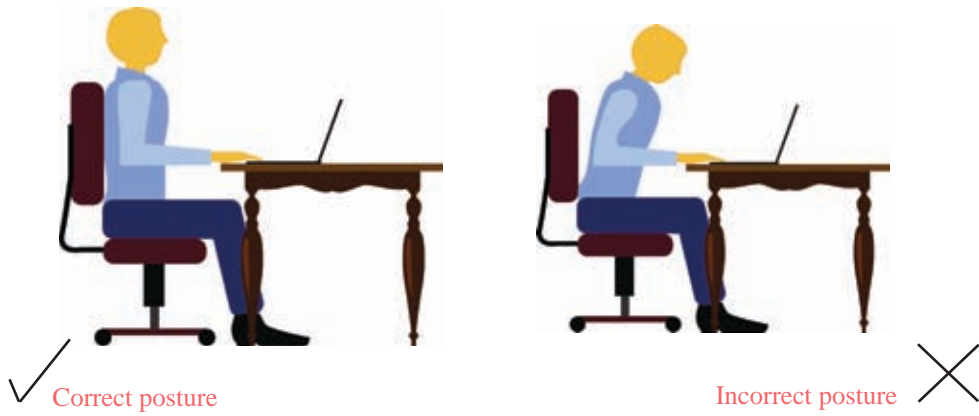


Figure 3.2 - Using computers

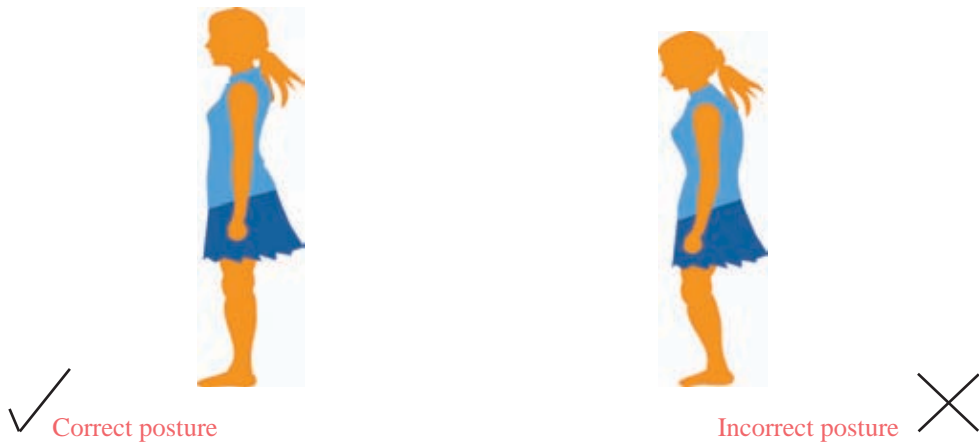


Figure 3.3 - Standing

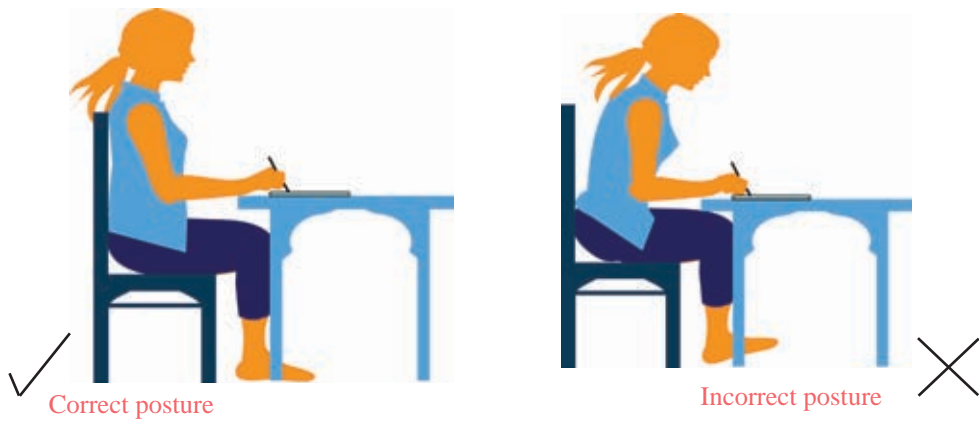


Figure 3.4 - Writing

- Repetitive use of bad posture when lifting heavy weights - Weight lifting and other sports, during work
- Use of unsuitable clothing and footwear - Clothes which are tight at the shoulders or hips, shoes with high heels
- Use of inappropriate equipment - Use of heavy, non ergonomic school bags. Using brooms, ekel brooms, chairs and tables which are inappropriate for the person's height. Driving the vehicle with the driving seat too far or too close to the steering wheel.
- Using wrong technique during exercise.



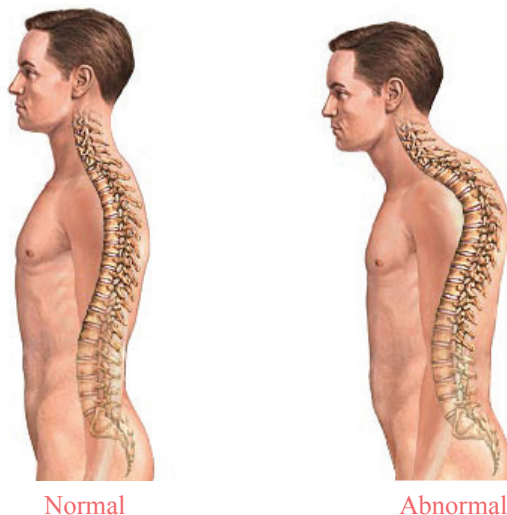
### Activity

Name five postures you use during daily activities. Draw one bad posture and the correct posture for each of these examples.

**Let us identify some abnormalities due to congenital or environmental causes**

## Kyphosis

Kyphosis is the excessive curvature of the upper back (thoracic region). This could be congenital or occur later in life due to environmental factors.



Normal

Abnormal

Figure 3.5 - Kyphosis

## Excessive lumbar lordosis

Excessive lumbar lordosis occurs due to the excessive curvature of the lumbar region (lower region) of the spine. The hips are pushed back, the abdomen protrudes forward and the head moves forwards.



Normal

Abnormal

Figure 3.6 - Excessive lumbar lordosis

## Scoliosis

In scoliosis the spine is curved to the side. Because of this, the shoulder on one side drops down and the hip on the opposite side goes up.



Figure 3.7 - Scoliosis

## Flat back

The normal curvature of the lower back is not present.



Figure 3.8 - Flat back

## Bow legs and knock knees

Bow legs is a condition where the knees are wide apart when the person stands with the feet together. In knock knees the knees are angled in and touching each other when standing. These conditions make walking difficult. Nutritional deficiencies during childhood can be one reason for this condition.



Figure 3.9 - Bow legs and knock knees



The deformities described above should be recognized early and medical treatment should be sought.

Most hospitals have an orthopaedic division which treats such conditions. Surgery may be needed to correct some of these deformities.

The physiotherapy unit in hospitals can help with exercises that will strengthen muscles and improve functioning of the affected parts.

The Medical Officer of Health (MOH) clinic or the hospital can advise regarding nutritional deficiencies.

Special Sport Medicine units provide advice and treatment for sports related injuries.

A healthy lifestyle can prevent most of the environmental causes.

### Healthy behaviours which can prevent bad posture and other skeletal conditions

1. Taking a balanced diet
2. Exercising daily
3. Getting adequate sleep and rest
4. Maintaining weight appropriate for height (BMI) for age
5. Correcting hearing and visual defects
6. Adopting correct posture during day to day activities
7. Maintaining good mental health
8. Always obtaining medical advice regarding medication and nutritional supplements

#### Summary

Good posture makes us attractive and enables us to carry out our work efficiently.

Disease conditions can interfere with good posture.

Physical deformities can occur due to congenital or environmental (acquired) causes.

Congenital diseases can arise due to genetic defects or due to harmful conditions, which affect the foetus. Environmental reasons include bad life style, disease and nutritional deficiencies.

Adopting good posture and a healthy life style can prevent physical deformities.

Early treatment can correct physical deformities or minimize their impact.



### **Exercise**

1. List five advantages of having good posture
2. What are the main causes of physical deformities?
3. List some of the physical deformities you learnt about in this chapter
4. What are the health behaviours that can prevent or minimize physical deformities?

# 4

## Let us identify organized games and outdoor activities

In order to become a healthy student, it is essential that you get involved in sports in addition to taking a balanced diet. When you get involved in sports and excel in it you will get the opportunity to participate in various sports competitions representing your school and even your country depending on your talents. Getting involved in sports is very important to improve your physical, mental and social wellbeing and also to develop your personality and physical fitness.

When you were previous grades, you gained knowledge about organized games, lead-up games, minor games and athletics. You also gained happiness, enjoyment and experience by getting involved in sports.

After studying this lesson, you will be able to classify organized games and outdoor activities. You will also gain understanding about how getting involved in such activities contribute towards enhancing one's physical and psycho-social development.

### Sports

In the ancient times man lived in very close relationship with the natural environment. While carrying out his day to day tasks like hunting, he had to do activities such as running, jumping and hitting with a stone or a stick. Such activities required man to perform basic movements which were later used in sports. With the emergence of civilizations after the hunting era, man had more leisure time and sports were used as an effective way of spending it. Various types of sports that were created in this manner have developed into different games with rules and regulations.



#### Activity

1. Write down the names of ten organized games played in Sri Lanka.
2. What common features can be seen in them?

Physical or mental competitions, where the participants take part following accepted sets of rules can be called as games.

## Organized games

Sports events that are held in accordance with laid down rules and regulations can be called organized games.

Common features that are seen in organized games

- There are accepted rules and regulations.
- Playgrounds with standard measurements are used.
- Standard equipment are used.
- Number of players are specified.

## Classification of organized games

There are wide geographical variations on the earth. Accordingly, there are marked variations in the natural environment. A wide variety of sports based on the variations of the natural environment have been created. Apart from that, a wide variety of sports have also been created based on various social and cultural environments.

Organized games can be classified based on a variety of criteria. In this classification the same sport can come under several categories.

The following are some examples for classification of organized games:

Classifying sports based on the nature of the place where they are held:

i. Water sports.



Swimming



Water ballet



Wind surfing



Diving



Water surfing



Boat races



Water polo

Figure 4.1 - Water sports

ii. Sports played on ice



Ice hockey



Ice skating

Figure 4.2 - Sports played on ice

iii. Winter sports (Sports played on snow)



Dancing on snow



Snow skating



Ski jumping



Sledging

Figure 4.3 - Winter sports

iv. Air sports



Aerobatics



Para jumps



Sky diving

Figure 4.4 - Air sports



v. Sports played on land

Sports played on land can be further classified in different ways:

Table 4.1

Bat-and-ball games	Ball games	Athletics
1. Cricket	1. Netball	1. Track and field events
2. Elle	2. Volleyball	2. Road races
3. Hockey	3. Football	3. Race walking
4. Tennis	4. Basketball	4. Cross-country running

Indoor games	Sports played without using equipment	Self-defence games
1. Basketball	1. Kabadi	1. Karate
2. Table tennis	2. Kho kho	2. Judo
3. Carom		3. Boxing
4. Chess		4. Wrestling
5. Draughts		5. Wushu
6. Squash		



Kabadi



Koko

Figure 4.5 Sports played without using equipment

According to the

evolution of man he

has been adapted to live in the natural environment like any other animal. With the advancement of technology, man has got used to live in a house. Further, as a result of industrialization, man designed various types of machinery. With the invention of such machinery, man stopped doing natural, manual work and began to use machinery to get easily done his day-to-day work.

Now we don't live in a natural environment as the ancient man did, but outdoor education will enable us to gain experience about the natural environment and to develop skills needed to protect and conserve it.

Outdoor education is not merely studying about the environment; many outdoor activities have been designed under outdoor education. Under outdoor education you can engage in activities like camping, campfire games, explorations into jungles and forests and making of fireplaces. Participation in such activities helps you to develop your physical, psycho-social and life skills.

### **What is outdoor education?**

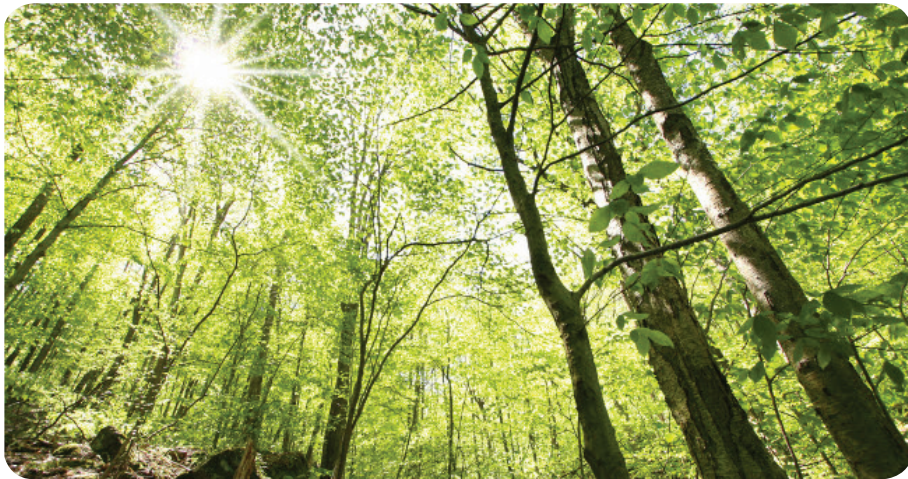


Figure 4.6 - Natural environment

Providing of opportunity for you to learn about and understand the real nature of the environment by using it and to adapt your lifestyle accordingly, can be called outdoor education.

The objective of outdoor education is to develop the skills of observation, exploration, perseverance, innovation and team spirit etc. Apart from that, it is also expected to develop attitudes such as to love and protect the environment.

You can gain lot of experience by engaging in outdoor activities. Some of them are;



1. Understanding of how the elements in nature are strongly interconnected.
2. Appreciating the beauty and the charm of the natural environment.
3. Motivating to protect the environment.
4. Identifying the negative impacts on the ecological balance and proposing remedies to overcome them.
5. Identifying strategies to live in the wood.
6. Learning to utilize natural objects in place of technological equipment.
7. Developing skills to adapt lifestyles to suit the environment.
8. Learning to take leadership.
9. Developing skills to successfully face challenges.
10. Learning to work as a team.

There are many activities in which you can take part while learning outdoor education. Such activities can be classified in various ways.

Diagram 4.1

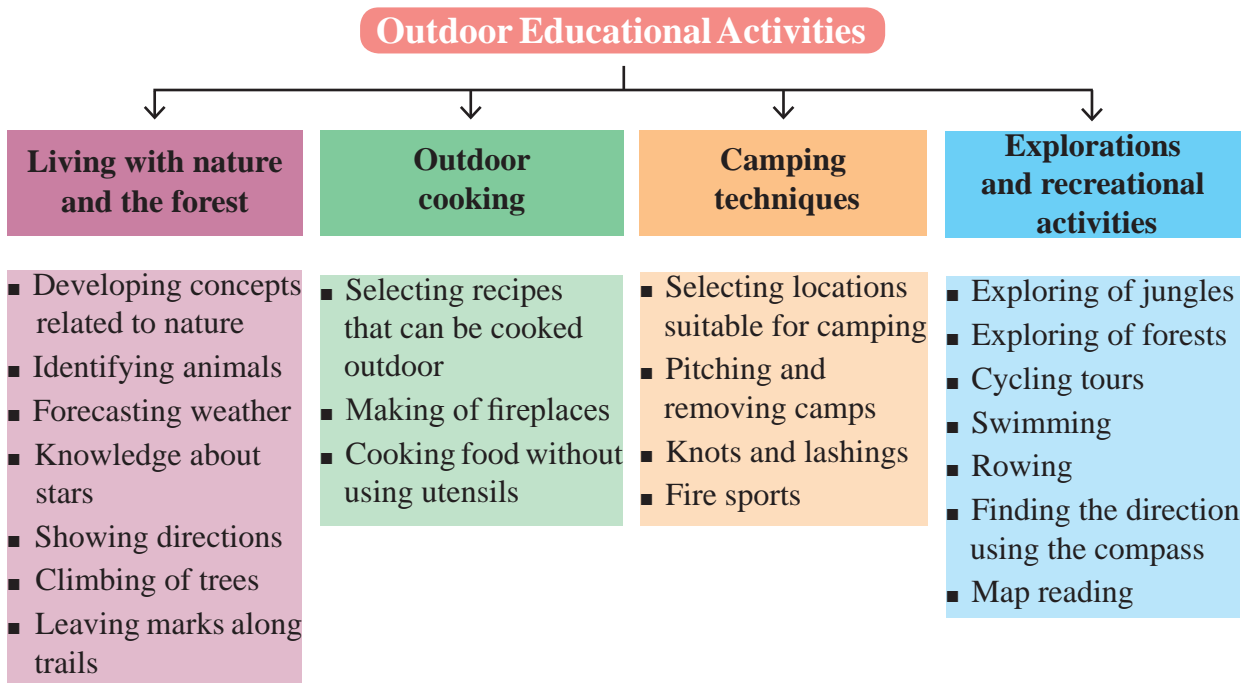




Figure 4.7 - Outdoors education

### Benefits of engaging in outdoor activities

Physical and psycho-social skills that are required for the success of your future life can be developed by engaging in organized games and outdoor activities.

#### Physical

1. Development of physical fitness.
2. Not getting tired too soon during activities.
3. Getting used to adopt correct postures.
4. Having less possibility of facing accidents and injuries during day-to-day activities.
5. Strengthening of bones and muscles.
6. Improving nerve-muscle coordination.
7. Improving the efficiency of the nervous system, respiratory system and circulatory system etc.

#### Psycho -social

1. Ability to live motivated life.
2. Learning to spend the leisure effectively.
3. Development of team skills such as friendliness, co-operation and helping each other.
4. Development of leadership skills.
5. Developing skills related to respecting social values, following rules and ethics and maintaining of discipline.
6. Gaining ability to manage stress.

## Summary

Sports that are played by following a set of rules and regulations are called organized games. Organized games can be classified based on the place where the games are held and the equipment used.

Outdoor education is to understand the true nature of the environment by using the natural environment outside the classroom. There are many activities that can be done in order to fulfill this. These activities, too, can be classified in a number of ways.



## Exercise

1. Define the term “organized games”.
2. Name the sports that are played in Sri Lanka and classify them.
3. List the benefits that can be gained by engaging in outdoor activities.

# 5

## Let us play volleyball

Volleyball is a popular game all over the world and is a compulsory game in all schools in Sri Lanka. Volleyball is a less expensive game and it can be played in a small area. There are six main skills in volleyball, namely serving, receiving, setting, spiking, blocking and defending.

You may remember that, you have learnt the skills of serving, receiving and setting when you were in the previous grades.

In this grade you will learn the skills of spiking and blocking.

### Volleyball – Introduction

In a game of volleyball, there are twelve players in each team. Among them, one or two are nominated as libero players. During the play, six players take part. Out of them, three players should be positioned in the front and the other three should be positioned at the back. They are called front-row players and back-row players respectively.

A team gets the opportunity to choose a libero player as one out of six. The libero player acts as a back-row player, but there are restrictions and rules on how a libero player is allowed to play.

### Spiking

Spiking can simply be defined as hitting the ball that is above the net so that it goes straight over the net on to the opposite side. Except for serving and blocking, any other action which directs the ball towards the opponent can be considered as spiking.

Spiking can be described in several stages for easy understanding of the technique.



Figure 5.1 - Spiking

## Approach

- Reaching the part of the court where the ball is up in the air in order to hit the ball is called the approach.

## Take-off

- After reaching the area of the court under the ball, jumping up towards the ball is called take-off.
- When taking off, first the knees are bent and the body is leaned downwards.
- Swinging the two hands backwards as the body moves downwards helps make an easy take-off.
- Together with the take-off, the body should be bent backwards like a bow and the two hands should be brought upwards from the front of the body.

## Hitting the ball

- The hitting hand should be brought back over the head and the ball should be hit as the body is brought forwards very fast.
- When hitting the ball, the hitting hand should be well straightened and should hit at the highest possible level.
- When hitting the ball, the free hand should be held freely at the level of the head in front of the body.
- The eyes should be focused on the ball.

## Landing

After hitting the ball, the player should land on the ground maintaining the balance of the body by bending his knees.



## Let us go outdoor

### Activities to practise spiking

1. > Take a volleyball.
  - > Toss the ball up with the non-dominant hand.
  - > Hit the upper part of the tossed ball hard with the dominant hand.
  - > Do this activity as many times as possible.



Figure 5.2

2. > Toss the ball up with both hands.
  - > After tossing the ball, jump and hit it hard.



Figure 5.3

3. > Fix a net in the playground so that the net lies above the level of your raised hands.
  - > Now take a volleyball and throw it up above the net.
  - > Now jump up and hit the ball so that it lands on the opposite side of the court.
  - > Continue practising this activity, gradually increasing the height of the net.

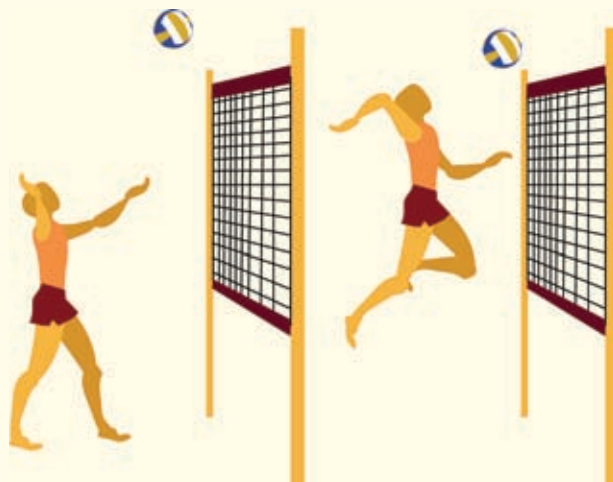


Figure 5.4

4. > Ask a friend to toss the ball up into the air close to the net.
  - > Jump up and hit the ball so that it lands on the opposite side of the court.



Figure 5.5

5. > Take a volleyball and bounce it fast on the ground so that it bounces into the air above your head.
  - > As the ball bounces, jump up and hit the ball.



- > The speed at which the ball should be bounced has to be determined according to your jump.

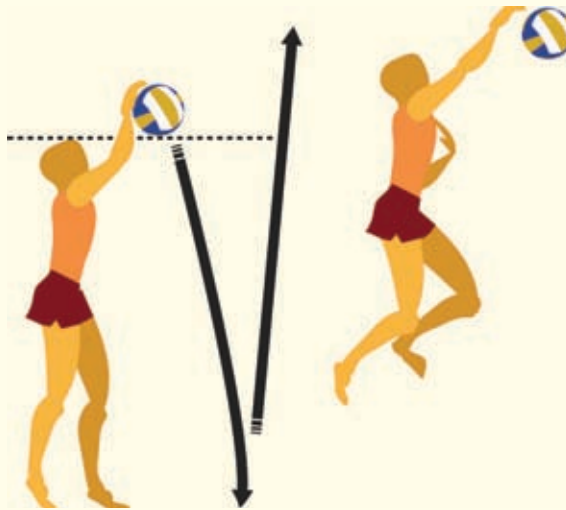


Figure 5.6

6. > Do the activity described above together with a friend.
  - > When one of you bounce the ball on the ground, the other can jump up and hit the ball.
  - > Continue doing this activity changing roles.

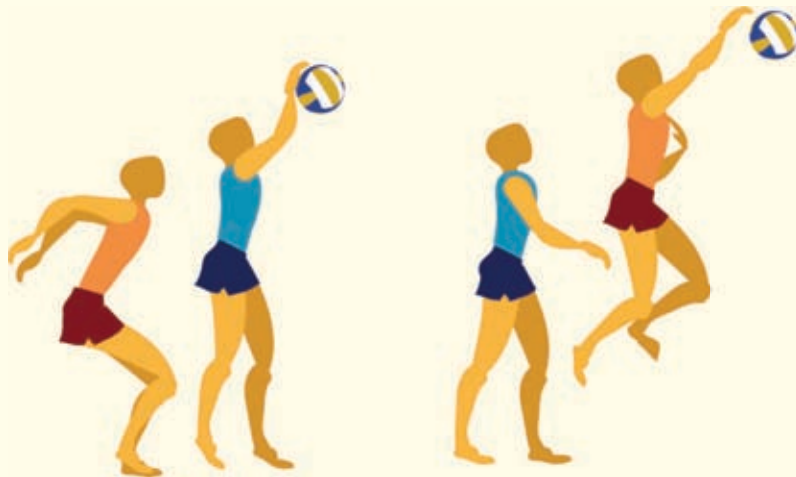


Figure 5.7

## Factors that should be taken into consideration when spiking

- While spiking, the ball should not be caught or thrown.
- Should not hit the ball while the ball is in the opponent's side.
- After hitting, the ball should land on the opposite side of the court.
- A front-row player can hit the ball at any height within the player's own playing space.
- But a front-row player cannot hit the ball that is served, when it is completely above the top level of the net.
- A back-row player can hit the ball at any height, from the back zone.
- A back-row player may also hit the ball from the front zone, but at the time at least a part of the ball should be below the top level of the net.
- On any occasion, a libero player cannot hit a ball that is above the top level of the net.
- No player in the same side can hit the ball that is lifted by the libero player in the front zone, if it is completely above the top level of the net.

## Blocking

Blocking is obstructing the ball coming from the opposite side, when it is above the net, by a front row player, before it enters their side.

Only front-row players are permitted to block. At the time the blocker is in contact with the ball, a part of the body of that player should be above the top level of the net.

In order to secure victory in a game of volleyball, blocking the ball is as important as spiking. Blocking, which is an action that should be done against the spiking of the opponents, should take place at the same time the ball has been spiked. When the ball is hit by the opponents, the challenge can be reduced by blocking it at the net. Therefore, as a volleyball player, you should diligently practise the skill of blocking.

The technique of blocking, too, can be described in several steps:

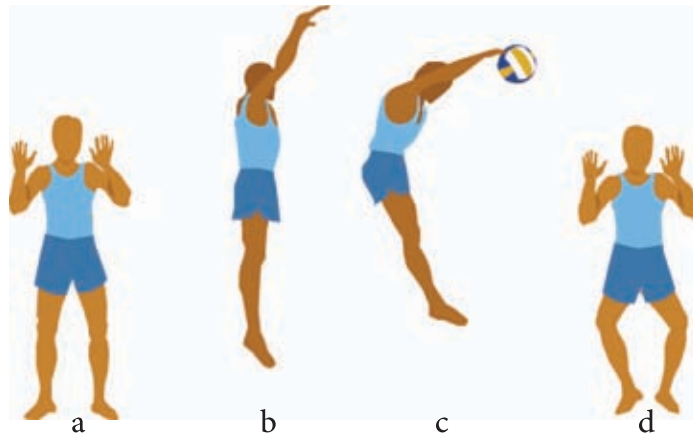


Figure 5.8 - Blocking

### Preparation

- Stand facing the net with legs shoulder-width apart, keeping the body in a balanced position.  
(5.8 a)

### Approaching the ball

- Anticipate the place where the ball is going to land and approach it.

### Taking off and touching the ball

- Bend the hands at the elbows, raise them and position them on either side of the head.
- Spread the fingers and hold with your palms facing towards the net.
- Bend the knees and then jump up.
- As the blocker is up in the air, the hands should be placed over the net directed towards the opponents' court.  
(5.8 b,c)

### Landing

- Landing should be done on the balls of the feet.
- After landing, the two hands should be brought down.
- Body balance should be maintained by bending the knees.  
(5.8 d)



## Let us go outdoor

### Activities to practise blocking

- › Take a volleyball and go to a playground or an open place.
  - › Stand with your legs a shoulder-width apart.
  - › Hold the ball with both hands and raise the hands with the ball.
  - › Now bend the hands at the wrist and make the ball fall fast on to the ground close to your feet.
  - › Do this activity as many times as possible.



Figure 5.9

- › Join with a friend who is of different height from yours.
  - › The taller one should hold the ball in one hand and keep that hand raised from a side.
  - › The other should jump up a little and make the ball fall on the ground in the same way it was done in the previous activity.
  - › Do this activity as many times as possible.



Figure 5.10

3. > Go to a volleyball court or to an open space where a net has been fixed.  
Get into pairs.
  - > One should stand at the back of the court and send the ball over the net.
  - > The other should stand in front and should block the ball jumping up.
  - > Before doing the blocking, the blocker should keep the two legs a shoulder-width apart, lower the body by bending the knees and be prepared to jump up.
  - > All the participants should do this activity changing roles.



Figure 5.11

## Factors to be considered for effective blocking

- A blocker should not touch the ball that is in the opponent's side before an opponent hit the ball.
- Blocker's hands should not be placed over the top level of the net before the ball has been spiked by an opponent.
- Blocking cannot be done by a back-row player or the libero player.



### Activity

Engage in playing volleyball following the rules of spiking and blocking.

### Summary

For a game of volleyball, a team requires six players – three front-row players and three back-row players.

Both the skills of spiking and blocking are very important in order to secure victory in volleyball.

Spiking is to hit the ball that is in the air above the net to send it to the opposite side. Spiking can be described under four stages, namely approach, take-off, hitting the ball and landing.

When the ball is coming from the opponent's side, obstructing it before it enters the other side is called blocking. Blocking is done in four stages namely, preparation, approaching the ball, taking-off and contacting the ball and landing.

Rules of spiking and blocking should be followed in order to execute a successful spiking or blocking.

You can develop these skills by engaging in simple practice activities.



### Exercise

1. Execute the spiking and the blocking by following their techniques step by step.
2. Write three factors for each, to be taken into consideration when spiking and blocking.

# 6

## Let us play netball

Netball was initially a very popular game among girls, but at present even boys play netball and there are also mixed events where both girls and boys play for the same team.

You remember that when you were in previous grades you have learnt several netball skills and engaged in activities that help to develop ball controlling skills by catching the ball, holding the ball and throwing the ball.

In this grade, you will learn skills that are important in passing the ball. For that, let us practise in the playground the three skills, namely attacking, defending and shooting.

### Attacking

A game of netball begins with the centre pass. From the centre pass up to shooting, the ball should be passed between the players of a team, strategically avoiding the players of the opposing team and a goal should be scored by shooting the ball. Passing the ball in this manner is called attacking.

While the ball is being taken to the netball post by a team by way of passing it between players, the players of the opposing team try to prevent the players of that team from receiving the ball. Therefore, activities should be designed to practise skills in attacking so that players learn to pass the ball avoiding their opponents.

### Defending

The aim of defending is to restrict and delay the opportunity for the players of the opposing team to get a goal by shooting the ball after it has been passed among the members of that team.

Defending can be done as follows.

1. defending the player
2. defending the ball
3. defending the position



## 1. Defending the player

Preventing the attacker from catching the ball is called as defending the player. This can be done in four methods.

- i. Standing in front of the attacker
- ii. Standing behind the attacker
- iii. Standing beside the attacker
- iv. Standing opposite the attacker



Figure 6.1 - Defending the player

## 2. Defending the ball

When defending the ball, the defender should identify the landed foot of the player who has received the ball and should prevent the ball from being thrown by standing face to face with the ball 3 feet away from that landed foot of the player with the ball. The defender should obstruct throwing of the ball by the attacker by extending her hands according to the throwing direction. As the attacker is throwing the ball, the defender can jump up and catch the ball as it is released from the hand of the attacker.



Figure 6.2 - Defending the ball

## 3. Defending the position

After passing the ball to an another player of the own team, the attacker moves to a free place. Preventing the attacking player from moving in this manner is called defending the position.



Figure 6.3 - Defending the position

## Shooting the ball

The victory of a game of netball depends on the number of points a team scores. A point is scored for each correct shooting. Practise the shooting techniques following the steps given below.

- Place the ball on the palm of the dominant hand, raise that hand above the head and stand with the feet shoulder-width apart or with one foot in front so that the body is positioned upright.
- Keep the free hand on the ball as a support to the ball.
- Focus the eyes on the ring of the netball post.
- Bend the knees slightly while keeping the body in an upright position and shoot the ball as the body is raised straightening the knees.
- The ball should be released from the hand at maximum possible height.



Figure 6.4 - Shooting the ball



## Let us go outdoor

### Activities to practise attacking and defending skills

#### 1. Basic movements

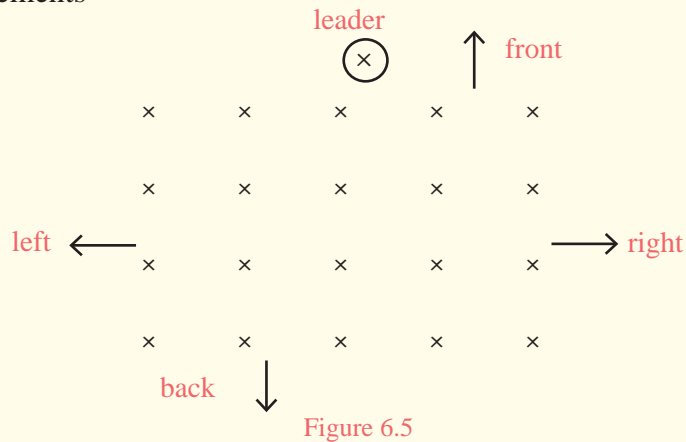


Figure 6.5

- › Position yourself as shown in the figure 6.4
- › Run to the left, right, front or back on receiving the signal given by the leader

#### When doing this activity,

- › Players should run on the balls of their feet.
- › The chin should be kept straight looking forwards and the body should be held freely.
- › Should take short steps.

#### 2. Zigzag running

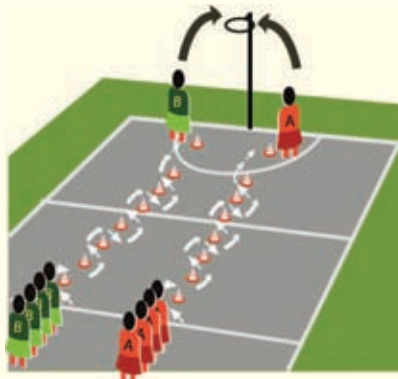


Figure 6.6

- › Stand in a few lines with equal numbers in each line.
- › Stand 10 cones or small flags in front of each line with gaps of 2 feet between each.
- › At a given signal, the student at the front of each line should run between the cones or the flags in zigzag and then run back in zigzag and should go to the back of the line.
- › While running between cones or flags, body postures should be changed instantly and body movements should be done promptly.

### 3. Avoiding the defending player



Figure 6.7

- › Get into several groups so that each group stands in a line.
- › Place two marks as mark 1 and mark 2 in front of each line so that there is a gap of two feet between the two marks.
- › At a given signal, the student standing at the front of each line should place the right foot on mark 1 and should bend the body to the right.
- › Then they should raise the body and come back to the former position.
- › After that, the left foot of the students should be placed on mark 2 and the body should be bent to the left.
- › Next the student should come to the former position.
- › After completing these actions the students should go to the back of their lines.
- › When doing this activity body posture of the students should be changed instantly and very fast.

#### 4. Activities with pairs

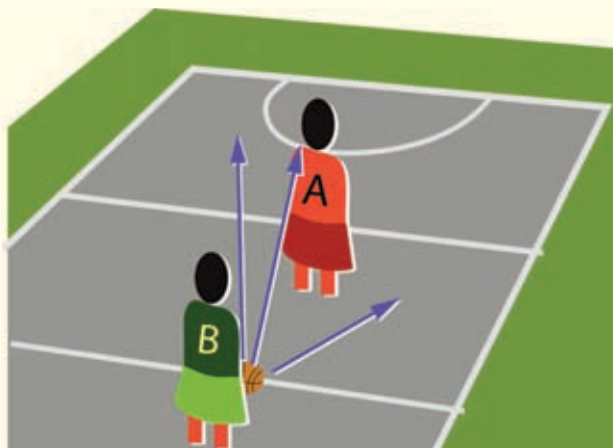


Figure 6.8

- › Two students should stand in the playground as shown in figure 6.7.
- › One student should act as defender and the other should act as attacker in carrying out the activities.
- › Initially practise the activities without the ball.
- › Then practise the same activities using the ball.

### Activities for practising shooting skill

1. Shooting the ball from different points that have been marked on the goal circle.



Figure 6.9

2. Draw circles with varying radii inside the goal circle and shoot the ball from each of the circles.
3. Catch the ball sent from outside the court close to the netball post and shoot the ball immediately after catching it.

## Fouls committed when attacking, defending and shooting

1. Interrupting by keeping the foot so that it is less than 3 feet away from the landed foot of the player with the ball.
2. Defending the ball by stretching the hands sideways.
3. When defending and attacking, knocking against the opponent, pushing the opponent, causing the opponent to fall by entangling a foot, hitting the opponent and grabbing the ball.
4. Falling on the opposing player, jumping on to the opposing player, putting the elbow across, pushing the opponent possessing the ball or hitting the ball with the fist.
5. Holding the opposing player either accidentally or intentionally.
6. Placing the hand on the ball or shaking the netball post.

A penalty pass is given for infringements that involve opposing players. Either a penalty pass or a penalty shot is awarded for the infringements that are committed by the opposing players within the goal circle.



### Activity

Divide the class into several groups so that there are seven pupils in each group.

- i. Play a netball match applying the netball skills and the netball rules and regulations you have learnt.
- ii. Get some pupils in your class to judge the match following the relevant rules and regulations.
- iii. Appraise the skills of the players in playing the match and in judging it.

## Summary

In netball, the three skills, namely attacking, defending and shooting are very important.

A game of netball begins with the centre pass. From the centre pass up to shooting, the ball should be passed between the players of a team by strategically avoiding the players of the opposing team and a goal should be scored by shooting it. Carrying the ball in this manner is called attacking.

Restricting and delaying the opportunity for the players of the opposing team to get a goal by shooting the ball after it has been passed between the members of the team is called defending.

Throwing the ball from within the shooting circle following the correct technique is called shooting.

Various activities can be used to develop the above mentioned skills.

Attacking, defending and shooting should be done following the relevant rules and regulations.



## Exercise

1. Define the terms attacking, defending and shooting in netball.
2. Write some of the infringements that could be committed by players in each of the above mentioned stages.



# Let us play football

Football is one of the most popular games in the world. A football team consists of 11 players and it is played in a rectangular field. The victory of a football match is decided on the number of goals the teams score within a period of 90 minutes.

When you were in the previous grades, you gained theoretical knowledge and practical experience about the skills of kicking the ball, stopping the ball and heading the ball.

In this lesson you will get the opportunity to learn the skills of throw-in and goal keeping, which are two important skills in football.

## Throw-in

In football, throw-in is a method of restarting play.

When a football match is being played, a throw-in is used to bring the ball back to the court when the ball has gone out of the court across the side line.

The opponents of the player who last touched the ball before it crossed the side line get the opportunity for the throw-in from the place where the ball crossed the side line.

A goal cannot be scored directly from a throw-in.

The ball should always be thrown-in from outside the court. The opponents must stand not less than 2 meters from the point at where the throw-in is taken. After the ball is released, the thrower should not touch the ball again until it has touched another player.

### technique of throw-in

- The thrower should be facing the field of play at the moment the ball is released.
- Both feet of the thrower should be behind the side line, with one foot behind or apart.
- The ball should be held in both hands and thrown from behind over the head.
- The body should be bent backwards and as the body is straightened again, the hands should be brought forwards and the ball should be released.

## Goal Keeping

Out of football skills, goal keeping is a very important skill because the victory of a match depends on the number of goals scored. Preventing the ball from entering the goal is called goal keeping. By goal keeping, the opponents can be prevented from winning goals. Only the goal keeper is allowed to touch the ball with the hand. The goal keeper should be clad in a colour that is different from that of the other players of his team.

Methods of goal keeping vary based on the ways the ball reaches the goal. Accordingly, keeping the ball that is coming towards the goal is done in the following ways:

1. Keeping of the ball that is coming along the ground from the front.

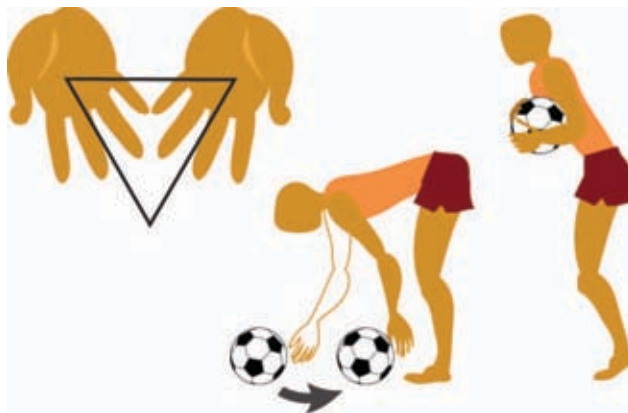


Figure 7.1

2. Keeping of the ball that is coming along the ground from a side.



Figure 7.2

3. Keeping of the ball reaching at chest level or abdominal level.



Figure 7.3

4. Keeping of the ball reaching above head.

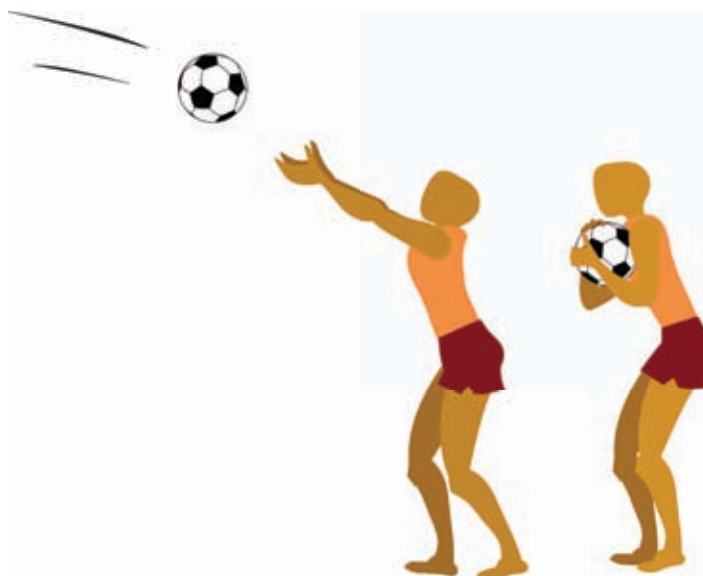


Figure 7.4

5. Keeping of the ball by jumping to a side or by changing the direction of the ball.



Figure 7.5

Out of the methods described above, let us now learn how to goal keep when the ball is coming along the ground and at chest level or stomach level.

### Technique of goal keeping

- The goal keeper should stand on the goal line with legs about shoulder-width apart maintaining body balance.
- Hands should be bent at the elbows and should be positioned on the sides of the body above shoulder level.
- The knees should be bent bringing the body downwards and bending the body slightly forwards.
- The goal keeper should stand on the balls of the feet so that it is easy to move.
- When the goal keeper is in this position, he can easily move to the left, to the right, forwards or backwards.



Figure 7.6

## **Keeping of the ball that is reaching along the ground**

- The goal keeper should be prepared with the correct technique.
- Then he should reach the path of the ball and should stand with the legs close together.
- As the ball comes closer, the keeper should lower the body bending from his knees.
- The eyes should be focused on the ball.
- The fingers of the hands should be spread and the ball should be held with both hands.
- As the keeper straightens the knees and raises his body, the ball should be lifted towards his chest.

## **Keeping of the ball reaching at chest level or stomach level**

- The keeper should be prepared according to the correct technique.
- Eyes should be focused on the path of the ball and the keeper should be positioned with the legs slightly apart according to the path the ball takes.
- The body should be bent slightly forwards by bending the knees according to the path the ball takes and the ball should be brought close to the chest or abdomen.
- When the goal keeper is in this position, his elbows should be slightly bent so that it is easier to catch the ball.
- Soon after holding the ball it should be brought close to the chest.



## Let us go outdoor

### Activities to practise the throw-in

1. › Hold the ball correctly and throw it to some distance from over the head.



Figure 7.7

2. › Get into pairs. Hold the ball correctly and pass it to each other from above the head.



Figure 7.8

3. › Get into two groups and stand in two lines facing each other.  
› Leave sufficient space between the two lines to pass the ball between the two students in the front as shown in the figure

- › The ball should be held with both hands from above and behind the head and the student at the front of each line should pass the ball between two of them.
- › After passing the ball, two players should run to the back and stand at the back of their lines.
- › This activity should continue until all the students have passed the ball.



Figure 7.9

## Practise activities for goal keeping

### Practising keeping the ball that is coming along the ground

1. › Bounce the ball on a wall so that the ball goes in different directions.
  - › Stand in the correct position and keep the ball.



Figure 7.10

2. › Get into pairs.
  - › One should kick the ball so that it moves in different directions along the ground.



- › The other should keep that ball following the correct technique.
- › Now the next pair should practise doing the activity.

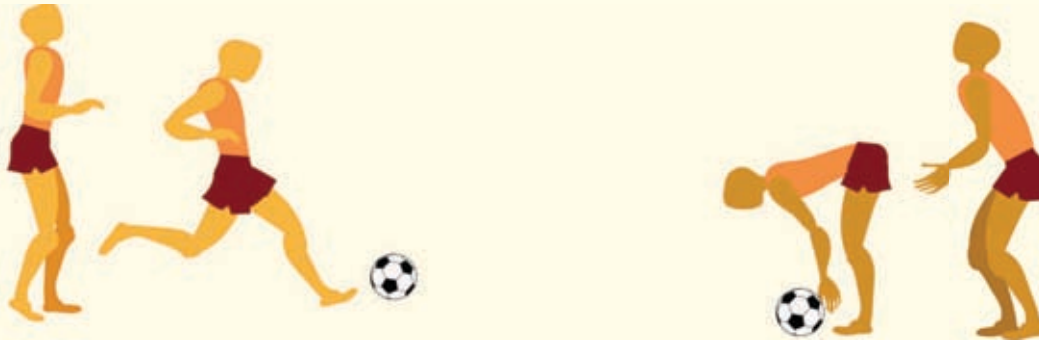


Figure 7.11

### Keeping the ball that is reaching at chest level

1. › Take a football and bounce it on a wall from chest level so that the ball moves in different directions.
- › Now be in the correct position and catch the ball.

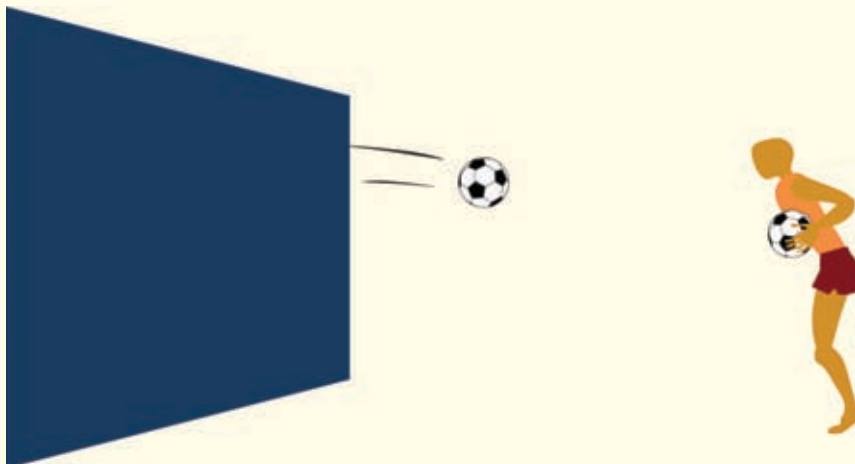


Figure 7.12

2. › Get into pairs.
- › One should throw the ball to the left, to the right, forwards and backwards from shoulder level.
- › The other should stand in the correct position and catch the ball.
- › Then the next pair should practise doing this activity.

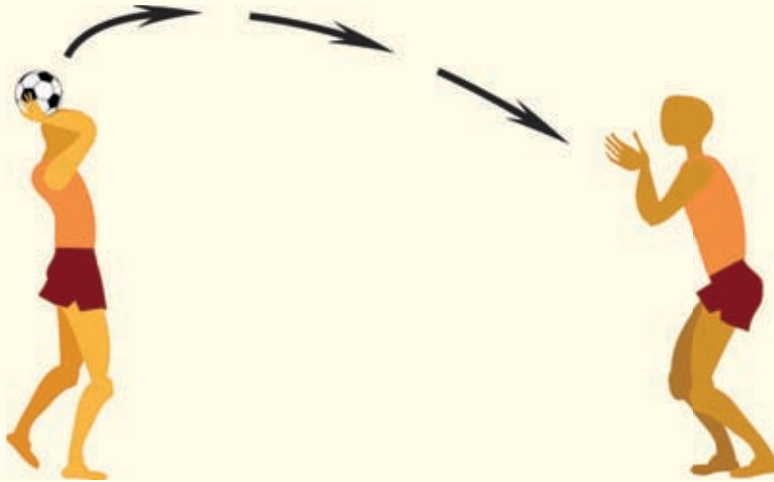


Figure 7.13



### Activity

Create a lead-up game including activities to practise throw-in and goal keeping in football and engage in the game.

## Summary

When the ball has gone out of the court across the side line, the skill of throw-in is used to bring the ball back to the court.

It is important to learn the throw-in technique, activities that can be used to practise throw-in and rules and regulations related to throw in.

Preventing the ball from entering the goal is called goal keeping.

Methods of goal keeping vary depending on the ways the ball reaches the goal. Such ways are the ball coming along the ground from front or from a side, at chest level or abdomen level, above head level and the ball that cannot be caught by hand.

You can engage in activities in order to learn how to keep the goal, adopting the correct technique.



## Exercise

1. What skill is used to restart play in a football match when the ball has gone out of the field across a side line?
2. Write three faults that may be committed while a throw-in is taken.
3. State the different methods of keeping the goal according to the ways the ball is coming towards the goal.
4. Which player of a football team should be clad in a different colour?

## Let us train for relay - races

Out of athletic events, relay race is an event where the runners take part as teams. Therefore, many runners get the opportunity to participate in the same event at the same time. In a relay race, four runners take turns in running, changing a baton and victory can be achieved through the skills of all the four runners of the team. Maintaining of a maximum running speed throughout the race and changing of the baton correctly and efficiently are very important factors in relay races. For a correct baton change, it is essential that runners have a good training and good understanding among them.

When you were in the previous grades, you engaged in various running exercises in order to improve the running technique.

In this lesson, you will get the opportunity to learn the upsweep technique and the downsweep technique of baton change in relay races, and how the inside change, outside change and the mixed change are done, and also how the visual pass and the non-visual pass are done.

### Baton change techniques

**There are two techniques of baton change according to the way the baton is handed over by the runner who is carrying the baton to the next runner.**

1. Upsweep technique
2. Downsweep technique

#### **Upsweep technique**

In the upsweep technique of baton change, the baton is swept upwards by the giver. The receiver stretches the hand behind so that the palm faces downwards and gets hold of the baton.

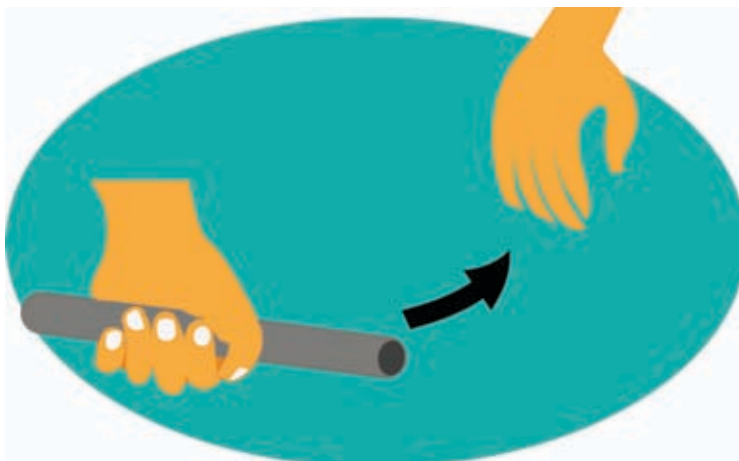


Figure 8.1 - Upsweep technique

## Downsweep technique

In the downsweep technique, the giver sweeps the baton down. The receiver stretches his hand behind turning the palm of the hand upwards and gets hold of the baton.

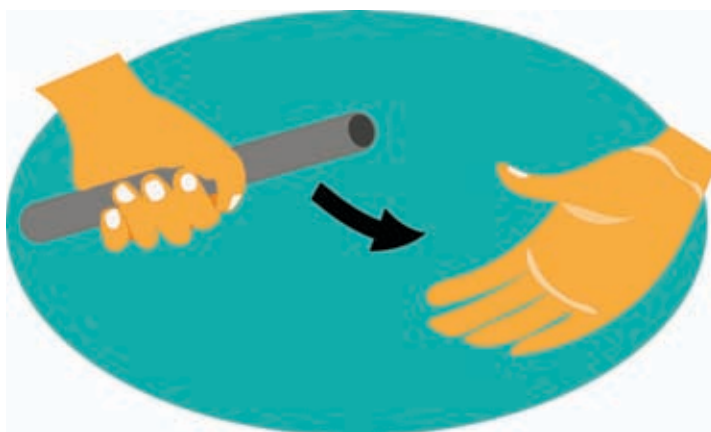


Figure 8.2 - Downsweep technique



### Activity

Under the guidance of your teacher, engage in practice activities together with your friends in the class to practise the upsweep technique and the downsweep technique of baton change.

**Baton change can once again be divided into three types base on the side of the body from which the receiver receives the baton.**

1. Inside pass
2. Outside pass
3. Mixed pass

### **Inside pass**

In the inside pass method, the receiver receives the baton in his/her left hand (on the inside of track). The giver carries the baton in his/her right hand.



Figure 8.3 - Inside pass

### **Outside pass**

In the outside pass method, the receiver receives the baton in his/her right hand (on the outside of the track). The giver carries the baton in his/her left hand.



Figure 8.4 - Outside pass

## Mixed pass

In a relay race changing the baton both with the inside pass and the outside pass in turns is called the mixed pass. The mixed pass is suitable for a 4 x 100m relay race run in a 400m track.

**Relay races of different distances are held. Passing the baton is done in two ways based on the distance of the race.**

1. Visual pass
2. Non-visual pass

## Visual pass

If the receiver looks at the baton when receiving the baton in a relay race, it is called the visual pass technique. In this method, the receiver positions the hand so that the palm faces upwards. This method is used in relay races of 4x400m and above.

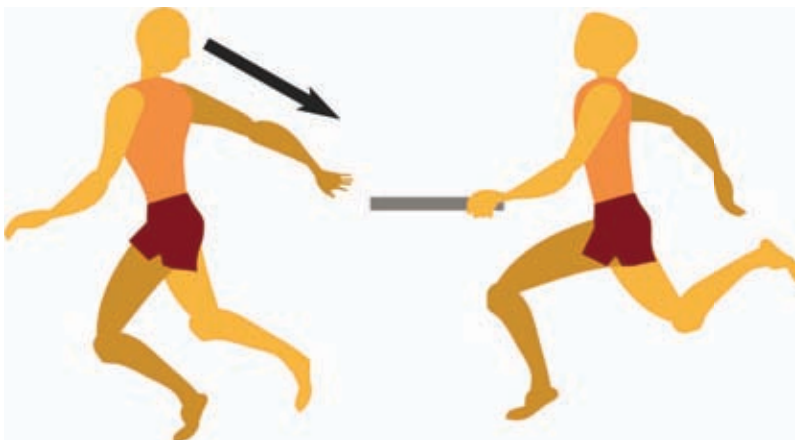


Figure 8.5 - Visual pass



## Non-visual pass

If the receiver takes the baton without looking at the baton in a relay race, it is called the non-visual technique. This method is used for short distance relay races, namely 4x100m races and 4x200m races.



Figure 8.6 - Non-visual pass



### Activity

Go to the playground with your friends and practise changing the baton according to the visual pass technique and the non-visual pass technique.



Let us go outdoor

### Activities for practising the baton change

The following activities can be used to practise the upsweep technique, downsweep technique, inside pass, outside pass and the mixed pass.

- › Get into groups of four and stand in lines as shown in the figure 8.7 so that there is sufficient gap between two students in each line to change the baton.
- › Begin from the student in the back of the line who gives the baton to the third student in it, the third to the second and then the second to the first in the front.
- › Practise doing these activities, first standing in the same place, then walking, next running slowly and finally running fast.



Figure 8.7



#### Activity

Create a lead-up game that is suitable for practising baton change techniques and engage in the game.

## Rules for baton change

1. The baton should be exchanged directly from hand to hand. It should not be thrown.
2. If the baton slips and falls down while it is being exchanged, the runner who handed over the baton should pick it up and give it to the receiver. The receiver should not pick up the baton.
3. Before or after the baton has been exchanged, lanes should not be obstructed so that the other runners are disturbed.
4. The baton should be carried in the hand throughout the race.
5. The baton should be exchanged only within the baton exchange zones.

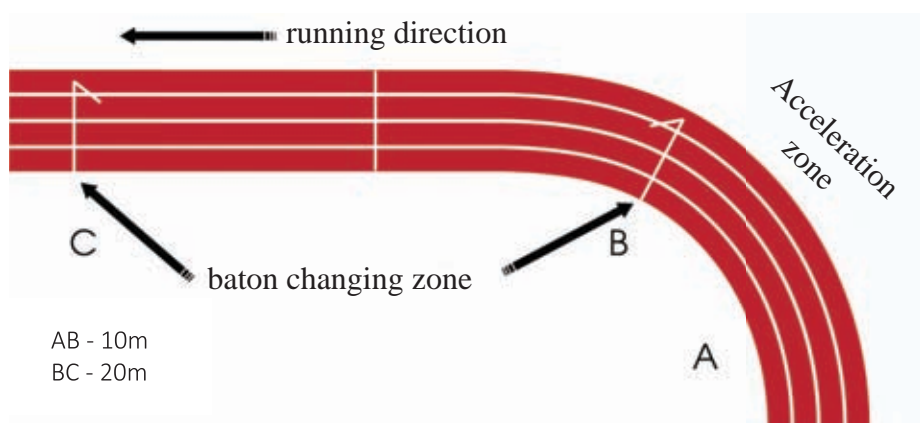


Figure 8.8 - Baton exchange zone

### Summary

Out of athletic events the relay race can be called a team event.

Baton change is a very important factor in relay races. There are two techniques of baton change, namely the upsweep technique and the downsweep technique based on the direction the baton is swept when changing.

Baton change can be divided into three types, namely inside pass, outside pass and the mixed pass based on the side of the body from which the receiver takes the baton.

In relay races, baton change is done in two ways, namely the visual pass and the non-visual pass, as appropriate for the event.

You should engage in practising activities for successful baton change.



## Exercise

1. Describe the upsweep technique and the downsweep technique of baton change in relay races and demonstrate how the baton is changed according to these two techniques.
2. How do the inside pass and the outside pass of baton change differ?
3. Describe how the mixed pass of baton change is done during a relay race.
4. What relay events use visual pass method for baton change?
5. What relay events use non-visual pass method for baton change?
6. State two occasions where a team will be disqualified due to a fault in the baton change?

## Let us practise long jump

According to the classification of athletic events, long jump is a horizontal jump that comes under field events. Speed, strength and coordination, which are different factors of physical fitness, are very important for gaining victory in long jump event.

When you were in grade 8, you learnt the different phases of the long jump under the sail technique and you also engaged in activities related to this technique.

In this lesson, you will learn the different phases of the long jump under the hang technique and will get opportunity to engage in activities to practice it as well.

### Techniques of Long Jump

There are three techniques of long jump based on the way the jumper manages his body during the flight:

1. Hang technique
2. Sail technique
3. Hitch-kick technique

### Phases of long jump

Each technique of long jump consists of four phases.

1. Approach run
2. Take off
3. Flight
4. Landing

## The hang technique of long jump

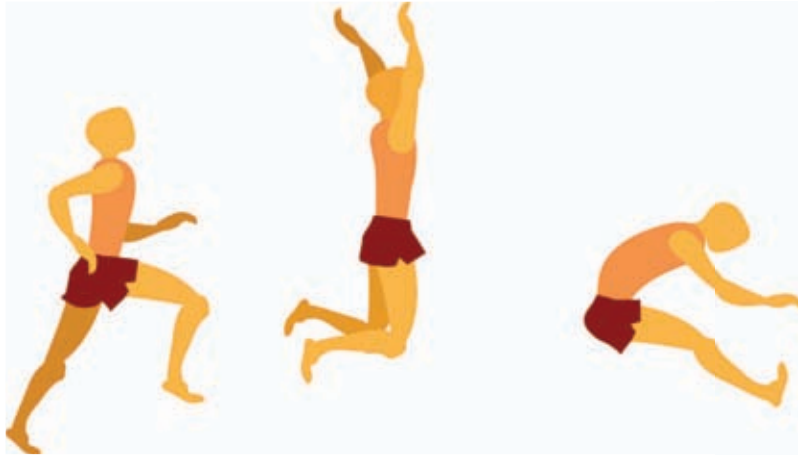


Figure 9.1 - The hang technique of long jump

This technique is called the hang technique because the jumper, after taking off, makes the flight with his/her hands raised as if he/she is raising hands to hang on a support that is lying above.

When the long jump is made according to this technique, a very fast and rhythmic approach run should be made up to the take-off board lifting the knees high.

- The take-off foot should be placed correctly on the take-off board and the take off should be made properly in order to make the flight.
- Then the two feet should be brought forwards and upwards, and the two hands that were at the back should be brought forwards.
- Then the body is bent forwards and the landing is done.
- As the two feet touch the landing area, the knees are bent and the body is pushed forward along the ground in a sitting position.



Let us go outdoor

## Activities to practise long jump

1. › Walk forward.  
› Take off from one foot and jump over a small obstacle, on the walk.



Figure 9.2

2. › Run slowly.  
› Take off from one foot and jump over a small obstacle on the run.



Figure 9.3

3. › On slow run, take off from the dominant foot at the mark placed on the ground.  
› Jump over the obstacle placed in front of the mark and land with both feet.



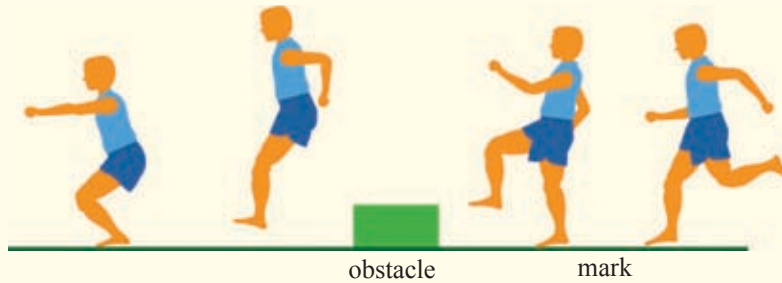


Figure 9.4

4. › Take off from your dominant foot at the last step of an approach run of three steps.
- › Again change to running.
- › When doing this, the take-off leg should be well-straightened and the free leg should be raised parallel to the ground.
- › The two hands should be straightened well and should be in a hanging position.



Figure 9.5

5. › Remain in the same place, jump up and touch with both hands a support that has been hung above and then land with both feet.
- › When landing, the knees should be bent.



Figure 9.6

6. › Take an approach run of a few steps, take off with the dominant foot at a marked place, and touch with both hands the supports that have been hung above.
- › Raise both legs parallel to the ground and then land correctly with both feet.

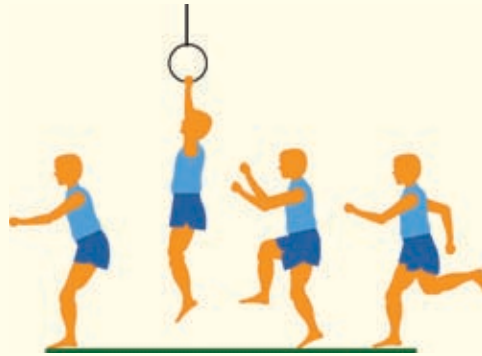


Figure 9.7

7. › Take an approach run of 7 or 9 steps and do the long jump according to the hang technique.



Figure 9.8

## Occasions which are considered as failures in a long-jump event

- Touching the ground beyond the take-off line with any part of the jumper's body while taking off for the long jump.
- Taking off by placing the take-off foot on the ground outside the two sides of the take-off board.
- Making somersaults while running or while jumping.
- Not starting to attempt jumping before the lapse of one minute after the number of the jumper has been announced.
- After landing, walking back towards the take-off board along the landing area.

### Summary

According to the classification of athletic events, long jump is a horizontal jump under the field events.

There are three techniques of long jump, namely the hang technique, the sail technique and the hitch-kick technique.

Each of these techniques consists of four phases, namely the approach run, take-off, flight, and landing.

Knowledge of rules of long jump, following them and engaging in practice activities are very important for taking a successful jump.



### Exercise

Fill in the blanks of the sentences from 1 to 5.

(three/ horizontal/ one/ four/ take-off)

1. Long jump is an event coming under ..... jumps.
2. There are ..... techniques of long jump.
3. Each technique of long jump consist of ..... phases.
4. The phase after the approach run is the ..... phase.
5. In a long jump event, a jumper is given a time period of ..... minute after his/her number has been announced to start attempting the jump.
6. State three occasions which are considered to be fouled in long jump.

# Let us fulfill our nutritional needs

If we do not get the required amounts of nutrients from food we may get various illnesses and our body will become weak. Therefore to prevent getting diseases and to maintain a healthy life we need to know about the nutrients in food and the different stages in life we need them most.

In the previous grades you would have studied on the nutrients needed for life, problems with nutrition, food pyramid, nutrients required for the family, points to consider when selecting food, consuming and storage of food so that the nutrients are not destroyed.

In this lesson you will learn about the different nutrients needed during different stages in our life cycle, nutritional needs in special groups, various myths regarding nutrition and how you could contribute to choose nutritious food.

## Our nutritional needs

Food provides our body with energy, repairs our body and protects our body from various diseases. The different nutrients found in our food help to do this work.

The main nutrients needed in our body are carbohydrates, proteins and lipids. The micro nutrients needed in our body are vitamins and minerals.

Food can be divided into six groups depending on the nutrients it supplies.

1. Grains and yams
2. Vegetables
3. Fruits
4. Meat, fish and eggs
5. Pulses and seeds
6. Milk and milk products



Figure 10.1



### Activity

Make a chart containing the macro and micro nutrients, foods that contain them and their main functions.

A balanced diet is one with the right amount of each nutrient that should be provided by food. It is important to have three main meals and two supplementary meals that are well balanced. When preparing a balanced meal you can make use of the knowledge gained in previous grades from the food pyramid and the food plate.



### Activity

Divide into two groups and make charts on the food pyramid and the food plate. Hang the charts in your classroom. The grade seven text book will be useful for this.

## Stages where our nutritional needs change

Find below are the stages a baby goes through after being in the mother's womb.

Table 10.1

Age	Stage
Birth to one year	Infant
1 year - 9 years	Childhood
10 years - 19 years	Adolescence
20 years - 59 years	Youth and middle age
60 years and above	Old age

Let us learn about the different nutritional needs during different stages in life.

### Nutritional needs of an infant

This is the period from birth to one year. During the first two years the brain, bones, muscles and connective tissues show intense growth.

The following nutrients mentioned below are needed for this.

- Proteins
- Carbohydrates
- Fats
- Minerals - Calcium, Iron, Zinc
- Vitamins

All these nutrients are needed at optimal levels.

Until six months of age only food for the baby is breast milk and all the nutrients are supplied by it. During this period the baby's nutrition as well as the mother's is very important. After six months of age complementary feeding is started. This is a gradual introduction to solid food.



Figure 10.2 - Complementary feeding

## Food items that can be given after six months

Table 10.2

Food	Nutrients
Rice, green gram, cowpea, chick pea	Carbohydrates and proteins
Green leaves	Minerals and vitamins
Fish, meat, milk, eggs	Proteins, minerals, vitamins, iron, lipids
Fruits	Vitamins, minerals
Oil, butter, margarine	Lipids



### Activity

There is a special meal that is prepared for infants called mixed rice. Write down the foods gradually introduced when preparing this.

When preparing food for a baby it is important to be particular about the cleanliness and freshness of the food. It is also important to be particular about the cleanliness of the utensils used to prepare the food.

## Nutritional needs during childhood

Childhood is the period between one year and ten years. During this stage the nutritional requirements for boys and girls are the same. However, on the level of

activity the nutritional needs may differ. A child engaged in sports will need foods that provide energy.

During this stage as the amount of food consumed at a meal is limited, it is important to have two or three snacks in addition to the three main meals.

There is adequate growth and protection from illnesses when nutritious food is provided for the children. When adequate nutrition is not provided there is malnutrition.

Research has shown that illness such as diabetes and obesity can set in during childhood when healthy dietary habits are not followed. To prevent non communicable diseases in later life it is important to have healthy dietary habits during childhood.



### **Additional knowledge**

Child and maternal health programmes have been implemented to reduce malnutrition in childhood.

- Promotion of breastfeeding
- Giving adequate nutrition to sick children
- Providing adequate and healthy supplementary foods
- Monitoring growth
- Initiating child friendly hospital programmes
- Providing vitamin A mega dose
- Providing food packets fortified with micronutrients to children under two years of age, in areas where there are nutritional deficiencies
- Providing supplementary food to children with malnutrition eg: Thripasha
- Providing special food for children with severe malnutrition
- Providing zinc supplements when having diarrhoea
- Providing worm treatment
- Promoting proper hand washing
- Measuring body mass index and determining the nutritional level by school health clinics.
- Giving advice to mothers on nutrition
- Inspecting the teeth and treatment for dental diseases
- Providing school children with iron and folic acid supplements on a daily basis
- Introducing a program on healthy living and life skills



## Nutritional needs during adolescence

Age of 10 to 19 years is known as adolescence. It is during this period that there is an accelerated growth in height and weight. Therefore, the need for nutrition is more. During this phase, the nutritional requirements differ depending on the age, gender height, weight and level of activity. During this period extra amounts of protein, iron, iodine, calcium, vitamins ( A, B12, C, D) and folic acid are needed. During this period too the meals have to be balanced.



### Activity

Below is a chart with nutritional needs during adolescence. Fill in the third column in this chart.

Need	Nutrients	Type of food
1. Rapid growth of body	Protein, iron, iodine, vitamin A, B12, C, D, Folic acid	
2. Rapid growth of the skeletal system	Calcium, Phosphorus	
3. To prevent anemia in girls after puberty	Iron	
4. In boys due to increased level of activity	Iodine, vitamin A, B, C, iron Carbohydrate Lipid	
5. Muscle growth in boys	Protein	

## Bad eating habits of adolescents

1. Missing the breakfast
2. Eating junk food and fast food (Sausages, french fries, food which are high in sugar, fat and salt)
3. Consuming sweetened fizzy drinks
4. Consuming alcohol



Figure 10.3 - Junk food and fast food

When get used to the above habits the body get excess calories and limited amount of nutritious food. This leads to getting various illnesses.

### Consequences of bad food habits during adolescence

1. Overweight and obesity
2. Deficiency of micronutrients
3. More susceptible to develop non communicable diseases during adulthood
4. More gastrointestinal diseases
5. Menarche starts early or late/ irregular menstruation in girls
6. Retarded growth of offspring
7. Musculoskeletal diseases during pregnancy and adulthood

### Nutritional needs in youth and middle age

This is the period between the ages 20 and 59 years. As they have passed adolescence they are also considered as adults. The nutritional requirements of this stage vary depending on the gender and the occupation of the person.



## Additional knowledge

Energy requirement of a person per day in kilo calories

- Man with a high level of activity - 2700
- Man with a low level of activity - 2200
- Woman with a high level of activity - 2300
- Woman with a low level of activity - 2000



## Activity

Below is a chart showing the special requirements of an adult and the nutrients needed. Fill in the third column.

requirements	nutrients	Examples of food
To prevent weak bones	Calcium and Vitamin D	
For the regeneration of cells and maintain immunity	Protein	
Protection from illnesses	Vitamins and minerals	
To maintain a healthy digestive system	Food with fibre	

## Consequences of bad food habits in youth and middle age

1. Diabetes due to consumption of food with high sugar content.
2. High blood pressure and heart problems due to consumption of food with increased salt.
3. Obesity, heart attacks and strokes due to consumption of food with high fat content.
4. Obesity due to consumption of foods with high carbohydrate content.



Figure 10.4 - Obesity

Adults have to be particular about their nutritional needs. The dietary requirements change if there are illnesses and medical advice should be sought whenever needed. Engaging in daily exercise is important.

### Nutritional needs in old age

Our bodies grow till we are 20 to 25 years of age. The functioning of the body gradually reduces as we reach old age. By having a good balance in nutrition, our bodies will function at optimal level.

### Changes in old age

1. Reduction in appetite
2. Growth drops
3. Becomes less active
4. Develops diseases. eg: diabetes, heart problems
5. Digestion gets weak
6. Become obese or wastes



Figure 10.5 - Become less active

## Ways of ensuring good nutrition during old age

- Eating food that increases appetite
- Eating food that generates energy
- Eating food that has simple proteins to help in growth
- Take fibre rich food regularly
- Increase water intake
- Eat vegetables and fruits that help easy digestion
- Control the intake of foods high in sugar, oil and salt
- Eat low calorie foods
- If having diabetes, high cholesterol or cardiovascular diseases take meals as advised by the physician
- Select food with a soft texture which is easy to bite and chew

In addition, engage in suitable exercises whenever possible and lead an active lifestyle.

In the last part of old age it is important that solid, semisolid and liquid food described below is consumed.

Table 10.3

Solid food	Semisolid and liquid food
Pulses	Porridge
Vegetables	Soups
Fruits	Fruit juice
	Milk
	Barley
	Semolina



Figure 10.6 - Solid, semisolid and liquid food

## Nutritional needs in special groups

The same way our nutritional needs change during our life cycle they also change with the different situations in our life.

1. Pregnant mothers
2. Breast feeding mothers
3. Sportspersons
4. People who do heavy work
5. Sick persons
6. Vegans



### Activity

Write five types of food that can be consumed by people who have special nutritional needs. You may get some advice from teachers and elders.

Let us study the nutritional requirements in each situation mentioned above

## Nutritional requirements of a pregnant mother

The period a fetus is in the uterus of a mother is known as the gestational period. It is approximately 280 days. During this period the nutritional needs are very important to both mother and baby. If the mother and baby do not get the required nutrients during this period they may get various illnesses and even face life threatening situations.

After pregnancy the mother may get various nutritional deficiencies.



## Additional knowledge

Child and maternal programmes have been implemented to reduce malnutrition in childhood.

- Low birth weight
- Premature birth
- Anaemia
- Mental retardation
- Deformities in the brain and spinal cord



## Activity

Write some menus suitable for a mother during pregnancy in the chart given below.

Breakfast	Lunch	Dinner

In addition to the three main meals people are used to have a snack around 10am and 4pm. During pregnancy in addition to the two snacks, several snacks can be consumed in between meals. This is because it is more comfortable to eat in small amounts in pregnancy.

The pregnant mother should be reviewed by the midwife. The midwife will educate the mother on the nutritional needs. In addition, the mother will be given vitamins, minerals and medicines to prevent certain diseases.



Figure 10.7 - Reviewed by the midwife



### Additional knowledge

Below are some nutrients supplements and medicines given at maternal clinics during pregnancy.

Folic Acid tablets - initial 3 months of pregnancy (It is better to take folic acid when you plan for a pregnancy)

- Iron tablets - after the 3rd month of pregnancy.
- Vitamin C tablets - after the 3rd month of pregnancy.
- Calcium tablets - after the 3rd month of pregnancy.
- Worm treatment - after the 3rd month of pregnancy.
- Tetanus vaccine -

- |               |                        |                |
|---------------|------------------------|----------------|
| 1st pregnancy | - 1st dose at 3 months |                |
|               | - 2nd dose at 5 months |                |
| 2nd pregnancy | - 3rd dose             |                |
| 3rd pregnancy | - 4th dose             | } booster dose |
| 4th pregnancy | - 5th dose             |                |

(If you have received the adults tetanus / diphtheria vaccine and get pregnant within 10 years of receiving it, no need to take the tetanus vaccine.)

- Vitamin A mega dose - After delivery (Within 2 weeks)

In addition, a pregnant mother should drink a minimum of 8-10 glasses of water per day.

It is important to know about the development of the foetus as the mother gains weight gradually during pregnancy. The BMI of the mother is checked before 10 weeks at the maternal clinics. After which the weight is checked at the clinic to see if there is adequate weight gain.

For free distribution



## Nutritional needs of a breast feeding mother

After child birth the glands in the mother's breast are activated and milk is produced. This is known as breast milk. The importance of breastmilk is shown below.

- Provides natural immunization
  - Reduces allergies
  - Free of germs
  - All the required nutrients are provided
  - Necessary amount of water is provided
- 
- Can be given in a hygienic manner
  - Can be given to the baby at any moment



Figure 10.8 - Breast feeding

During the first six months after birth, the baby gets nutrition only from breastmilk. Therefore, the mother should have good nutrition to provide the baby with all the necessary nutrients and water.



### Activity

Make a menu for a breast feeding mother so that it contains all the nutrients

Food	Nutrients in the food

A breast feeding mother makes about 850 ml of milk per day. The milk contains a large amount of calcium. Thus the mother should take extra calcium. Additional meals and water should also be taken. The meals should contain macro and micro nutrients.

## Special nutritional needs for a sportsman

Nutrition is important for all but a sportsman has to pay more attention to his nutrition than others. By paying attention to his nutritional needs his sporting skills can be improved, dehydration can be prevented and his wounds will heal faster. A sportsman needs more calories than an ordinary person.

A sportsman needs lipids and carbohydrates for his energy requirements. During extra training additional proteins are needed. Proteins are needed for the growth of tissues and muscles. Salts and extra carbohydrates are needed to prevent muscle fatigue. Lipids are needed to provide energy when engaging in training for long periods.

The control of weight is also important when such nutrients are taken in this manner. This should be done under the supervision of a coach.

eg: swimmers and gymnasts should be strong but also light weight. In boxing and weight lifting strong muscles are needed.

To prevent dehydration adequate water should be drunk and if engaged in vigorous exercises or activities adequate energetic food and salts should be consumed.

## Advantages for a sportsman when getting proper nourishment

1. Helps to perform optimally
2. Body will become stronger
3. Will be healthy
4. Good control of weight
5. Development of mental faculties
6. Body composition and growth will improve
7. Faster recovery after an accident



Figure 10.9 - Helps to perform optimally

### Nutritional needs of a sick person

All sick people have to be given food as advised by the doctor.

The food provided to a patient should be of proper nutrition. If there is a nutritional deficiency the food given has to be one that corrects the deficiency. A patient has to be given food at the correct time and in correct amounts. The food has to be prepared with less oil, chillies and sugar. Food can be given as solids, semisolids or liquids as necessary.



Figure 10.10 - Feeding a sick person

In addition to the information given above different menus are used for different illnesses.

- eg: patient with diabetes - food that has less sugar
- patient with heart disease - food with less oil
- patient with high blood pressure - diet with less salt



### Activity

Write a list of illnesses and the specific food recommended for each of them

Illness	Type of food

## Nutritional needs of a vegan

Vegan is a person who takes only food of plant origin and they should pay special attention to their nutritional needs. It is difficult to gain all the essential amino acids needed for the body by vegetarian foods. To complete this, a diet mixed with grains and pulses should be consumed.

In addition, vegans can get the required calcium and protein by drinking milk. Milk products like cheese, paneer, curd, yoghurt, and other dairy products should be consumed daily. Vegans should consume coconut milk, oats, soyamilk and almond milk as a substitute for animal milk.

Growing up children should preferably not be exclusive vegans. Although you take substitute food you cannot gain all the nutrients by a vegetarian meal.



Figure 10.11 - Substitute food for vegans



### Activity

Write foods that vegans can eat to fulfil their nutritional needs

- Calcium
- Zinc
- Iron
- Protein
- Lipids

## Myths regarding nutrition

There are lots of programmes regarding looking after our health and improving of the standard of living. Despite these you come to know about cases of nutritional deficiencies and people falling sick. One of the main reasons for this is the myths and beliefs people have regarding nutrition. Find below are such myths and ways of overcoming them.

Table 10.4

Myth	Fact
All the expensive food for sale in the shops have a very high nutritional value.	The nutritional value of the food cannot be estimated by the price. The nutritional value depends on the nutrients, freshness, cleanliness and hygiene of the food. Due to the addition of artificial flavours and preservatives sometimes the nutritional value of expensive food can be reduced.

Myth	Fact
Meat based food provide all the nutrients needed for the body.	Proteins, minerals, vitamins, amino acids can be found in vegetables too. eg: grains, mushrooms, tofu, leafy vegetables
Breast milk secreted initially should be cast aside. It is the milk secreted after this that should be given to the baby.	It is very important that the baby gets the initial secretion of mother's milk known as colostrum as it is very nutritious and gives immunity to the baby.
Fruits that are big are more nutritious	The nutritional level is not high due to the size of the fruit which could have extra water or more cells for the size.
Jambu and mandarins should not be given to small children	These should be given as they have a lot of vitamin C and minerals
A larg body indicates good nutrition	Having a large body does not mean the person is healthy. In diseases as well as due to unnecessary nutrition the body can be large.
Big fish have more nutritional value than small fish	Flesh of small fish is as nutritious as big fish. In adition all of small fish are also consumed when eating small fish. Therefore we can get more of micronutrients such as calcium, iron, zinc. Bones of large fish are not consumed, so the nutritional value is less.
Most food items are known to cause phlegm, gall or wind. These food make you sick	Certain foods can be allergic only to some people. Therefore food cannot be commonly labelled as unsuitable.
Green leafy vegetables should not be eaten in the night	No matter what time of the day you eat the green leafy vegetables the nutritious value remains high
Pregnant mothers should not eat small fish	Small fish contain protein as well as a large amount of micronutrients. The unborn baby in the mother's womb gets the nutrition through the umbilical cord.

Information about artificial food is advertised in attractive manner using various mass media. Radio, TV, newspapers, magazines, books and web media are used for this purpose. But, whatever information is given by such media, such foods should not be consumed unnecessarily. You could be subjected to various diseases when you take such artificial and instant foods for a long period of time.



### Activity

Make a list of the different foods advertised in the media. From the list you made, identify the food that cause unwanted effects, giving reasons.

## How can we contribute to fulfill our nutritional needs

It is important that we have a good knowledge of the food we purchase and our nutritional requirements.

### 1. Buying food to suit each individual.

Eg: An obese person should select food that has less carbohydrates, fats and proteins.

People who have or have a family history of hypercholesteraemia should avoid food that has a lot of fat ( especially animal fats).

People who have skin diseases or falling hair should increase amounts of vegetables and fruits in their meals.

### 2. When buying canned, bottled or packeted food you need to be aware of the date of expiry, ingredients and the standards certificate.



Figure 10.12 - Checking date of expiry and ingredients of the food

### 3. Choose natural foods over artificial or processed food.

Natural food is fresh and has more nutritional value and does not have toxins compared to artificial food.



- 4. Do not purchase fruits, green leaves and vegetables that are withered.**  
These food items could be withered due to chemicals that have been sprayed or due to the long duration of storage. The nutrients in such foods could be very much less, and worms and insects could be present in them.
- 5. When purchasing fish it's better to buy small fish than big fish. Make sure the gills are red and the eyes of the fish are glistening.**
- 6. Do not buy cans and tins that are crushed, dented or ballooned as they can have toxic chemicals in them.**



Figure 10.13 - Crushed or dented cans and tins

- 7. Processed food, junk or fast food should be avoided.**
- 8. Avoid consuming food with added artificial flavours, colours, dyes and preservatives.**
- 9. When preparing food, use methodology and ingredients that increase its nutritional value**

Eg: Soaking gram prior to cooking.

Preparing greengram and cowpea after sprouting.

Eating different coloured food.

Adding grated coconut, lime juice, maldive fish to green leaves.

Preparing a dish with different types of food.

Avoid drinking tea, coffee immediately after meals.





Figure 10.14 - Sprouting green grams

### Summary

Our nutritional needs vary at different stages of our life cycle such as childhood, adolescence, youth, middle age and old age.

There are also special nutritional needs for special situations in our life like pregnant mothers, feeding mothers, sports persons, invalids and vegans.

We must avoid myths related to nutrition to avoid nutritional problems in our community.

All of us can contribute to convey correct messages regarding nutrition, in selecting, preparing and consuming of food.



### Exercise

1. Name the different stages in our life cycle which have different nutritional needs.
2. What are the situations or persons that have special nutritional needs?
3. What are the additional nutrients which should be taken by pregnant mothers?
4. Name some vitamins that should be taken by breastfeeding mothers.
5. What are the special features of food that are given to an invalid?
6. Introduce several substitute foods for a vegan friend of yours.
7. What are the benefits that a sportsmen can gain by consuming correct nutrients.
8. Write some myths regarding nutrition, in your area.
9. Give some suggestions to increase the nutritional value of the meals for your family.

# Let us protect the features which affect our appearance

Our body is a wonderful biological creation made to live and continue life. It is our responsibility to lead a healthy life protecting appearance which contributes to personality.

In the previous grades we studied about the basics of our sensory organs such as ears, eyes, nose and skin as well as the digestive system, respiratory system, circulatory system and the excretory system. We also studied about maintaining healthy organs.

In this chapter we will study about the organs such as skin, hair, teeth, lips, eyes and ears that help in the external appearance. We will learn how to keep them healthy and factors that cause them to be unhealthy.

## Skin

The skin is the largest organ of our body. It protects our whole body, covers it, gives it a shape and the external appearance. Depending on the purpose it shows adaptations. The skin is thick where it is exposed to friction, e.g. soles of the feet and palms of the hands.

The hair follicles in the skin protect the body. The skin regenerates and gets rid of old skin  
eg: keratinized layer.

Skin is different in each person. People have dry, oily, sensitive or normal skin .

### Functions of the skin

- Gives an external appearance to the body
- Protects the internal organs
- Helps in getting rid of excretory material e.g. sweat
- Controls the internal body temperature- when cold the skin protects the body by conserving heat
- As a sensory organ the skin reacts to heat, cold and pain from the external environment
- Helps in producing vitamin D from sunlight

## Skin related diseases

- Pityriasis
- Scabies
- Eczema
- Sweat rash
- Skin cancers
- Leucoderma
- Psoriasis
- Allergic dermatitis



Figure 11.1 - Skin related diseases

## Healthy ways of preventing skin diseases

### 1. Take nutritious food

The skin should be supplied regularly with all the nutrients it needs. Foods contains Vitamin A, D, minerals and proteins should be consumed.

### 2. Drinking adequate amounts of water

Water is necessary to maintain good functioning of the body as well as a healthy skin. Water prevents drying of the skin and makes it bright.

### 3. Keep your skin clean

Skin can be kept clean by bathing daily or having a body wash twice a day. Quality products should be used for the skin. Obtain medical advice when using types of bactericidal soap as they can harm the useful bacteria present on the skin.

#### 4. Protect the skin from harsh sunlight

Early morning sunlight helps in producing vitamin D but very strong sunlight which has ultraviolet rays can be harmful to the skin. The skin can get burnt in strong sunlight. It is important to wear protective clothing to protect yourself from strong sunlight. Falling of sun rays directly on the skin can be prevented by wearing white coloured clothes which reflects the sun rays and by carrying an umbrella. If you are getting exposed to strong sunlight it is advisable that you wear a sun protection cream as prescribed by a doctor.

#### 5. Protect from accidents

You should try to minimize injury to your skin due to falls, pricks, cuts and burns. Some injuries remain as scars on the skin for a long period of time.

#### 6. Refraining from applying unnecessary makeup, creams etc

You may want to try various types of makeup and creams from different countries and institutions advertised on the internet and social media to make you look younger. You have to be careful as they may cause not only discolourations in the skin but also other diseases due to chemical toxins entering in the blood.

If you need to apply such creams etc obtain medical advice and use approved products. School children should refrain from using unnecessary makeup.

## Hair

Hair on your head is meant for protection and appearance. It should be kept healthy.

Hair minimizes injuries to the head. Hair protects the brain which is a valuable organ placed inside the skull. Hair of infants help to maintain their body temperature by reducing the loss of heat through surface area of the head.

Your hair grows and some falls off.

The live section of the hair follicle is in the skin despite the length of the hair shaft. The section above the skin is not live. Therefore, the hair can be combed and styled as desired.

### Diseases related to hair

- Dandruff
- Tinea capitis
- Psoriasis
- Head lice



Figure 11.2 - Diseases related to hair

### Healthy habits to prevent illnesses related to hair

1. Eat food enriched with vitamins and minerals e.g green leaves, fruits
2. Keep the hair clean and bathe daily
3. Protect the hair by covering it, wearing a cap or carrying an umbrella when going out in the hot sun
4. Use recommended hair oils or cleansers where necessary
5. Wash hair well after using a cleanser
6. Use standard hair products
7. Prevent doing artificial hair styles

As a student it is important that you maintain your hair in its natural state.

### Nails

Nails are formed by the thickening of skin on the fingers and toes. Nails are formed to protect finger tips and toes as they are constantly in friction when performing various tasks.

The squamous layer of the skin is not alive, so is the tip of the nail. The start of the nail on the finger is known as the nail root or matrix and this has life. The same way the skin regenerates so does the nail root or matrix.

## Diseases associated with nails

■ Fungal diseases

■ Blisters

■ Nailbed infection



Figure 11.3 - Nail associated diseases

## Healthy habits to protect nails

1. Consume healthy food
2. Keep nails clean and cut short. It is important to protect the nail bed when cutting the nails
3. Protect the nails from accidents
4. Avoid biting nails. By this, the fingers and the nails could be injured, infected and germs can enter your body.

## Lips

The lips surround the mouth. Lips help for the appearance of the face, to control expressions, to talk and pronounce words and to enter food into the mouth.

## Diseases related to the lips

- Cancers of lips
- Inflammation of lips
- Cleft lips
- Injuries to the lips





Figure 11.4 - Diseases related to lips

## Health practices related to lips

1. Consume nutritious food
2. Avoid eating and drinking very hot or very cold foods and drinks
3. Consume adequate water
4. Protect lips from accidents that are likely to cause injuries to them
5. Refrain from taking harmful drugs and alcohol
6. Refrain from chewing betel or using products of arecanut and tobacco

## Teeth

Teeth are helpful when having food, to break food into particles for easy digestion, for the shape and fullness of the face, when pronouncing sounds and for the personality.

Teeth start to erupt after about 6-9 months of a child's birth. These first teeth are known as milk teeth or deciduous teeth. From 6-12 years of age these teeth fall off and new teeth erupt in place. The new teeth that erupt are known as permanent teeth. The teeth erupting at two different times is a unique feature of man. This is known as diphyodont.

Man has a set of 32 permanent teeth with 16 each in the upper and the lower jaws. This is known as dentition.

Diagram 11.1 - Dentition

Incisor $\frac{2}{2}$	Canine $\frac{1}{1}$	Premolar $\frac{2}{2}$	Molar $\frac{3}{3}$
-----------------------	----------------------	------------------------	---------------------

The diagram 11.1 is to show the teeth on one side of the jaw.

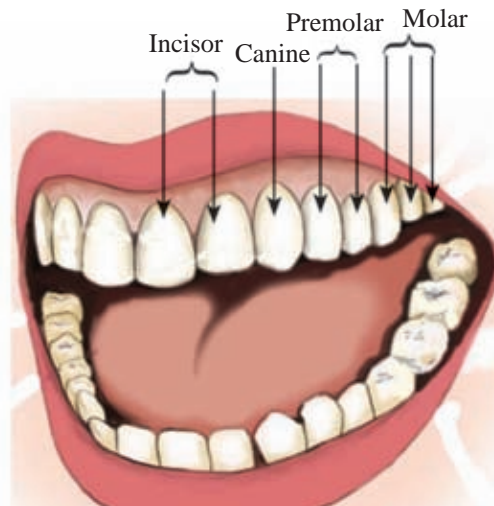


Figure 11.5 - Position of the teeth

Each tooth is different. There are four types of teeth according to its' shape and function.

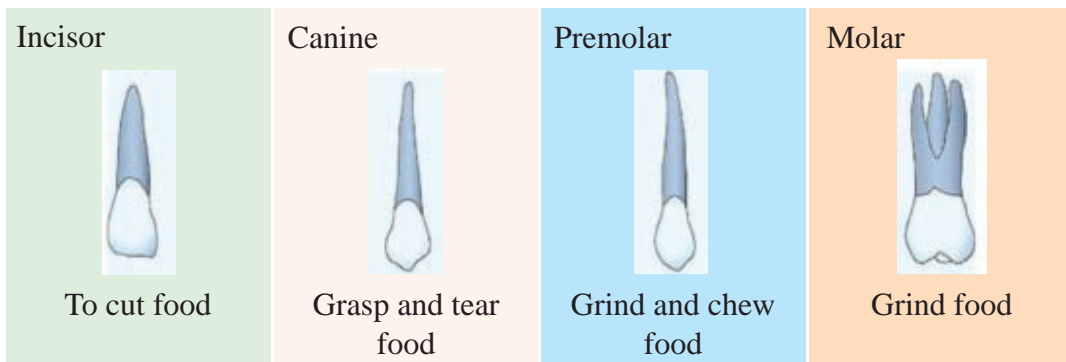


Figure 11.6 - Types of teeth

### Diseases related to teeth

- Decaying of teeth
- Tooth wear
- Discolouration of teeth
- Gum disease
- Crooked teeth
- Dental traumatic injuries





## Additional knowledge

The main reason for discolouration of teeth is dental fluorosis. If the water fluoride level in your area is high, there is a risk of dental fluorosis. Dental fluorosis at severe level can be seen in areas like Anuradhapura, Polonnaruwa and Hambantota.

It occurs during the stage of development of permanent teeth inside the jaw (from birth to 8 years of age). If you use the deep ground water in deep wells and tube wells which contain high fluoride for drinking and cooking purpose you can get fluorosised teeth.

If you are living in an area endemic for dental fluorosis;

- Check the level of fluoride in your water source. You can get assistance of the Public Health Inspector in your area or National Water Supply and Drainage Board.
- Use a fluoride filter to filter the water and use the filtered water for drinking and cooking.

## Healthy ways of looking after your teeth

1. Consume food rich in minerals and calcium
2. Other than the main meals refrain from eating at all times. Reduce the consumption of sweets, soft drinks, junk food, sticky food
3. Avoid eating very cold or very hot food
4. Brush your teeth every morning and night before going to bed. It is very important at least to rinse your mouth after eating sweets or sticky food.
5. Use a tooth brush that has small head with soft bristles
6. Use a standard tooth paste that contains fluoride in required quantity
7. It is not recommended to use coarse items such as sand, charcoal or tooth powder to brush your teeth.
8. Brush correctly to clean all the sides of the teeth
9. It is not recommended to use your teeth for harmful purposes like to break bottle tops, bend or break wire or cut glasses.

10. Avoid chewing betel, smoking, having harmful drugs or products made of arecanut and tobacco
11. Get the state of teeth checked by a dentist at least once a year
12. Make it a habit to examine your own mouth to detect for any changes in the oral cavity.
  - It may be a decayed tooth, swollen gums, calcified plaque, any growth or change in colour of oral mucosa.
  - If you detect any abnormality seek dental advice.
13. If from birth, your teeth are positioned in an irregular way, you should see a dentist and get it corrected.
14. Seek dental advice immediately after a dental or oro-facial trauma even though the damage is not visible or is small.



### **Additional knowledge**

Following a trauma, saving of a completely dislodged permanent tooth depends on the way of handling it immediately after the injury. In such a case,

- Never wash or clean the tooth using disinfectants.
- Never touch the root area of the tooth.
- Hold the tooth by the crown, and rinse the tooth for 10 seconds under running (tap) water to remove debris.
- Place the tooth in a solution of preferably fresh milk, saline or patient's saliva.
- Visit the closest dental clinic as soon as possible.

The Success rate is high if you can replant the tooth within half an hour.

## **Eyes**

The sensory organ that help us see is the eye. The fact that we can see an object at once with both eyes is known as binocular vision. Objects can be viewed in three dimension with both eyes as well as can judge the distance to the object. Due to this we can judge what we can see to do delicate work precisely.



Figure 11.7 - Binocular vision

The eye brows and the lashes are placed to protect the eyes from foreign bodies or germs. The eye brows are placed above the eye and slightly forwards.

If a foreign body enters the eyes the eye lashes start blinking very fast and works towards getting it out. If the object is still present the tear glands start to secrete tears and the object comes out.

If an object is about to strike the eye, instantly the eye closes and it reduces any injuries to the eye.

### Diseases related to the eyes

- Red eye, secretions, sties
- Colour blindness, night blindness
- Short sightedness, long-sightedness and blindness
- Irregularities
- Disfigurements.
- Nutritional deficiencies  
eg: bitot's spots
- Cataract
- Glaucoma
- Squint - it is important to consult an eye surgeon to know if this is a disease state. Otherwise it could result in blindness.

### Healthy practices to protect the eyes

1. Consume food enriched with vitamin A such as green leafy vegetables, carrots and yellow coloured vegetables and fruits daily in adequate amounts.

2. Protect the eyes from accidents and avoid from work that can cause harm to the eyes
3. Prevent chemicals and harmful rays from entering the eyes and wear appropriate eye wear when working with chemicals  
eg: in welding, at iron workshops.
4. Wear standard sunglasses on medical advice to prevent harm to your eyes from strong sunlight
5. Use protective glasses or screen when using the computer
6. Take regular breaks when working with computers
7. Keep a distance of about two and a half times the length of the television screen between yourself and the television  
eg: if the television is 30 inches you should watch the TV from minimum distance of 75 inches (six feet)
8. Seek medical help if you get a headache, in case an object gets into your eye, something bangs against the eye, notice tearing or secretions, redness in the eye, formation of a sty, excessive blinking, colour blindness, squint or if the vision is blurred
9. If something falls into the eye wash it with clean running water. Never use other liquids, substances or home remedies. Always follow medical instructions when using eye drops.
10. Choose sunglasses, contact lenses and spectacles as advised by your eye surgeon. Spectacles should be changed at least every two years after seeking medical advice.

### **Do you know?**

- ★ There are small torches that emit infra-red waves being sold at shops. It is important that you use it solely for the intended purpose and not expose the rays directly on the eye.
- ★ During an eclipse never look at the sun directly. Keep a basin of water or a sheet like a x ray sheet and view the sun if needed. Looking directly at the sun can harm your eyes.

## Ears

The ear is the sensory organ that you need to hear. Let us have a look at some natural protective mechanisms of your ear.



Wax is made internally to protect the ear. Wax is made from the secretions in the external ear.



The eardrum which is an important organ is placed in some what internally



The pinna or external portion of the ear is protruding outwards to be able to catch the sounds and direct them to the inside of the ear



The internal ear and the throat are connected by the Eustachian tube. This tube makes the pressure in the atmosphere and the internal ear equal



It Helps in maintaining the balance

### Diseases related to the ear

- Infections of the external ear
- Due to middle ear infections the ear drum can get pierced, there will be a discharge from the ear and the balance of the body will be affected.
- Infections of the inner ear will result in damage to the nerves and hearing would get affected.

### Good practices to maintain health of the ears

1. Avoid introducing objects into the ear.  
The ear wax will naturally get expelled from the ear. Introducing of external objects such as ear candles or pins can harm the ear drum. Infections can set in and injuries can occur. If the ear drum is damaged the hearing will be affected.
2. Do not get exposed to very loud noises.
3. Do not use mobile phones or earphones for a long period.
4. If you have an illness related to the ear, nose or throat, obtain help from a doctor specialized in that area.
5. If you have a cold, as your ear can be affected get your ears checked by a doctor.

6. If you have poor hearing get treatment - Speech can also be affected if hearing is affected

## Fingers and toes

- Power grip and precision grip are special features in the human fingers.  
Power grip means the ability to hold firmly using the large muscles of the hand.  
Precision grip helps in holding an object or doing a task and is done using the small muscles of the hand.
- The opposing thumb is a feature of primates. The thumb can be moved so that it can be placed opposite the other fingers and can perform similar tasks of other four fingers.
- The tips of the fingers and toes have a lot of nerve endings and is able to feel sensations.  
eg: sensation of heat, cold, pain
- There are lines between the phalanges in the fingers and toes. These help to cause friction. Therefore when you hold something with your fingers they are gripped firmly due to the friction.
- The nails placed at the tips of the fingers and toes gives protection to them.



Figure 11.8 - The opposing thumb



## Additional knowledge

In many criminal cases the law gets the finger prints to catch the criminal. This is because no two people will have the same type of finger prints.

### Instances where the fingers get injured

- When using the knife or sharp objects
- When fingers and toes are caught in machines
- When using the hammer

### Ways of protecting the fingers and toes

1. Pay attention and take care when using knives, hammers and scissors
2. Keep your fingers, toes and nails clean
3. Do not wear gloves, shoes and boots for longer periods

### Summary

The skin, hair, nails, teeth, eyes, ears and lips are parts of the body that make our appearance. There are good practices to keep these clean and healthy.

The skin is the largest organ in the body and it has a lot of uses. The skin protects the internal organs and protects the body. The skin should be kept clean and healthy.

The hair which protects the head should be kept clean as this will prevent diseases and give a healthy appearance to a person.

The nails are placed at the tips of the fingers and toes should be kept clean and protected.

It is important to protect our lips that protect the internal aspect of the body and makes up the external appearance of our face.

It is important to protect our permanent teeth too, as they arise just once during our lifetime.

Our eyes that gives us binocular vision should be kept healthy and protected.

The ear that helps us hear should be kept without diseases.



## Exercise

Choose the correct answer

- Which of the following is not a skin disease,  
i. Psoriasis      ii. Cancer      iii. Bitot spots      iv. Scabies
- The vitamin that keeps our eyes healthy,  
i. Vitamin A      ii. Vitamin B      iii. Vitamin C      iv. Vitamin E
- The following practice with regard to the ear is not healthy  
i. removing wax with an ear candle  
ii. not using a cotton bud to clean the ear  
iii. not exposing the ear to loud noises  
iv. not scratching the ear with fingers
- Shampoo is used to clean the hair. An important practice after shampooing is,  
i. not washing the hair adequately to retain the fragrance  
ii. rubbing the hair  
iii. massage the head  
iv. washing off all the shampoo with clean water
- The following is not a practice to protect the nails,  
i. cutting the nails short  
ii. biting the nails  
iii. consuming nutritious food  
iv. protecting the nails when using equipment
- Which milk tooth commonly falls down first?  
i. Incisors      ii. Canine      iii. Premolar      iv. Molar
- The maximum number of molar teeth an adult can have is,  
i. 8      ii. 4      iii. 12      iv. 10
- Due to the binocular vision,  
i. entry of foreign bodies to the eyes are prevented  
ii. the three dimensional view of the object and the distance can be perceived  
iii. objects in the distance can be viewed  
iv. the squint get worse
- The eye can be damaged by,  
i. directly looking at a lunar eclipse  
ii. directly looking at a solar eclipse  
iii. looking at a large lit bulb directly  
iv. staring for a long period



10. which of the following should not be done if a foreign object or an ant enters the ear,
- i. attempting to use an ear candle to remove it
  - ii. adding a bit of water to the ear then move the head to the opposite side and get rid of the water
  - iii. adding a small amount of coconut oil into the ear
  - iv. seeking help from a doctor
11. the following disease is not related to the lips
- i. inflammation of lips
  - ii. cancer
  - iii. tinea capitis
  - iv. cleft lips
12. The important function of the position of the thumb is to,
- i. make it attractive
  - ii. make sensations to be felt
  - iii. help with the precision grip
  - iv. protect the fingers

## Let us develop health related physical fitness

Physical fitness is the ability to perform physical activities effectively. As you already know, physical fitness is divided into two main categories as skill related physical fitness and health related physical fitness. Health related physical fitness factors directly affect our health. There are five main health related physical fitness factors called cardiovascular endurance, muscular endurance, muscular strength, flexibility and body composition.

In grade 8 you identified health related physical fitness factors which are important to maintain a healthy lifestyle and engaged in activities which improve them.

In this chapter, we will learn about ways of measuring physical fitness. By performing these tests you can get to know how to maintain your fitness at an optimal level.

### Health related physical fitness tests

These tests can be performed in many ways. With the development of technology these tests are performed using various instruments both in and outside research labs. The simple tests we use in Sri Lanka can be done also in the playground.

These results help to understand the health state of a person and accordingly can improve health related physical fitness. These can also be used for people starting new sports to choose the sport best suited for them.

### Getting ready to measure fitness factors

In order to measure fitness factors divide the class into four groups. Get each group to measure and note the results. Arrange the measurement in each category from the highest to the lowest of all the students in the class. Grade the values into five groups.

1. Very good
2. Good
3. Average
4. Satisfactory
5. Poor

Compare your results with those of others in your class and get involved in activities to achieve higher grades.

Pay attention to the three steps below and organize a programme to test the level of fitness.

1. Preparation before the test
2. Carrying out the test
3. Analysis after the test

### **Instructions to be followed when performing tests to assess fitness levels**

- Prepare the field so that accidents and injuries are minimized.
- Prior to the test make sure the participants do warming up exercises.
- After the test, make sure they do exercises to warm down.

Follow the instructions above and perform tests to assess each factor.

### **Measuring cardiovascular endurance**

Cardiovascular endurance is the ability of the heart and respiratory system to function properly and supply adequate amounts of oxygen to the muscles.

**Test** - Continuous running (boys 800m and girls 600m)

**Equipment needed** - Stop watch.

Prepare a track in your school grounds so it has two straight sides and two bends. Mark how many rounds they need to run to complete 800m and 600m.

eg: If the track is 200m it will be 4 and 3 rounds

## Procedure



Figure 12.1

- Prepare to run the required distance from the starting point. Use the standing start. You need to complete this distance in a minimum time duration.
- Start on the signal given by the leader.
- Start the stop watch and measure the time taken to complete the distance
- Give each student the time he or she has taken to complete the distance
- If a student finds it difficult to run the complete distance, he can alternate between running and walking to complete the distance.
- Chart the time taken by each student to complete the distance and identify the capabilities comparing the charts given by your teacher.

### Measuring muscular endurance

Muscular endurance is the ability of the muscles to work for a long time without getting fatigued.

**Test** - Pushups test.

**Equipment needed** - Stop watch.

## Procedure

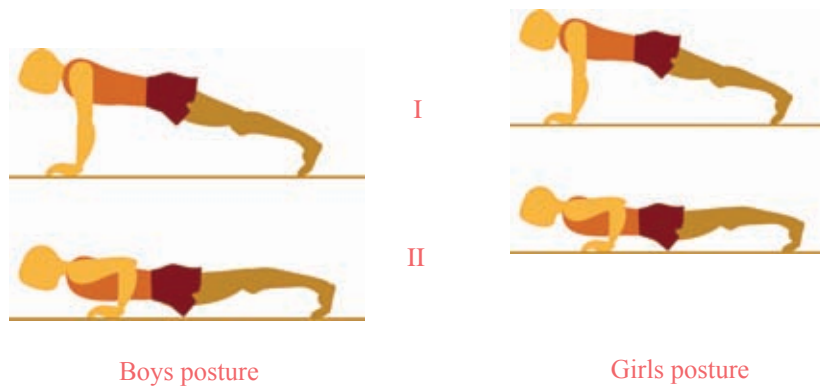


Figure 12.2

- Start the exercise in the posture recommended for you. (Figure 12.2 I)
- Change posture after the signal. Bend the elbows and bring the body close to the ground. (Figure 12.2 II)
- Straighten the arms at the elbow and raise the body off the ground, to the starting position.
- Count the number of times the exercise can be done in 30 seconds. Bringing the body from down to up is considered as one turn. If the number of repetitions in 30 seconds is high it is considered as high endurance.
- Measure the endurance of all the children in your class.

## Measuring muscular strength

Muscular strength is the ability of a muscle to generate force when doing some work.

**Test** - Standing long jump test.

**Equipment needed** - Measuring tape.  
Long jump pit or a safe surface.  
marker.

## Procedure



Figure 12.3

- Student should stand placing both feet behind the mark drawn close to the long jump pit.
- Bend your knees, swing arms forward and jump forwards with power.
- Measure the horizontal distance jumped. The '0' of the tape should be kept at the landing point.
- Compare the distance you jumped with those of others in your class and get to know your capabilities.

## Measuring flexibility

Flexibility is the ability to move or stretch through the joints.

**Test** - Stand and reach test.

**Equipment needed** - A small steady table.  
A measuring tape ('0' to be in the middle of the tape with + and – marked in centimeters in either direction).

## Procedure

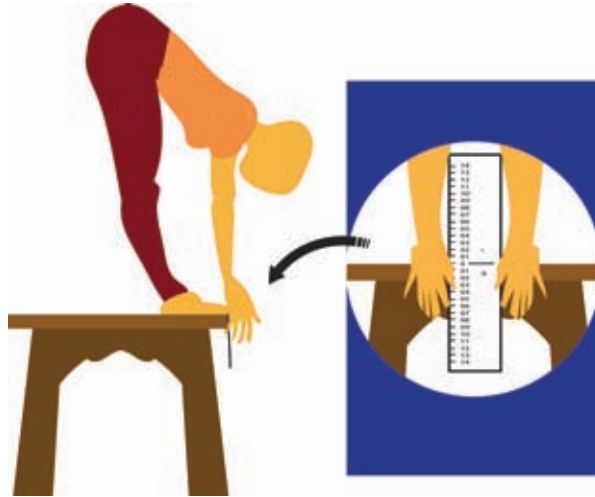


Figure 12.4

- Fix the tape vertically so that the mark '0' coincides with the upper edge of the table having the + side below and the – side above.
- Place your feet 30cm apart so that the tape measure falls between your feet.
- Without bending your knees bend down and try to touch the lower end of the tape with your hands. Measure this distance from '0' to the tip of your middle finger.
- If you have bent past your feet you will get a + measurement.
- Assess your level of flexibility by comparing it with the charts given by your teacher.

## Measuring Body composition

Body composition is the components which make up the body. The composition of the body can be divided into two main components as fat component and fat free component. If the body composition has too much fat there is a higher chance of getting non-communicable diseases later in life.

**Test I** - Measuring the body mass index (BMI)

**Equipment needed** - Measuring tape  
Weight balance

## Procedure

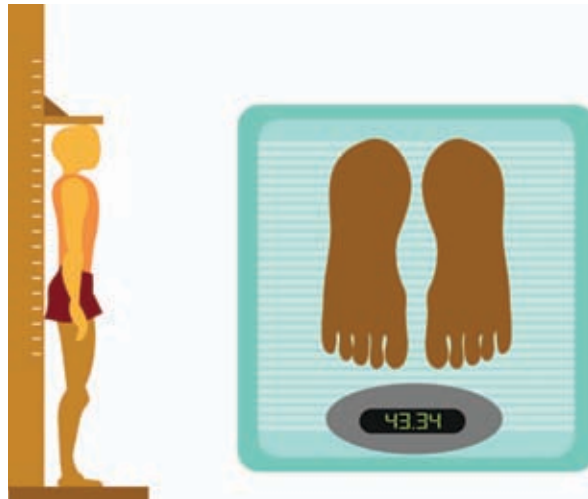


Figure 12.5

- Measure the height and weight of the students.
- Calculate the BMI according to the formula given below.

$$\text{Body mass index (BMI)} = \frac{\text{Weight (Kg)}}{\text{Height (m)} \times \text{Height (m)}}$$

Use the BMI chart given to you in grade 6 and check if your BMI is in the appropriate range.

**Test II** - Measuring waist to height ratio.

**Equipment needed** - Measuring tape.



## Procedure

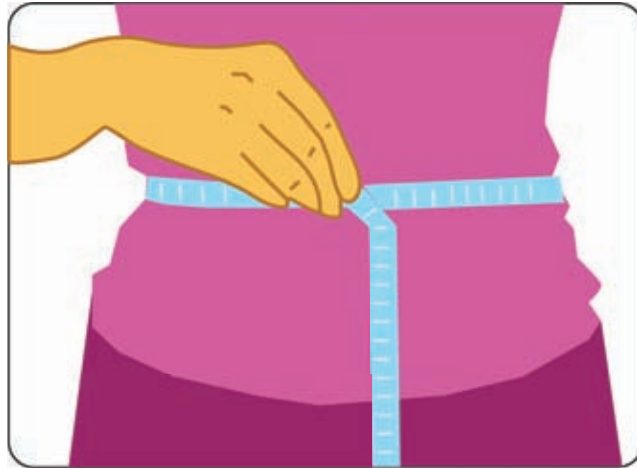


Figure 12.6

- Measure the circumference of your waist and your height. (You have learnt in grade 6 how to take these measurements correctly).
- Use it in the formula given below and get the waist to height ratio.

$$\text{Waist to height ratio} = \frac{\text{Circumference of waist (cm)}}{\text{Height (cm)}}$$

Try to maintain this value at 0.5 or less by engaging in relevant exercises.



### Activity

Do a self-assessment on the following factors when you performed the test in groups. Each factor can get a maximum of five points

Factor	Group 1	Group 2	Group 3	Group 4
1. Preparation				
2. Performing the correct tests and obtaining the points				
3. Assessing the level of physical fitness on the points obtained				
4. Cooperation within the group				

## Summary

Health related physical fitness affects our health directly. There are five factors considered in health related physical fitness. Different tests are used to measure these factors.

Cardiovascular endurance is the ability of the heart and respiratory system to function properly and supply adequate amounts of oxygen to the muscles. This is measured by 800m and 600m non stop running.

Muscular endurance is the ability of the muscles to work for a long time without getting fatigued. Doing pushups is a way of measuring muscular endurance.

Muscular strength is the ability of a muscle to generate force when doing some work. The standing long jump test is a way of measuring muscle strength.

Flexibility is the ability to move or stretch through the joints. Stand and reach test can be done to measure the level of flexibility.

Body composition is the components that the body is made. The two main components are, fat component and fat free component. Measuring body mass index and waist to height ratio, give an idea about the body composition.



## Exercise

1. Give three instructions to be followed when performing physical fitness tests.
2. You can organize a physical fitness test in three steps. Name the steps.
3. Name health related physical fitness factors. Mention a test that can be used to measure each factor.

## Let us be familiar with knots and lashings

Engaging in outdoor activities helps learn how to enjoy the natural beauty of the environment and, when faced with challenging situations, how to respond to such challenges. Doing knots and lashings is an important skill that is involved with outdoor activities. Different types of knots and lashings are used in order to fulfil day-to-day tasks more easily and effectively. If you are a Scout or a Girl Guide you may have already gained some knowledge about knots and lashings.

By now, you have gained knowledge about classification of organized games and outdoor activities from Lesson 04.

From this lesson you can gain knowledge about knots and lashings which will be useful in various situations when engaged in outdoor activities.

### Importance in gaining knowledge about knots and lashings

In our day-to-day activities we have to carry out various tasks which require doing knots or tying things with ropes. On some occasions where we need a very long rope, we may have to join together two or more pieces of ropes. In such situations, if we do not tie the knot properly to join the pieces of rope, the knot will get loose and undone when the rope is pulled tightly from either end. Further, if knots and lashings are not done properly, it could lead to accidents. What type of a knot do you use to tie up your shoelaces? The type of knot you use should be one that can be undone easily. Accordingly, possessing a proper knowledge about knots and lashings is vital for carrying out of day-to-day activities more easily and effectively.



#### Activity

Take a piece of rope or string of about one meter in length, and engage in practicing different types of knots that you use in day-to-day activities.

## Characteristics of a good knot

- A knot should be able to stand the weight or the pull of the required task.
- A knot should be able to be undone as required.

## Different types of commonly used knots and lashings

1. Reef knot
2. Sheet bend
3. Bowline knot
4. Clove hitch
5. Square lashing
6. Shear lashing

### 1. Reef knot

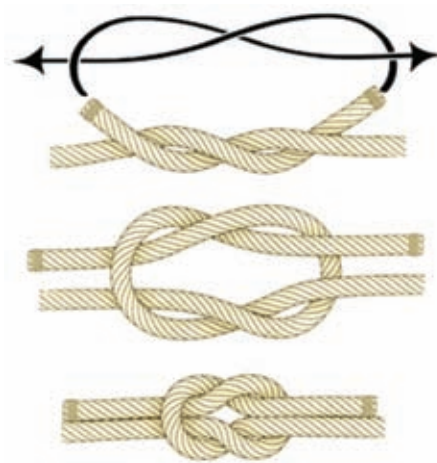


Figure 13.1

Reef knot can be used to tie together two pieces of ropes of similar type. Reef knot is also used when putting a shoulder sling. Being able to tighten quickly, being able to undo quickly, and having a flat nature are the characteristics of the reef knot.

### Let us learn to do the reef knot

- Take the ends of the two ropes in the two hands.
- Place the rope in the left hand over the rope in the right hand.
- Take the rope end that has come to the right hand side with the right hand and bring it up from under the rope on the right.

- Bend back the rope end that is in the left hand and place it under the rope end that was in the right hand.
- Now a loop has been created with a rope end extending to the right.
- Put that rope end on the right through the loop bringing it over the rope of the loop and pull it in the opposite directions.

When this knot needs to be tightened, the shorter strand and the longer strand on either side should be held by the two hands and the two ends should be pulled in the opposite directions. Similarly, in order to loosen the knot, the two strands on either side should be held in the two hands and should be pushed forwards.

## 2. Sheet bend



Figure 13.2

Sheet bend is very useful to join ropes with different thicknesses.

### Let us learn how to do the sheet bend.

- First bend an end of one rope and make a bight with it.
- Hold that bight in the left hand and take an end of the other rope in the right hand.
- Now put the rope end in the right hand under the bight and push it up through the bight.
- Now take the end that was pushed through the bight and push it under both strings of the bight.
- Now take that end and push it through the bight again from under the same string.
- Hold the four strings with the two hands and pull them in opposite directions.

### 3. Bowline knot

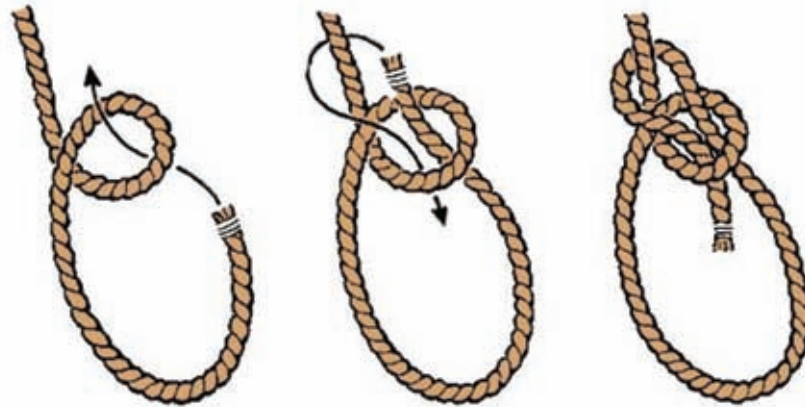


Figure 13.3

When engaged in tasks that involve a risk to life, bowline knot is used to keep the body tied to a safe place in order to ensure the safety of life. For example, this knot is used when a person climbs to the top of a very tall tree to cut down its branches. When a certain object has to be kept pulled hard and tied to something, the bowline knot is used for that, too. For example, this knot can be used to tie a clothes line.

#### Let us learn how to tie the bowline knot

- Take a rope and tie a knot at one end.
- Now take that end and make a bight.
- Push the end of the rope through the bight making a noose to the required size and take the end of the rope round the string of rope and push it through the bight once again and pull hard.

## 4. Clove hitch

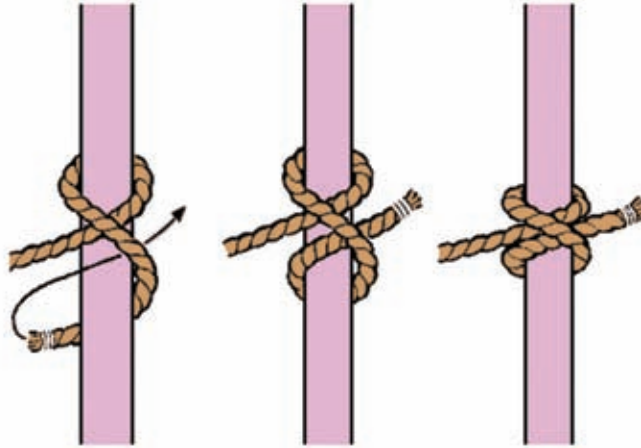


Figure 13.4

The clove hitch is used to tie a rope tightly on to a log. What is important about this knot is that the knot does not slip on the log. The more you pull the rope, the further this knot gets tightened. Clove hitch is used to tie a rope to the handle of a bucket and to tie poles of scaffoldings together.

### Let us learn how to tie the clove hitch

- Stand before a vertical pole with a gap of about one foot between you and the pole and hold the rope with the two hands (This gap may vary depending on the diameter of the pole).
- The end of the rope that is in the right hand should be brought around the pole from the right to the left from behind the pole and it should be pushed under the string of rope in the left hand. Now bring the rope around the pole once again as done earlier making a round below the previous encircle.
- Finally, push the end of the rope through the space between the pole and the starting point of the second round of the rope and pull the strings of rope in opposite directions.

## 5. Square lashing



Figure 13.5

Square lashing is used to tie two poles that are put together crosswise. In day-to-day life, square lashing can be used in activities such as making a kite or making a Vesak lantern.

### Let us learn how to do the square lashing.

- Put two poles together crosswise as shown in the figure above.
- Then take one end of the rope and tie the clove hitch on the bottom pole close to the place where the two poles cross each other.
- Then wrap the rope around both poles as shown in the figure so that the two poles are tightened together.
- Finally stop wrapping the rope using the clove hitch again.



## 6. Shear lashing



Figure 13.6

Shear lashing is a type of knot that can be used to tie together two poles as shown in the figure.

### Let us learn how to do the shear lashing

- Take two poles and tie the clove hitch on one pole.
- Then wrap the rope around both poles tightly.
- Now push the rope between the two poles and wrap it around the tie several times in order to frap it tightly.
- Now complete the shear lashing by tying the clove hitch once again on a pole.

#### Summary

Knowledge about doing knots and lashings are considered to be very useful when engaging in outdoor activities.

Various types of knots and lashings are used to fulfil the day-to-day tasks more easily and effectively. When using knots and lashings, they should be done to suit the occasion and the purpose.

The reef knot, sheet bend, bowline knot, clove hitch, square lashing, and shear lashing are different types of knots and lashings that are used in day-to-day activities.



## Exercise

1. What characteristics should knots and lashings have?
2. What would be the effects of not doing a knot or a lashing properly?
3. Write two occasions where the clove hitch is useful in day-to-day activities.
4. Write the type of knot or lashing that is most suitable in the following situations and demonstrate how the knot or the lashing is done.
  - To join together ropes of different thicknesses.
  - To make an arm sling.
  - To tie a rope to the handle of a bucket.
  - In life saving activities; and
  - To tie two poles put together.

Ancient man considered fire to be divine and therefore performed various rituals in honour of God of Fire. Woodsmen who used to eat fruits of trees, yams and meat in raw form, got accustomed to boil or roast them after discovering how to make fire. Since then fire has been an essential thing in our lives. We need fire to cook our food and for various other activities in our day-to-day life.

In the previous lesson you gained knowledge about knots and lashings which are useful in outdoor activities as well as in your day-to-day activities.

From this lesson you can gain knowledge about how bonfire displays can be used as an effective means of spending leisure time.

### Occasions where bonfires are used

The following are examples for occasions where a bonfire is made.

1. During outdoor activities
2. In night camps
3. In scouting camps
4. During excursions

### Factors that should be taken into consideration when building a bonfire

When making a bonfire it would be dangerous to do it without planning. There are several factors that should be taken into consideration when making a bonfire.

1. Permission should be obtained from the owner or the relevant authorities of the land in which the bonfire is expected to be built.
2. Climatic and weather conditions should be taken into consideration.
3. People in the immediate surroundings should be kept informed.
4. Firewood required for the bonfire should be collected prior to the day on which the bonfire is made.
5. Valuable timber should not be used for making the bonfire.
6. If insects are found on the pieces of wood, they should be removed.

7. When the bonfire is burning, the participants should not be wearing dresses of which any part is likely to be blown by the wind.
8. Keeping a wet sack, water baskets, and some fresh foliage ready for use in an emergency situation.
9. It should be ensured that the bonfire that is built is not too large.
10. After the event is over, the bonfire should be put out properly and the place should be cleaned well.
11. Safety of all participants should be ensured.

### How a bonfire should be made correctly

- Clear the area where the bonfire is planned to put up.
- If there is grass in the place where the bonfire is made, sods of turfs should be cut off from the ground and placed aside.
- Put up a safety wall around the fire using big logs.
- Make an entrance using wood as shown in the figure 14.1 leaving space to go near the fire.



Figure 14.1



Figure 14.2

- After that, take some pieces of wood and lay them on the ground in the center of the area surrounded by the safety wall as shown in the figure 14.2.
- Lay some sawdust, hay, dried grass, wood shavings, or thinly torn pieces of dried coconut sheaf on the pieces of wood laid on the ground.
- Then pile up the firewood properly on the pieces of wood that have been arranged on the ground. When piling up the firewood, enough space should be left between pieces of wood.

## Types of bonfires

Bonfires are given different names as follows based on the way the pieces of firewood are piled up for making the bonfire.

1. 'A' fire
2. Reflector fire
3. Rectangular fire
4. Pyramid fire

### Making bonfires

#### 'A' fires



Figure 14.3

An 'A' bonfire is built by placing three logs of firewood either horizontally or vertically as shown in the figure and then by piling up pieces of firewood on them.

#### Reflector fire



Figure 14.4 - Reflector fire

To build a reflector fire, two poles are held in vertical position and logs of firewood are tied to the poles as shown in the figure. Then, three logs are placed on the ground with the two poles forming a rectangular shape. The bonfire is built by piling firewood inside the rectangular shape. This bonfire can also be built by placing granite or some other shiny stones around it so that heat and light is reflected. Reflector bonfires can be used to keep the food hot and also to keep the campsite hot.

## Rectangular fire



Figure 14.5 - Rectangular fire

Rectangular bonfire is built by placing pieces of firewood inside a structure that is made by placing logs in a rectangular shape as shown in the figure.

## Pyramid fire



Figure 14.6 - Pyramid fire

To build the pyramid fire, a few pieces of firewood are placed on the ground parallel to one another and then another tier is made on them by placing pieces of firewood across them. In this manner several tiers of firewood are placed one on top of the other changing directions. Use shorter pieces of firewood to make upper tiers, so that a pyramid shape is created.



### Activity

Collect information about different uses of bonfires and about the objectives of holding bonfire displays and present them to the class.

## Benefits of making bonfires

- To provide light
- To minimize the cold or to generate heat
- To cook or roast different kinds of food
- To be safe from wild animals or to drive animals away
- To be used as a signal
- For recreation and enjoyment
- To build up solidarity
- To develop presentation skills
- To develop creativity
- To find relief from weariness at the end of day's work
- To exchange views
- To discuss information
- To review the work done during the day and plan future work
- To share knowledge
- To present participants' talents
- To reflect the culture of the participants
- To plan future works



Figure 14.7



Figure 14.8



## Bonfire displays



Figure 14.9 - Bonfire displays

On most occasions lighting the bonfire is done in the form of a display. They are called bonfire displays.

Bonfire displays are seen mostly during scout camps and during outdoor activities and outdoor camps. When making the bonfire, particular attention should be paid towards ensuring that a small bonfire is made and that there is sufficient space around the fire for participants to enjoy presenting their songs and dances without any disturbance. Bonfire displays should be held maintaining proper discipline and safety under the care of a responsible person. Also, a leader should be appointed to handle the bonfire display. Arrangements should be made to finish a bonfire display within a period of one hour or one and a half hours and it is sufficient to allocate a maximum of five minutes for each item. The display should end with the singing of national anthem.

### Songs that can be sung at bonfire displays

#### *Punchi suda*

*Punchi suda pedure indan  
Andanna gaththa  
Amma....Amma....  
Ane asarana daruwa*

#### *Biththare*

*Biththare sudu made – biththare kaha made  
Biththare sudu made kaha made  
Biththare kaha made – biththare sudu made  
Kaha made sudu made puduma de .....*



### ***Ging gang goolie goolie***

*Ging gang goolie goolie goolie goolie watcha,  
Ging gang goo, ging gang goo.  
Ging gang goolie goolie goolie goolie watcha,  
Ging gang goo, ging gang goo.  
Hayla, oh hayla shayla, oh hayla shayla, shayla, oh-ho,  
Hayla, oh hayla shayla, oh hayla shayla, shayla, oh.  
Shally wally, shally wally, shally wally, shally wally,  
Oompah, oompah, oompah, oompah.*

### ***Seeya bulath vita kotai***

*Seeya bulath vita kotai – rasa katha kiyai  
Rasa katha kiyai – bulath vita kotai  
Raja raja raja raja katha – gama gama gama gama katha ....  
Raja katha gama katha danne seeyamai.*

### ***Allaapan maalu***

*Allaapan maalu goda edapana maalu  
Modara velle maalu kanna rasai maalu  
Paname godai goda panamai  
Enna ganna maalu*

Apart from these, patriotic or classic songs, too, can be sung during bonfire displays.



### **Activity**

Organize and hold a bonfire display with the guidance of your adults.

## Summary

Fire is used today for cooking and for various other purposes. In outdoor activities bonfires are used for various activities.

When making a bonfire, there are several factors that should be taken into consideration so that the safety of the person making the fire as well as that of the others is ensured.

Bonfires are named as 'A' fire, reflector fire, rectangular fire, and pyramid fire based on the way pieces of firewood are piled up for building the fire.

Having a bonfire in the form of a display is called a bonfire display. Bonfire displays are useful for enjoyment and to develop creativity of the participants and achieve many other objectives.

Bonfire display should be organized, maintaining proper discipline and safety.



## Exercise

1. State the factors that should be taken into consideration before making a bonfire.
2. List the names of the bonfires of different shapes.
3. State benefits that can be gained by bonfires.
4. What are the occasions bonfire displays are held?
5. Compose a song that is suitable to be sung at a bonfire display.

## Let us cook food outdoors

Although the ancient man was used to eat raw food, it changed with time and at present man consumes food that is prepared using different methods. The kitchen of a house has a wide variety of utensils that are used to prepare food, but preparing food is a difficult task while engaging in some outdoor activity or going on a trip.

In previous lessons, you learnt how to do knots and lashings during outdoor activities and also to make bonfires.

This lesson will tell you how to cook food outdoors using available resources during outdoor activities or during camping.

### Cooking food outdoors

Cooking food at home is an easy task because there are varieties of containers and bowls to keep food in and there are electric cookers, gas cookers or permanent fireplaces to cook food with firewood. However, these facilities are not available when cooking food outdoors during an outdoor camp or during an outdoor activity.

We engage in outdoor activity with thorough preparation. Therefore we could be prepared in advance for this activity by;

- ⇒ getting food and beverages supplied to suffice the number of participants for the number of days the camp is held.
- ⇒ identifying the types of food that can be cooked easily and that can be preserved for a longer time under natural environmental conditions.
- ⇒ providing with safe vessels that do not break easily for cooking food and for keeping water.
- ⇒ preparing condiments such as spices and chillies required for cooking packed in small containers.
- ⇒ selecting a suitable location to cook food within the campsite.
- ⇒ providing with a small gas cooker if necessary.

However, when lost in a forest or during outdoor activities such as forest explorations or forest crafts, it is difficult to fulfill tasks such as getting food supplies and cooking food without utensils. On such occasions, various kinds of yams, leaves, fruit, vegetables or fish that are available in the environment have to be boiled or roasted and eaten as food. For that a fireplace has to be made using the available resource.



### Activity

Use various kinds of materials available to you and try making different types of fireplaces that can be used to cook food outdoors.

## Types of fireplaces that are used to cook food outdoors

When we speak of cooking outdoors, the three-stone fireplace that you prepared for playing cooking rice must have come to your mind. When cooking food outdoors, fireplaces of several types can be prepared using the materials available in the environment. They include,

- Carter's fireplace / three-stone fireplace
- Ditch fire
- Stone-row fireplace
- Unit fireplace
- Double-fork fireplace
- Flat-rock fireplace
- Tin can stove

### Carter's fireplace or three-stone fireplace



Figure 15.1- Carter's fireplace three-stone fireplace

Carter's fireplace or the three-stone fireplace can be used to cook food even for a large group and any kind of food can be cooked using it. What is special about this type of fireplace is that it can be made easily within a short period of time using any kind of stone such as granite, bricks, cabook blocks or cement blocks so that any type of cooking pot available at the time can be placed on them.

## Ditch fire

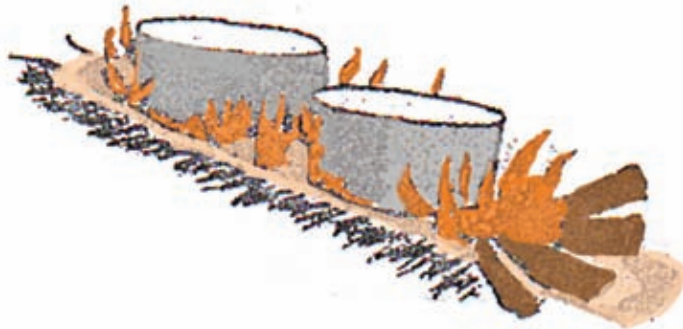


Figure 15.2 - Ditch fire

Ditch fire is prepared by digging a ditch in a flat land so that cooking pots can be placed on it. The width of the ditch should be decided according to the diameter of the cooking pot. A special advantage of this pot is that several cooking pots can be placed on this at the same time.

## Unit fire



Figure 15.3 - Unit fire

The unit fire is made by standing a pole with a strong fork on the ground and placing another pole across the fork so that the cooking pot can be hanged on that pole. A fire is made below the pot. This can also be used to roast certain types of food. This cannot be used to cook food for a large group. Newly cut, fresh poles should be used for this.

## Double-fork fire



Figure 15.4 - Double-fork fire

Double-fork fire is made by standing two poles of similar length with strong forks on flat land and placing another pole on the two forks. Cooking pots are hung on the pole and a fire is made below the pots. Double fork fire, too, cannot be used to cook food for a large group. Newly cut, fresh poles should be used for this.

## Flat-rock fire



Figure 15.5 - Flat-fock fire

A flat-rock fire can be made by placing a fairly large, flat rock on a few stones. This can be used to bake food items like rotee. Instead of the flat rock, a metal plate can also be used over the fire to bake food.

## Tin can stove



Figure 15.6 - Tin can stove

A tin can stove can be made by removing the lid of a tin and cutting out a square shape from the lid side as shown in the figure so that firewood can be inserted through the cutting. This can be used for tasks such as baking rottee.

**There are several factors that should be taken into consideration before lighting fires for cooking food. They include the following.**

- ⇒ Direction of the wind – When cooking close to buildings or in forest areas, fire should be lighted from the direction that is opposite to the direction of the wind as flames can be blown away by the wind and cause fires.
- ⇒ Materials like pebbles, turfs and dried matter such as dried leaves available at fireplace should be removed.



### Activity

Join your friends and go to an open place. Find a discarded tin or a similar object for making a fire and prepare tea as an outdoor activity.

At present there are many food items in the market that can be prepared easily within a short period of time. Although packeted, canned or bottled food available in the market which can be prepared easily, learning to cook food with or without using utensils is important during camp life. Immense pleasure can be gained by making various kinds of cooking utensils from the material available in the environment and cooking food items obtained from the environment under minimum facilities without using conventional utensils.

## Types food that can be prepared in an open place

### Baking rotee

Make a dough by mixing flour and coconut and adding water and salt as required. Now make smaller balls of dough. Take a stick such as a tamarind or lime stick, which is not harmful, peel it off and clean it well. Now, take the small doughs and wind them like rings around the stick. Use a unit fire and bake the rotee by rotating the stick over the fire. Different types of yams and meat, too, can be cooked in the same manner. Apart from this method, the dough can be flattened to make a rotee of the traditional form and it can be baked on a flat-rock fire.



Figure 15.7 - Baking rotee

### Boiling or roasting meat, fish and vegetable

These types of food can be roasted by putting them on a stick or a rod that is placed on two forks as show in the following figure.

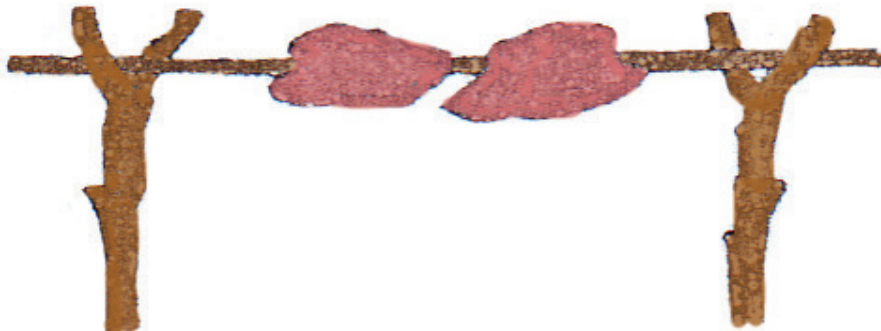


Figure 15.8



The following utensil that is made from fresh sticks and creepers is called the tennis-racket boiler.

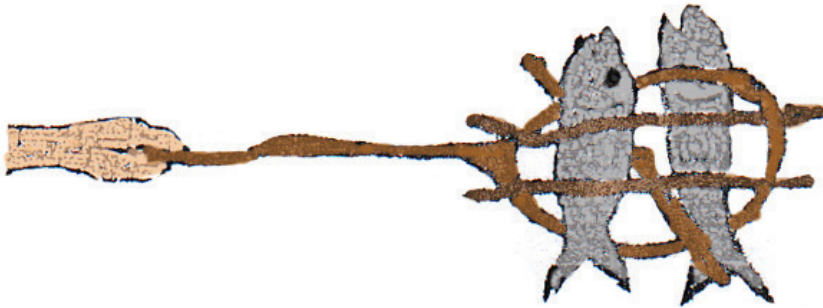


Figure 15.9 - Tennis-racket boiler

Meat, fish, or vegetable can be put on the strings of this utensil and can be burned by holding them over a fire.

### **Making bread / biscuit**

The dough that is made by mixing flour, water and milk can be wound like a band on a fresh stick and bread / biscuit can be made by baking it over a fire. This utensil is called bread-dough baker.



Figure 15.10 - Making biscuits

### **Cooking rice**

Take about two internodes of a thick bamboo and remove the diaphragm in the middle using a knife. Now, sift the rice, wash it and put it into the bamboo, add sufficient water and boil it over the fire as shown in the following figure. This method cannot be used to cook rice for a large group.



Figure 15.11 - Cooking rice

### Activity

Select some kind of food and, under the guidance of your teacher, boil or roast it outdoors without using cooking pot.

### Summary

Various kinds of utensils and fireplaces are used in the kitchen of a home to cook food, but during an outdoor activity, while camping or while in the forest, cooking food is not an easy task.

In such situations, food has to be cooked with or without the use of cooking vessels using various types of fires that are made with the available resources.

There are several types of fires that can be used to cook food outdoors. They include the carter's fireplace or the three-stone fireplace, ditch fire, stone-row fire, unit fireplace, double-fork fireplace, flat-rock fireplace and the tin can stove.

These types of fire places can be used to bake rotee, boil or roast meat, fish or vegetables, make bread or biscuit, or to cook rice etc. with or without using cooking utensils.



### Exercise

1. State the factors that should be taken into consideration when making fires to cook food outdoors during outdoor activities or outdoor camps.
2. Name the type of fireplace that can be used to cook food by placing several pots on it at the same time.
3. When cooking food without using cooking utensils, most often, fresh sticks or creepers are used for holding food on. Write the reason for using fresh sticks or creepers for the purpose.
4. Name the food items that can be cooked outdoors.

## Let us train high jump events

According to the classification of athletic events, high jump can be described as a vertical jump that comes under field events. In high jump events, jumpers can display maximum skills by maintaining the different factors of physical fitness such as strength, flexibility and coordination at highest levels and by adopting the correct technique.

In lesson 9, you learnt the technique of long jump and also engaged in practice activities to practise the technique.

In this lesson you get the opportunity to learn the Fosbury Flop technique of high jump by engaging in activities related to high jump.

### Techniques of high jump

Five techniques of high jump can be identified based on how the body of the jumper moves when clearing the cross bar in high jump.

1. Scissor jump
2. Eastern cut-off
3. Western roll
4. Straddle
5. Fosbury flop

Out of these techniques, Fosbury flop technique is the most used by jumpers at present in order to display maximum performance.

### Phases of high jump technique

1. Approach run
2. Take-off
3. Bar clearance
4. Landing

## Fosbury flop technique of high jump

High jump is done according to Fosbury flop technique under the four phases mentioned above.

- The jumper uses the initial stage of the approach run to gain speed.
- At the second stage the jumper controls his speed and gets ready to take off.
- When the jumper is making the approach run along a curved path, the jumper's body is inclined towards the curve of the path.
- At the last step of the approach run, the body is inclined to the back.
- When taking off, the take off leg should be well-straightened and the foot should touch the ground well while the free leg is bent at the knee and is raised to become parallel to the ground.
- The back of the jumper is turned towards the cross bar and the cross bar is cleared with the body arched.
- After clearing the bar, the bust, which is now parallel to the ground, falls on the landing area first with the shoulders and then with the hands.



Figure 16.1 - Fosbury flop technique

NB: When doing high jump with the Fosbury flop technique, it is very dangerous to practise or jump without using a proper mattress.



## Let us go outdoor

### Activities to practise high jump

#### Practising the approach run according to Fosbury flop method

1. > Draw a circle with a radius of about three meters on the ground.  
> Run along the circle leaning the body towards the curve.

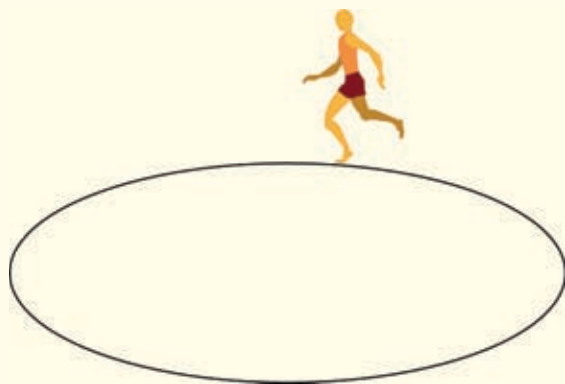


Figure 16.2

2. > Draw the shape of figure 8 with a length of about 16 meters.  
> Run along the circle very fast.  
> Reduce the speed when entering the second circle.



Figure 16.3

3. > Place on a line some obstacles with a gaps of about 4-5 meters between them and run along curved paths between the obstacles as shown in the following figure.

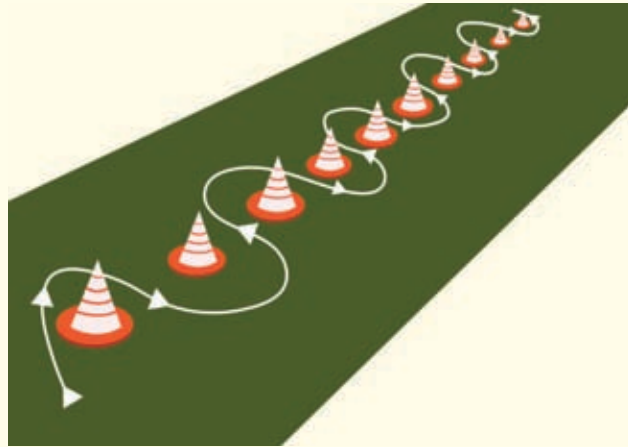


Figure 16.4

### **Practising take-off according to Fosbury flop technique**

- > Lay on the ground a high-jump mattress and stand about two steps away from the mattress turning the back towards the mattress.
- > Take off with both feet and jump up backwards.
- > When landing, raise the legs upwards from the front.



Figure 16.5

### **Practising bar clearance and landing according to Fosbury flop technique**

1. > Stand close to the mattress turning the back to the mattress as shown in the figure.

- › Take off with both feet and bend the body well backwards.
- › Fall on to the mattress so that the upper body hits the mattress first and the hands hit next.



Figure 16.6

- › First fall on to the mattress freely.
- › Then use a plastic or rubber tape as the crossbar so that it will not cause any injury and fall on to the mattress jumping over the tape.



Figure 16.7





### Activity

Go to the playground with your friends and engage in exercises that would help boost the strength of the legs.

## Some of the rules related to high jump

1. After three consecutive failures, the jumper is removed from the competition.
2. Take-off should be taken from one foot.
3. If the crossbar falls off the supports due to some action of the jumper while jumping, it is considered to be a failure.
4. If the jumper touches with any part of the body the area outside the two posts or the landing area before clearing the bar, it is considered as a failure.

### Summary

According to the classification of athletic events, high jump is a vertical jump.

There are five techniques of high jump; however, Fosbury flop technique is the most popular technique at present.

High jump can be described under four phases, namely approach run, take-off, clearing the bar and landing.

Skills related to high jump can be improved through various activities. Gaining knowledge about the rules of high jump and following them help to make successful attempts in high jump.



### Exercise

1. Match A with B

A

- i. A vertical jump
- ii. The last phase of high jump
- iii. The most advantageous technique of high jump
- iv. The number of attempts given to clear a particular height
- v. Number of phases of high jump

B

- four
- fosbury flop
- three
- high jump
- landing

2. Describe two occasions on which the jump is considered to be a failure.

## Let us practise throwing events

Throws come under field events according to the classification of athletic events. Putting the shot, throwing the discus, throwing the javelin, and throwing the hammer belong to throwing events. Only putting the shot, throwing the discus and throwing the javelin are included in school level athletics events. The weight of the throwing equipment differs according to the age group of the participants. Putting the shot and throwing the discus are done from within a circle by adopting rotatory movements. Throwing the javelin is done with an approach run in a specially laid down area. When a piece of equipment is thrown with the rotating movements of the body or with an approach run, it can be thrown farther than when it is thrown while standing in one position.

When you were in Grade 8, you learnt how to hold the throwing equipment, namely the shot, the discus and the javelin and engaged in activities to practise throwing such equipment. You also practised throwing these equipment from standing position.

In this lesson, you will learn how to put the shot and throw the discus and javelin from the power position.

### Power position

The events of putting the shot, throwing the discus and the javelin are described under several phases.

These phases are preparation and starting position, speed building position, power position, release and follow through.

The phase of power position is common to all these three events. In throwing events, the phase immediately before releasing the throwing equipment is called the power position.

When an equipment is released from the power position, that piece of equipment gains more momentum and a greater speed. Therefore, by practising the power position, the thrower gets the ability to throw the equipment to a farther distance.

## Putting the shot being in the power position

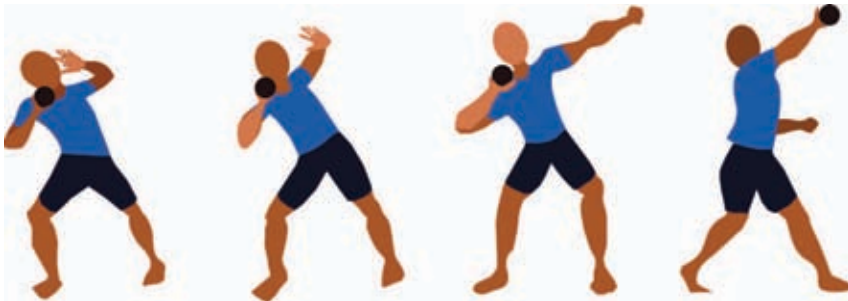


Figure 17.1

- When the shot putter is in the circle being ready to throw the shot, his/her right foot should be placed in the middle of the circle and the left foot should be placed close to the front of the circle.
- The right leg is slightly bent at the knee and the left leg is straightened and extended towards the back.
- Most of the weight of the body is on the right leg.
- The shot putter who is in the power position in this manner, rotates counterclockwise, straightens the legs, turns the body towards the throwing direction and releases the shot from the hand.

## Throwing the discus from the power position



Figure 17.2

- When the thrower is ready to throw the discus, most of the weight of the thrower's body is on the right leg.
- The left leg is extended towards the back.
- Then the right hip is turned towards the front of the ring.
- The body is turned towards the throwing direction and the discus is released.

### Throwing the javelin being in the power position



Figure 17.3

- The javelin is held with the right hand of the thrower who is in the power position ready to throw the javelin.
- The left leg is well straightened and is extended towards the front.
- The body is slightly bent backwards.
- Now the javelin is released from the hand from above the level of the thrower's head so that the head of the javelin is raised.



## Let us go outdoor

### Activities to practise shot put

- › Take a tennis ball and place it on the neck below the ear and under the jaw.  
› Stand with the legs shoulder-width apart and release the tennis ball.



Figure 17.4

- › Keep the tennis ball in the same position as described in (1) above.  
› Now stand with your body turned backwards and release the ball from your hand as you turn forwards.

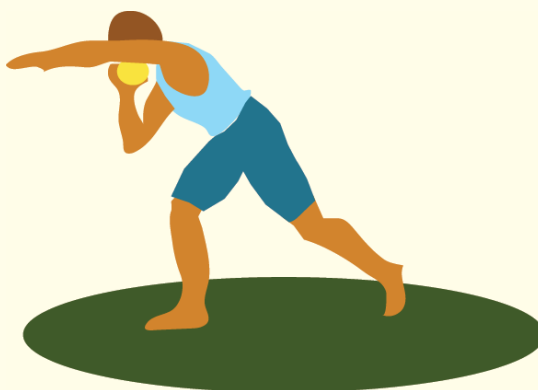


Figure 17.5

## Activities to practise throwing the discus

1. › Stand with the legs slightly apart and throw a ring forwards being in the standing position.



Figure 17.6

2. › Take a ring in your hand and stand turning your body towards the back.  
› Now, turn forwards as shown in the figure and throw the ring.



Figure 17.7

3. › Take a piece of wood of about one foot in length.
  - › Stand with your feet shoulder-width apart, facing the direction of throw and throw the piece of wood forwards.



Figure 17.8

4. › Stand turning your back towards the throwing direction.
  - › Now throw the piece of wood forwards as you turn the body forwards.



Figure 17.9

## Activities to practise throwing the javelin

1. › Take a leather ball, a tennis ball or a rubber ball.
  - › Stand with the legs slightly apart, extend the hand backwards and throw the ball forwards from the standing position.



Figure 17.10

2. › Hold the ball in your dominant hand.
  - › Run to a place that has been marked on the ground and throw the ball forwards from that place with the hand extended well towards the back.



Figure 17.11



### Activity

Under the guidance of your teacher, engage in activities to practise releasing the shot, discus and javelin by being in the power position.



**Engage in activities to practise throwing the above mentioned equipment, first without using equipment, then using some substitute equipment and finally using the standard equipment.**

**Ensure that you engage in these practice activities under the guidance of your teacher as throwing such equipment without observation by a teacher could be very dangerous.**

### Rules relating to throwing events

1. Throwers should start attempting the throw within one minute after his / her name has been announced.
2. Throwers are not allowed to wear gloves.
3. The shot and the discus should be thrown from inside the throwing circle.
4. The shot, the discus or the head of the javelin should land in the area between the lines marked.
5. The thrower should not leave the circle or the runway until the throwing equipment has landed.
6. After putting the shot or after throwing the discus, the thrower should leave the circle from the back half of the circle. After throwing the javelin, the thrower should leave the runway from the back of the runway without crossing the side lines.
7. After a competition has started, no athlete is allowed to engage in practice activities in the playground or in the area where equipment lands.
8. The eight athletes who display the best performance in the first three rounds will get three more trials.



#### Activity

Prepare a set of instructions to be followed by participants in throwing events in order to ensure the safety of the participants.

## Summary

According to the classification of athletic events, the events of shot put, discus throw and javelin throw come under field events.

The throwing techniques of these throwing events are described under several phases.

Out of these phases, the phase immediately before releasing the equipment is the power position.

The shot, the discus and the javelin gain greater momentum and power when such pieces of equipment are thrown from power position.

Gaining knowledge about rules related to throwing events is important for making successful attempts in throwing competitions.

You can gain experience in throwing these equipment by engaging in practice activities.



## Exercise

1. Name four throwing events.
2. State separately the throwing events in which the equipment is thrown from within a circle and those thrown after an approach run.
3. What are the phases that are common to both the shot put technique and the discus throw technique?
4. What is the phase that comes immediately before the phase of releasing the throwing equipment and is common to all throwing events?
5. Write three rules that are common to all throwing events.

# Let us develop social values through sports

People prefer to live in a group rather than in isolation. Such a group is called a community. The family is the smallest social unit. A person is accepted as a member of a community, when its rules and customs are observed. In life there are many opportunities to comply with social norms. In this context the school plays an important role. Pursuing studies and taking part in extra-curricular activities in the school helps you to be an active member of the school. Participating in inter house sports and other team events provides valuable experience in becoming a socially accepted person. Sports takes a major role in building up of social values in the society.

In previous grades you learnt that it is essential to abide by the rules, regulations and ethics of sports in order to maintain the honour of the sport as well as fair play and safety of the players.

Let us learn in this lesson the social value of observing rules and regulations in sports.

## Rules, regulations and ethics in sports

To give an opportunity for every student to take part in sports, the following levels of competition are available.

- Minor games and lead-up games
- Inter house sports competitions
- Friendly matches amongst classes
- Inter school friendly matches
- Divisional sports competitions
- Provincial sports competitions
- All island sports competitions
- Sports competitions at international level

You may have participated in at least two or three of the events given above. You would have gained valuable experience by observing the rules of the game and rules of good conduct.



## Activity

Indicate the qualities you would need to be a useful member of the team representing your house, for instance 4x100m relay.

The rules of sports are accepted principles to be followed in the game.

eg: The dimensions of the play area, number of players in each team, specifications of equipment.

Regulations of the sports are terms and conditions within the frame of rules.

eg: outfits specified for each sport.

The traditions, sportsmanship and good conduct are known as the ethics of sports.

eg: At the end of the game both teams shake hands with each other as well as with the umpires / referees.

Taking part in a sport whilst abiding by its rules and regulations is true sportsmanship. It is also respecting social values.



Figure 18.1 - Face criticism

Even if a person achieves the highest standards in a sport, but does not follow the rules, regulations and ethics it leads to disadvantages, given below;

- Liable to be sent out of the game
- To be debarred from the sport
- Face disgrace
- Face criticism
- Negligence
- Lose respect from spectators

An outstanding cyclist Lance Armstrong of the USA and Marion Jones a sprint champion of the USA were found guilty of taking performance enhancing drugs and were deprived of the gold medals they won at the world cycling championships and the Olympic sprint respectively. As a result they lost the respect of the sporting world and were condemned by all.

## The social value of observing the rules and ethics of sport

It is expected that a person will change for the better by participating in sports. Such a change can be personal or among individuals or in a group. The benefits of such a change are given below.

- Productive way of spending leisure time
- Mental and physical development
- Training to work together in a group
- To work in cooperation with others
- Engage in daily activities with contentment
- Ability to spend time pleasantly in any group or society
- Become valuable members of society who are courteous and respect good behavior

You must make every effort to obtain the benefits given above by taking part in sports.

A person who observes the rules of the sports will be respected in any society.

Therefore it is clear that by following rules, regulations and ethics of good conduct in a sport is considered valuable in any society.

Taking part in sports in school would give you valuable experience in addition to the knowledge you get in the classroom. This experience is most useful when you take up higher studies after school or in later employment.

Some of the good qualities you gain by participating sports are.

- Being active
- Be sociable
- Organizational abilities
- Decision making abilities
- Problem solving abilities
- Good interpersonal relationships
- Emotional control abilities
- Leadership qualities
- Followership qualities
- Empathy



Figure 18.2 - Be sociable



### Activity

Recall a lead-up game you learnt in grade 8. Play the game with your friends. List the benefits you gained from the game.

## As a sportsman how do you maintain good relationships?

When taking part in sports it will be necessary to work with different types of people. Sometimes the members of the team may not be united and do not cooperate which gives rise to problems.

You may have seen in the television, incidents where sportspersons argue with members of the opposing teams, referees or umpires and spectators attacking the players with items such as bottles and stones. It is necessary to take steps to avoid such conflicts. Therefore in dealing with team mates, opposing teams, umpires, referees and spectators there are several qualities that need to be developed.

### Qualities required in dealing with team members

A team includes its members and coaches. In team sports success depends on the skills of team members, their dedication and team spirit.



Figure 18.3 - Working as a team

The following qualities are needed to be developed to gain victory;

- Acting with enthusiasm, dedication and cooperation
- Participating actively in team work
- Avoiding criticizing and humiliating team members
- Refraining from complaining against team members
- Helping team members
- Taking part in practices
- Respecting and following instructions of the coaches
- Showing respect to the team leaders
- Considering of opposing views
- Being flexible

### **Qualities needed to be maintained for good relationship with opposing teams**

In sports, the team that plays against you is not an enemy but only a competitor.



Figure 18.4 - Be cordial with opposing team

In your relationships with opposing teams the following qualities are required;

- Appreciate and congratulate any outstanding skill of the opposing team
- Point out courteously any breakage of rules by the opposing team
- Avoid arrogance in the event of victory and refrain from giving excuses for defeat
- If an opposing team member meets with an accident or an emergency help him
- Whatever the result of the competition, it is necessary to be cordial and to bid farewell



- Refrain from commenting on weaknesses or economic difficulties of the opposing team
- Avoid ridiculing and making unsuitable remarks

### **Qualities needed in dealing with referees / umpires**

Referees or umpires involve to hold the game according to the rules and regulations and to decide on the victory or defeat in a game.

The following qualities are required when dealing with umpires.

- Respect the judgment
- Do not directly question the umpire on his decision
- If the decision is questionable, objection should be made according to the rules
- A mistake on the part of the umpire must not be criticized
- Avoid exchange of harsh words with the umpire
- Avoid arguing with the umpire
- At the end of the competition, leave from them with courtesy

### **Qualities needed in maintaining good relationships with the spectators**

Varied types of spectators come to watch a sports competition.



Figure 18.5 - Spectators



Following qualities should be developed to maintain good relationships with them.

- Ignore spectators jokes
- Appreciate good responses from spectators
- Maintain cordial relationships with the spectators
- Do not keep room for fights with the spectators
- Do not accept illegal favours from spectators

### **Expected qualities of spectators at sports events**

Persons watching a sports competition must behave in a manner that safeguards the honour of both the sport and the sportsmen. You may have seen incidents in international matches, spectators behave in a provocative manner as reported in the media. Spectators must realize that unlawful acts would result in punishment from the relevant authorities.

Hence spectators must observe certain norms of behavior.

- Encourage teams in both victory and defeat
- Avoid criticizing, humiliating or annoying the teams
- Encourage and evaluate the performance of the teams whether you support or not
- Harsh or inappropriate words must be avoided
- Avoid making excessive noise which can be a hindrance to the game
- Avoid taking liquor, drugs or smoking in the field

If you have the characteristics mentioned above then you have acquired true sportsmanship and developed social qualities.

A person who has followed rules and regulations of sports and rules of good conduct will be recognized in the society as a respectable law abiding citizen.

## Summary

Observing rules, regulations and ethics of sports preserves the honour of the sport, fair play and safety of the participants.

When taking part in sports you need to associate with different types of people. Hence the qualities you gain from sports help you to behave in the society cooperatively and with responsibility.

When taking part in sports it is important that you maintain good qualities as a sportsman with your team mates, opposing teams, umpires and the spectators.



## Exercise

1. What are the positive changes that take place in your behavior when you involve in sports?
2. Write the skills you develop as a sportsperson when you start working after school to do your job successfully and with ease.
3. Write separately in a chart the qualities you need to possess when dealing with your team mates, competitors, referees and spectators.
4. What are the good qualities you should maintain as a spectator?

# Let us improve our psychosocial fitness

We have to face many challenges in life. These include personal challenges such as illness, exams, unemployment as well as natural disasters and war which affect the entire society. We need good physical, mental and social fitness to overcome such challenges. Mental and social fitness is important for proper decision making, facing challenges and to make use of one's experience in a positive way.

In the previous grades we learnt about factors which improve psychosocial wellbeing such as emotional balance, empathy, effective communication and good interpersonal relationships.

In this lesson we will learn some more skills which will improve our mental and social fitness.

## Creative and exploratory thinking

We may have to make quick decisions when faced with challenges. Creative thinking and exploratory thinking are necessary to meet such challenges.

Creative and exploratory thinking ability is ability to use our knowledge and creativity to generate options which are novel.

Reading different types of books, thinking logically about what is learnt, engaging in games such as chess or draughts which require analytical thinking can develop our thinking abilities.



Figure 19.1 - Engaging in a game of chess

Nalindu visited Nipun at home after school. Both agreed to go for a walk along the paddy fields. Nalindu picked up a bamboo almost unintentionally. They noticed that there was a heavy current in the stream near the paddy field.

Nipun: We can cross here because the stream is not very deep.

Nalindu: Yes, but we don't know how deep it is.

Nalindu immersed the bamboo in the stream and checked its depth. "It is about three feet deep, we can even get washed away by the current. Let us walk down and find a narrow part of the stream to cross" He said.

They walked down and found a narrow part of the stream. Nalindu used the bamboo to jump across. He then extended the bamboo and helped Nipun too to cross the stream.

Afterwards Nalindu walked in front and used the bamboo to part the grass. They once saw a snake slithering across the grass.

They walked to the end of the stream. They found a mango tree full of fruits. It was too tall to climb or pluck the fruits. Nalindu aimed and threw the bamboo at a branch with fruits. Four or five mangoes fell. They picked them up and both enjoyed eating the mangoes.

The final use of the bamboo was when the next door dog Tommy jumped at them. Tommy was a fierce dog who had also bitten some people. Nalindu waved the bamboo at the dog to keep it away. The aunt next door then came and tied up the dog.

Nipun: "This is a magic bamboo. Can I have it please?"

Nalindu: "There is nothing magical about this bamboo. We used it appropriately when it was needed".

The above example shows how the two children were able to avert several dangers by using the bamboo appropriately.



### Activity

Discuss how the two boys in the story used their knowledge, creativity and observations to overcome the challenges they faced.

## Ability to solve problems

There was a big commotion when Nirodha and Ruvangi came home after school.

“Your father was admitted to hospital because he was not well. I have to go to hospital regularly to see him. How can I look after the two of you?” Their mother appeared very stressed.

“We can stay a few days with our grandmother or aunt” Nirodha suggested. “Yes that is a good idea. But don’t you have your term tests these days?” said his mother. “It is all right we have studied and we can continue to do so even if you are not there Amma. We can also get help from our grandmother” Ruvangi suggested.

“What about the school trip?” their mother asked.

“ I don’t think you will have enough money for it now. Also there is no one to drop me and pick me up. So I will go on the trip next time”. Ruvangi added thoughtfully.

“I will look after my younger sister, we can wash our own clothes” Nirodha said.

“Yes it is best that you stay at your grandmother’s. I will talk to her and find out if you can stay a few days there. Get your things ready. It is a great relief that we solved this problem” their mother said.



### Activity

What are the problems faced by the family members in the above story? What were the solutions for each of these problems? How did each one contribute to problem solving?

Such unexpected problems can arise at various points in life. It is important that we try to solve problems instead of becoming distressed.

Let's see how did the people in this story use the strategies described below.



Figure 19.2 - Problem solving

## Ways of handling problems

1. Be positive that the problem can be solved.
2. Understand the nature of the problem. - Collecting information about the problem is helpful for this.
3. Be creative and generate alternatives to solve the problem. - Writing these down may be helpful.
4. Select the most appropriate solution and implement it. - You need to be aware of who can help you and the resources available when selecting the most appropriate solution.
5. If you cannot think of a suitable solution you can get the advice from an adult who you can trust.
6. If the problem has an impact on the whole family or a group where everyone is affected, must meet and discuss options - You must respect each others opinions. Sometimes sacrifices may have to be made to achieve a solution that is acceptable to all.
7. If one solution does not work, find out reasons for failure and select and implement another solution.

Once you solve a problem, you can use that experience to solve similar problems in the future. Some people use maladaptive behaviours such as using alcohol or getting into conflicts which complicate problems. You need skills to solve problems while maintaining your physical and mental wellbeing and without getting stressed.



### Activity

Try to recall a problem you faced during the past week. Write down how you could have solved that problem using the strategies listed above. Get help from your teacher.

## Acting with responsibility

The class teacher has not come to school as she was not well. The students were shouting and behaving in an unruly manner. Malindu was the monitor. Malindu tried to stop the students from shouting but they did not listen to him. He knew if this behaviour went on longer they would all be punished by the teacher in the next class.

Malindu had a bright idea. “Can everyone please sit down. We are going to have a competition. This is a general knowledge competition. Can Nilmini and Oditha become the leaders? We will divide the class into two groups. Each group can ask questions from the other. The side that answers the most questions correctly is the winner”.

“Excellent” said the students. Everyone sat down and the competition commenced. The competition was proceeding. The students were busy thinking of difficult questions.

The principal on his walk around the school came into the class room. He was very pleased to see that the class was quiet despite the absence of the teacher. He praised all the students.

The above case shows that we sometimes need to make decisions regarding others. We must act with responsibility in such situations.

Because Malindu made the correct decision, as the class monitor, everyone benefited. He had the power to make the decision. If he has avoided responsibility everyone in the class would have suffered. When people with power avoid responsibility it can harm the society.



Figure 19.3 - Decision making

Making decisions responsibly, appropriate to the situation based on experience, contribute to the wellbeing of everyone.



### Activity

You have to spend an afternoon at home alone. There is no adult at home. If a friend comes and suggests that you go out to the playground, how will you handle this situation? How can you act responsibly?

## Coping effectively with stress

We become stressed when we have to face challenges. Stress is the physical and psychological reaction to a challenge.

Being late to school, becoming ill, facing exams, losing a friend or death of a family member cause different degrees of stress.

Some extent of stress lead us to do our work effectively and to face challenges successfully.

There are only a few days more for the term test. Everyone is talking about it.

Madhavan saw that Nizam was looking unhappy and was resting his head on the desk. “Nizam, do you have a headache?” asked Madhavan.

“No I slept only a few hours last night. I studied throughout the night. I get scared when I see the number of books I have to study. Then I don’t feel like doing anything”. “Last few days I studied without watching television or going out to play. But I can’t remember anything” Nizam said.

“Why did you take such a long time to finish studying? I do daily work and finish all the tasks given by the teacher. By doing that my knowledge improved. About one month before the exam I made a timetable and started revising. I continue to read story books and plan to take part in the badminton tournament tomorrow as well” Madhavan said.

Saman who was listening to this story said “ Why do you want to work so hard? I couldn’t do any work. Now there is no point in studying. Therefore I don’t want to start studying now. I don’t mind even if I am the last in the class”.

Madhvan replied “Your position in class is not important. The purpose of a term test is to check if you have understood what has been taught”. “Nizam, there is no point



in studying throughout the night. Proper sleep is important for a good memory. Make a time table today and study whatever you can within the next few days. Don't forget to have some time to rest and play” Madhavan advised Nizam.

“When I have lot of work to do I don't feel like studying at all. What should I do when that happens?” asked Nizam.

“Why don't you listen to a song or talk to someone so that you become less stressed? After that you can get back to studies. Study a subject you like when that happens. In the morning when you are active you can study the difficult subjects” said Madhavan.

You can see that in the above story Nizam became very stressed because he couldn't complete revising on time. Because he was stressed he couldn't even do the work he otherwise could have done. When the stress reaches a certain level it reduces efficiency and leads to failure.

If a student has no stress at all he will become lazy and would not prepare for the exam. Saman is an example of such a student. Therefore a certain amount of stress helps us meet challenges.

Madhavan who sees the exam as a challenge, and wants to get good results started studying well in time. His advice to Nizam on how to face stress is very useful. Working according to a timetable, making optimal use of time and working to a plan helps achieve success. Proper rest helps reduce stress. Engaging in sports and adequate sleep also help decrease stress and improve your memory.



Figure 19.4 - Preparing to meet challenges

## Good habits which help to handle stress

1. Good time management
2. Recognising and dealing with problems
3. Preparing in advance to meet challenges
4. Exercising daily
5. Proper rest and sleep
6. Engaging in hobbies
7. Engaging in religious activities
8. Engaging in activities which calm the mind such as meditating

The good habits listed above are connected with each other and improve mental and social wellbeing. Developing one such skill will lead to improvement in other areas as well. You can achieve success by developing these skills.

### Summary

Developing of skills which improve mental or social wellbeing help us face challenges successfully.

Creative and exploratory thinking involves being able to observe a situation, identifying factors which influence it, using our knowledge and creativity to generate novel alternative solutions, selecting and implementing the most suitable course of action.

The ability to solve problems helps us achieve success as individuals and as groups. When we discuss solutions as a group we should ensure that everyone contributes, solutions are arrived at through dialog and each others views are respected.

Taking responsibility and making correct decisions helps society.

Stress is the physical and psychological reaction to a challenge. Excessive stress can lead to failure. Being prepared in advance, being organized and good time management can help minimize stress.



### Exercise

1. What thinking abilities do you need to make decisions?
2. Name five strategies you can use to solve a problem
3. Name three situations which can cause stress to a student
4. Take one of the situations listed above and list activities which can minimize stress in that situation.

## Let us identify gender responsibilities

All animals produce offspring which ensures the survival of the species. The male and the female reproductive systems are made up to produce offspring. The reproductive system becomes active during adolescence and produces secondary sexual characteristics. You and your friends who are about 14 years old will begin to display these characteristics. It is important to learn facts about reproductive health and not to believe in inaccurate information.

In Grades 7 and 8 you learnt about the functioning of the male and the female reproductive systems. We also learnt how the menstrual cycle prepares the female reproductive system for a pregnancy and the role of the male reproductive systems in conceiving a child.

In this lesson we will learn about sexuality, healthy sexual behaviours and social norms.

### Gender

The child is assigned a gender based on the appearance of the external genitalia. The biological gender is determined genetically and through the action of hormones.

Society assigns different gender roles for males and females. For example society assigns different dress codes for males and females and expect girls and boys to play with different toys. Social norms regarding responsibility, behaviours and roles contribute to the social concept of gender. The social concept of gender is also influenced by economic status, culture, religion and political influences. Our gender role as a male or a female is acquired by imitating our parents, the clothes we dress during childhood, toys we play with etc.



#### Activity

Discuss the social differences between males and females based on the social concept of gender in Sri Lanka.

## Occasions influenced by the social concept of gender

1. Jobs
2. Patterns of behaviour
3. Things which women can do and men can do
4. Position in the family and the society
5. Family responsibilities assigned to males and females
6. Clothing and fashion
7. Toys



Figure 20.1 - Classifying toys according to gender

Senali came back from school to find her father cooking. “Your mother went to see your grandmother who is not well. I will do the household work today” Senali’s father said.

Senali helped her father with the cooking and washing up. They both washed the clothes. After some time her brother returned home from school. He swept the floor and, folded the clothes.

Their mother came home in the evening. She looked tired. Senali’s father made her a cup of tea. “Although I wasn’t at home the work has been done well” she said smiling.

From ancient times, in Sri Lankan households, cooking, housework and looking after children have been the responsibility of the female. The husband goes to work and is responsible for earning for the family.

However, many social changes have happened in the recent past and often both husband and wife go out to work. Therefore, the difference in the assigned gender roles have become less. Depending on the time available, both husband and wife equally share the responsibilities and work.

As shown in the incident above, sharing of work equally ensures a successful family life. If work is not labeled as “work of women” and “work of men” and it is shared, it will improve everyone’s wellbeing. You should also do the same while at home and in school.



Figure 20.2 - Equally sharing responsibilities

### Activity

Explain how the family members in the above incident helped each other without adhering to male, female or age related stereotypes.

The socially attributed male and female roles can lead to conflict and stress.

Socially assigned differences in gender can lead to issues such as abuse of women and children, women being restricted to the home, depriving children of education, male female inequality in certain occupations and abuse of human rights.

Therefore, the international concept of human rights does not recognize the social concept of gender. It states that both males and females are entitled to the same rights as humans. There should not be any gender discrimination at home, work place or society.

## Responsibilities and behaviours related to sexuality and reproduction

Male and female gender roles are determined by two major factors. The biological sex which is genetically determined and the socially assigned gender which is determined by social and cultural factors. Based on these, from childhood, we identify ourselves as male or female and behave accordingly. Gender identity is one's personal experience of one's own gender.

People express their sexuality in different ways. Reproduction is the main function linked with sexuality. It is important to adopt healthy, responsible sexual behaviours.

The conception, implantation and development of the foetus takes place in the female reproductive system. The male reproductive system contributes to the conception of the child. After the birth of the child the female assumes the mother's role and the male assumes the father's role.

Until 20 years of age, the female reproductive system is not adequately developed to provide the nutrition necessary for the foetus. The adolescent female reproductive system is still undergoing growth. Both adolescent boys and girls are not psychologically mature enough to assume the role of a mother or father. They are still developing skills needed to function in the role of a mother or father.

The minimum age at marriage in Sri Lanka is 18 years. The law has been enacted to prevent teenage pregnancies which can harm the mother and the baby.

The sexual relationship between two married adults, based on love and trust, contributes to physical, psychological and social wellbeing. A child born to a married couple, who plan the pregnancy, will enjoy more love and security than if it is born to an unmarried mother.

Most married couples are economically stable. Therefore, they are more able to provide the child's educational and other needs. The child will develop psychological and social skills by associating the parents, family and friends.

A child born to unmarried parents will often have the protection of only one parent. Sometimes the child may not get the love and protection of either parent. There may not be adequate economic resources to provide for the needs of the child. The child will not get adequate psychological and social support. If there is inadequate love and security such children may engage in antisocial behaviours. If married parents too do not carry out their responsibilities and provide adequate, love, and security, their children's education may get disrupted and they may consume alcohol and other drugs or be subjected to sexual abuse.



## Negative consequences of irresponsible sexual behaviour

1. Unplanned pregnancies
2. Sexually transmitted diseases
3. Psychological problems
4. Disruption of education
5. Disruption of future plans
6. Social discrimination
7. Break-up of family relationships
8. Lack of security for the children



Figure 20.3 - Unplanned pregnancies

## Responsibilities of parents for a healthy child

The ideal family will help each other, share joys and sorrows and work together. This will build up a good relationship between parents and their children who will become citizens who contribute positively to the society.

The birth of a child is a special occasion for the parents. The parents have a special responsibility to ensure the birth of a healthy child. They must be prepared for the birth of the child. Planning for the pregnancy will contribute to the health of both mother and child.

## What a mother should do to ensure the birth of a healthy child

1. Eat a healthy, balanced diet.
2. Inform the public health midwife about the pregnancy. She will then educate the mother and direct her to obtain the necessary services.
3. Attend clinics conducted by the Medical Officer of Health (MOH) in the area, take the supplementary nutrition, vitamin and minerals as prescribed. Undergo necessary check-ups.
4. Carry out daily activities and exercises.
5. Engage in aesthetic activities and religious activities to improve psychological wellbeing.



6. At the appropriate time, identify the hospital where you want to deliver the baby and register in the maternity clinic of the hospital.
7. Continue to fulfill your responsibilities towards your other children and family members.
8. Avoid consumption of alcohol and smoking.



Figure 20.4 - Attending health clinics

### **Responsibilities of the father regarding his pregnant wife**

1. Provide adequate love, care and security for the wife
2. Provide food, clothing and other needs
3. Provide a home and environment suitable for the pregnant mother
4. Attend the maternity clinics with the wife
5. Engage in activities with the wife which improve psychological well being
6. Avoid alcohol consumption and smoking
7. Support the wife in caring for the other children and family members



Figure 20.5 - Providing love, care and security to the wife

### Activity

A mother is expecting her third child. She already has two children. Explain how the family members can contribute for household work cooperatively.

With the birth of a new child the parents are faced with many responsibilities. They have to look after the child from birth until adulthood and ensure that the child becomes a useful member of the society. The parents have to provide security and education so that as an adult he or she has adequate skills to engage in employment and have a successful life.

### **Responsibilities of the parents towards their children**

1. Provide adequate nutrition
2. Provide a suitable education and encourage children to learn
3. Provide love and protection
4. Ensure that the children have adequate skills to protect themselves
5. Provide opportunities to develop physically, psychologically and spiritually
6. Provide opportunities to express their ideas and develop their creativity
7. Provide opportunities to excel
8. Provide a conflict free home environment



Figure 20.6 - Providing love and protection



### Activity

Although you are still a child, you have responsibilities towards your parents. List the responsibilities of a child towards his / her parents.

Understanding about your sexuality and the accompanying social responsibilities ensures your wellbeing and that of your children.

### Summary

The biological gender of a person is determined genetically.

The social concept of gender assigns different roles and responsibilities for males and females based on cultural, religious and political factors.

The gender based stereotypes assigned by the social concept of gender can sometimes be harmful.

A happy family disregards strict adherence to gender roles.

Gender identity is one's personal experience of one's own gender, which is based on the biological sex and the social concept of gender.

Responsible sexual behaviour is essential for physical and mental health. Good relationship between parents and responsibility towards each other ensures a healthy environment for the children.



## Exercise

1. What are the factors that determine the social concept of gender?
2. Give three adverse consequences of the social concept of gender.
3. Are the following statements true or false?
  - i. Household responsibilities must always be carried out by females (.....)
  - ii. If a person wishes to, he or she can get married even if he / she is are under the age of 18 years. (.....)
  - iii. Irresponsible sexual behaviour can lead to disruption of education. (.....)
  - iv. Good relationship between parents ensures a healthy environment for the children. (.....)
  - v. During pregnancy both mother and father have to bear many responsibilities to ensure the birth of a healthy child. (.....)
4. What should a pregnant mother do to ensure the birth of a healthy child?
5. What are the responsibilities of the parents towards their children?

# Let us overcome social challenges

There are many social challenges which affect our wellbeing. To face them successfully we need to identify them and steps to overcome them. This will help improve our physical, psychological and social wellbeing.

In the previous grades we learnt about environmental challenges such as accidents, disasters, abuse and diseases and how to overcome them.

This lesson will focus further on how to face social challenges.

## Major social challenges

- Unhealthy eating habits
- Diseases
- Climate change and disasters
- Cultural factors
- Problems related to new technologies
- Conflicts

Let us discuss how to overcome each of these challenges.

## Unhealthy eating habits

We fulfil our nutritional requirements by consuming food which we buy. We can classify these foods into 2 categories.

1. Natural foods
2. Artificial foods



Figure 21.1 - Natural and artificial foods

### Natural foods

Natural foods are those which have been minimally processed and have no added preservatives, flavours or colours.

eg: fresh vegetables, fruits, cereal.

### Artificial foods

Foods which have been subjected to changes

eg: processed food  
junk food  
fast food

## Natural food

Natural food has high nutritional value and is free of harmful chemicals. Therefore, natural food is healthy. Although some foods have not been processed they may have been contaminated by pesticides and chemical fertilizers. Therefore, we have to select natural foods carefully.

We must select the following types of food

- Food which has been grown without using pesticides or chemical fertilizers
- Food with a thick outer covering
- Fresh food
- Foods which are in season

## Artificial food

### 1. Processed food

Processed foods are foods where the content has been changed physically or chemically to preserve it or to enable quick preparation. Preservatives or artificial flavours are added to processed food.

eg: canned vegetables and fruits.

Milk which has been pasteurized and par-boiled rice are not harmful to health.

### 2. Fast food

Fast food can be prepared and consumed within a short time. Fast foods have less nutritional value.

eg: instant noodles, bacon, food made with wheat flour.

### 3. Junk food

Junk food contains excessive sugar, fat and calories. They have less fiber, protein, vitamins and minerals.

eg: potato chips, fried manioc chips, chocolate, fizzy drinks, rolls, pizza.

## Why we should not consume artificial foods?

Table 21.1

Characteristic of food	Adverse effects
Excess of sugar, fat or salt	Obesity, diabetes, hypertension, increased cholesterol
Less fiber	Constipation, diseases of the gastro intestinal tract
Excessive calories	Nutritional deficiencies due to reduced appetite
Excess use of artificial flavours, colouring and preservatives	Cancers, allergies and poisoning

Did you know that processed food can harm your health? You will now understand the importance of consuming natural food.



### Activity

Classify the food that is available in your canteen as natural and artificial. Identify the healthy types of food that are available in the canteen.

## Diseases

We can classify diseases as;

1. Communicable diseases
2. Non-communicable diseases

### Communicable diseases

These diseases can spread from one person to another. They are caused by disease causing microbes. They can spread directly or through a vector.

eg: dengue, malaria, filaria, tuberculosis, leptospirosis, typhoid, diarrhea, sexually transmitted diseases.

### Non-communicable diseases

These are caused by physical factors and do not spread from one person to another.

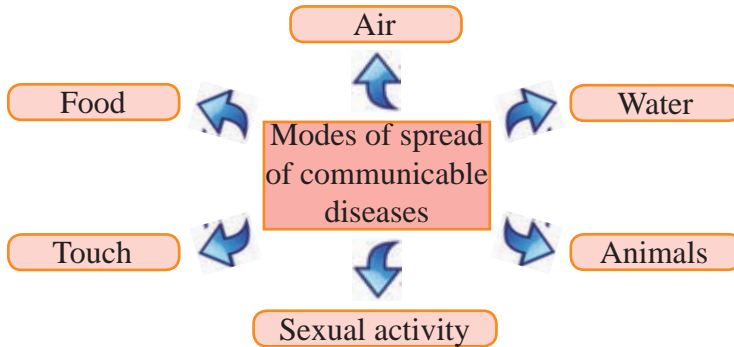
eg: diabetes, cancer, hypertension and mental illness.



## Communicable diseases

Communicable diseases can spread through different modes.

Diagram 21.1



### Dengue

Dengue is spread by 2 species of *Aedes* mosquitoes. Dengue has become a major health challenge because of the actions of humans.

Dengue fever can result in complications such as dengue haemorrhagic fever. Because such conditions can be fatal we must prevent the illness and diagnose early with the help of investigations and treat adequately.

#### Symptoms of dengue



Fever which lasts more than 2 days

Headache

Eye pain

Muscle and joint pain

Nausea and vomiting

Red spots which develop on the skin

Bleeding

#### What should we do when these symptoms are present?

- Do not engage in strenuous activities. You must rest
- Use only paracetamol to control the fever
- Drink recommended amounts of fluid
- Do not consume food and drinks which are red or brown coloured
- Seek medical advice and carry out appropriate investigations





Figure 21.2 - Spread and control of dengue



### Activity

Describe how we can prevent the breeding of dengue mosquitoes

### Malaria

Malaria is spread by mosquitos. People travelling to countries with malaria should take medicines for malaria during that period. Tourists from these countries can spread the disease in Sri Lanka. Malaria can be diagnosed through a blood test.

#### Symptoms of malaria



Fever with chills and rigors

Poor appetite

Joint pains

Vomiting

Headache

### Filaria

Filaria is spread through mosquitos. Filaria has been eliminated in Sri Lanka. Therefore we do not encounter it these days. Filaria can be diagnosed by a blood test.

### Symptoms of filaria



Muscle pain

Fever

Painful lumps under the skin

Lymph node enlargement

Swelling of infected limbs



Figure 21.3 - Swollen limbs caused by obstruction of lymphatic flow due to filaria

### Tuberculosis

Cough is a common symptom. Cough which lasts more than 2 weeks should be investigated. The bacteria which causes tuberculosis can be identified by examining the sputum which is coughed out. Tuberculosis can be cured by treating for 6 months.

### Symptoms of tuberculosis



Chronic cough

Blood stained sputum

Fever

Chest pain

Unexplained loss of weight

Excessive sweating at night

## Leptospirosis

The infective agent is transmitted through the urine of infected rats. The bacteria enters the body through open wounds and by drinking or bathing in contaminated water where the bacteria can enter through the mucosa in the mouth or eyes.

In addition to rats, pets can also transmit these bacteria.

Farmers in areas where this disease is present should contact the MOH office and obtain preventive medicines. Open wounds should not be exposed to contaminated water. Medical advice should be sought immediately in case of noticing following symptoms.

### Symptoms of leptospirosis



Fever

Red and yellow eyes

Headache

Muscle pain

## Typhoid

This infection is transmitted through contaminated water and food. It can be prevented by consuming clean food and boiled water.

### Symptoms of typhoid



Fever

Watery diarrhoea

Abdominal pain

Lethargy

Poor appetite

Headache

## Diarrhoea

This is caused by a bacteria. It is transmitted through contaminated food and water.

### Symptoms of diarrhoea



Fever

Stools may contain blood and mucous

Abdominal pain

Loose stools

Poor appetite

### Sexually transmitted disease.

Sexually transmitted diseases are spread from one infected person to another through unsafe sexual behaviour.

eg: HIV AIDS, gonorrhoea, syphilis, genital warts and genital herpes.

### HIV AIDS

Infection with the HIV (human immunodeficiency virus) can result in AIDS (acquired immune deficiency syndrome) This suppresses the immunity provided by the white blood cells in blood and reduces our resistance against infection.

The symptoms of AIDS appear after many years, therefore, the person can transmit this disease to others during this period. The HIV cannot survive on its own in the environment, it can only survive inside a live cell.

HIV can be diagnosed by a blood test.



Figure 21.4 - Testing for HIV

### Transmission of HIV

Unsafe sexual behaviour  
Transmission from an infected mother to the child

- across the placenta during pregnancy
- during child birth
- through breast milk

Transfusion of infected blood  
Transplant of organs or tissues of an infected person  
Syringes and other equipment which have been contaminated with blood from an infected person and has not been properly sterilized

### HIV is NOT transmitted through the following

Touch or shaking hand with an infected person  
Hugging an infected person  
Coughing or sneezing  
Through clothes, food, cups and plates used by an infected person  
Bites of mosquitos and other insects  
Swimming in a pool  
Toilet seats



### Activity

Learn about common infectious diseases. Make a chart of the preventive measures for each of these diseases and display it in your class room.

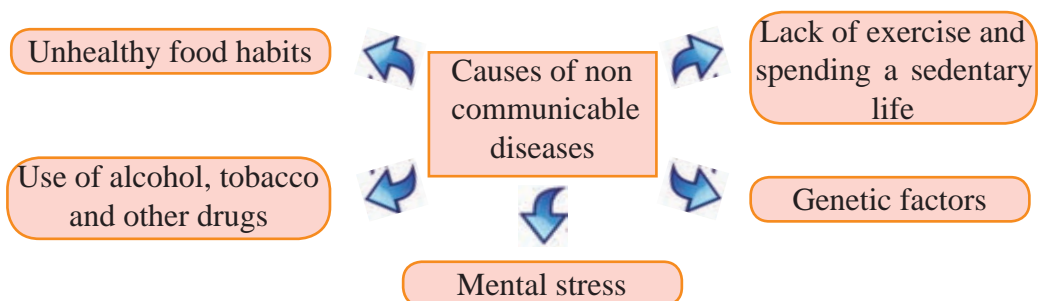
## Ways to prevent infectious diseases

- Maintain good personal hygiene
- Obtain recommended immunization
- Engage in healthy habits
- Use mosquito nets, mosquito coils and mosquito repellants appropriately
- Prevent environmental pollution

## Non communicable diseases

Many factors increase the risk of non communicable diseases.

Diagram 21.2



## Diabetes

In diabetes the blood glucose level is increased. The excess glucose is eliminated in the urine.

If the disease is not controlled it can lead to complications such as heart attacks, visual problems, kidney diseases and stroke.

### Symptoms of diabetes



Excessive weight loss

Increased frequency and amount of urine

Delayed wound healing

Excessive thirst and dry mouth

Poor vision, lack of energy, dizziness

Tingling sensation in hands and feet

## Hypertension (high blood pressure)

In hypertension the blood pressure is more than normal. It can lead to complications. Therefore, blood pressure must be checked regularly and the person should take medicines to control it.

### Symptoms of hypertension



Headache, dizziness

Nausea

Chest pain, palpitations

Visual problems

Excessive sweating



Figure 21.5 - Checking blood pressure

## Heart disease

Ischaemic heart disease is caused by the narrowing the coronary arteries or because of a blood clot which block the coronary arteries which supply blood to the heart.

### Symptoms of heart diseases



Difficulty in breathing

Chest pain

Pain radiating down the left arm

Lethargy and pallor

A person who develops features of heart disease should immediately seek medical advice. An ECG can help to diagnose heart disease.

## Cancer

In cancer there is uncontrolled growth of cells in some areas of the body. This can happen in different organs. The cancer is named according to the organ it involves.  
eg: oral cancer, breast cancer, cervical cancer.

The symptoms vary according to the site of the cancer.

eg: Oral cancer-change in voice, chronic cough

Gastro intestinal system-alteration of bowel habits, passing of blood

Breast - Presence of a painless lump

Cancer can be cured if diagnosed and treated early.

## Kidney disease

Diseases of the kidney interfere with the process of filtration and production of urine which affects the elimination of waste from the body.

## Symptoms of kidney disease



Swelling of the body

Joint pain

Reduced concentration

Reduced production of urine

Too much of sleep

Itching of the body

## Causes of kidney disease

- Use of medication without proper medical advice
- Consuming food and drugs which can harm the kidneys
- Consuming unfiltered water with heavy metals
- Stress
- Diabetes and hypertension



Figure 21.6 - Use of medication without proper medical advice

## Mental illness

Mental illness can be precipitated by stress due to difficulties in decision making, problem solving and poor life skills.

Like physical illness, mental illness can also pose a risk to life. Some mental illness may be difficult to diagnose during its early stages.

The risk of mental illness is increased by the competitive life style which affects our wellbeing, poor stress management and lack of leisure activities.



## Symptoms of mental illness



Feeling of hopelessness

Isolated behaviour

Restlessness

Irritability

Hearing or seeing things  
which are not present

Reduced speech or excessive speech

Poor memory

Reduced concentration



Figure 21.7 - Restlessness

You can prevent these conditions by improving your wellbeing by engaging in sports and aesthetic activities and seeking help if you have a problem which causes stress.

## Prevention of non communicable diseases

- Restrict excessive use of sugar, fat and salt in food
- Avoid consuming artificial foods
- Consume clean water
- Avoid consumption of alcohol, tobacco and other drugs
- Exercise daily
- Maintain normal BMI
- Check blood pressure and blood glucose levels regularly
- Manage stress

## Challenges due to communicable and non communicable diseases

- Weakness of body and reduced functioning
- Interferes with functioning of internal organs
- Physical and psychological disability which reduces day-to-day activities
- Affects education and employment
- Affects the economy
- Loss of life



### Activity

Get help from your teachers, divide into two teams and conduct a debate on “Which causes more social harm, is it communicable or non communicable diseases?”

## Climate change and disasters

In recent times, there is more frequent change in weather patterns and environmental disasters. Disasters may occur naturally or due to acts of man such as environmental pollution.

Earthquakes, Tsunami, floods, landslides, cyclones, lightning strikes etc are some examples for disasters.

Because disasters cause major disruption to life it is important to identify such situations early and take appropriate action.

### Harm caused by climate change and disasters

- Spread of diseases
- Loss of life
- Damage to property
- Displacement
- Injury
- Shock
- Mental stress



Figure 21.8 - Climate change and disasters

### Ways to prevent disasters and to minimize the damage

- Monitor the changes in the environment
- Be aware of unsafe and risky places and time periods
- Set laws and standards

- Develop good attitudes
- Be aware of phone numbers to inform in case of emergency
- Set up alarm systems
- Prevent environmental pollution
- Be educated about first aid



### Activity

Make a booklet about the disasters that happened during the last year.

## Cultural influences

Sri Lanka is a multicultural country made up of Sinhalese, Tamils, Moors, Burghers and other races. Many countries in the world too are multicultural. There are differences in aspirations, religion, language, beliefs, traditions, clothes and other factors among different people. This can sometimes lead to social problems.

eg:

- Social isolation and difficulty in meeting ones needs because of inability to speak a language.
- Racial discrimination.
- Discrimination in opportunities for education and employment.

Learning to respect other cultures, just like our own, and treating everyone equally and humanely can prevent such problems.

Sometimes when people of different cultures live together certain cultural values may clash. It is important to be aware of such situations and be flexible.

We must develop skills such as ability to respect others, effective communication, developing good interpersonal relationships and controlling our emotions. This will allow people of different cultures to live together without creating problems.



### Activity

Think of some people you know who belong to different cultural backgrounds. List the similarities and differences among them.

## Improper use of technology

New technology has enabled us to carry out our daily activities easily and efficiently. However improper use of technology has negative consequences.

For example, the internet and social media have many uses but improper use can result in harmful consequences for children and adults.

## Negative consequences of technological development

- Use of machinery instead of human labour has led to unemployment
- Manufacture of dangerous chemicals and nuclear weapons
- Reduced interpersonal relationships and social isolation
- Lack of life skills development due to excessive use of machinery
- Sedentary life style and as a result risk of contacting non-communicable diseases
- Children who cannot set limits on the use of mobile phones and social media may be led astray and be exploited

You must learn to earn the benefits of technological development and minimise their negative consequences.

## Examples of positive use of technological development

1. Communication can be carried out quickly and easily
2. Ability to obtain information and knowledge anytime, anywhere
3. Makes household work easier
4. Reduces stress by providing entertainment
5. Provides educational opportunities
6. Improves the quality of medicines and other treatment methods
7. Saves time and money
8. Supports inventions and creativeness



Figure 21.9 - Obtain information

## Conflict

Conflicts arise due to mismatch or disagreement of ideas or preferences. Conflicts can arise within us or within society.

### Conflict



- Within us
- Between parents and children
- Between friends
- Between employers and employees

Sometimes conflicts can arise within us when we have to make choices. For example when choosing subjects we have to consider factors such as what we like and dislike as well as what is easy and difficult etc.

When we associate with the people who have different ideas and preferences we may face situations where there are disagreements which can lead to conflict.

#### Negative consequences of conflict

- Mental illness
- Disruption of education
- Loss of employment
- Financial problems
- Due to physical conflicts
  - injury
  - disability
  - loss of life

#### Ways to prevent conflicts

- Develop life skills
- Follow a simple life style
- Develop psychological and spiritual wellbeing
- Maintain good interpersonal relationships
- Develop healthy attitudes



#### Activity

Discuss with your friends about situations where you resolved conflicts.

## Summary

Processed foods, diseases, negative consequences of new technologies, climate change and disasters, conflict and cultural influences are some examples of challenges we face in society.

Natural foods are high in nutritional value while artificial food can cause health problems.

Communicable diseases are spread through air, water, food, animals and sexual behaviour. Most non communicable diseases are caused by unhealthy life style.

Harms caused by climate change and disasters include spread of disease, damage to life and property, displacement, shock, stress and disruption of education.

We must ensure that conflicts don't arise when people of different cultural backgrounds live together.

Although new technologies are helpful they can have negative consequences. Therefore, we must use them carefully.

Conflicts arise when there is disagreement. These conflicts can arise within us or with other members of the society. We can avoid conflict by developing life skills.



## Exercise

1. Name the social challenges which affect health.
2. Explain how junk food and fast food affect our health.
3. List communicable diseases and state how they are transmitted.
4. Describe how we can prevent non communicable diseases.
5. What are the harmful consequences of climate change and disasters?
6. How can we minimise dangers in disaster situations?
7. What skills should you develop to prevent cultural clashes and conflicts?
8. What are the negative consequences of improper use of new technologies?

## Glossary of technical terms

approach run	ஏப்கீர்ஷன் டிவான்ச	அணுகலோட்டம்
attacker	ஏாதுஷன் த்ரீபிகாவ	தாக்குபவர்
bar clearance	பர்சு டீஷன் வர்ஷன்	குறுக்குச் சட்டத்தைத் தாண்டல்
basic needs	பூடிகல் ஏவன்சு	அடிப்படைத் தேவைகள்
binocular vision	பீவீஷன் த்ரீ டீஷன்	இரு விழிப் பார்வை
biological gender	பீவல் பீடீஷன்ஷன் ஸீத்ரீ பூர்ஷ னாவல்	உயிரியல் பால்நிலை
blocking the ball	பன்டூவல் வுடூஷன்	பந்தைத் தடுத்தல்
body composition	பூரீஷன் ஸன்ஷன்ஷன்	உடற் கொள்ளளவு
body mass index	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன்	உடற்றிணிவுச் சுட்டி
bonfire	பூரீஷன்	தீச்சுடர் (முகாமில் மூட்டும் நெருப்பு)
bowline knot	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன்	வழுக்கா சுருக்கு முடிச்சு
bread-dough baker	பூரீஷன் ஸன்ஷன்ஷன்	பாண் கிலங்களை வாட்டும் கருவி
cardiovascular endurance	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்/ பூரீஷன் ஸன்ஷன்ஷன்	இதயம் மற்றும் சுவாசம் சார் தாங்குதிறன்
	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	மூன்று கற்களிலான அடுப்பு
	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	
carter's fireplace/ three-stone fireplace	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	பலாப்பட்டை முடிச்சு/ எட்டு முடிச்சு
clove hitch	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	தொற்றும் நோய்
communicable disease	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	புலணுணர்வு
congenital	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	பந்தைக் காத்தல்
defending the ball	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	களத்தைக் காத்தல்
defending the field	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	வீராங்கனையைக் காத்தல்
defending the player	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	இடம் காத்தல் (நிலை)
defending the position	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	குழி அடுப்பு
ditch fire	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	இரு கவன்கள் கொண்ட அடுப்பு
double-fork fireplace	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	கீழ்க் கை முறை
downsweep technique	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	கீழேத்தேயப் பாய்ச்சல்
eastern cut off	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	மனவெழுச்சி சமநிலை
emotional balance	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	பரிவுணர்வு
empathy	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	விளையாட்டு ஒழுக்கம்
ethics in sports	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	கலாவதித் திகதி
expiary date	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	கண்டறி சிந்தனை
exploratory thinking	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	நெகிழும் தன்மை
flexibility	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	பறத்தல் நிலை
flight	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	பின்பற்றுதல்
followership	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	உணவுக் கூம்பகம்
food pyramid	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	பால்நிலை அடையாளம்
gender identity	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	தொங்குதல் நுட்பம்
hang technique	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	சுகாதார மேம்பாடு
health promotion	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	சுகாதார உடற்றகைமைகள்
health related physical fitness	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	வளியில் பாதங்களை மாற்றும் முறை
hitch-kick technique	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	உட்பக்கம் அணுப்புதல்
inside pass	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	தனிநபர்களுக்கிடையிலான உறவு
interpersonal relationships	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	பதனிடப்பட்ட உடன் உணவு
junk food	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	தலைமைத்துவம்
leadership	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	வழி விளையாட்டு
lead-up game	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	உற்பத்தித் திகதி
manufacture date	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	கர்ப்பிணிச் சிகிச்சை நிலையம்
maternity clinic	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	சுகாதார வைத்திய அதிகாரி காரியாலயம்
medical health office	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	உள நன் நிலை
mental wellbeing	பூரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன் டீரீஷன் ஸன்ஷன்ஷன்	



minor game  
 mixed pass  
 muscular endurance  
 muscular strength  
 non-communicable disease  
 non-visual pass  
 nutrients  
 nutritional deficiency  
 obesity  
 opposing team  
 opposing thumb  
 organised game  
 outdoor education  
 outside pass  
 penalty pass  
 penalty shot  
 physco-social fitness  
 physical deformity  
 physical fitness  
 physical fitness factors  
 physical wellbeing  
 power grip  
 power position  
 precision grip  
 processed food  
 public health inspector  
 public health midwife  
 pyramid fire  
 receiving the ball  
 rectangular fire  
 reef knot  
 reflector fire  
 relay race  
 rules and regulations in sports  
 sail technique  
 scissor jump  
 self actualisation  
 self esteem  
 sensory organ  
 serving the ball  
 setting the ball  
 shear lashing  
 sheet bend  
 shooting the ball  
 skill related physical fitness  
 social concept of gender  
 social wellbeing  
 spiking  
 spiritual wellbeing  
 square lashing  
 stone-row fireplace  
 take-off  
 team spirit  
 throw-in

සුළු ක්‍රීඩාව  
 මිශ්‍ර මාරුව  
 ජේෂ්මය දූර්වමේ හැකියාව  
 ජේෂ්මය ශක්තිය  
 බෝ නොවන රෝගය  
 අදාශ්‍ය මාරුව  
 පෝෂ්‍ය පදාර්ථ  
 පෝෂණ උගතාව  
 ස්ථූලතාව  
 ප්‍රතිවාදී පිල  
 පිළිමල් මහපට ඇඟිල්ල  
 සංවිධානාත්මක ක්‍රීඩාව  
 එළිමහන් අධ්‍යාපනය  
 පිටත මාරුව  
 දඬුවම් යැවීම  
 දඬුවම් විදීම  
 මනෝසමාජීය යෝග්‍යතාව  
 ශාරීරික ආබාධය  
 ශාරීරික යෝග්‍යතාව  
 ශාරීරික යෝග්‍යතා සාධක  
 කායික යහපැවැත්ම  
 බල පරිග්‍රහණය  
 ජව ඉටියවීම  
 සියුම් පරිග්‍රහණය  
 සැකසූ ආහාර  
 මහජන සෞඛ්‍ය පරීක්ෂක  
 පවුල් සෞඛ්‍ය නිලධාරියා  
 පිරමීඩ ගිනිමැළය  
 පන්දුව ලබා ගැනීම  
 සෘජුකෝණාස්‍ර ගිනිමැළය  
 පිරිමි ගැටය  
 පරාවර්තන ගිනිමැළය  
 සහාය දීම  
 ක්‍රීඩා නීති රීති  
 පාවෙන ක්‍රමය  
 කතුරු පිම්ම  
 ආත්ම සාක්ෂාත්කරණය  
 ආත්මාභිමානය  
 සංවේදී ඉන්ද්‍රිය  
 පන්දුව පිරිනැමීම  
 පන්දුව එසවීම  
 කතුරු බැමීම  
 රුවල් ගැටය  
 පන්දුව විදීම  
 දක්ෂතා ආශ්‍රිත ශාරීරික යෝග්‍යතාව  
 ස්ත්‍රී පුරුෂ සාමාජිකයා  
 සමාජීය යහපැවැත්ම  
 පන්දු ප්‍රහාරය  
 ආධ්‍යාත්මික යහපැවැත්ම  
 හතරැස් බැමීම  
 ගල් පේළි ලිප  
 ඉපිලීම/ නික්මීම  
 කණ්ඩායම් හැඟීම  
 පන්දු පිටිය තුළට විසි කිරීම

சிறு விளையாட்டு  
 கலப்பு மாற்றம்  
 தசைத் தாங்குமியல்லு  
 தசைச் சக்தி  
 தொற்றாத நோய்  
 பார்க்காமல் மாற்றுதல்  
 போசணைக் கூறுகள்  
 போசணைக் குறைபாடு  
 அதிக நிறை  
 எதிரணி  
 எதிரிடையாக அசையத்தக்க பெருவிரல்  
 ஒழுங்கமைக்கப்பட்ட விளையாட்டு  
 வெளிக்கள கல்வி  
 வெளிப்பக்கம் அனுப்புதல்  
 தண்ட எறிகை  
 தண்ட எய்கை  
 உள சமூக நன்னிலை  
 உடற் குறைபாடு  
 உடற்றகைமை  
 உடற்றகைமை காரணிகள்  
 உடல் நன்னிலை  
 உறுதியாகப் பற்று  
 வலுநிலை  
 உறுதியாகப் பற்றுதல்  
 பதப்படுத்தப்பட்ட உணவு  
 பொதுச் சுகாதாரப் பரிசோதகர்  
 குடும்ப சுகாதார உத்தியோகத்தர்  
 பிரமிட் தீக்குவியல்  
 பந்தைப் பெற்றுக்கொள்ளல்  
 செவ்வகத் தீக்குவியல்  
 ஆண் முடிச்சு  
 தெறிப்புத் தீக்குவியல்  
 அஞ்சல் ஓட்டம்  
 விளையாட்டு விதிமுறைகள்  
 மிதித்தல் நுட்பம்  
 கத்தரிப் பாய்ச்சல்  
 சுய திறனியல்  
 சுய கௌரவம்  
 புலனுறுப்பு  
 பந்தைப் பணித்தல்  
 பந்தை ஒழுங்கமைத்தல்  
 கத்தரிக்கோலுரு முடிச்சு  
 ராவல் முடிச்சு  
 பந்தை எய்தல்  
 திறன் தொடர்பான உடற் தகைமை  
 கால் நிலை தொடர்பான சமூக எண்ணக்கரு  
 சமூக நன்னிலை  
 அறைதல்  
 ஆன்மீக நன்னிலை  
 சதுரக்கட்டு  
 கல்வரிசை அடுப்பு  
 மேலெழல்  
 குழுவுணர்வு  
 உள்ளெறிகை



time management  
tin can stove  
unit fireplace  
upsweep technique  
vegan  
visual pass  
warming down  
warming up  
western roll

கால கළමனாக்கரணம்  
பின்புறப்பேணி அடுப்பு  
பீகை டிப  
உயர்ந்த துறை  
வகைகள் போன்ற பல்வேறு வகைகள்  
உயர்ந்த துறை  
உயர்ந்த துறை  
உயர்ந்த துறை

நேர முகாமைத்துவம்  
தகரப்பேணி அடுப்பு  
அலகு அடுப்பு  
மேற்கை முறை  
தாவர உணவுகளை மட்டும் உண்போர்  
பார்த்து மாற்றுதல்  
உடலைத் தளர்த்தல்  
உடல் உஷணப்படுத்தல்  
மேலேத்தேய பாய்ச்சல்

## Lesson Sequence

Lesson in the text book	Competency level	No. of periods
<b>1<sup>st</sup> Term</b>		
1. Let us build a healthy society	1.1	5
2. Let us achieve towards self actualization	2.1	2
3. Let us identify physical deformities which prevent good posture	3.1	2
4. Let us identify organized games and outdoor activities	4.1	1
5. Let us play volleyball	4.5	3
6. Let us play netball	4.6	3
<b>2<sup>nd</sup> Term</b>		
7. Let us play football	4.7	3
8. Let us train for relay-races	5.1	2
9. Let us practise long jump	5.2	2
10. Let us fulfill our nutritional needs	7.1	6
11. Let us protect the features which affect our appearance	8.1	3
12. Let us develop health related physical fitness	9.1	6
<b>3<sup>rd</sup> Term</b>		
13. Let us be familiar with knots and lashings	4.2	3
14. Let us enjoy making bonfires	4.3	3
15. Let us cook food outdoors	4.4	3
16. Let us train high jump events	5.3	2
17. Let us practise throwing events	5.4	2
18. Let us develop social values through sports	6.1	2
19. Let us improve our psychosocial fitness	9.2	3
20. Let us identify gender responsibilities	10.1	3
21. Let us overcome social challenges	10.2	4