



HEALTH AND PHYSICAL EDUCATION

A Teachers' Guide for Class VIII





एक कदम स्वच्छता की ओर

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एन सी ई आर टी
NCERT

राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्
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FOREWORD

Health is an important multidimensional concept, which includes physical, mental, social and emotional aspects. Over a period of time, the scope of health and physical education has evolved, making it an integrated discipline, comprising health, physical education and yoga. Considering the importance of this area, various National Curriculum Frameworks (NCFs) have made health and physical education a compulsory subject in schools. Material in the form of teachers' guide has already been developed for Classes VI and VII on health and physical education.

As in the other subject areas, a teacher plays a vital role in effective transaction of knowledge and skills in this area too. The National Council of Educational Research and Training (NCERT) has developed this resource material in the form of teachers' guide on Health and Physical Education for the upper primary stage.

This book, *Health and Physical Education — A Teachers' Guide for Class VIII*, focuses on the holistic understanding of health, physical education, yoga and fitness activities, including the impact of environment on health. Experiential learning activities for acquiring skills for healthy living have been integrated to make it child-friendly in terms of pedagogy. The guide is expected to assist teachers with skills to impart techniques with a child-centred approach. It will give them an insight as how to encourage students and make learning an enjoyable process. The teacher will be able to instill a desire among the students to participate in games, sports and yoga as an integral part of their daily lives.

I appreciate the efforts of Saroj Yadav, *Professor and Dean (Academic)*, NCERT, and the team in bringing out this teachers' guide. The contributions of experts and teachers towards the review and finalisation of the teachers' guide is duly acknowledged. The material has been finalised based on the feedback of experts and teachers.

As an organisation committed to systemic reforms and continuous improvement in the quality of this material, the NCERT welcomes

comments and suggestions from readers, which will enable us to further improve the teachers' guide.

HRUSHIKESH SENAPATY

Director

New Delhi
July 2018

National Council of Educational
Research and Training

PREFACE

Health and Physical Education has been an integral part of the school curriculum. It has been a compulsory subject up to the secondary stage and an optional subject at the higher secondary stage for long. But it has not received the same status as other subjects. Appreciating the importance of this curricular area to the overall development needs of children and adolescents, the National Curriculum Framework (NCF)-2005 has made a number of recommendations to improve its transaction as child centric. It adopts a holistic definition of health within which physical education and yoga contribute to the physical, physiological, emotional, mental and social development of a child.

The National Council of Educational Research and Training (NCERT) has developed syllabi and a number of instructional material for different classes as a follow-up of NCF-2005 to facilitate and promote effective transaction of Health and Physical Education. The present publication, *Health and Physical Education — A Teachers' Guide for Class VIII*, addresses the needs of teachers. The material makes an effort not only to explain the various concepts related to different content areas but also indicates certain activities, in which every learner may be actively involved. Besides, some critical facts related to the content are also provided in boxes. Each Unit ends with a set of items for 'assessment'. This material has special significance since the NCERT has decided not to prepare any textual material for students of this class. Therefore, the subject of Health and Physical Education will be transacted by teachers with the support of this material. It also includes details about the topic of mental health, which is a part of the syllabus for this class.

As reflected in this teachers' guide, the pedagogical approach to be adopted for the transaction of this curricular area has to be interactive and participatory that promotes experiential learning. It is also addressed to the conditions that must be made available for ensuring that all students of the class get equal opportunity to participate in all games and sports included in the syllabus. For this, teachers are expected to be responsive to the needs of all students to be able to participate in the activities. Those who choose to excel in selected games and sports must also be provided with adequate opportunities. All activities that are organised have to be focused

on skill development and not simply on providing knowledge. It is appreciated if the students are let to play games and sports freely, contributing to the development of fundamental movement skills or sports-specific skills. The students must be encouraged to play games of their choice.

This teachers' guide discusses mental changes and mental health in Unit 1. Unit 2 and 3 cover 'food and nutrition' and 'water conservation', respectively. These Units discuss the impact of our lifestyle on our physical and mental health. Units 4 to 7 discuss physical fitness activities, fundamental skills for individual and team games, yoga and the various types of *asana*, as well as, recreational and outdoor activities. Unit 8 deals with safety, security and first aid. Unit 9 emphasises on the social health of the students.

Therefore, the role of the teacher in effective transaction of this subject is crucial. The teacher has to pay special attention to the following points:

- Health and physical education is a core subject like other subjects. Hence, it has to be ensured that it receives the same recognition and status as other subjects, which is not being given at present.
- It is essential to ensure that the minimum required physical space and equipment are available in schools.
- This subject does not need to be focused on organising certain casual physical activities, and games and sports activities for selected students. It consists of health education, physical education and yoga. All these components must be suitably integrated during the transaction process.
- A basic understanding of all concerns, activities, games and sports is necessary but more important is the transaction process, which must focus on skill development and utilisation of the experiences of learners.
- Focus must be given on cross-curricular learning. Teachers of other subjects also need to include some concerns of this area as well.

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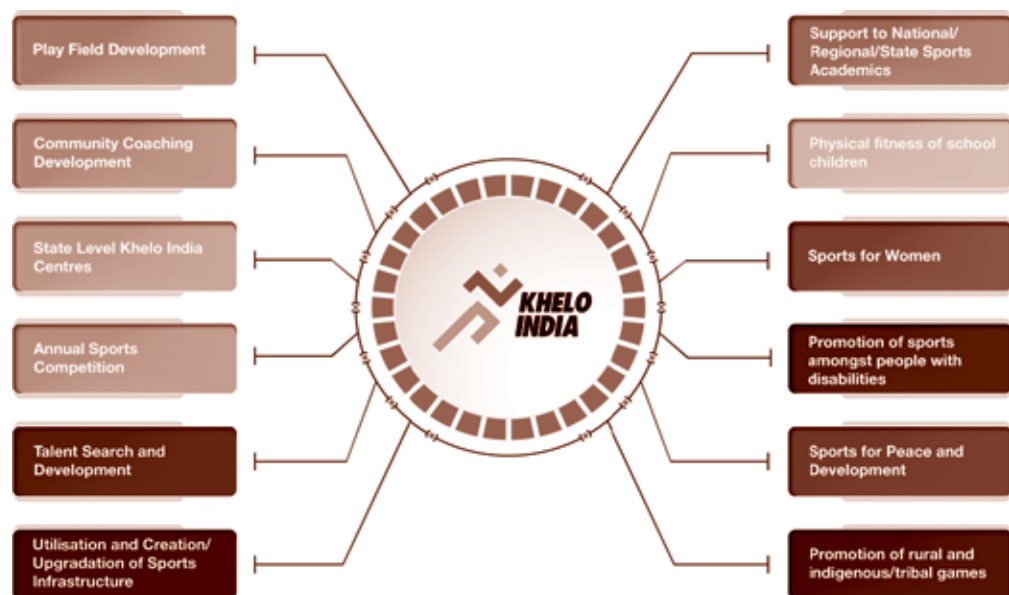
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Knowing Mental Changes

↑ Unit

INTRODUCTION

“Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”.

WHO, 2001

This Unit discusses issues related to mental health and managing various situations. The ‘Fact Sheet’ given in the Unit covers mood swings in adolescence and how to remain healthy.

GUIDELINES FOR THE TEACHER

- It is important to read the material thoroughly before organising the activities.
- It must be ensured that the process of organising the activities is based on participatory approach. One needs to make sure that students are engaged in the learning process and are active learners. Thus, we as teachers can try to make this learning as collaborative as possible to ensure their maximum participation.

Objectives

This Unit will help a teacher to enable students to:

- understand the meaning of mental health and mental illness.
- observe the behaviour of different people and learn to manage social relationships.
- manage and regulate emotional changes within oneself.
- equip them in goal setting and identifying strategies to achieving the goals.

ACTIVITY

1.1: Self care wheel

Material required: Notebook, charts, models, posters and blackboard

The teacher asks the students to make a 'self care wheel' as shown in Fig. 1.1 and writes down one activity suitable for each heading. For example, 'physical domain' includes 'riding a bicycle', and 'sharing lunch with a friend' comes under 'social domain'. 'Emotional domain' includes, 'I feel happy when my team wins a Kabaddi match' and an example under 'psychological domain' is: 'Your classmate falls in the playground, you choose to offer first aid rather than laughing at the classmate'. Now, write more activities under each domain.



Fig. 1.1: Self care wheel

The teacher, then, writes all responses and concludes if the students have understood the four domains. This understanding will help the students to communicate and socialise with people around them effectively and adjust successfully in the society.

1.2: Knowing myself or self-awareness

Material required: Notebook, charts, models, posters and blackboard

The teacher asks the students to write down three of their strengths and three weaknesses.

In the end, the teacher asks them to think and state incidents when a quality helped them to cope up with a situation, and a weakness that had a negative impact on their minds.

The teacher can sum-up all student responses and help them become aware of their self-image.

Table 1.1
My qualities

Strengths	Weaknesses

1.3: Understanding others

Material required: Notebook, charts, models, posters and blackboard

The teacher asks the students to choose a friend or a relative. The students have to imagine what emotions this person has experienced in places mentioned in Table 1.2. The teacher, then, compiles the responses of the students and discusses those with them to explain how they should react when the friend or relative experiences a particular emotion. For example, when I exercise, I feel happy; my friend feels sad or bad when teachers scold him in front of the class.

The teacher can sum-up all the responses and help the students observe that in different situations, different people experience different emotions. The emotions are not permanent for a particular person. That is why, on the basis of the emotions observed we cannot categorise or label a person as happy, sad or angry.

Table 1.2
Different emotions in different situations

What does my friend or relative (name) feel	Home	School	Neighbour	Society
Happy				
Sad				
Anger				
Stress				
Shame				

1.4: Understanding your worries

We all experience worry and stress in our lives. Stress can be described as a person's pattern of behavioural responses to situations that disturbs the mind, making it difficult to cope. All stressful situations are not inherently bad or destructive. Some increase and improve our performance like the stress experienced during the preparation for exams motivates you to study. The teacher asks the students to fill in the table given below (Table 1.3).

Table 1.3
Different situations and responses

S. No.	Situation/ Event	How do you feel about it?	Reason behind the event	Ways to overcome
1.				
2.				
3.				
4.				
5.				

The teacher will sum-up all the responses and draw the students' attention to a comic strip (Fig. 1.2). Through an interactive session with them, the teacher will discuss that in stressful situations, different people respond differently. Some get 'aggressive', while others become 'passive'. The teacher states that 'both the behaviours are not regarded as 'healthy''. We must understand that situations are temporary. If we think and respond to a situation with a calm mind, we can get through the stressful situation easily.

1.5: Healthy lifestyle

Healthy lifestyle is a pattern of decisions and behaviours that determines a person's health and quality of life. Some health impairing behaviours are staying awake late in the night, spending a lot of time playing video games, spending too much time watching television, eating junk food, lack of physical

activity, etc. Unhealthy lifestyle affects both our physical health and psychological functioning. Due to unhealthy lifestyle, one may experience fatigue, problems like nausea, irritability, anxiety, feeling of helplessness and hopelessness. Thus, an individual must include healthy habits in the daily schedule to stay healthy and fit. The teacher can ask questions like:

- What should the students eat to remain healthy?
- What are their goals in life?
- How does a healthy diet maintain physical growth and development?

The teacher discusses these answers in class. S/he also highlights the importance of sleep and nutrition to maintain physical and mental health. The teacher explains the importance of sleep in healing and repairing of tissues, as well as, blood vessels. Sleep deficiency increases the risk of heart and kidney diseases, high blood pressure and many other health-related problems. The teacher discusses various ways to sleep adequately (around 8 hours daily). Some of the factors that aid the above are as follows:

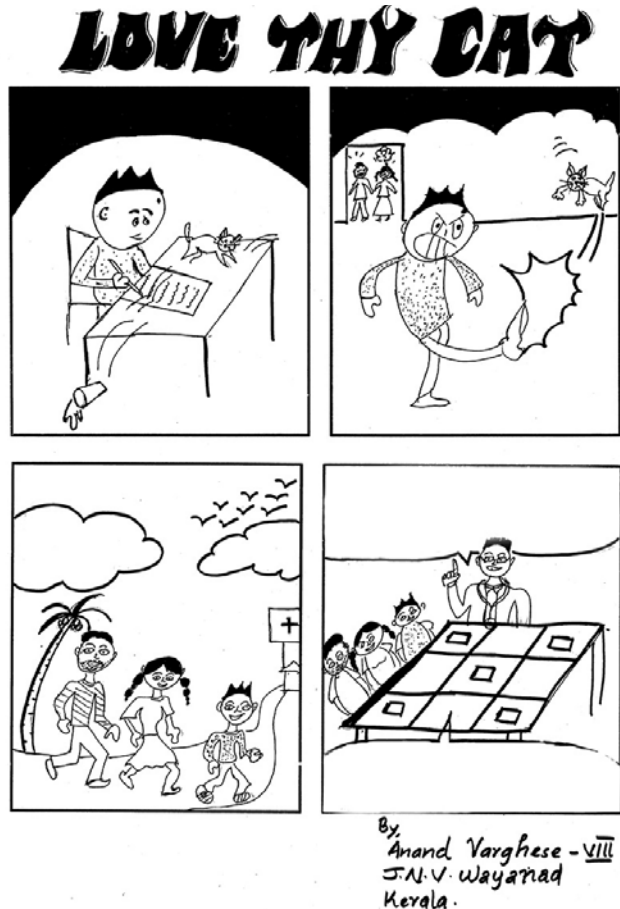


Fig. 1.2: Response towards a stressful situation

- Exercise during the day as it helps in relaxation during sleep.
- Choose a regular bedtime and stick to it.
- Do not use your bed for all purposes like studying, reading, eating, watching TV and other recreational activities.

1.6: Setting up goals

The teacher can ask the students to make a list of the goals the students have set in the past one year. The teacher makes them understand the importance of setting goals.

- The teacher asks the students to write down the goals that they have achieved.
- The students are, then, asked to write down the goals that they have not been able to achieve and what they are doing to achieve them.
- Each student needs to draw a hexagon and write one goal one has in life in its centre. Then, on each side of the hexagon, the teacher asks the students to write down the answers to the following:
 1. Is your goal clear to you?
 2. How long will you take to achieve it?
 3. What will you do in order to achieve it?
 4. How will you feel when you attain your goal?
 5. What will you tell yourself to keep patience?
 6. If not attained, what will be your alternate plan?

The teacher concludes that it is important for the students to set goals with a timeframe so that they are able to manage their time and energy for achieving them.

Remember the word 'SMART' and you shall never fail to make your goal achievable.

The objective of your goal must be 'SMART'.

S : Specific, significant

M: Measurable, meaningful, motivational

A : Actionable, acceptable, achievable, action-oriented, agreed upon, attainable

R: Relevant, realistic, reasonable, result-oriented, rewarding

T : Timely, tangible, time-based, trackable

1.7: Share your feelings

Material required: Notebook, charts, models, posters and blackboard

The teacher asks the students to share their feelings. Each student gets a chance to express what one feels at the moment and the reason behind such a feeling. The teacher can ask questions like the following to the students.

1. How are you feeling at present?
2. Why are you feeling so?

The teacher will sum-up and conclude the students' moods into positive and negative emotions. The teacher will also guide them as to how they can regulate or manage their emotions.

1.8: Working on emotions

Material required: Notebook, charts, models, posters and blackboard

The teacher divides the class into groups of 5–6 students each, according to their common interests, and gives them situations or case studies to discuss among themselves. Each group gets one case study. The teacher gives the students at least 10 minutes to discuss and answer the questions.

The teacher narrates a situation to the students. The students have to raise their hands and tell the entire class what emotion is being dealt with in the story. Each student gets a chance to recognise the emotion in the situation. The teacher will ask the students to think beyond the situation, add more scenes to the story to change the emotion and cite the reason for doing so.

Case study 1

Rohan wants to win the all-rounder award in school. He takes part in many extracurricular activities, such as debate, painting, basketball, singing, dancing, etc. But he faced difficulty in managing time between studies and extracurricular activities. As a result, he scored low marks in exams.

1. What kind of emotions were experienced by Rohan?
2. What can be done that he is able to overcome such emotions?

Case study 2

A 13-year old student says (in a sobbing voice), “I am not able to handle it anymore. I just want to go home. I do not like this bed. No one is friends with me. Every time, someone or the other is fighting with me in the dormitory.”

1. What kind of emotion was experienced by the student?
2. In this case, what can be done?

Case study 3

Rita is eagerly waiting for Friday as her school is organising an education trip to Agra. She has packed her bag since Monday and told everybody in her family that she is going on a trip.

1. What kind of emotions did Rita experience?
2. Extend the story and identify the other emotions that would have followed in your version of the story.

The teacher discusses these answers in class and helps the students identify and understand the emotions in the story. The teacher explains that every situation is different, the ways to deal with every situation are different and mentions that psychological well-being is important for better understanding and adjustment in different situations.

1.9: Different kinds of emotion

Material required: Notebook, charts, models, posters and blackboard

There are different kinds of emotion experienced by an individual. Some are positive and some negative. Emotions like joy, fear, anger, disgust and sadness are commonly experienced.

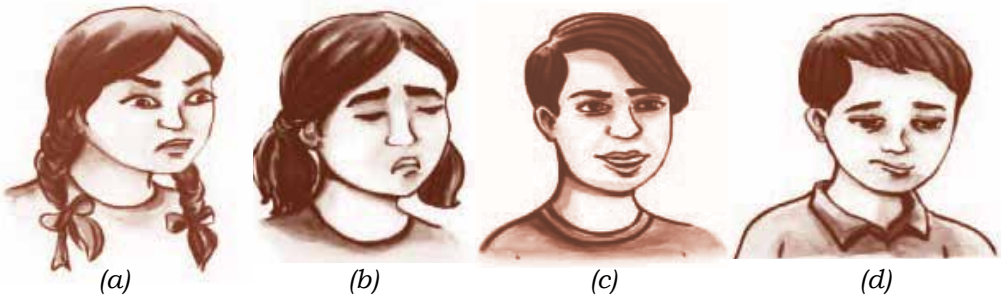


Fig. 1.3(a-d): Different kinds of emotions

Guidelines for the teacher

- The teacher divides the class into four equal groups — A, B, C and D, gives them a topic — anger, sadness, shyness and stress — to discuss and mention their answers in a tabular form as given in Table 1.4.

Table 1.4

Teams	A	B	C	D
Topic	Anger	Sadness	Shyness	Stress
Situation/event				
Causes				
Ways to overcome				

The teacher can ask each group to share its response with the other students in the class.

The teacher emphasises on the ‘importance of experiencing all kind of emotions that add pleasure and excitement to our lives. Emotions bring about a change in how we feel and help us realise what we like and dislike. Going through all these emotions is as important as going through developmental milestone.

The teacher concludes by teaching different styles of relaxation to the students like take a deep breath, listen to soft music, watch a comedy movie, take a stroll in the garden, etc.

1.10: Managing circle

Material required: Notebook, charts, models, posters and blackboard

The teacher asks the students to write down a list of feelings they can control and those that they cannot control under a concentric circle. For example, I can prepare well for my exams; it is not in my hand to change the dates of the exams. Each student explains why one believed one can or cannot control these feelings.

Guidelines for the teacher

- The teacher asks the students to draw one big circle and one small circle within it.
- The teacher asks the students questions, such as:
 1. What can I control?
 2. What I cannot control?

The teacher will sum-up and write all the responses on the blackboard or a chart paper. S/he will conclude that it is important to understand that some situations are not under our control, for example death of a loved one. But it is only we who can help ourselves get over the grief.

FACT SHEET

Mental health is described by the World Health Organization (WHO) as, “A state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully and is able to make a contribution to his or her community.” Mental health includes the following three domains:

- (i) Emotional health
- (ii) Psychological health
- (iii) Social health

Emotional health, Psychological health and Social health are related

Emotional health is an essential part of our life. We must make constant effort to develop a healthy emotion because people who are emotionally healthy can regulate their thoughts, feelings and behaviours. Emotionally healthy people also experience stress, anger, sadness and other discomforting emotions but they know how to deal with them positively.

A psychologically healthy person responds to a situation rather than reacts to it. When an individual demonstrates a positive behaviour while interacting with people and with the environment, one can be called ‘socially healthy’.

Characteristics of psychologically healthy person

- A psychologically healthy person is aware of one's strengths and weaknesses.
- Such a person is optimistic about life and future.
- The person shows control over one's impulses, thoughts, habits and emotions in line with expectations from the environment.
- The person follows a healthy lifestyle, takes care of one's physical health and manages time to relax and work.
- Such an individual develops a positive social attitude.
- The person is capable of getting along with people and form healthy and close relationships with others.
- The person is able to solve the problems of daily life, resolve conflicts and is ready to face challenges.
- The person takes an initiative to do things and complete the assignments.
- Such an individual is independent in thoughts and actions, which is based on one's personal values.

Difference between mental health and mental illness

Mental illness is characterised by a combination of abnormal thoughts, emotions, behaviours and relationship with others. Many people experience these difficulties to a limited extent in their daily lives. For example, many of us feel anxious before an exam or while giving a performance. However, it becomes a mental illness when it starts causing distress and interferes with our effective functioning. Thus, it becomes important to consider that most mental illnesses lead to misery and hamper the development of an individual.

Mental illnesses are common and widespread. Although we attach fear and shame to these, most of these like physical illnesses are treatable. In fact, a majority of individuals, who suffer from mental illness, are able to continue with their daily activities.

Emotional development

Emotions play an important role in creating mental health. Hence, it is important for us to be aware of our emotions and learn to manage them in the most effective manner.

Emotions like joy, sorrow, hope, love excitement, anger and hatred are all experienced in our course of life. As we grow, even our emotions develop and we learn new ways to express them.

Emotional development refers to an individual's ability to recognise, express and manage feelings at different stages of life. Even a newborn smiles when s/he sees a familiar object. Thus, as we grow older, our emotions also grow and modify. The emotions that we recognise in childhood include joy, anger, sadness and fear. Later, as the child develops a sense of self, more complex emotions like shyness, surprise, shame, guilt, pride and empathy emerge.

Mental health care

The way we perceive a particular situation has a direct impact on our mental health. This, in turn, affects our relationships with the people around. We can achieve a good mental health by the following.

Positive self-esteem

Self-esteem is the opinion about oneself and accepting strengths and weaknesses.

Regular exercise and adequate amount of sleep

Physical exercise helps us to stay fit and regulates our thoughts and emotions. Adequate sleep (around 8 hours daily) is important for



Fig. 1.4: Adequate sleep is important for health



Fig. 1.5: Regular exercise keeps one fit

our physical health. It also helps in being focussed.

Balanced diet

A balanced diet can provide energy, improve blood circulation, prevent illness, strengthen the immune system, lift one's mood and make one feel better to cope with the stresses of life.

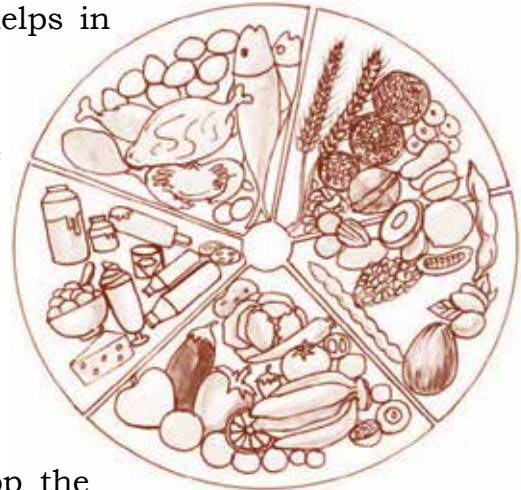


Fig. 1.6: Thali showing variety of food

Effective communication

An individual needs to develop the ability to express one's thoughts and emotions by effective communication skills, which include attentiveness, having clarity of thoughts, emotions and ideas, and meaningful content.

Relationship with others

The way we perceive ourselves has a direct impact on our relationships with others. We must try to develop a healthy relationship with family members, teachers, friends and peers. Friends and family can serve as a great support in difficult times.

Positive attitude

Positive attitude and thinking have a direct impact on an individual's health and well-being. It helps the individual in developing a perspective for things around and coping with stress. For example, optimists tend to assume that a problem can be handled successfully, whereas, pessimists anticipate the worse rather than focusing on solving the problem.

Emotional development in adolescence

Adolescence is defined as an age group between 10 and 19 years. It is a period of transition, which includes biological changes due to puberty; cognitive changes, including idealism and logical reasoning; social changes, focusing on autonomy

and identity. Generally, children during adolescence do not share about these changes with peers and elders. All these changes lead to loneliness and isolation. Adolescents, who are able to adjust to these changes, experience a high self-esteem.

As children grow towards adolescence, they develop the ability to recognise their feelings and emotions, as well as, understand those of others. For example, when you make a mistake, you can clearly understand by the expression on your mother's face that she is angry, and if you want a favour, you must keep quiet as you know she will refuse at that point of time. This is because as one matures one learns to regulate one's emotions, as well as, behaviours and actions. Emotions not only make us live but also help us in our daily functioning. Let us see how emotions help us in our daily life.

- Emotions help us in taking actions like when you see a dog growling on a road, you feel scared. It is the emotion of fear, which forces you to take action like running or moving away.
- Emotions help us shape our behaviour. By the anger experienced in the dog example, you learn to avoid such a situation. Similarly, when one performs well in a class test, one experiences happiness or joy. One learns to repeat one's behaviour to experience the same emotions. This is the reason why we put in efforts to do well in music, studies, maintaining friendship, or helping elders or parents at home as pleasant feelings are associated with these actions.
- Emotions help in interacting effectively with others. You must have observed that when your friend is upset or your teacher is happy or someone is angry, one is able to read these emotions. These behaviours act as a signal to give an indication to what the other person is experiencing. For example, if we know a person is upset, we avoid interacting with the person for some time. Similarly, when we see the person happy, we perceive it to be a good time to interact.

Mood swings in adolescents

Why am I in such a bad mood?

'Bad mood' is often associated with the feeling of anger, fear, disgust and sadness. A bad mood can affect how individuals interpret and translate the world around them and can also influence their behaviour. Bad moods bring about a change in one's physical and psychological state. Bad mood affects the individual's capacity and ability to work in different settings. It also affects one's relationships with family and friends.

Conflict with family members

An adolescent wants to be treated like an adult and not as a child. As the person considers oneself as an adult, the person often has conflict with parents. A child at such a stage has differences in opinions, poor communication and discipline issues with parents. All these conflicts and disputes lead to mood changes in adolescence.

Insecurity about peer status

Peers play an important role during adolescence. Adolescents often look up to their age mates for approval. Their age mates influence them in establishing their independent identities, have a positive influence on them and may help them discover different aspects of their personalities.

Distancing from family and forming new relationships

Adolescents extend their relationships beyond family and make a special place for friends. They develop a strong sense of self and have their own views and feelings about various issues that may not always be in agreement with their parents, which brings about a change in their behaviours and leads to mood swings.

Sibling rivalry

Sibling rivalry is more intense when adolescents are close at age and of the same gender. During adolescence, the rivalry increases due to physical, psychosocial and emotional changes. These lead to increased mood swings.

Anger

Anger is a kind of intense emotion that involves a strong, uncomfortable and emotional response to an instigating stimulus. There are many reasons that can lead to anger, such as stress, injustice, losing your patience, feeling as if your opinion or efforts are not being appreciated, and so on.

How can I manage my anger?

When one is angry, one shouts, breaks stuff or speaks in a rude tone with others or engages in fighting, which not only harms others but also affects one's state of mind. One experiences loss of energy (fatigue), stress, exhaustion, difficulty in sleeping, restlessness and tension. Hence, it is important that one learns to manage anger. There are some ways by which we can regulate anger.



Fig. 1.7: Expressing emotions through writing

Recognise your feelings

Identify and understand your's and others' feelings.

Stay calm

Take a deep breath, relax your muscles, and listen to music or do something else that makes you calm.

Draw it out

Express distressing and disturbing situation in the form of drawing and painting.

Talk it out

Share your emotions with your friends, parents or any other resource person.



Fig. 1.8: Mother helping a child to calm down

Self-talk

Engaging in self-talk will help one analyse difficult or upsetting situations.

Dairy writing

Writing helps in releasing one's emotions as there is no one to judge.

Mindfulness

Rethink about the situation that caused a specific emotion like anger, and engage in reinterpreting and understanding the situation.



Fig. 1.9: Self-talk

How can you control it?

Anger is a common and normal emotion experienced by all but it is essential to control it before it starts affecting our lives. Some ways to control it are as follows:

Healthy habits

These include a healthy eating pattern and nutritive diet.

Regular exercise

This involves any kind of physical activity because it not only keeps our body fit but also regulates our mind and thoughts. Adequate sleep helps in thinking and controlling anger.

Meditation or yoga

Meditation and yoga help in better understanding of emotions, provide relaxation, as well as, enhance emotion regulation.

Social support

It enhances an individual's self-esteem and well-being as people with social support focus more on good rather than bad mood. Engage in activities that build a sense of achievement and contentment.

When do I get angry?

Anger is one of the common bad moods experienced by all of us. The feeling of anger arises due to how we interpret and react to certain situations. Everyone has their own triggers for what makes them angry. Some common ones are as follows:

Expectations

When our expectations are not met, we experience a feeling of anger and resentment.

Threatening situation

When a situation is not in our control and threatens us, we feel angry.

Individual characteristics

Some people get angry quickly than others as it is their personality trait.

Injustice

When we feel injustice or unfair is done to us, we get angry.

Internalised

The way we interpret and analyse a situation affects our mood. If we interpret that we are being treated unfairly, we experience anger.

Illness

When an individual is suffering from an illness or any physical discomfort, one tends to get angry.



Fig. 1.10: Reading helps in maintaining calmness

Coping with emotions

This refers to individual attempts to adjust and drive a coping mechanism either with task or defence-oriented reactions. The following tips might prove useful for achieving the desired balance of emotions.

Enhance self-awareness

Be aware of your own emotions and feelings. Try to gain insight into how and why you feel so.

Appraise the situation objectively

It has been proposed that an emotion is preceded by the evaluation of an event. If the event is experienced as disturbing, your sympathetic nervous system is activated and you feel stressed. If you do not experience the event as disturbing, then there is no stress. Hence, it is you who decides whether to feel sad and anxious or happy and relaxed.

Do some self-monitoring

This involves constant or periodic evaluation of your past accomplishments, emotional and physical states, real and vicarious experiences. A positive appraisal will help enhance your belief in yourself and lead to enhanced feeling of wellness and contentment.

Engage in self-modelling

Be the ideal for yourself. Repeatedly observe the best parts of your past performances and use them as an inspiration and motivation to perform better in future.

Perceptual reorganisation and cognitive restructuring

Try viewing the events differently and visualise the other side of the coin. Restructure your thoughts to enhance positive reassuring feelings and eliminate negative thoughts.

Be creative

Find an interest or a hobby and make efforts to develop it. Engage in an activity that interests and amuses you.

Develop and nurture relationships

Choose your friends carefully. In the company of happy and cheerful friends, you will feel happy, in general.

Have empathy

Try understanding others' feelings to make your relationships meaningful and valuable. Seek, as well as, provide support mutually.

Participate in community service

Help yourself by helping others. By engaging in pro-social behaviour, you can participate in community service.

Assessment

The teacher can assess the students on the basis of the questions given below. The teacher can also construct more questions.

I. Answer the following questions

1. Why is mental health important for us?
2. Write down about any one situation in which you felt that your behaviour should have been different. Explain why you felt so?
3. How can you enrich your mental health?
4. Write down few ways by which communication can be enhanced.
5. Write down some methods that can help deal with stress.
6. According to you, what is 'emotion'?
7. Write about any one situation in which you experience anger.
8. What all facial changes are observed by you in yourself and others when angry or sad?
9. Why is it important to manage negative emotions like anger?
10. Write down few ways by which you can control your emotions.

II. Write 'Yes' or 'No'

1. Mental health does not affect our emotions and thought process.
2. It is difficult to come out of a bad mood.
3. Mental health causes distress and interferes with our executive functions.
4. Junk food is important for staying healthy.
5. Mental health means being physically fit.
6. Emotions can be positive, as well as, negative in nature.
7. Culture plays no role in enhancing our emotions.
8. Relaxation techniques help you to calm down.
9. It is good to be angry all the time.
10. Exercise helps in channelising energy and regulating emotions.

III. Complete the sentences

1. When I perform well in my exams, I feel _____.
2. When I get scolded, I feel _____.
3. When someone teases me, I get _____.
4. When someone gets chocolates for me, I feel _____.
5. Going to a picnic makes me feel _____.
6. When I see a snake, I feel _____.
7. Talking to a stranger makes me feel _____.
8. I cry when I am _____.

Food and Nutrition

2 Unit

INTRODUCTION

Food is essential as it supplies nutrients to our body, which are needed to sustain life and physical activity. These nutrients are necessary for physical growth and development, repair and maintenance of cells and tissues, regulation of normal body functions, and protection against infections and diseases.

Our diet must provide all essential nutrients in required amounts. The requirement of essential nutrients varies with age, gender, physiological status and physical activity. Eating too little or too much at any age, especially during adolescence and young adulthood can lead to permanent harmful consequences.

Therefore, a balanced diet, providing all nutrients to the body, is needed throughout our lives.

Objectives

This Unit will help a teacher to enable students to understand:

- the importance of food, nutrients and their functions.
- different types of food items, food practices and their relevance.
- the importance of seasonal, indigenous foods and their nutritive values.

UNDERSTANDING FOOD AND NUTRITION

Adequate nutrients are important for maintaining good health and physical fitness, and help prevent injuries and infections. Nutritional needs are fulfilled by the quality, quantity and variety of the food we eat. Those who exercise and play sports need adequate amount of carbohydrates to maintain the energy level. Sportspersons need protein for muscle building and repairing.

Low protein intake by sportspersons leads to fatigue, lethargy and muscle weakness. At the same time, intake of excess protein or supplements causes weight gain, and adversely affects bones liver and kidney. Fat is also an energy



Fig. 2.1: Group discussion

giving nutrient. However, high fat diet must be avoided. Other nutrients like vitamins and minerals are micronutrients and are needed in small quantities. Water is also an important part of food intake. Taking of 8 to 10 glasses of water everyday is essential for keeping the body hydrated.

ACTIVITY

2.1: Awareness about healthy foods

A teacher may divide a class into groups of five–six students and assign tasks as follows:

- Group 1: Prepare a menu for one healthy meal (breakfast, lunch or dinner) and justify why the group considers it as healthy.
- Group 2: Develop at least six slogans on promoting healthy eating habits and justify why the group thinks these slogans are important.
- Group 3: Create a poster on healthy food and suggest how one can build awareness on healthy eating habits among peers.
- Group 4: How do you think media influences the eating habits of young people? Please share at least three examples.
- Group 5: Find out from your parents and grandparents about a meal they used to have as teenagers. Share and discuss it in the group, reasons for the difference in 'items' in the meal consumed by them then and you now.

Group 6: Do a colour check for your tiffin box using a self-assessment chart. Write down the names of fruits and vegetables having different colours in the table as given below.

Table 2.1
Fruit and vegetable tracker

Red	Green	Yellow	Orange	Other colour

The teacher will ask all groups to present a summary of the task assigned, and share their experiences and outcomes of the discussion with the whole class. The teacher will summarise the task as follows:

- We must include different types of food in appropriate amounts to keep the body healthy and fit as no single food contains all nutrients.
- We must adopt healthy eating habits and have a healthy lifestyle, which includes moderate physical activity.
- Change in lifestyle and media influence has brought a shift in food practices. For example, meals are being replaced by unhealthy snacks and fast foods [foods containing High Fat, Sugar and Salt (HFSS) content].
- Global cuisines are quite popular and easily available in India, for example pizza, burger, tacos, sizzlers, noodles, pasta, etc. This is due to globalisation.
- With the help of a fact sheet, the teacher talks about the different nutrients, their functions and sources of food items.



Fig. 2.2: Variety in food

2.2: Classification of food

The teacher may ask the students to talk about the food that they had in their last meal at home. The teacher asks them how it was different from the meal served in a party that they had last attended. The teacher helps the students to note how food differs according to different regions of the country to which they belong.

This will help the students to evaluate whether the food was selected based on taste and flavour only or it contained nutrients too.

2.3: Seasonal and locally available foods

The teacher draws three columns on a blackboard and writes down the names of the seasons — summer, winter and monsoon in each column [Table 2.2(a)]. S/he may encourage the students to identify and list the names of foods consumed during religious fasts and feasts during festivals [Table 2.2(b)]. The teacher, then, discusses the food items available in each season and writes down the names of these items in the given columns. S/he also discusses the advantages of eating seasonal food items.

Table 2.2(a)

Commonly available foods in different seasons

Winter	Summer	Monsoon

Table 2.2(b)

Foods consumed during religious fasts and feasts

Fasts	Feasts

2.4: Gender discrimination and nutrition

Illustrate case studies in the classroom to initiate a discussion on gender discrimination in food consumption practices.

1. Ramesh and Manju are brother and sister, who live in village Rampur with their mother and father. Their mother gives one glass of milk to Ramesh everyday but not to Manju because she thinks Manju will become fat.
 - (a) Is Manju's mother doing the right thing? If yes/no, then why? List the responses of the students and discuss.
 - (b) How will you convince Manju's mother that such discrimination is wrong?
2. Sneha is a 14-year old girl. She skips meals in the afternoon. She also avoids green vegetables. She thinks that taking more meals will make her fat and nobody would be her friend.
 - (a) Is Sneha doing the right thing?
 - (b) Do you think peer pressure influences food habits?
 - (c) What would you have done if you were in Sneha's place and why?

Gender is a social construct, which refers to those behaviours, tasks and responsibilities assigned by the society to men and women. There is no scientific evidence or logic for such gender-specific roles.

From the above discussion, the teacher is expected to summarise the major points regarding the importance of a balanced diet for both the genders to lead a healthy and active life. In addition, s/he discusses the importance of calcium and vitamin D (sunlight) for healthy bones and teeth.

2.5: Genetically Modified (GM) foods

The teacher discusses about Genetically Modified foods with the help of a fact sheet. S/he can ask the students to collect information about GM foods and encourage them to share the information.

2.6: Healthy lunch box

A healthy lunch every day will provide one with the energy and nutrients required to grow, develop and learn. The key to a balanced and nutritious lunch box is variety. A healthy, balanced and nutritious packed lunch must include foods from the following three food groups:

1. Starchy foods, such as any sort of roti, bread, rice preparations or wraps, provide carbohydrates, which give us energy.
2. Fruits and vegetables provide vitamins and minerals, which protect us against diseases.
3. Food items, such as *dal*, sprouts, paneer, cheese, tofu, egg, chicken, fish and peanut butter, provide protein, iron and calcium, especially milk and milk products.

Let us check your 'sweet' choices. Are they packed with nutrients too? Or are they empty calories, providing less nutrients?

Do you...	Always (4 pts.)	Usually (3 pts.)	Some times (2 pts.)	Never (1 pt.)
<ul style="list-style-type: none"> • reach for a fruit as snack, rather than a candy? • drink juice or milk with lunch or dinner rather than soft drinks? • top your cereals with a fruit instead of sugar? • sweeten waffles, pancakes, or toasts with fruits rather than jam or syrup? • top ice cream with fruits and not chocolate or caramel syrup? • order juice or milk with a fast food meal or snacks, such as a burger meal? 				

<ul style="list-style-type: none"> • choose fruits for dessert and not a rich, high-calorie dessert? • go for a smaller rather than a bigger slice of cake? • snack on two or three cookies with milk rather than eat five or six cookies with it? • make hot cocoa with milk and not just water? 				
<p>If you scored...</p> <p>30 or above: Your ‘sweet’ choices are mostly high in nutrients. In fact, enjoy a bit of sugar now and then to add pleasure to eating.</p> <p>20 to 29: Your overall diet is balanced and you are not overspending your calorie budget. Your preference for sweets is probably okay.</p> <p>10 to 19: Your ‘sweet tooth’ may prove to be expensive in terms of fitness and teeth health.</p>				

The teacher sums up the lesson by stating the following:

- Food gives us energy for walking, playing and working in the house or outside, and doing other activities.
- Food helps in the growth and repair of tissues. We need food for the formation of new cells. In addition to growth, new cells are formed to replace dead and damaged cells.
- Malnutrition (improper nutrients) hampers the growth of children and decreases body resistance.
- Food must always be prevented from contamination by dust and flies.
- Food helps the body to fight against diseases.
- It also provides mental and psychological satisfaction.
- Food has always been a central part of our social existence and celebration. We all enjoy having delicious food during celebrations.
- Being at a stage of rapid growth and development, adolescents need a carefully planned diet so that they can grow and remain healthy.

- Balanced diet means inclusion of proteins, carbohydrates, fats and vitamins in requisite proportions in a meal.
- Every region has locally available nutritious food items. These food items must be identified and consumed as a part of our daily meals. For example, millet *ragi* is a rich source of calcium and is easily available across many parts of India.
- Packaged and junk food may be tasty but must never replace the regular meal. They do not have adequate nutritional value. They are also harmful for health and can cause obesity if consumed regularly.
- Drastic diet plans and slimming medication can be harmful for the health unless prescribed by a qualified nutritionist or doctor. Advertisements that promote girls as being thin and boys as being tall and muscular can mislead young people into making unhealthy eating choices.
- Eating wholesome food, including cereals, fruits and vegetables, preferably those that are locally available and seasonal, help develop good health.
- The National Food and Health Survey 4, 2015–16, has shown that infant mortality rate has declined. However, children are still dying in infancy and early childhood due to nutritional disorders, malnutrition and under nutrition.

FACT SHEET

Food and nutrients

Food is any substance, which nourishes the body and is fit to eaten. Food is essential for human life because it is the source of energy and nutrients. Our body is made up of the foods we eat. Food contains chemical components similar to those that make the body. These chemical components of food are called 'nutrients'.

Nutrients are the substances found in food that keep the body functioning. The food one eats is a source of different nutrients. Our body needs nutrients to fuel our energy, help in growth, repair itself, protect against infections and regulate basic body functions. There are six groups of nutrients, which are essential. They are broadly classified as — carbohydrates, proteins, fats, vitamins, minerals and water (Table 2.3).

Table 2.3
Essential nutrients

Nutrients	Function	Food sources item
Carbohydrate (forms the major component of most diets)	<ul style="list-style-type: none"> • gives energy and feeling of fullness • increases the bulk of our food • helps make the food tasty 	<p>Starch sources Cereals — wheat, rice, <i>bajra</i>, maize, potatoes, sweet potatoes, etc.</p> <p>Sugar sources Sugar, honey, jaggery, sweets, jam, <i>murabba</i>, etc.</p>
Protein	<ul style="list-style-type: none"> • is needed for making new cells in the body • helps in repairing old and damaged cells • helps in healing wounds • is needed for making blood, enzymes, fats and hormones 	<p>Animal sources Meat, egg, fish, poultry, milk curd, cheese, etc.</p> <p>Plant sources All cereals, pulses, peas, soyabean, nuts, especially groundnut, etc.</p>

<p>Fat (concentrated source of energy)</p>	<ul style="list-style-type: none"> • helps to keep our body warm • helps in the utilisation of fat soluble vitamins A, D, E and K • provides protection to delicate organs, such as heart and liver, and also provides padding on our skeleton and muscles • makes the food tasty 	<p>Butter, ghee, groundnut oil, coconut oil, <i>vanaspati</i>, fried foods, etc.</p>
<p>Minerals (required in small quantities)</p> <p>(a) Calcium</p>	<ul style="list-style-type: none"> • enable the body to use other nutrients • play an important role in growth, repair and regulation of vital body functions, i.e., functioning of nerves and clotting of blood when needed • maintains water balance in the body • helps in the contraction of muscles <ul style="list-style-type: none"> • helps bones to grow and become strong • makes teeth healthy and strong • helps in clotting of blood • helps in the movement of muscles 	<p>Milk and its products like paneer, cheese, curd, <i>lassi</i>, buttermilk, etc.; green vegetables</p> <p>Green leafy vegetables like broccoli, cabbage, okra, fenugreek, curry and coriander leaves</p>

<p>(b) Iron (deficiency causes anaemia)</p> <p>(c) Iodine (deficiency causes goitre)</p> <p>(d) Zinc</p>	<ul style="list-style-type: none"> • helps body to make haemoglobin or 'Hb', found in red blood cells, which transports oxygen throughout the body and also imparts blood its red colour • needed for the functioning of thyroid gland • supports growth and development • helps in the absorption of vitamins • strengthens the immune system and helps in the healing of wounds 	<p>Green leafy vegetables like spinach, mustard leaves, fenugreek, mint leaves, wholegrains and legumes, meat, egg yolk, jaggery, dates and pomegranate</p> <p>Seafood like fish and sea weeds; plants, which grow in iodine-rich soil; salt fortified with iodine</p> <p>Seafood, meat, seeds, and cooked dried beans, peas and lentils</p>
<p>Vitamins (a) Fat soluble (Vitamin A, D, E and K are soluble in fat. These are essential for the functioning of the body.)</p>	<p>Vitamins are classified into two groups on the basis of their solubility in fats and water.</p>	

<p>(i) Vitamin A (deficiency causes night blindness)</p>	<ul style="list-style-type: none"> • for better vision • makes our skin healthy • necessary for growth and development • provides resistance to infections 	<p>Vegetables, fruits, milk, cheese, egg yolk, butter, ghee, animal liver and green leafy vegetables</p>
<p>(ii) Vitamin D (deficiency causes rickets in children and osteomalacia in adults)</p>	<ul style="list-style-type: none"> • works with phosphorus to make teeth and bones stronger 	<p>Fish, milk, cheese, calcium butter, ghee, etc. Our body can make Vitamin D when the skin is exposed to sunlight.</p>
<p>(iii) Vitamin E (an antioxidant)</p>	<ul style="list-style-type: none"> • prevents tissue breakdown 	<p>Whole pulses and cereals</p>
<p>(iv) Vitamin K</p>	<ul style="list-style-type: none"> • needed for the clotting of blood 	<p>Green leafy vegetables</p>
<p>(b) Water solubles (vitamins soluble in water, e.g., B Complex vitamins and Vitamin C)</p>		
<p>(i) Vitamin B Complex</p>	<ul style="list-style-type: none"> • helps the body to use energy • keeps the digestive system healthy 	<p>Pulses, wholegrains, cereals, wheat, rice, etc.</p>
<p>(ii) Vitamin C</p>	<ul style="list-style-type: none"> • needed by body cells as it helps to hold the cells together • keeps our teeth and gums healthy 	<p>Fruits, green leafy vegetables, potatoes, sprouted grains, guava and gooseberry (<i>amla</i>)</p>

Fibre	<ul style="list-style-type: none"> • increases the bulk and softness of stool, thus, making it easier to pass out of the body • fibre-rich foods require more chewing, have a high degree of satiety • deficiency can cause constipation and high blood pressure 	Whole wheat flour, <i>dalia</i> (porridge), fruits, such as guava, apple, pineapple, banana, whole pulses like lentil, <i>rajmah</i> , Bengal gram, vegetables, such as peas, beans, carrots, cauliflower and green leafy vegetables
Water (It constitutes about 70 per cent of our total body weight and is a major constituent of all body fluids)	<ul style="list-style-type: none"> • helps to digest food and enables nutrients to reach different cells of our body • helps to keep our body temperature constant in summer; when we sweat, extra heat is removed from the body • helps remove waste products from our body in the form of urine 	On an average, one must drink about 8–10 glasses of water every day.

As we can see from Table 2.3, several foods appear in more than one category. Foods can be used for a variety of purposes, depending on individual requirements. No single food provides the desired amount of nutrients required by the body. Therefore, we have to consume a variety of foods, such as egg, meat, fish, pulses, green vegetables, fruits, milk and

Healthy eating habits

- Eat slowly.
- Chew your food.
- Avoid watching TV or reading while eating.
- Eat a balanced meal that contains different food groups in adequate proportions at regular intervals.
- Never skip meals and do not overeat.
- Drink sufficient water (8 to 10 glasses per day).

food rich in carbohydrates (bread, potatoes, rice and pasta) for energy, as well as, green vegetables, wholemeal bread and butter, which are rich in Vitamin B. We also need to eat fruits like orange, lemon and blackberry as they are rich in Vitamin C, as well as, fibre. We must drink plenty of water. However, we need to restrict eating junk foods, which contain more fat and sugar, such as chips, cookies, chocolates and aerated drinks.

Classification of foods

Foods are classified into three broad groups, according to the functions they perform in the body.

Energy yielding food

This group includes foods rich in carbohydrates, fats and proteins. Energy yielding foods may be broadly divided into two groups.

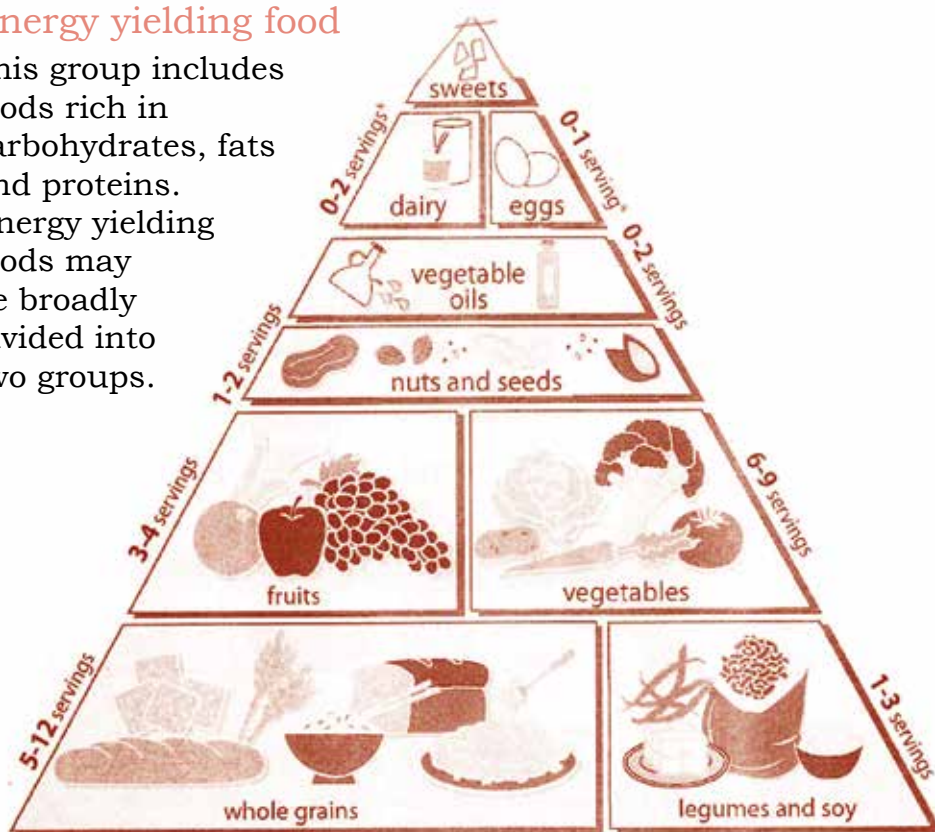


Fig. 2.3: Food pyramid

- (i) Cereals, pulses, roots and tubers: Cereals provide, in addition to energy, large amount of proteins, minerals and vitamins in the diet. Pulses also provide protein and Vitamin B, besides giving energy to the body.
- (ii) Fats, oils and pure carbohydrates like sugar, provide only energy. Fat is a concentrated source of energy.

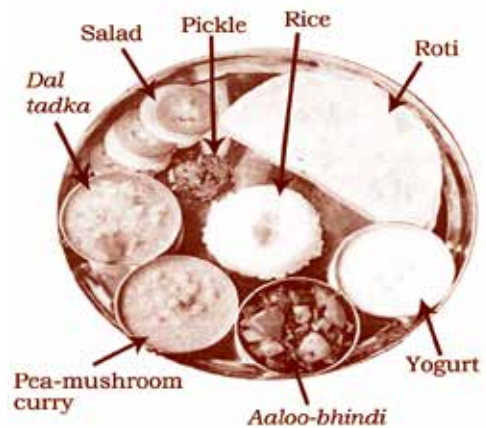


Fig. 2.4: The Indian thali offers a balanced meal, having roti, rice, curd, green vegetables, dal and salad.

Table 2.4
Recommended dietary allowance of nutrients
for adolescents in 24 hours

Age (in years)	Male			Female		
	10–12	13–15	16–18	10–12	13–15	16–18
Energy (kcal)	2200	2500	3000–3500	2000	2100	2500 to 3200
Protein (gm)	54	70	78	57	65	63
Calcium (mg)	600	600	500	600	600	500
Iron (mg)	34	41	50	19	28	30

Source: ICMR

Do you have enough energy?

When we eat and drink, we are putting energy (kilojoules/kilocalories) into our body. Our body, then, uses that energy. The more physical activity we do, the more is the energy we need. To maintain a stable weight, the energy we put in our body must be the same as the energy we use through normal bodily functions and physical activity.

Body building food

Food rich in protein are called 'body building food'. Body building food can be classified into two groups.

- (i) Milk, egg, meat and fish: These items are rich in protein. They have all essential amino acids in correct proportion and help in making body tissues.
- (ii) Pulses, nuts, soya and oilseeds: These food items are rich in protein. However, all of these may not contain all essential amino acids required by the human body.

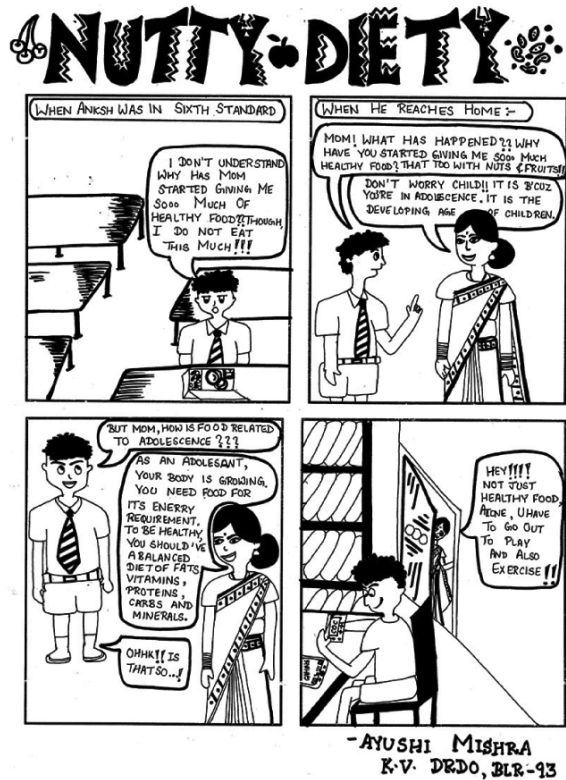


Fig. 2.5: Importance of balanced diet for adolescents

Protective food

Food items rich in protein, vitamins and minerals perform regulatory functions in the body, for example maintaining the heartbeat, water balance, temperature, etc. Protective foods are broadly classified into two groups.

- (i) Food items rich in vitamins, minerals and proteins are milk, egg and fish.
- (ii) Food items rich in vitamins and minerals are green leafy vegetables and fruits.

From Fig. 2.6, the teacher can conclude that a balanced diet is one that has various food items, such as energy yielding food, body building food and protective food, so that an individual obtains the minimum daily requirement of nutrients. Adolescents need a carefully planned diet so that they remain healthy as this is the stage of rapid growth and development.

Seasonal foods

Seasonal foods refer to the foods available at different times of a year. A particular food, which at its peak of production during a season either in terms of harvest or flavour, is usually, the cheapest, most fresh, tastier, more nutritious and easily available in



Fig. 2.6: Seasonal fruits and vegetables in India

the market can be classified in the category of seasonal food. In our country, we have a new season every three months. For us, every season brings with it a unique abundance of foods with a variety of flavours.

Nutrients of food items begin to deteriorate with time. When food is produced or harvested, hundreds or thousands of miles away, it travels for days or weeks to reach the market and is exposed to air, artificial light, temperature changes and time. These factors reduce the nutritional value of fruits and vegetables. The fresher the food, the better it tastes. A seasonal food tends to be fresher because it is picked at its peak of quality and nutritional value. It is ready to be eaten right away.

Deficiency disorders

Deficiency disorders are caused by the shortage or absence of certain nutrients required in our daily diet. Deficiency disease is a condition, which occurs in the body when a particular nutrient in our daily meals has been missing for a long period. Often, the deficiency is reversible, if the missing nutrient is detected early and adequately replaced. Children and old people are more prone to deficiency diseases. Let us now study some deficiency disorders.

Iron deficiency: Anaemia

Iron deficiency is a major nutritional problem in our country. It is commonly found in women and children. Iron, as a mineral, is essential for the formation of haemoglobin in red

blood cells (RBCs). Red blood cells carry oxygen and transport it to the body.

The sources of iron are animal liver, red meat, pulses — black and red gram, nuts, eggs, dried fruits, fish, wholegrains, dark green leafy vegetables, garden cress seeds, niger seeds, flax seeds, etc.

The major causes of anaemia are as follows:

- inadequate intake of dietary iron or its poor absorption
- hookworm infestation mainly found in young children and adults
- excessive blood loss due to accidental injury and during childbirth in women

You have already studied that iron is required to make haemoglobin. Iron deficiency causes lack of haemoglobin in blood. Hence, the supply of oxygen to different cells in the body is reduced. When this happens, we feel tired, restless and fatigued all the time. Therefore, we cannot work to our full potential.

Weekly Iron and Folic Acid Supplementation (WIFS) programme for adolescents

The Government of India has launched Weekly Iron and Folic Acid Supplementation Programme. This addresses the high prevalence and incidence of anaemia among adolescent girls and boys



Fig. 2.7: Deficiency of iron

(10–19 years). This programme is based on the empirical evidence that weekly supplementation of 100 mg Iron and 500 mg Folic acid are effective in decreasing the prevalence of anaemia in adolescents. Iron and Folic acid deworming tablet, along with testing and counselling services, are provided for free. It is implemented in both rural and urban areas, which will cover school-going adolescent girls and boys of Classes VI–XII enrolled in government, government aided or municipal schools, and out of school adolescent girls through *anganwadi* centres.

Genetically Modified (GM) foods

Genetically Modified (GM) foods are produced from organisms, using the process of genetic engineering. The commercial sale of GM foods started in 1994.

Genetic engineering has helped in improving sweetness, developing pest resistance, delayed ripening, and cold and freeze resistance in vegetables and fruits, thereby, improving their shelf life.

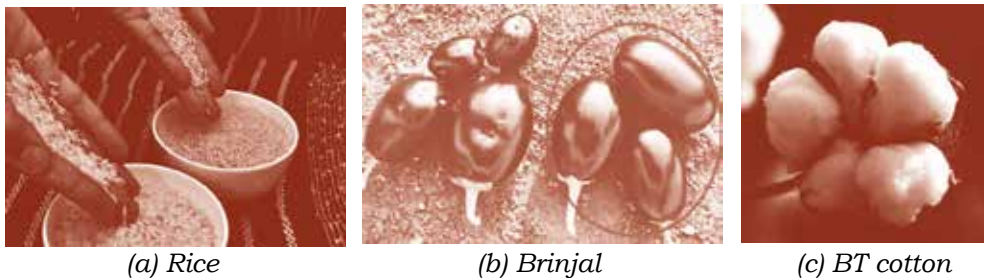


Fig. 2.8(a-c): GM Foods

ASSESSMENT

The teacher can assess the students on the basis of the questions given below. The teacher can also construct more questions.

I. Answer the following questions

1. List the three important functions of food.
2. Recommend three energy giving foods for an active school-going child.
3. Justify the need for extra calcium and iron in the diet of adolescents.

4. What are the symptoms observed in a person suffering from anaemia?
5. Complete the table given below:

S.No.	Name of the nutrient	Main function	Three sources
(i)	Vitamin A		
(ii)	Vitamin B		
(iii)	Vitamin C		
(iv)	Vitamin D		
(v)	Calcium		
(vi)	Iron		
(vii)	Iodine		
(viii)	Protein		

6. (a) What do you mean by GM food?
(b) List the importance of GM foods over conventional foods.
7. (a) List some of the global food items eaten by you.
(b) What are the special practices employed in making such food items?

II. Write 'Yes' or 'No'

1. Having a skinny body means women are healthy.
2. Milk should only be given to boys as it makes girls fat.
3. Deficiency of iron makes a person suffer from anaemia.
4. Refrigerated foods have better nutritional content.
5. An anaemic girl should be given ghee and butter to recover.

III. Things to do

1. A community lunch can be organised for the class. The students will bring nutritious food items home-made and share with each other.
2. The teacher can organise a discussion on the importance of different types of food and food practices adopted by different people in a locality.

IV. Match the Columns

Column A

- (i) Vitamin D
- (ii) Protein
- (iii) Vitamin A
- (iv) Iron

Column B

- (a) deficiency causes anaemia
- (b) night blindness
- (c) for repairing old and damaged cells
- (d) rickets

Water Conservation

Unit

INTRODUCTION

Water is an important resource on Earth. It is vital for our health and sustenance of life. We cannot live without water but, now, there is a growing scarcity of this precious resource. There are many who do not even have access to safe and clean drinking water. In Class VII, various sources of water pollution and the preventive measures have already been discussed. We have also learnt about the health hazards associated with consuming polluted water. We will now look into the various ways by which we can conserve water.

ACTIVITY

3.1: Importance of water

A teacher may ask students to imagine a scenario of how they would manage their water needs in a situation of 'no water supply' for a day. The teacher may ask the students to respond to the following questions:

- What are the problems you are likely to face?
- How will water scarcity impact our health?

The students will give varied responses. The teacher will record the responses on a blackboard and summarise the discussion on 'How precious is water?'

Objectives

After learning this Unit, a teacher will enable students to:

- realise the importance of water.
- become aware of the consequences of wasting water.
- appreciate the need for water conservation.
- learn about the different ways and means of water conservation.
- learn how to dispose household liquid waste.

3.2: Water crisis

The teacher may ask the students to form groups, each having five–six members, and discuss the following case study.

Case study

Anita walks five hours every day to fetch drinking water from a distant spring. She walks on dusty and bumpy paths of a remote village in India. Drinking water has remained one of the biggest problems for residents of her village. The women form groups and walk for miles towards the hills to reach the source of water. They also have to wait long hours to get a bucket of water, every drop of which is spent judiciously. The teacher will now raise the following questions to the students:

1. What is the source of water supply in your locality?
2. What is the quantity and quality of water supply in your locality?
3. Is it similar or different from Anita's situation?
4. In this situation, do you think Anita will be able to go to school or find time to play?
5. What would be the implications of water scarcity on the health of Anita's family?

The teacher will summarise the major points of the discussion. Fetching water is a challenging task in remote parts of India even today. People need to work hard to get water to meet their family needs. For them, every drop of water counts. Conservation of water is a concern for all of us as it is the most important resource for the survival of all life forms.

3.3: Water harvesting

The teacher will divide the students into groups, each having five–six members, and ask them to do the following:

1. Find out some traditional forms of water harvesting systems practised in your locality or State.
2. How has it changed over the years?
3. Do you think that such traditional practices should be continued? Give reasons for your answer.

The teacher will discuss that water harvesting is not new. It has been in practise for hundreds of years and adapted to the local terrain. Many of these practices have been discontinued but many have continued with suitable modifications.



Fig. 3.1: Water harvesting

3.4: Being water wise

The teacher may ask the students to prepare a flow chart with pictures, captions, cartoon strips, slogans, newspaper clippings, etc., on how to manage water, and how to prevent its wastage. The guiding motto is 'even a drop of water counts'. The work done by the students can be displayed in the school assembly or in the classroom.

The students should be encouraged to reflect on their own experiences and also be motivated to make others aware.

What I can do about that?

For example, I will close the tap while brushing my teeth. (The student may be encouraged to give more examples in the lines given below.)



Fig.3.2: Water wastage

In this way, write down as many activities as you as a student can carry out for being 'water wise'. Apply this in life always and guide others to do the same.

The teacher records the observations on the blackboard or chart paper and reiterates the major points related to the judicious use of water. The teacher may even hang the chart paper on the classroom wall to generate awareness in this regard.

3.5: Groundwater management

The teacher may conduct a brainstorming session in the class on the following issues:

1. For which purposes do we use groundwater?
2. Why is the groundwater level going down?
3. What is the possible threat to the environment as the groundwater level is going down?
4. What could be the impact of dumping polythene waste in soil on the groundwater level?

Extending the responses, the teacher will sum up the discussion by saying that groundwater is used for agricultural, industrial and domestic purposes. However, the groundwater level is going down due to its exploitation. This is a threat to forests and may lead to further global warming, a matter of great concern today.

FACT SHEET

Water and its importance

Water is the most precious resource for the existence and sustenance of life on this planet. It needs to be used wisely. Its wastage at the personal and community level must be strictly checked.

Water conservation may be described as the practice of economising on the use of water and reducing its wastage that needs methods for conservation.

In our Geography and Science textbooks, it is mentioned that three-fourth of the Earth's surface is covered with water and also that water is a renewable natural resource. If there is so much of water around us, then why is there a growing scarcity of it?

The fact is that only 2.7 per cent of the available water on Earth's surface is 'freshwater'. Out of this, only 1 per cent of the freshwater is fit for human consumption and use. This water is available to us either directly from water bodies, such as rivers, lakes, streams, waterfalls and groundwater, or indirectly as

water from these sources is supplied to us through a network of pipes. These water sources are crucial for our survival but are either drying up or being polluted, thereby, leading to the scarcity of this vital natural resource.

In Class VII, we have seen how the pollution of water bodies has reduced the availability of safe and clean water. We have also learnt about the health hazards associated with drinking and using contaminated water. In addition, there is a great inequality in the distribution and availability of water. In cities and towns, water supply is managed by civic bodies. Some people get tap water almost throughout the day, while there are many who have to stand in long queues to collect or buy water to meet their daily needs. The situation is becoming worse in many villages, where people have to carry water directly from the sources — lakes, rivers, ponds or wells — situated at long distances. Most often, the burden of collecting water is imposed on women. The constant load of weight on the head adversely affects their spine and women become prone to backache, spondylitis, exhaustion, etc. In many instances, children, particularly girls, also carry water. Apart from health problems, it also affects their attendance rate in schools and gives them almost no time for leisure and study.

Scarcity of water and lack of safe drinking water accounts for a large number of water-borne diseases, such as jaundice, diarrhoea, cholera, and so on. According to a report of

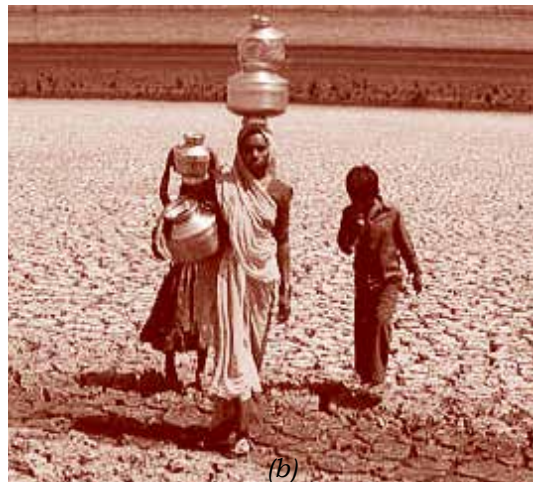


Fig. 3.3(a-b): Even a drop of water counts

the United Nations International Children's Emergency Fund (UNICEF) published in 2016, it is estimated that about 5.2 lakh children aged below 5 years die annually from diarrhoeal diseases, which means 1,400 deaths every day. In fact, India has the largest number of cases as regards to water-borne diseases, and most of the victims are children.

Water conservation and management

To meet the growing water crisis, we must learn how to conserve water and manage the available water supply. Some of the simple but effective methods that must be practised are as follows.

Rainwater harvesting

Rainwater harvesting is a convenient and practical method of water conservation. It is not a new system. It is being practised since ancient times by various communities. They pooled in local resources and devised various ways of storing rainwater in community ponds, tanks, or diverting and storing water from local streams or springs, etc. The names of these systems and methods that were adopted varied from region-to-region, depending on local ecological conditions, water requirements and the prevailing culture of the community. It was an important system that helped them meet their water needs.

You can also store water in a variety of ways. A simple method is to place a drum on a raised platform directly under the rainwater collection source. You can also collect water in buckets during the rainy season. This water may be utilised for flushing in toilets, cleaning floors, washing clothes and utensils, gardening, etc.

Though much of this tradition on water conservation is not in use now, it is still being practised by certain communities with modifications. There are many methods of rainwater harvesting. For individual households, the most appropriate method is the process of collecting, filtering and storing rainwater from rooftops, paved or unpaved, and storing in nearby tanks,

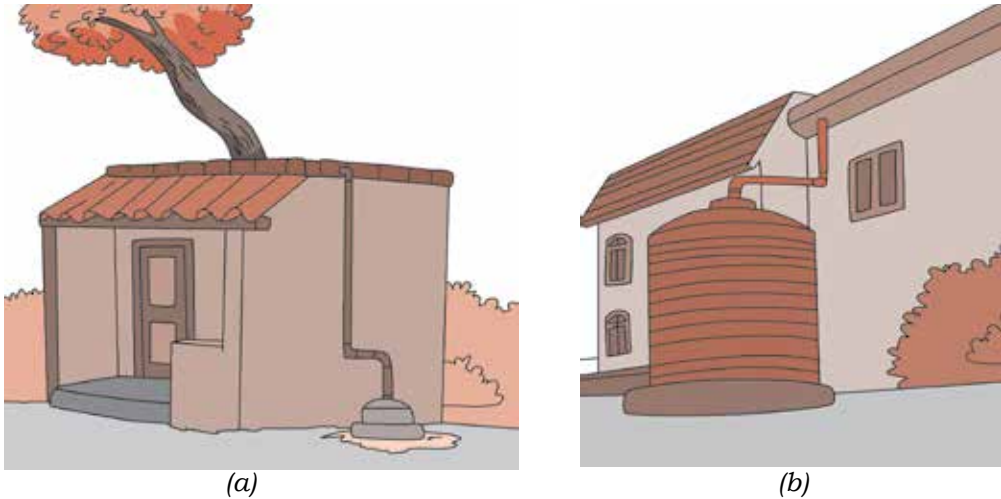


Fig. 3.4(a-b): Rooftop rainwater harvesting technique

large containers, etc. The water can also be used for multiple purposes and drinking, after testing and treatment. This system can also be used for recharging the groundwater.

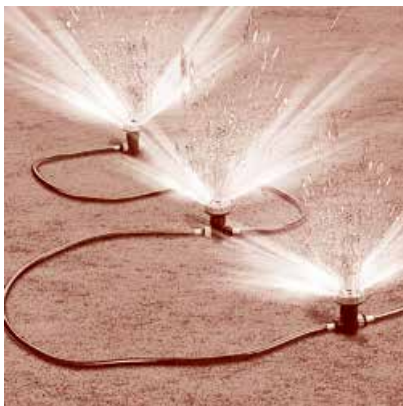


Fig 3.5: Conservation of water in irrigation

WHAT I CAN DO— Students' initiative to conserve water at personal level.



- Repair all leaking pipes.



- Close any tap that is dripping.



- Keep the tap closed while brushing the teeth or shaving. Use a glass of water instead.



- Bathe with a bucket of water instead of taking a shower or bathing with the tap open. Avoid long showers.



- Do not wash cars or scooters using hose pipes or drinking water. Instead use a bucket.

Fig 3.6: Water conservation at individual level

Judicious use of water

- We must economise on the use of water and prevent its wastage.
- It is important to remember that used water needs to be disposed of hygienically, else it can be a potential health hazard. Therefore, efficient disposal or reuse of household liquid waste is necessary.

Problem of open defecation in the world and India

About one billion people or 15 per cent of the global population follows the practice of open defecation (WHO UNICEF Report–2014). India has the largest number of people practising open defecation, around 500 million. Of these, about 52 per cent reside in rural areas while 7.5 per cent is estimated to be living in urban areas.

As a result of open defecation, germs in the faeces and urine often find their way to sources of water and food, which may cause diseases. It is, therefore, important to dispose such waste efficiently.

Generally, our wastewater (known as sewage) goes through the drainage system to the main water treatment plant. After treatment, the water is discharged into rivers. There are, however, many houses, particularly, in rural areas, which do not have this facility. Even in places having a drainage system, there are instances where clogged or overflowing drains and leaking pipes cause unsanitary conditions. We are likely to fall sick in such situations. The effective disposal of wastewater from our homes is important for ensuring sanitation, and also its conservation by reusing it, if possible.

One way of disposing wastewater from our homes is by reusing it for some other purposes. This method serves as an important measure of water conservation.

Alternative methods of disposing or reusing household liquid waste

- Do not throw away the water, which has been used for washing vegetables, *dal*, rice, etc.
- Use it to water plants, cleaning the floors, washing clothes and utensils and in the kitchen garden, etc.

- Grey water can be utilised for flushing in toilets.
- Prepare a soak pit.

How to prepare a soak pit

Another alternative method for disposing household liquid waste is by preparing a 'soak pit'. This process helps in the hygienic disposal of wastewater, for example black water. However, water disposed of by this method cannot be reused.

The advantage is that soak pits require a small space, and those who do not have the provision for raising a kitchen garden can practise this method.

Grey water is household wastewater that is not contaminated with excreta or urine. It can be reused for gardening and flushing in toilets.

Black water is household wastewater that contains excreta or urine. It contains harmful germs and has to be disposed of efficiently, otherwise it can cause numerous health hazards.

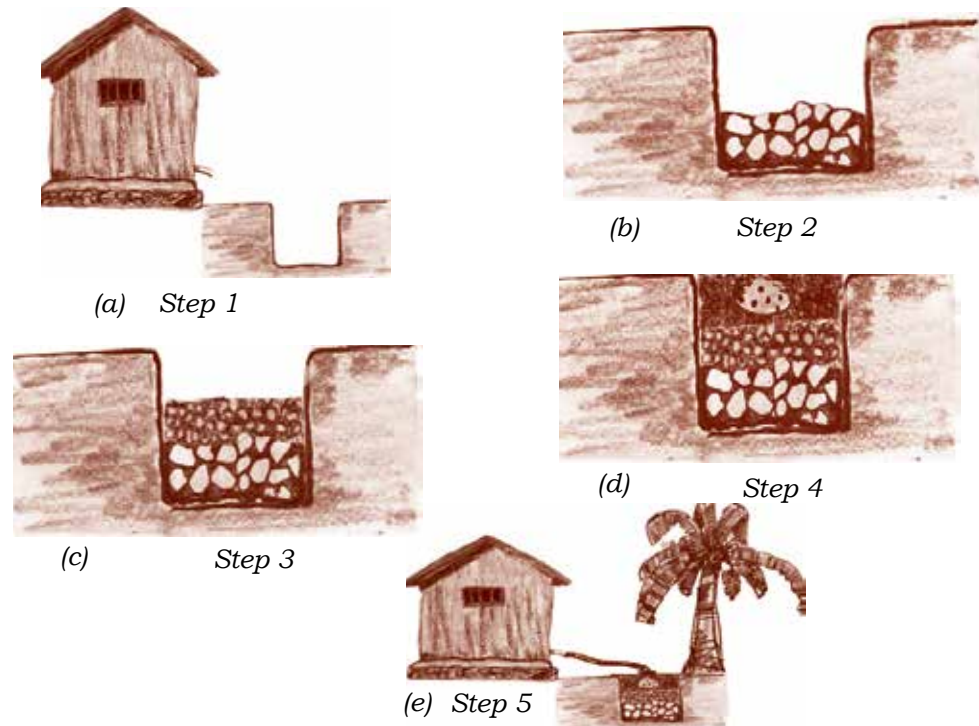


Fig.3.7(a-e): Steps for making of a soak pit

Procedure

For a family of six members, a pit of 3×3×3 feet can be dug [Fig. 3.7(a)]. The bottom layer of about 1 foot will be filled with big-sized irregular stones [Fig. 3.7(b)]; the middle one foot layer with medium-sized stones [Fig. 3.7(c)], and the uppermost layer with small stones, pieces of broken bricks and broken earthen pots [Fig. 3.7(d)]. For filtering, we need to have an earthen pot with multiple holes at the bottom. Put some coconut husk in the pot at the bottom. This earthen pot needs to be embedded in the topmost layer of the soak pit. The end of the exhaust pipe from bathroom should be put in the pot. Now, cover the pit with a plastic coated gunny bag of 4×4 feet, leaving space for the pot. Cover the gunny bag with soil. Now, the soak pit is ready for use. Coconut husk in the pot needs to be replaced every month. The pit may be dug and remade after every five years or whenever needed.



(a)



(b)

Fig 3.8(a-b): Management of wastewater through soak pits by school children at Parinche in Pune district of Maharashtra

Source for picture: ABHA

Success story

Children of many *ashram* schools in Maharashtra have made soak pits. They have also created kitchen gardens at many places. Soak pits are, particularly, made in many village homes.

Groundwater management

- Groundwater is used for irrigating crops, drinking and domestic purposes in rural areas, in addition to industrial use.
- The water table may be deep or shallow and may rise or deplete, depending on many factors. Heavy rains or melting snow may cause the water table to rise, while heavy pumping of groundwater supplies may cause the water table to deplete.
- Groundwater supplies are replenished or recharged by rain and melting snow that permeates into the cracks and crevices beneath the land's surface.
- In areas where plastic material above the aquifer is permeable, pollutants can readily sink into groundwater supplies. Groundwater is also polluted by polluted material used for landfills. If the groundwater becomes polluted, it will no longer be safe to drink.

Assessment

The teacher can assess the students on the basis of the following questions.

I. Answer the following questions

1. Why is water conservation important?
2. How does rainwater harvesting help in the conservation of water?
 - (a) Describe the procedure for making a soak pit.
 - (b) What are the benefits of soak pit?
 - (c) Draw neat and labeled diagrams of all the steps involved in making a soak pit.
3. What is 'grey water'? Give four examples of how you would reuse grey water.
4. Write down five activities through which you would generate awareness on water conservation in your locality.
5. Write a paragraph on the 'impact of water scarcity on our daily life and health'.

II. Write 'Yes' or 'No'

1. In urban areas, wastewater is mostly disposed from houses by sewage system.
2. Only 2.7 per cent of the available water on the Earth's surface is freshwater.
3. Wastewater disposed in soak pit can be reused.
4. One can use black water in kitchen garden.
5. Checking and preventing leakage of taps prevents wastage of water.

III. Things to do

1. Make a soak pit in your school campus.
2. As a teacher, find out a success story and explain to the students how water conservation practices have changed people's lives.
3. The teacher may ask the students to write down about the practice of water harvesting technique that they know.
4. The teacher can talk and show videos to the students, showing the initiatives taken by the local people and NGOs for rejuvenating rivers.

Fundamental Skills

(Individual Sports)

4 Unit

INTRODUCTION

Participation in sports improves qualities like self-confidence, self-esteem, and mental and physical well-being. If sports are played without much emphasis on competition, these will enable students to enjoy and learn more, and also help them to excel. The bases of fundamental skills of different sports have already been discussed in Class VII. In this Unit, track and field, gymnastics, swimming, wrestling and judo have been discussed in detail, along with some important skills required for these sports so that the students can perform better in these games.

GUIDELINES FOR THE TEACHER

- The teacher must familiarise the students with the procedure of performing the skills of selected sports, as well as, different phases of these skills.
- The teacher may procure material required for teaching the skills.
- The teacher must include a warm-up session of 8 to 10 minutes before starting the class.

Objectives

This Unit will help a teacher to:

- enable students to develop neuromuscular coordination.
- identify and nurture the talent of students in different individual sports, including those meant for Children With Special Needs (CWSN).
- enable students to learn the tactics and strategies of individual sports.
- provide recreation to students through participation in sports.
- develop qualities, like confidence, self-esteem, illpower, physical and mental well-being in students.

- The teacher may take the help of a better performer (if needed) for the demonstration of the skills.
- The students are made to practise the sub-skills or parts under the teacher's supervision.
- During the practice session, the teacher needs to observe the students and make necessary corrections or changes, if required.
- The teacher must motivate the students, so that they take a keen interest while learning the skill.
- At the end of the practice session, the students need to participate in a cooling down session.
- The teacher must sum-up the lesson and clarify the doubts, if any, raised by the students.
- The teacher must also ensure the safety of the students during the practice session.

TIME DURATION AND MATERIAL

The duration of each class for teaching different skills of individual sports is 45 minutes. The teacher must ensure that all required material are available in sufficient quantity.

INDIVIDUAL SPORTS

Individual sports are track and field (running, jumping and throwing), gymnastics, swimming, wrestling, judo and taekwondo. Every event requires various fundamental skills for performance, which have been discussed in the Unit.

ACTIVITY

4.1: Track and field events

1. Sprints: 400-metre race
2. Jump: Triple jump
3. Throw: Javelin throw

Material required: Whistle, clapper, stopwatch, writing board, chart paper, pen, marked 200 or 400-metre track, throwing arena, jumping pit, measuring tape, lime powder, javelin, etc.

Guidelines for the teacher

- The teacher must explain the skills with the demonstration of each phase step-by-step.
- The students must practise the movements of the skills in phases.
- The teacher needs to combine the phases in a progressive way.
- During individual phase practice, the teacher must identify the shortcomings and provide assistance.
- The teacher must give sufficient time to the students to practice.
- The teacher can use lead-up activity to further improve upon the quality of the skill.

400-metre race

The techniques of a 400-metre race are divided into the following phases:

- Start
- Running
- Finish

Start

As per the rules, the teacher asks the students to take crouch start position to commence the event. The procedure of crouch start has already been discussed in detail in previous classes and can be recapitulated by the teacher.

Running

For this, the teacher directs the sprinter to run two curves and two straights (in 400m standard track). The start of the race is from the first curve with full stagger (full stagger is given because the sprinter has to run two curves of the track). Soon after leaving the starting block, the sprinter accelerates



Fig. 4.1: 400-metre race

and attains speed (Fig. 4.1). After covering the first curve, the sprinter maintains the pace and runs the first straight and second curve, maintaining inward inclination of the body. Thereafter, the person enters the second straight and runs the second remaining straight at one's best speed.

Finish

For finishing, the teacher motivates the sprinter to adopt any one of the following techniques:

1. Run through
2. Shoulder shrug
3. Dip

The techniques of the above mentioned styles of finishing the race have already been discussed in Class VII and can be recapitulated by the teacher.

Triple jump

The teacher explains the techniques of 'triple jump'. The teacher may demonstrate it also. The techniques of triple jump can be divided as follows (Fig. 4.2):

1. Approach run
2. Hopping
3. Stepping
4. Jumping and landing

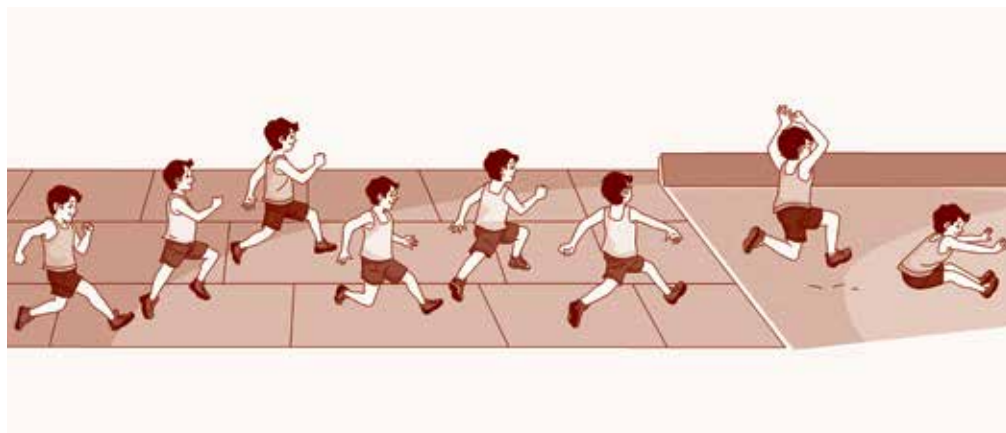


Fig. 4.2: Triple jump

Approach run

The teacher explains that the length of the approach distance varies from 35 to 40 metre. The main task of this phase is to produce optimum horizontal velocity and prepare for accurate or effective first take-off from the board.

Hopping

The teacher explains that the important point to remember is to take-off and land on the same foot. The teacher explains that this is the shortest phase. It is more difficult as the same leg must hold the body weight and accelerate it again. Take-off is an explosive action and to perform this phase effectively, stretching and swinging movements need to be coordinated. Landing is done on the flat part of the foot.

Stepping

After finishing the step phase, a student has to land on the opposite leg (called step) and take-off from the opposite leg again further to land in the jumping pit.

Jumping and landing

If the jumper is in the flight for the third jump, one will not be able to bring the legs too far in the front as is done in long jump. As soon as both the feet, which are kept together, touch the landing pit, the jumper flexes the knees, and simultaneously, swings both the arms forward to take the body ahead of the landing mark.

Javelin throw

The teacher explains the following technical phases of javelin throw as shown in Fig. 4.3 and Fig. 4.4.

1. Grip and stance
2. Javelin carry and approach
3. Withdrawal
4. Impulse stride
5. Throwing stride
6. Release
7. Recovery (reverse)

Grip and stance

The teacher explains and demonstrates that the javelin is gripped at the rear end of the binding so that force can be transmitted to the javelin behind its centre of gravity. Fingers find a resistance on the shaft as shown in Fig. 4.3. The thrower stands with both the feet parallel at the start of the runway, keeping the shoulders square to the throwing direction and keeping the javelin at the height of the forehead [Fig. 4.4(a)].



Fig. 4.3: Grip and Stance

Javelin carry and approach

The length of the approach run is about 25 to 30 metre. The first two-third of the total approach distance is used for increasing the speed (acceleration) of the run-up. The run-up should be easy and relaxed. At the end of this phase, the athlete has to prepare for withdrawal of the javelin for resuming the correct throwing position [Fig. 4.4(b to c)].

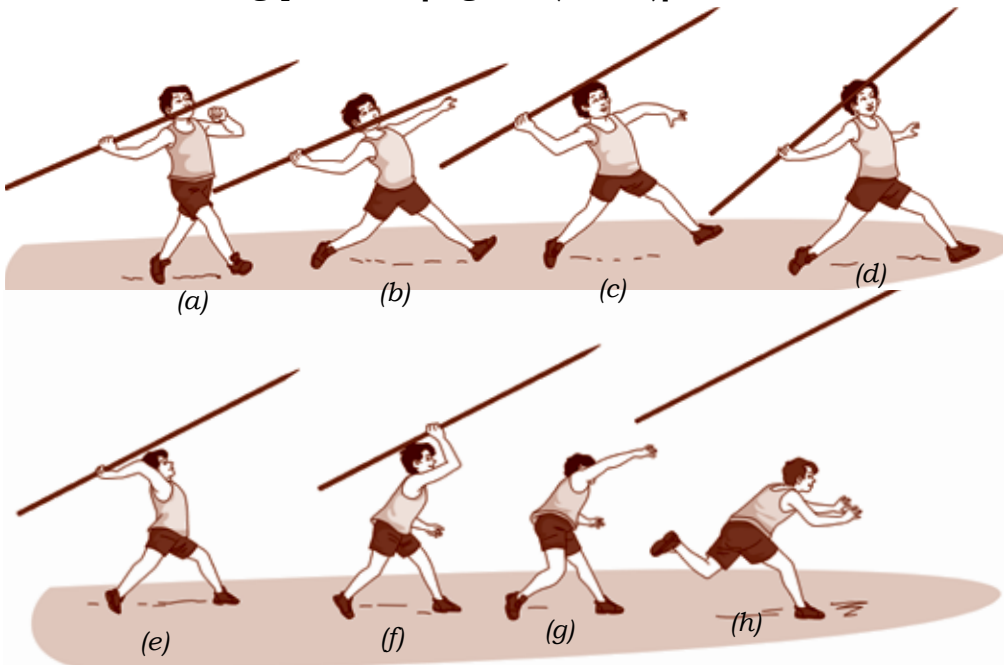


Fig 4.4(a-h): Steps of javelin throw

Withdrawal

Withdrawal starts at the second of the fifth stride rhythm and ends at the third stride. The throwing arm is drawn back in alignment with the shoulder axis. The palm of the hand is turned upward. The hips are kept at the right angle to the throwing direction. The teacher explains withdrawal by demonstration also [Fig 4.4(d)].

Impulse stride

This is the fourth of the last five stride rhythm. This stride is carried out low and quickly, and the body is leaned backward [Fig. 4.4(e)]. The left leg presses the body down so that the centre of gravity is kept low. The left leg is in the front with the heel touching the ground [Fig. 4.4(f)].

Throwing stride

During this phase, both the feet come to the ground after the fifth stride. The right foot contacts the ground after the impulse stride and the left lands on its heel. The arm holding the javelin is fully extended, ensuring that the wrist is not flexed.

Release

During the release, there is forward and upward stretching of the right leg and driving the right hip forward. Turn the face towards the direction of the throw, the javelin must be parallel to the shoulders. The javelin is released in the throwing direction at angles of about 32 to 36 degree [Fig. 4.4(g)].

Recovery (reverse)

The teacher tells the students that the purpose of this phase is to check the forward speed of the body so as to prevent the athlete from committing foul [Fig. 4.4(h)]. After the release, the right leg is led forward in a springing movement. In order to perform reverse, the right foot landing is made on the flexed leg and leaning the upper body forward to lower the centre of gravity. The left leg is raised and brought back into the direction of run-up.

4.2: Gymnastics

Gymnastics comprises floor and apparatus exercises. The teacher has already demonstrated and guided the students to learn certain floor exercises. Cartwheel, handstand and forward roll are included in this Unit.

Material required: Mattress, writing board, charts and safety equipment as required

Guidelines for the teacher

- The teacher will explain the phases of the skill with the demonstration of each phase.
- The students need to practise the movement in parts or steps.
- The teacher must combine the phases in a progressive way.
- During the individual phase of practice, the teacher must assist in the correction movement.
- The teacher must give the students sufficient time to practice.
- The teacher must use lead-up activity to further improve the quality of the skill.

Cartwheel

For the purpose of better explanation, the teacher divides the skills of cartwheel into three phases (Fig. 4.5).

1. Initial position
2. Execution
3. Final position



Fig 4.5: Cartwheel

Initial position

The teacher demonstrates the initial position, which starts from the standing position by raising the arms over the head while raising one leg forward.

Execution

The teacher asks the students to bring the lifted leg down on the mat with a 90-degree angle turn by lowering the upper body. The same side hand (hand on the side of the raised leg) is simultaneously placed on the mat. A push is taken with the leg on the mat and the other leg swings upward to assume side hand position. The legs are kept wide open in handstand position. Thereafter, the front moving leg is lowered and placed on the ground. As soon as the foot touches the ground, one hand is lifted, the other leg is continuously allowed to come down simultaneously with a push from the other hand.

Final position

Finally, the teacher asks the students to come in a standing position with legs apart and the arms sideways up.

Handstand

For quick and effective learning, the teacher divides handstand skills into three phases (Fig. 4.6).

1. Initial position
2. Execution
3. Final position

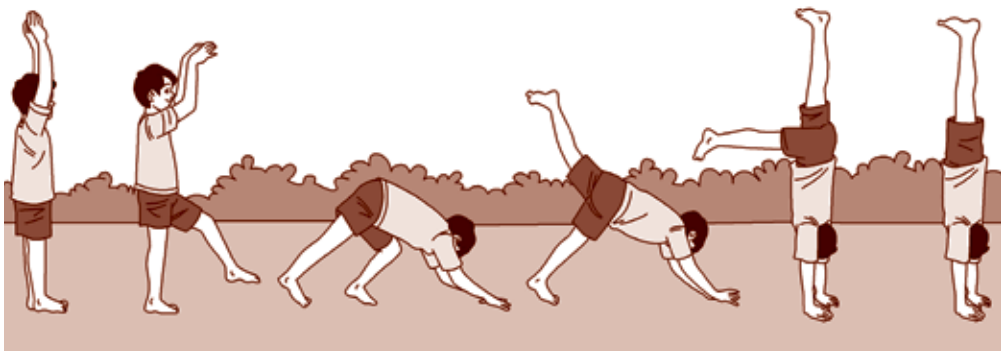


Fig 4.6: Handstand

Initial position

The teacher asks the students to keep the arms upward and raise one leg horizontal to the ground.

Execution

The teacher explains to the students to lower the arms and the chest, and simultaneously, bring the raised leg down. Bend the forward leg and place the hands on the mat. As soon as the hands are placed on the mat, at the same time, swing the rear leg upward and forward leg extends in take-off to join the rear leg. The fingers must be apart at the time of placing the hands on the ground. The index finger must point straight to the front.

Final position

The teacher explains the students to attain the handstand position, keeping the body straight. Arms, shoulders, trunk, hips and legs must be fully stretched.

Handstand to forward roll

The techniques of handstand to forward roll are divided into following phases (Fig. 4.7):

1. Initial position
2. Execution
3. Final position

Initial position

The teacher asks the students to keep their arms upward and raise one leg horizontal to the ground.

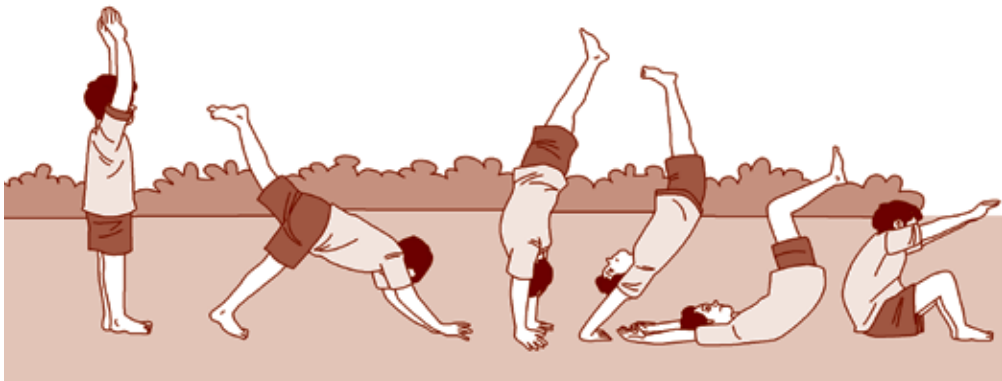


Fig 4.7: Handstand to forward roll

Execution

The teacher demonstrates this phase by lowering down the arms and the chest, and simultaneously, bringing the raised leg down. Bend the forward leg and place the hands on the mat. As soon as the hands are placed on the mat, at the same time, swing the rear leg upward. The forward leg extends in take-off to join the rear leg. The fingers must be apart at the time of placing the hands on the ground. The index finger must point straight to the front.

Final position

The teacher demonstrates the final position of the skill by the bending of elbows. As the upper shoulders start making contact with the mat, the head is tucked in, hips are flexed and roll forward on the back. Simultaneously, bend the knees to complete the forward rolling movement. The teacher can take the help of audio and video.

4.3: Swimming

Swimming comprises various strokes. 'Breast stroke' has been explained in this Unit.

Material required: Costume, towel, bathing cap, swimming goggles, clapper, writing board, pen and safety equipment as required

Guidelines for the teacher

- The teacher will explain the phases of skills. Videos can be used for the demonstration of each phase.
- The students need to practise the movements in parts or steps.
- The teacher must combine the phases in a progressive way.
- During individual phase practice, the teacher needs to use observation and correction method to assist skill acquisition.
- The teacher must give sufficient time to the students to practice.
- The teacher can use lead-up activity to further improve the quality of skill.

Breast stroke

For effective learning, the teacher divides the skills of breast stroke into three phases.

Phase 1

The mechanics of breast stroke start are similar to the start used in free style and butterfly strokes. In breast stroke, the swimmer dives deeper because the person is allowed one pull and one kick under water before starting the surface stroke. It is important that part of the head must show above the water surface before the second arm stroke starts [Fig. 4.8(a)].

Phase 2

The teacher asks the swimmer to come up on the surface of the water. The swimmer's body must be as flat as possible in the water to reduce resistance [Fig. 4.8(b)]. To achieve a flat position, the swimmer raises the head late in the arm stroke to eliminate the raising of the shoulders caused by arm pull. The swimmer also recovers the legs for the kick with deep knee and hip flexion to keep hips and legs high. The pull and kick are performed alternately. The arm pulls, while the legs are extended, and the head is lifted for inhalation at the end of each arm pull. As soon as the pull finishes, the legs start recovering.

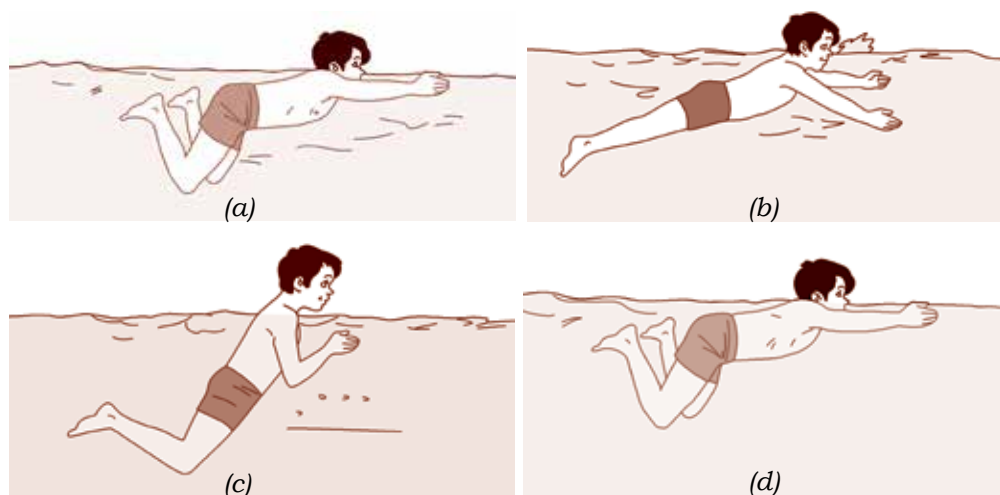


Fig 4.8(a-d): Breast stroke

Phase 3

The teacher explains to the students that inhalation must be done before the arms are fully extended and the face submerges in the water [Fig. 4.8(c)]. The leg kick starts just before the complete extension of the arms and until the kick finishes, the arms are kept extended. Before the next pull starts, the body is kept fully extended with the arms, legs and back kept straight.

The teacher explains the process of breathing, which involves the head lifted by neck extension at the end of the arms stroke. Air is inhaled through the mouth. The face returns to the water a moment before the arms return to full extension [Fig. 4.8(d)]. The breath is held throughout the arm extension and leg kick. Exhalation finishes with a forceful pull. Inhalation must be done through the mouth only.

4.4: Wrestling

There are two types of wrestling styles:

- (i) Greco roman: Wrestlers are not allowed to attack the leg, instead they need to grab their opponents around the waist or above.
- (ii) Free style: Wrestlers need to hold the waist and leg, allowing a greater variety of hold.

Material required: Wrestling mat, costume, stopwatch, whistle, pen, writing board, charts and safety items as required

Guidelines for the teacher

- The teacher will explain the phases of skills with the demonstration of each phase.
- The students must practise the movement in parts or steps.
- The teacher needs to combine the phases in a progressive way.
- During individual phase practice, the teacher needs to use observation and correction method to assist skill acquisition.
- The teacher must give sufficient time to the students to practise.
- The teacher can use lead-up activity to further improve the quality of skill.

Jackknife (free style)

The teacher demonstrates and divides jackknife skills into two phases.

Stance

The wrestler on defence is placed. The teacher asks the students to perform this skill by taking half-nelson hold (Fig. 4.9).



Fig 4.9: Jacknife technique

Execution

The teacher demonstrates the students to apply force so that the opponent's head is brought down towards the knees. As the head and knees are drawn together, the wrestler is rolled forward so that the shoulders touch the mat.

Top scissors (Greco Roman)

The teacher demonstrates and divides the 'Top Scissors' skills into three phases.

Stance

This hold is applied by quickly jumping from the referrer's mat position to straddle position on the back of the opponent. The teacher asks the students to wrap their legs around the body of the opponent, keeping the feet crossed and forced well back between the legs (Fig. 4.10).



Fig 4.10: Top scissors technique

The teacher asks the students to wrap their legs around the body of the opponent, keeping the feet crossed and forced well back between the legs (Fig. 4.10).

Execution 1

The teacher asks the students to push the opponent's arms forward so that opponent lies flat on the mat.

Execution 2

After stretching the opponent for a while, apply half-nelson to turn her/him slowly into a pinning position. The wrestler on

attack must remain directly above the opponent. Release the scissors hold to allow the opponent's body to turn slowly as you force over.

4.5: Judo

Judo is a relatively modern martial art. It was developed in Japan by Jigaro Kano. Judo became an official sport for men in 1964 and for women in 1992. Ogoshi and Kesa-Gatame are discussed in this Unit.

Material required: Judo mat, *judogi*, judo key, stopwatch, whistle, pen, writing board, charts and safety equipment as required

Guidelines for the teacher

- The teacher must explain the skills with the demonstration of each phase.
- The students need to practise the movement in parts or steps.
- The teacher must combine the phases in a progressive way.
- During individual phase practice, the teacher has to use observation and correction method to assist skill acquisition.
- The teacher must give sufficient time to the students to practise.
- The teacher can use lead-up activity to further improve the quality of skill.

Ogoshi (throwing technique)

The teacher explains the technique of Ogoshi for a right-sided throw, i.e., the *judoka* pulls with both the arms in order to bring the opponent to the balls of one's both the feet. At the same time, the *judoka* steps across and plants the right heel of one's foot near right ball of the opponent's foot. Then, the *judoka* brings in the left foot and forms a 'V' with both the feet. Now, both the *judoka* and the opponent are facing in the same direction. In order to successfully execute this throw, the belt

of the *judoka* must be lower than the belt of the opponent, and simultaneously, the *judoka*, who is trying to throw the opponent brings one's feet close together. The *judoka* takes the right arm beyond the opponent's waist. The opponent is pulled on the back by pulling with the left arm around the waist. The opponent is pulled and dropped on the mat right in front of the *judoka*, who is applying this skill. In order to prevent flat fall on the back, the *judoka* needs to pull down the right arm of the opponent (Fig. 4.11).



Fig. 4.11: *Ogoshi*

Kesa-gatame (Osaekomiwaza)

It is one of the mat holds of Judo. Most of Judo throws, generally, lead to Kesa-gatame, as the classic Judo hold places one grip on the opponent's lapel and one grip near the opponent's elbow. Then, as one enters the ground phase, the teacher asks the students to place one arm around the opponent's neck and the other arm secures the opponent's arm. After teaching these skills, the teacher can introduce lead-up activities so that the students also get recreation (Fig. 4.12).



Fig. 4.12: *Kesa-gatame*
(*Osaekomiwaza*)

4.6: Taekwondo

Taekwondo is identified as a martial art. It is believed that taekwondo was developed during 1940–1950 by Korean martial artists. The oldest governing body for taekwondo is the Korean Taekwondo Association. The combined effort of the nine original 'kwans' (Martial Arts School of Korea) resulted in the formation of taekwondo associations of Korea in 1959. The governing body for taekwondo is the World Taekwondo Federation.

Taekwondo has been considered since 2000 as one of the Asian martial art forms. Taekwondo was demonstrated for the first time during the Seoul Olympic Games in 1988. From 1989, it was an event at the Pan American Games. Taekwondo for the first time became an official event at the 2000 Sydney Olympic Games. It was accepted in the Commonwealth Games in 2010 held in New Delhi.

Fundamental movements

1. Attention stance
2. Closed stance
3. Back L-stance
4. Rear foot stance
5. Fighting stance
6. Hand attacks
7. Kicks
 - Front kick
 - Side kick
 - Back kick
 - Round house kick
8. Blocks
 - Single forearm block
 - Low block
 - Rising block
 - Palm block
9. Self-defence



Fig. 4.13: Taekwondo fight

Arena and equipment

In taekwondo, the players are called 'fighters'. The playing area in this game includes the contest and safety area. The contest area is 8×8 m square and the safety area is of 2×4 m. The total area in which the game is played is 10×10 m and a maximum of 12×12 m.

Do You Know

In Korea Martial Arts School 'kwans' are considered hub of religious self defense activities.

Guidelines for the teacher

- The teacher must ask the students to draw a taekwondo arena on their notebooks.
- The teacher will explain to the students that a taekwondo player fights against other fighters of the same gender.
- The students are told that weight categories are applied to ensure that the fights are as evenly matched as possible.
- There are age categories in junior competitions too.
- The uniform worn by a taekwondo player is often called a 'gi'. It is the Japanese name for a martial arts uniform. The Korean term for the uniform of taekwondo is 'dobok'.

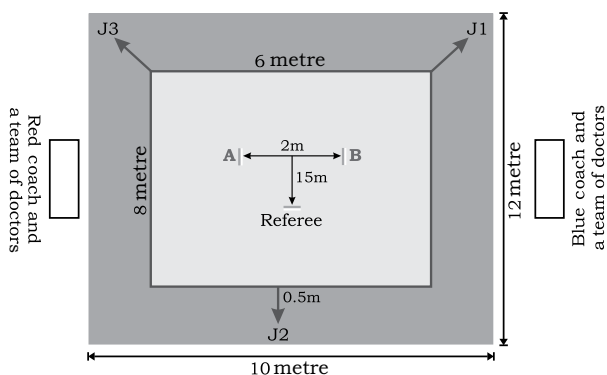


Fig. 4.14: Taekwondo arena



Fig. 4.15: Taekwondo equipment

Taekwondo uniform

1. Taekwondo dress
2. Belt
3. Head guard
4. Mouth guard
5. Chest guard
6. Elbow guard
7. Gloves
8. Shin guard
9. Groin guard
10. Foot protector

General rules and regulations

The teacher explains the following rules of taekwondo to the students:

- In taekwondo, both the players are of the same gender and in a given weight category.
- The game is organised in a mat area, which is 8 metre square.
- In this game, the fights are contested over 3 rounds — each round of 2 minutes. The rest period between the rounds is of one minute.
- Each player attempts to knockout the opponent. A player scores points by landing blows on one's opponent's torso or head. Kicks are allowed to both the torso and head. Punches are allowed only to attack the torso, whereas, no kick or blow is allowed below the waist.
- The player loses points due to penalties. The teacher explains the actions that result into penalties.
 - punching in the face
 - attacking with the knee
 - attacking below the waist
 - stepping out of the ring with both the feet
 - turning one's back on the opponent
 - pushing, holding or grabbing the opponent
 - feigning injury

- If the game is a draw between two fighters, then a golden point round is fought and the fighter getting the first scoring point is declared the winner.

Scoring in taekwondo

In the game of taekwondo, a player gets:

- one point for basic attack to the opponent's torso.
- two points for spinning kick to the opponent's torso.
- three points for a kick to the head.

Weight categories in taekwondo

Boys U-14	Girls U-14
-18 kg	-16 kg
18-21 kg	16-18 kg
21-23 kg	18-20 kg
23-25 kg	20-22 kg
25-27 kg	22-24 kg
27-29 kg	24-26 kg
29-32 kg	26-29 kg
32-35 kg	29-32 kg
35-38 kg	32-35 kg
38-41 kg	35-38 kg
above 41 kg	above 38 kg

Boys U-17	Girls U-17
-35 kg	-32 kg
35-38 kg	32-35
38-41 kg	35-38
41-45 kg	38-42
45-48 kg	42-44
48-51 kg	44-46
51-55 kg	46-49
55-59 kg	49-52

59–63 kg	52–55
63–68 kg	55–59
68–73 kg	59–63
73–78 kg	63–68
Above 78 kg	Above 68 kg
Boys U-19	Girls U-19
–45 kg	–40 kg
45–48	40–42
48–51	42–44
51–55	44–46
55–59	46–49
59–63	49–52
63–68	52–55
68–73	55–59
73–78	59–63
Above 78 kg	63–68
—	Above 68 kg

Assessment

The teacher can assess the students on the basis of the questions given below. One can also construct more questions.

I. Answer the following questions

1. Explain the technique of 'Start' in a 400-metre race.
2. Write the technique of handstand to forward roll.
3. Explain the technique of 'triple jump'.
4. Describe the technique of 'Ogoshi' with demonstration.
5. Explain the technique of 'breast stroke'.
6. When was taekwondo accepted as an official game in the Olympic Games?
7. What is the duration of each round in taekwondo?

II. Write Yes or No

1. Sprint races use crouch start.
2. Triple jump is a hop step jump.
3. Pery 'O' Brien is the technique of javelin.
4. Throwing stride is related to javelin.
5. Breast stroke is related to gymnastics.
6. Handstand to forward roll is one of the techniques in gymnastics.
7. Taekwondo was developed during 1940–1950.
8. The oldest governing body of taekwondo is the Indian Taekwondo Association.
9. Taekwondo matches are contested over three rounds.

III. Match the Columns**Column A**

- (i) Triple jump
- (ii) Sprint
- (iii) Javelin throw
- (iv) Gymnastics
- (v) Swimming
- (vi) Judo
- (vii) Wrestling

Column B

- (a) Impulse stride
- (b) Handstand
- (c) Races
- (d) Breast stroke
- (e) Hop step and jump
- (f) Top scissors
- (g) Ogoshi

IV. Skill-based evaluation

1. Perform any one technique of finish in a 400-metre race.
2. Perform triple jump technique.
3. Perform handstand.
4. Perform jackknife technique.
5. Perform kesa-gatame.
6. Perform cartwheel.
7. Perform breast stroke technique.
8. Name a wrestler from India who has won a medal at the Rio Olympics 2016.
9. Make a list of all athletes from your area, who have played district/state/national in any individual sport and mention the name of the sport they played.
10. Prepare a list of taekwondo players who represented India and the State they belong to.

Fundamental Skills

(Team Games)

5 Unit

INTRODUCTION

Team games can make a substantial contribution to the objectives of physical education, thereby, helping students develop qualities of team spirit, cooperation, taking care of one's own interests, as well as, of the group. They also help develop group cohesion, leadership and followership qualities. Team games provide an opportunity for the students to apply motor skills in a variety of ways in order to achieve the goals. Through these games, the students learn to adapt themselves and assess their effectiveness in different situations. Skills of hockey, football, cricket, basketball, volleyball, kabaddi and *kho-kho*, which were not covered in Class VII, have been discussed in this Unit.

GUIDELINES FOR THE TEACHER

- The teacher must familiarise the students with the procedure of performing the skills of a selected team game, as well as, teach different phases of the skills as per the requirements of Children With Special Needs (CWSN) too.

Objectives

The Unit will help a teacher to enable students to:

- understand and acquire various fundamental techniques of games.
- identify and nurture the talent of the students in games.
- learn the tactics and strategies of the selected team game.
- channelise their energy for achieving performance in a game.
- develop the qualities of followership, leadership, team spirit, cooperation and togetherness.

- The teacher must include a warm-up session of 8 to 10 minutes before starting a sport.
- The teacher may take the help of a better student performer of that sport for demonstration.
- The students are made to practise the sub-skills under the teacher's supervision.
- During the practice session, the teacher must use observation and correction methods.
- The teacher must motivate the students to take a keen interest in learning the skill.
- At the end of the teaching or practice session, the students must participate in a session of cooling down.
- At the end of the class, the teacher needs to sum-up the lesson and clarify the doubts, if any, raised by the students.
- The teacher must ensure the safety of the students during the practice sessions.

Depending upon the facility available for team games, the students have to choose a game as per their interest. In this Unit, only few techniques of each game are discussed as other techniques have been covered in the teachers' guides developed for previous classes. The games and their techniques for this class are as follows:

Table 5.1
Games and their techniques

Games	Techniques
1. Hockey	Straight flick and scoop
2. Football	(a) Kicking techniques: Lofted kick and chip kick (b) Trapping techniques: Thigh receives and chest receives
3. Cricket	(a) Batting techniques: Square cut and out flick (b) Bowling techniques: Off spin and leg spin (c) Fielding techniques: Stopping and throwing in outfield

4. Basketball	(a) Passing techniques: Chest pass and bounce pass (b) Dribbling techniques: Cross dribble (c) Shooting techniques: Layup shot
5. Volleyball	Tennis serve, spiking and blocking
6. Kabaddi	(a) Raiding techniques: Foot touch, sudden leg thrust (b) Catching techniques: Ankle hold and wrist hold
7. <i>Kho-Kho</i>	(a) Chasing techniques: Early <i>kho</i> , late <i>kho</i> (b) Running techniques: Ring play, double zig-zag
8. Table Tennis	
9. Taekwondo	
10. Relay races (track and field)	

GAMES

5.1: Hockey

It is one of the most popular games in India. The Indian hockey team has won many medals in various international tournaments, such as Olympic Games, World Cup, Asian Games, etc. This game includes dribbling, hitting, passing and stopping techniques.

Material required: Marked field, hockey stick, hockey ball, markers, cones, charts, writing boards and safety equipment

Number of players: 11 field players in each team, including one goalkeeper

Guidelines for the teacher

- The teacher has to explain the skill with the demonstration of each phase.
- The students need to practise the movement of the hockey stick in each phase with and without a ball.

- The teacher must combine the phases in a progressive way.
- During individual phase practice, the teacher needs to use observation and correction method to provide assistance.
- The teacher must give sufficient time to the students to practise.
- The teacher can use lead-up activity to further improve the quality of skill.

Straight flick

Under this game, the teacher will focus on straight flick and scoop. Straight flick is required to pass the ball to the partner. For effective learning, the teacher divides the technique into two phases.

Phase 1 (Gripping the stick)

Place the hockey stick diagonally at the waist level. First, slide your right hand about 1 foot below the top end. Now, place your left hand about 1–2 inches over the right hand in over land grip (Fig. 5.2).

Phase 2 (Stance)

The teacher asks the students to stand with the feet equal to shoulder width apart, the left shoulder pointing in the direction of flick.

Phase 3 (Execution)

The teacher demonstrates the position of the ball in the middle of stance, beginning by placing the stick behind the ball and transferring the body weight to the back foot. Roll the ball forward



Fig. 5.1(a-b): Straight flick



Fig. 5.2: Basic grip

with the stick to start the shot, transferring weight to the front foot. Push the ball in a straight line into the air. In the final stage, follow by wrapping the stick round below the left shoulder [Fig. 5.1(a–b)].

Scoop

Scoop is an essential technique to pass the ball to the partner through flight or air. For effective teaching, the teacher divides the skill or technique into two phases.

Phase 1 (Gripping the stick)

Place the hockey stick diagonally at the waist level. First stick your right hand about 1 foot below the top end. Now, place your left hand about 1–2 inches over the right hand in over land grip.

Phase 2 (Stance)

The teacher asks the students to stand with feet at shoulder width apart, the left shoulder pointing at the direction of the scoop.

Phase 3 (Execution)

The teacher demonstrates the final movement, which includes the position of the ball in the line of left foot, beginning by placing the stick behind and under the ball by rotating the wrist and dropping the stick backward. Push the right hand forward and left hand backward, and transfer the body weight forward in the direction of the ball. In the final stage, follow through by wrapping the stick and moving in the line of the ball [Fig. 5.3(a–b)].



(a)



(b)

Fig. 5.3(a–b): Scoop

5.2: Football

Football is one of the most popular games in the world. Most countries want to see their football teams play in international competitions. It is also considered as the most economical game at the school level. Children enjoy this game and it helps develop their physical fitness.

Material required: Marked playfield, football, markers, cones, charts, writing boards and safety measures as required

Number of players: There are 11 players in each team, including one goalkeeper.

Guidelines for the teacher

The teacher will explain the phases of the skill with the help of demonstrations.

- The students need to practise the movement in each phase without a ball.
- The teacher must combine the phases in a progressive way.
- During individual phase practice, the teacher must use observation and correction method, and provide assistance to improve upon the skill.
- The teacher must give sufficient time to the students to practise.
- The teacher can use lead-up activity to further improve the quality of the skill.
- The teacher will focus on the techniques as given in Fig. 5.4(a–b) and Fig. 5.5.

Lofted kick

It is an important technique meant to pass the football to the partner through air, over the opponents. It is also used for converting a shot in goal. For effective teaching, the skill of lofted kick is divided into three phases.

Phase 1 (Stance)

The teacher asks the students to stand at least four–five steps away from the football in the opposite direction of the kick.

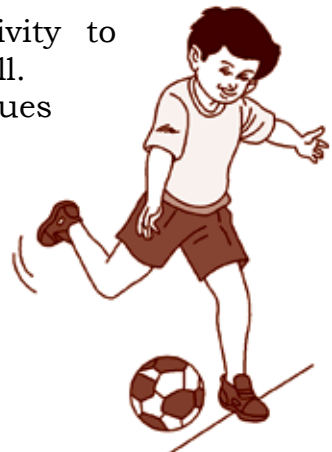


Fig. 5.4(a): Lofted kick

Phase 2 (Approach run)

The teacher asks the students to move closer to the football by running three–four steps and place the non-kicking foot by the side of the ball [Fig. 5.4(a)].

Phase 3 (Execution)

The teacher asks the students to bring the kicking leg first backward, and then, forward and contact the football by the front part of their shoes. The contact point must be under the football and can be obtained by slightly leaning backward. The football will start moving forward in the air. While maintaining balance, the teacher demonstrates the skill and places the kicking leg forward with slight hop on the non-kicking foot. This is important to provide maximum momentum on the ball [Fig. 5.4(b)].



Fig. 5.4(b): Lofted kick

Chip kick

Chip kick is essential in a situation, where space is very less to execute a kick. It is similar to lofted kick, except approaching run and good follow through. For effective learning, the skill of chip kick is divided into two phases.

Phase 1 (Stance)

The teacher asks the students to keep the football in front of the body and assume standing position (Fig. 5.5).

Phase 2 (Execution)

The teacher demonstrates the execution by placing the non-kicking foot by the side of the ball and with small swing of the kicking leg, kick the ball at the bottom to give maximum amount of back spin.



Fig. 5.5: Chip kick

The ball starts moving in the air. The student needs to kick the ball with the toe. There will be maximum or no follow through. The teacher asks the student to practise this skill.

Thigh trapping

This technique is used by players to control the flighted football and continue further in the game. To teach this technique, the teacher divides the skill into two phases.

Phase 1 (Position under the ball)

The teacher asks the student to take position quickly under the ball by anticipating its flight. Place the thigh (left or right) in the line of the ball. The eyes of all students must always be on the ball for shifting the position accordingly.

Phase 2 (Execution)

The teacher demonstrates the skill so that the students are able to place the thigh (with flex at knee joint) in line with the projected football and allow the football to have contact with the middle portion of the thigh. The teacher asks the student to flex the supporting leg to move the thigh in the direction of the ball at the moment of contact. It will help the student to absorb the impact force and allow the ball to fall near the student instead of rebounding away (Fig. 5.6).



Fig. 5.6: Thigh trapping

Chest trapping

This technique is also used by players to control the flight off the ball by using the chest and continue further. To teach this technique, the teacher divides the technique into two phases.

Phase 1 (Position under the ball)

The teacher asks the student to take a position quickly under the ball by anticipating its flight. Place the chest in the line of

the ball and the student's eyes must always be on the flight (downward) of the ball for repositioning the body accordingly (Fig. 5.7).

Phase 2 (Execution)

The teacher demonstrates the skill to the students so that they place their body in line of projected football, allow the ball to have contact with the chest while making a slight arch at the back. The teacher asks the students to loosen the chest immediately to go slightly downward in line of the ball. It will help the student to absorb the impact force and allow the ball to fall near the body instead of rebounding away (Fig. 5.7).



Fig. 5.7: Chest trapping

5.3: Cricket

Cricket is one of the most popular games in India. The game can be played in different formats like test, one-day, T-20, etc.

Material required: Marked field, stumps, bails, batting gloves, wicket-keeping gloves, special ball for CWSN, wicketkeeper's pad, batting pads and guards, bat, ball, helmets and other safety equipment as required

Number of players: There are 11 field players in each of the two teams.

Guidelines for the teacher

- The teacher will explain the phases of the skill with the demonstration of each phase.
- The students must practise the movement of bat in each phase without bowling.
- The teacher must combine the phases in a progressive way.
- During individual phase practice, the teacher will identify the errors or mistakes, and then, correct the same.

- The teacher must give sufficient time to the students for practise.
- The teacher must use lead-up activity to further improve the quality of the skill.

Batting techniques

These techniques are important to hit the ball. The swing of the bat depends on the flight and line of the ball. Different batting strokes are used for different kinds of ball.

Square cut

This stroke is used on short pitch balls, which is lined outside the off-stump. The teacher asks the students to learn the skill as given in the following phases.

Phase 1 (Stance)

The teacher asks the students to adopt the normal stance (right-handed batsman) with the feet slightly apart, legs flexed and eyes on the ball (Fig. 5.8).

Phase 2 (Execution)

The teacher demonstrates the skill and asks the students to observe the line and flight of the ball. The teacher also explains how the batsman shifts the right foot backward to create the space for playing a shot. The students are asked to take the back lift of the bat, stretch the body and place or swing the cross bat in the line of the ball. After the contact, the bat must be rolled over the ball and continue the swing of the bat to generate force in the shot (Fig. 5.8).

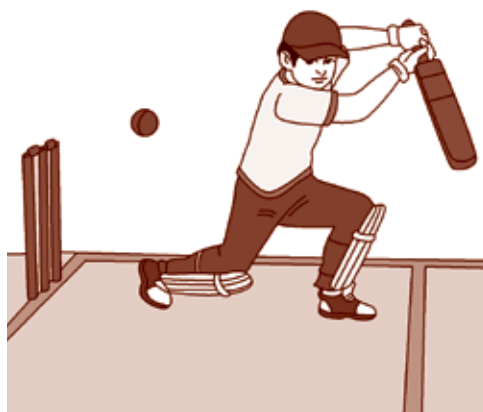


Fig. 5.8: Execution of square cut

Out flick

This skill is used when the ball is not coming towards the bat quickly and the height of the ball is low. It is also used to take advantage of the pace of the ball. For effective teaching, the teacher must follow these phases.

Phase 1 (Stance)

The teacher asks the students to have normal stance as used by a right-handed batsman with the feet apart, knees flexed, upper body slightly leaning forward and vision over the left shoulder towards the position of the bowler [Fig. 5.9(a)].



Fig. 5.9(a): Stance of out flick

Phase 2 (Execution)

The teacher demonstrates the skill to the students so that they attain the required position quickly. The batsman swings the bat backward as back swing, keeps an eye on the bounce of the ball while shifting the left foot slightly forward and bringing the bat in the line of the ball. At the time of contact, turn (rotate) the bat towards the left or right side by rotating the wrist, depending on the position of the ball. In this skill, after contact, the ball will reflect either towards or between the square leg [Fig. 5.9(b)].

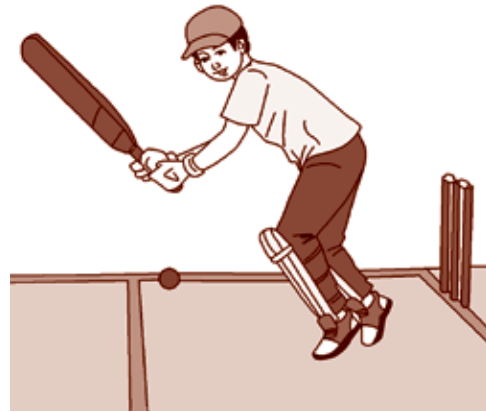


Fig. 5.9(b): Execution of out flick

Bowling techniques

The techniques of bowling in cricket involve delivering the ball after running few steps. Variation in running requires delivering

different types of bowling. The teacher gives few practices to the students for reaching up to popping crease. The running technique or skill is different from medium pace bowling to spin bowling.

Off-break (off spin) bowling

All off-break variation in bowling can be executed by finger spin, wrist movement and shoulder action. The grip of the ball is important in off-break. The teacher asks the students to learn through the following phases.

Phase 1 (Grip)

In orthodox grip for an off-break, the teacher asks the students to hold the ball by keeping the top joint of the first finger slightly bent and firmly pressed right across the seam, while the second finger and thumb are kept apart on each side to support the grip. The third and little fingers are bent from the second joint and the ball rests at the side of the third finger [Fig. 5.10(a)].



Fig. 5.10(a): Grip

Phase 2 (Release)

The students must follow the demonstration given by the teacher. When releasing the ball, turn it sharply from left to right with the wrist, simultaneously giving more twist with the top joint of the forefinger, as well as, with the second finger and the thumb. After the impact, the ball will break from the batsman's offside to the leg side [Fig. 5.10(b)].



Fig. 5.10(b): Release

Leg-break (leg spin) bowling

This technique is another variation of changing the normal path of the ball in the air, as well as, after bounce. The teacher asks the students to execute this skill in a way to increase the impact of the spin. The skill is divided into two phases for effective learning.

Phase 1 (Grip)

The teacher asks the students to hold the ball with the thumb and the first two fingers right across the seam. The third and the little fingers are bent and the ball rests at the side of the third finger. The wrist is bent inwards before the release [Fig. 5.11(a)].



Fig. 5.11(a): Grip

Phase 2 (Release)

The students must repeat the demonstration as presented by the teacher. When releasing the ball, the teacher asks the students to perform, turning of the right hand and the wrist from right to left, giving a powerful flick with the wrist, as well as, with the fingers, especially the third finger. Further, the ball will break sharply from the batsman's leg side to the off-side [Fig. 5.11(b)].



Fig. 5.11(b): Release

Fielding techniques

Fielding is the most important aspect in cricket, which prevents the person, who is batting to score runs. The teacher asks the students to stay alert, assuming that every ball will hit towards them by the person doing batting. The fielders need to focus on the movement of the person's bat and head. For distance fielder, it is important to move few steps towards the direction of the stump. This allows the fielder to gain momentum quickly in the desired direction.

Orthodox stopping technique

In this technique, a player stops the ball in an orthodox position. The teacher will demonstrate the stages of the skill, as well as, give its brief explanation. The skill is divided into the following phases.

Phase 1 (Stance)

The teacher asks the students to join the heel of the foot and toes opened at an angle



Fig. 5.12(a): Stance

of 80 to 100 degree. Flex the legs and go to squat position with the knees apart. Bring both the hands together down between the legs and try to stop the ball. Keeping the hands flexed from the elbow joint will help. The student must always keep one's eyes on the ball [Fig. 5.12 (a)].

Phase 2 (Execution)

The teacher throws the ball towards the students and asks them to assume position in the line of the moving ball towards them. Drop the upper body forward and stop the ball in front of the body [Fig. 5.12(b)].



Fig. 5.12(b): Execution

Orthodox catching technique

It is an important technique by which the person doing batting can be declared 'out'. Whenever possible, take a catch with the hands about 4–5 inches away from the chest, allowing the ball to come down, passing the level of eyes to judge correctly. The teacher involves the following phases to teach the skill to the students.

Phase 1 (Initial position)

The teacher asks the students to take the required position. Once the lofted shot is played by the person doing batting, the fielder must check the flight and decide whether the ball is in the reach of the fielder or not. If yes, the teacher asks a student to quickly assume the position under the ball. The student needs to keep one's eyes always on the ball and set the position to catch accordingly [Fig. 5.13(a)].



Fig. 5.13(a): Catching technique (phase 1)

Phase 2 (Final position)

The students need to understand the action to be executed with the help of

demonstration. In the final position, judge the flight correctly and place the hands in the line of the ball. The fingers must be closed round it to hold it tight. At the time of contact, sink down the hands in the line of the ball to prevent impact, jerk or rebound by the ball. Avoid grabbing or snapping at the ball [Fig. 5.13(b)].



Fig. 5.13(b): Catching technique (phase 2)

5.4: Basketball

Basketball was invented by Dr. James Naismith in 1891 at the Young Men's Christian Association (YMCA) Training School in Springfield for continuing the activity of his students in rainy days. Basketball is a popular game around the world. Passing, dribbling and shooting are the three main techniques of this game.

Material required: Basketball court, basketball cones, markers, charts, writing boards and safety equipment

Number of players: There are five field players in each team.

Guidelines for the teacher

- The teacher will explain the phases of the skill with the demonstration of each phase.
- The students need to practise the body movement in each phase without a ball.
- The teacher must combine the phases in a progressive way for the understanding of the students.
- During individual phase practice, the teacher must use observation and correction method to assist the students in skill learning.
- The teacher must give sufficient time to the students for practice.
- The teacher can use lead-up activities to further improve the quality of the skill.

Passing techniques

Passing is required to move the ball from one player to other teammates. There are various passing techniques, which are applied during the game, such as chest pass, bounce pass, hook pass, etc.

Chest pass

It is a simple, accurate and most usable pass in the game. Chest pass is an important technique to cover a short distance, where the ball is passed to the partner through air to their chest level. The skill of chest pass is divided into two phases.

Phase 1 (Holding)

Place the ball between both the hands with fingers spread evenly just below the chin.

Phase 2 (Stance and grip)

The teacher asks the students to stand with both the feet apart at shoulder level. Hold the ball in both the hands at chest level. The body weight must be distributed equally on both the feet with the knees flexed.

Phase 3 (Execution)

The teacher asks the students to bring one leg forward, slightly bent. Simultaneously, both the hands will move forward towards the partner for passing the ball. Shift the body weight from back to front leg to generate more force in the pass. After releasing

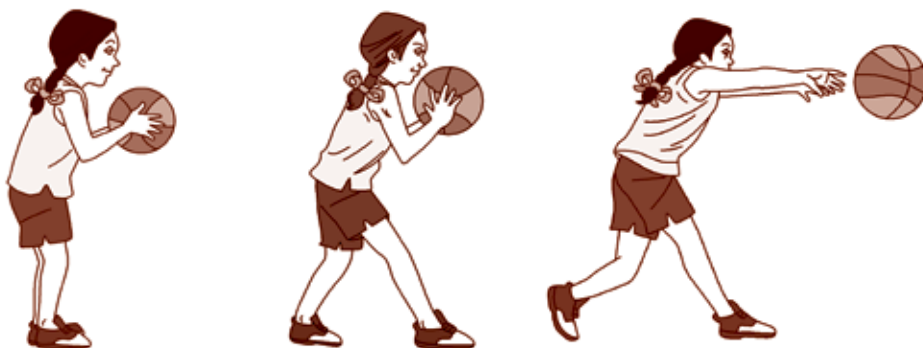


Fig. 5.14: Chest pass

the ball, the fingers of both the hands must point towards the direction of the pass. The students will move forward to avoid injuries (Fig. 5.14).

Bounce pass

Bounce pass is a commonly used pass in basketball. In this pass, the ball is passed to the partner with one bounce. This pass is used when the partner is slightly away. The skill of bounce pass is divided into two phases.

Phase 1 (Stance and grip)

The teacher asks the students to stand with both the feet apart at the shoulder level. The body weight must be on both the feet. The ball must be held in front of the chest.

Phase 2 (Execution)

The teacher asks the students to pass the ball to the partner by extending the arms completely. Simultaneously, the students will bring one leg forward. The body weight will shift from back to front. The ball will pass on the floor and the receiver will receive the ball after one bounce.

After releasing the ball, the fingers of both the hands must be pointing towards the direction of the pass. The students will move forward to avoid injuries (Fig. 5.15).

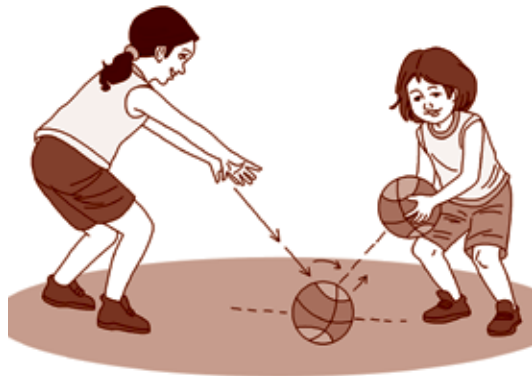


Fig. 5.15: Stance and execution

Dribbling techniques

To move the ball from one place to another, dribble is required. A player cannot take two steps without dribbling, while the ball is in hand. There are various techniques involved in dribbling like cross dribble, high dribble, low dribble, etc.

Cross dribble

This technique of dribble is used to cross the opponents. In this technique, the ball shifts from one hand to another, according to the position of the opponent. The skill is divided into two phases.

Phase 1 (Stance)

The teacher asks the students to hold the ball at the right side near the waist, bend the knees slightly and look forward. The palm of the dribbling hand needs to be kept over the ball [Fig. 5.16(a)].

Phase 2 (Execution)

After starting the dribble, it is assumed that the opponents are near the ball and will try to snatch it. The students will change the hand from right to left and vice-versa. The teacher demonstrates and explains the bounce of dribble. The bounce of the dribble must cross from the front. This can be repeated and practice can be continued. The students will keep swapping the ball between both the hands, bouncing it in front of them [Fig. 5.16(b)].



Fig. 5.16(a): Stance in cross dribble



Fig. 5.16(b): Execution in cross dribble

Shooting techniques

Shooting is one of the important skills in basketball. Shooting the ball into the ring is important to score points. There are various shooting techniques in the game like set shot, jump shot and lay-up shot. Only lay-up shot is being discussed in this Unit.

Lay-up shot

Lay-up shot is the most common shot in basketball. The success rate of lay-up shot to convert it into a point is higher

than converting other shots. The technique of lay-up shot is divided into two phases.

Phase 1 (Stance)

The teacher asks the students to stand around 8–10 feet away from the ring. The ball must be in the right hand pointed towards the ring.

Phase 2 (Execution)

The teacher first demonstrates the whole skill of lay-up shot, and then, breaks the skill into parts. For training purpose, the skill is divided into three steps.

1. Left–right–jump: The teacher asks the students to dribble the ball once, and then, shortly take the right step.
2. After that, they are told to bring the left leg forward, while holding the ball with both the hands.
3. The right knee is now bent upwards to take-off with the left leg and release the ball in the ring with the right hand, using fingertips, and landing on both the feet with the knees bent (Fig. 5.17).

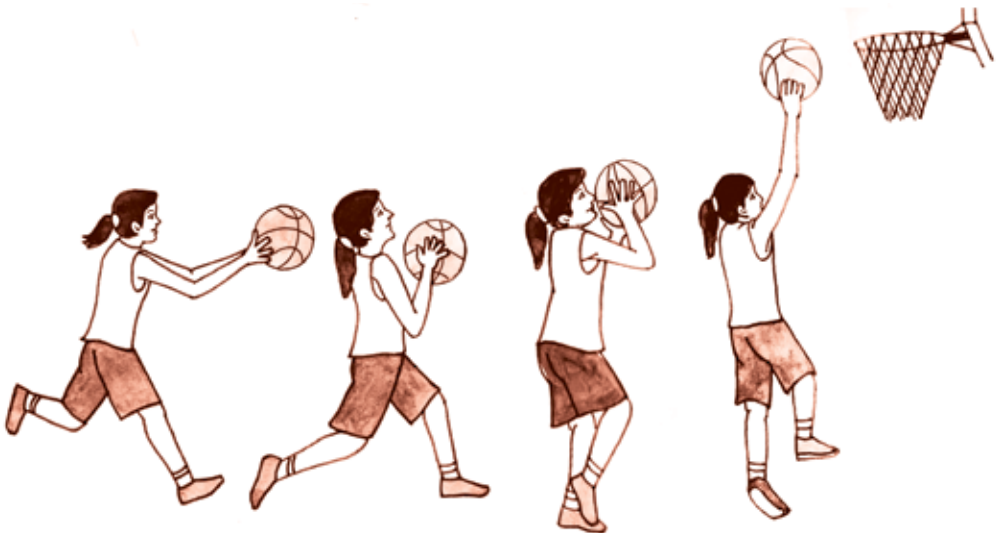


Fig. 5.17: Steps of execution in lay-up shot

5.5: Volleyball

Volleyball was developed in 1895 by William G. Morgan, a physical education instructor in the USA. It is played in all major competitions like Olympics, Asian Games and other world championships.

Material required: Marked volleyball court, volleyball cones, marker and safety equipment as necessary

Number of players: There are six field players in each team.

Guidelines for the teacher

- The teacher will explain the phases of the skill with the demonstration of each phase.
- The students must practise the movements of the skill in each phase without a ball.
- The teacher must combine the phases in a progressive way.
- During individual phase practice, the teacher will use observation and correction method to provide assistance in skill acquisition.
- The teacher must give sufficient time to the students to practice.
- The teacher can use lead-up activity to further improve the quality of skill acquisition.

Tennis serve

It is important for getting the ball into the opponent's court to start the service. It is divided into two phases.

Phase 1 (Grip and stance)

The teacher asks the students to stand near the end line. The students will put their left foot in front of the right about shoulder width apart, hold the ball in the left hand at about the eye level. The right hand must be ready to hit the ball.

Phase 2 (Execution)

The teacher asks the students to toss the ball vertically in front of the body with the left hand. When the ball is dropping down, the students will judge the flight of the ball and try to hit the



Fig. 5.18: Tennis serve – grip, stance and execution

ball with right hand so that it crosses over the net. After hitting the ball, the students will try to control the body to maintain balance (Fig. 5.18).

Spiking

Spiking is a complex ability that involves a combination of strength, power, balance and reaction time. This skill involves slamming the ball forcefully over the net into the opposing court once it is set by the setter. The teacher will teach the skills of spiking in two phases.

Phase 1 (Initial movement)

Once the setter sets the ball for a specific spiker, the spiker will take 2–3 approach steps, take a vertical jump and try to hit the ball over the net. The point of contact on the ball must be at the top of the head.

Phase 2 (Final movement)

After spiking, the teacher asks the students to land safely without touching the net and committing



Fig. 5.19: Spiking

foul. They need to flex the ankles and knees, and land on both the feet (Fig. 5.19).

Blocking

This technique involves countering the spiking of opponent in volleyball, which involves jumping with the arms stretched upward in the line of strikes to avoid or neutralise the ball being hit by the opponents. The teacher will ask the students to prepare the following phases for effective learning.

Phase 1 (Initial movement)

The teacher will ask the students to take position for the block within 30 cm of the net towards one's own side. The students must raise and spread the arms, according to the flight and position of the ball. The blocker goes into a deep crouch position and from the crouch position, the student executes the vertical jump at a point of time slightly after the hitter has made the jump (Fig. 5.20).

Phase 2 (Final movement)

As the blocker executes the jump, the hands and arms glide up to the net in such a way that no angular arm swing is involved. The actual blocking action is executed by extending the arms and hands above and over the net to intercept the spiked ball. In natural action of blocking, the wrists are flexed and the spiked ball is deflected downward into the opponent's court. The elbows must be stretched. The gap between the arms must not allow the ball to pass (Fig. 5.20).

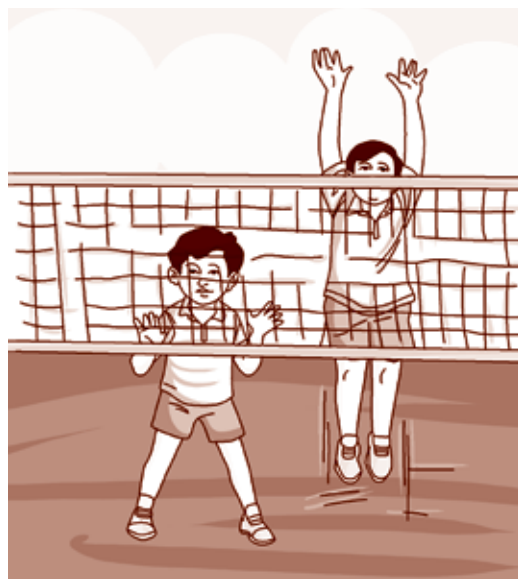


Fig. 5.20: Initial and final movement

5.6: Kabaddi

In kabaddi, raiding and catching techniques are discussed. One player, who enters in the opponent's court is known as 'raider' and utters the word 'kabaddi' continuously in one breath, which is termed as 'cant'. There are basically two types of skills used in kabaddi — raiding and defensive skills.

Material required: Marked court, cones, markers and safety equipment as necessary

Number of players: There are seven field players in each of the two teams.

Guidelines for the teacher

- The teacher will explain the phases of the skill with demonstration.
- The students need to practise the movement in parts or steps.
- The teacher must combine the phases in a progressive way.
- During individual phase practice, the teacher will use observation and correction method to provide assistance in skill acquisition.
- The teacher must give sufficient time to the students to practise.
- The teacher can use lead-up activities to further improve the quality of the skills.

Raiding skills

The skills used by a raider for raiding in game situation are called 'raiding skills'.

Foot touch

This technique is an important offensive skill used by a raider. This can be used when the raider is at a distance from the opponents. The teacher adopts the following steps to teach this technique to the students.

Step 1: After assuming a suitable position in the opponent's court, the teacher asks the raider to quickly extend the leg towards the opponent. The raider does not shift the body weight to the extended leg.



Fig. 5.21: Foot touch

Step 2: The teacher will demonstrate the upper body position of the raider. The shoulder must be parallel to the side line. Further, to maintain balance, the raider will keep the squat position and also lean towards the mid-line.

Step 3: The teacher demonstrates the final phase of the skill, which involves the raider. The raider tries to touch the opponent with the extended foot and sharply brings back the extended foot and moves towards the mid-line (Fig. 5.21).

Sudden leg thrust

This skill is similar to the foot touch. But in this, squat and leg thrust movements are sudden and simultaneous. The teacher requires to adopt the following steps to teach this skill to the students.

Step 1: After assuming a suitable position in the opponent's court, the teacher asks the raider to quickly squat, and simultaneously, extend one leg to touch the opponent.

Step 2: The teacher must demonstrate the quick squat and leg thrust movement. The teacher gives few practices to the students without the opponent. The shoulder of the raider must be parallel to the side line and the body must slightly lean towards the mid-line.

Step 3: The teacher demonstrates the final phase of the skill, which involves the raider to do sudden leg thrust. The raider tries to touch the opponent with the extended leg and sharply brings back the leg for moving backwards to the mid-line (Fig. 5.22).

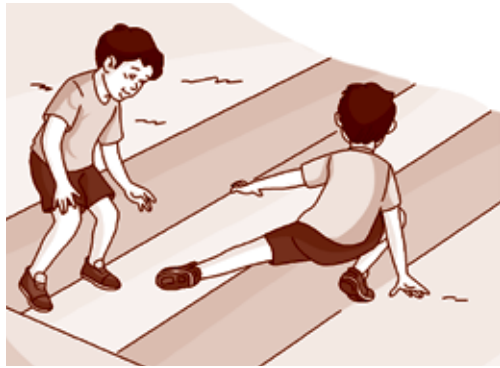


Fig. 5.22: Sudden leg thrust

Defensive skills

Defensive skills are those, which are used by the opponents to catch or hold the raider to their side. The defender uses catching or holding techniques, such as wrist hold and ankle hold in the game.

Wrist hold

In kabaddi, speed in a raid plays an important role. When the raider tries to touch a player by swinging one hand towards the defensive player, it is an opportunity for the defensive player to use this skill. The teacher must use the following steps for effective defensive skill development.

Step 1: The teacher explains the position of the raider for touching the opponent with hand swing. The defender must be free and in a relaxed position without holding the chain.

Step 2: The teacher explains that the defender must keep one's palms in a cup shape with the thumbs apart and the rest of the fingers close together for having a firm grip. Place the grip in the line of the swinging arm of the raider.

Step 3: As soon as the swinging hand of the raider moves downward,



Fig. 5.23: Wrist hold

catch the raider's wrist by using one hand up and one down. The defender will pull the raider towards the end line for better follow through action. The teacher asks the students to catch and fix the raider in their own court (Fig. 5.23).

Ankle hold

Ankle hold is an individual defensive skill in kabaddi. This is a counter skill used by the defensive players against toe touch, foot touch and leg thrust by the raider during an attack. This technique is mostly used by the corner players. The teacher can use the following steps to teach ankle hold to the students.

Step 1: The teacher must ask the students to create a suitable position for ankle hold. Allow the raider to get close to the defender. The player must be in free low stance position with eyes on the leg movement of the raider, waiting for the raider's action.

Step 2: Read the touch movement of the raider and quickly start the hold movement so that touching by the raider and catching by the defender are synchronised by the defensive player.

Step 3: After catching, the teacher explains how to disbalance the raider by pulling the ankle towards the end line. The other defensive players support the catcher so that the opponent remains in the defender's court (Fig. 5.24).



Fig. 5.24: Ankle hold

5.7: Kho-kho

Kho-kho is a popular indigenous game. It is also considered as small area game. It involves running and chasing skills.

Material required: Marked court, cones, markers and safety equipment as necessary

Number of players: There are nine field players in each team.

Guidelines for the teacher

- The teacher explains the phases of the skill with the demonstration of each phase.
- The students must practise the movement in parts or steps.
- The teacher needs to combine the phases in a progressive way.
- During individual phase practice, the teacher must use observation and correction method to assist in skill acquisition.
- The teacher must give sufficient time to the students to practice.
- The teacher can use lead-up activity to further improve the quality of skill.

Running skills

All required movements executed by a runner in the game are called running skills.

Double zig-zag

This is an important skill of running to confuse the chaser. Here, a runner crosses after every three positioned chasers on the field in a zig-zag manner. The teacher must use the following steps to teach the skill to the students.

Step 1: The teacher must ask the students to practise the skill without the presence of a chaser. First, the runner crosses between the gaps of positioned chasers from behind.

Step 2: The teacher asks the students to count three players while running forward in the same direction.

Step 3: The teacher demonstrates the skill before the students for again crossing the positioned players between the third and the fourth lap. The students must continue the same as per the requirement of the skill.

Ring play

It is a defensive skill, which is mostly used by runners. The runner has to run around positioned chasers in a ring

form. The teacher must use the following steps for quick and effective teaching.

Step 1: The teacher asks the runner to start running on one side.

Step 2: After crossing few players, the teacher demonstrates the crossing movement in a 'U' turn.

Step 3: After the 'U' turn, the runner continues running till one desires to have another ring.

Chasing skills

All movements required to catch the runner are called 'chasing skills'. Chasing *kho*, field dive and pole dive are the examples of chasing skills.

Late kho

In this, the teacher demonstrates the skill before the students by giving the *kho* slightly late. It is used to create confusion in the mind of the runner. The chaser reaches near the positioned player and waits for a while before giving *kho* to the teammate.

Early kho

In this, the teacher demonstrates the skill before the student by giving an early *kho*. It is also used to create confusion in the mind of the runner. The chaser extends the body to increase the reach so that one can touch the positioned player from a distance (1–2m) to give *kho* to the teammate.

5.8: Table Tennis

Table Tennis, also known as 'ping pong', is a sport in which two or four players hit a lightweight ball back and forth across a hard table (with a net dividing the table into two equal parts), using a bat (tennis paddle). This is a fast game involving quick reflexes.

Material required: TT rackets, TT ball, TT table, well-lit indoor hall or room, and other safety equipment as necessary

Guidelines for the teacher

- The teacher must familiarise the students with the procedure of performing the skill of the game, as well as, the different phases of the skills.
- The teacher must include a warm-up session of 8 to 10 minutes before starting the sport.
- The teacher may take the help of a better performing student of this sport for demonstration.
- The students need to be made to practise the sub-skill under the teacher's supervision.
- During the practice session, the teacher must use observation and correction methods.
- The teacher must motivate the students, so that they take a keen interest in learning the skills of the game.
- At the end of the teaching or practice session, the students need to participate in a session of cooling down.
- At the end of the class, the teacher must sum-up the lesson and clarify the doubts, if any, raised by the students.
- The teacher must ensure the safety of the students during the practice sessions.

Grip

The way one chooses to hold the table tennis paddle will make a big difference in the person's game.

Shakehand grip

It is the prevalent grip of Table Tennis used by most recreational and professional players. The teacher shall demonstrate how to grip the bat in handshaking wrist position approximately at 45-degree angle. The little, ring and middle finger wrap around one side of the handle, and the index finger rests on the bottom

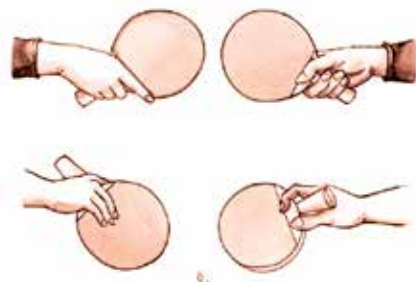


Fig. 5.25 (a): Shakehand grip

edge of the rubber. The thumb rests on the top of the handle on the other side. When the gripping arm is extended in front, the bat edge must form a line with the outstretched arm. The grip must feel natural, without any discomfort. It must neither be too tight nor too loose.

Penhold grip

This grip is not as popular as shakehand grip. The racket is gripped as one would grip a pen, with the thumb and the index finger, with the rest of the fingers being tucked away on the other side.

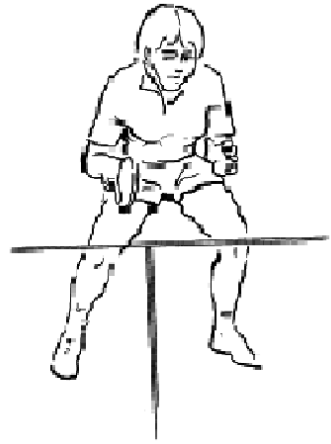


Fig. 5.25(b): Penhold grip

Ready position or stance

The teacher shall demonstrate the body position near the mid-line with the body bending forward, body weight on both the feet approximately 1 to 2 feet away from the nearer edge of the TT Table. The feet must be shoulder width apart. A ready stance must be kept at all times during the play to ensure maximum control, power and consistency. A relaxed posture is important.

Drive

Forehand drive

Keep the upper arm close to the upper body above the waist level. The forearm (form a rough 90-degree bend with the upper arm) must be drawn back to the 3 o'clock position, and let the waist turn naturally along with the arm. Shift your weight towards the right foot at the same time. While shifting your weight back to your left foot, swing forward with a slight upward motion, with the waist providing additional force in the swing. Use the elbow as a pivot point. It must be allowed to move slightly forward in the follow through. Contact with the ball must be made slightly to the side of the body after the top of the bounce. Follow through must finish when the TT bat is parallel with the left shoulder.

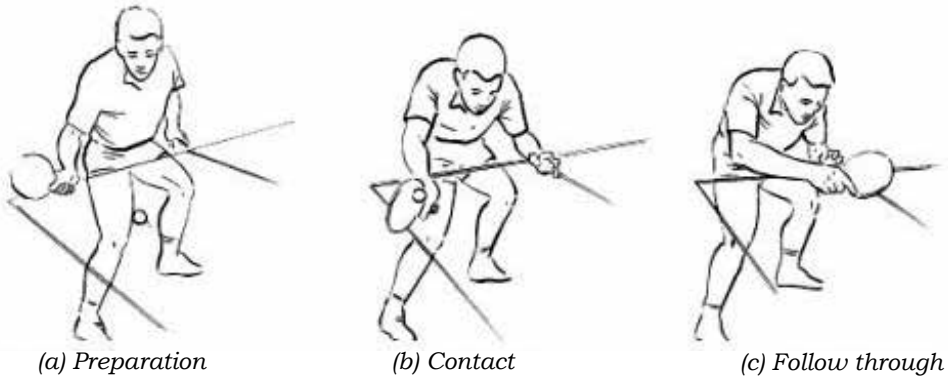


Fig. 5.26(a-c): Steps of forehand drive

Immediately, return to the ready position. The left foot must slightly be in front of the right for support.

Backhand drive

From the ready position, the waist turns left with the racket pointing towards the 9 o'clock position. When following through, contact with the ball is made in front of the body, slightly after the top of the bounce. Let the elbow again act as the pivot point, and snap the forearm forward in a slightly upward direction. Make sure that the paddle is closed. Follow through must finish naturally (about 12 to 1 o'clock position) after contact with the ball. The left foot must be slightly ahead of the right.



Fig. 5.27: Backhand drive

Push

Pushes are the basic backspin shots used to change the pace of an exchange or return certain very low and close shots, such

as backspin serve. It is, generally a defensive shot.

Forehand push

Bring the racket slightly up and back, while keeping the elbow at your waist. Bend the wrist back. Swing forward with a downward motion and when the racket reaches the ball, snap the wrist forward for extra racket speed. With an open racket, graze the bottom half of the ball. An ideal contact point is right after the ball bounces. Never push the ball at the top of the bounce because the resulting return will pop the ball high enough for the opponent to execute a smash. Try to hit the ball in front and slightly to the right of your body. Follow through forward and slightly down, and return to the ready position.



Fig. 5.28(a): Forehand push



Fig. 5.28(b): Backhand push

Backhand push

Bring the racket slightly up and back, close into your stomach while cocking the wrist back. This time, try to contact the ball directly in front of your body and remember to keep the elbow still while the forearm and wrist move forward and down. Graze the bottom of the ball and follow through.

Smash

Smash, or kill, is an offensive and powerful stroke of Table Tennis. A ball that is high and close enough to the opponent's side can be smashed, although some opportunities are better than others. Smashing combines waist, forearm and wrist movement to the fullest extent. A good smash is very hard to return but it can be done. Do not dawdle after you have executed a smash. The ball is contacted at the top of the bounce at its highest point.



Fig. 5.29: Smash

Service techniques

The following are the basic rules of service in Table Tennis.

1. The ball must be held above the table level so that the opponent and umpire are able to see it.
2. The ball must be held in the palm with the fingers stretched and tossed vertically at least six inches.
3. It must be struck only on the way down.
4. It must be struck behind the end line.

Serves are entirely up to the player. There are no specific serves that must be used by everybody. But to begin with, there are some basic serves that must be



Fig. 5.30(a): Service preparation

experimented with. Imparting spin on these serves should be concentrated mostly on the wrist.

Backspin

Just like pushing or chopping, a backspin serve is executed with an open racket, slicing the bottom of the ball.

Topspin

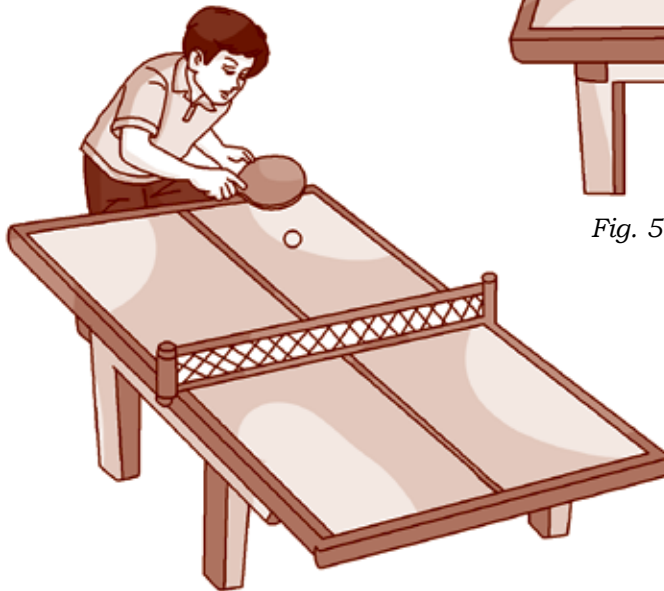


Fig. 5.30(c): Backspin service

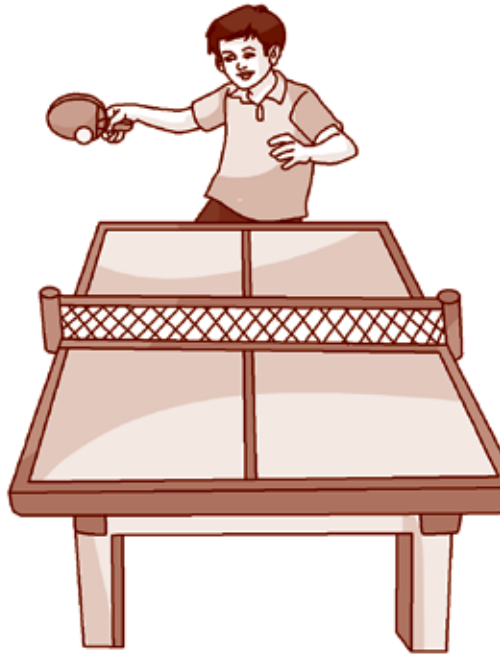


Fig. 5.30(b): Topspin service

Like driving, topspin serves can be done by hitting with a flat racket, or like looping, where the player grazes the top of the ball with a closed racket for more spin.

Assessment

The teacher can assess the students on the basis of the questions given below. S/he can also construct more questions.

I. Answer the following questions

1. Describe the technique of scoop in hockey.
2. Explain the concept of dribbling in hockey.
3. Explain the term lofted kick in football.
4. Describe the technique of thigh trapping in football.
5. Explain the procedure of execution of square cut.
6. Why fielding is the key of cricket?
7. Explain the concept of spin bowling in cricket.
8. Describe the technique of flick in cricket.
9. Mention the role of passing in basketball.
10. Describe the technique of blocking in volleyball.
11. Explain the concept of spiking in volleyball.
12. Explain the technique of cross dribble in basketball.
13. Explain the concept of holding in kabaddi.
14. Explain the technique of wrist hold in kabaddi.
15. What do you mean by double zig-zag in *kho-kho*?
16. Explain the technique of ring play in *kho-kho*.
17. Explain some basic rules of service in Table Tennis.

II. Write Yes or No

1. The term hitting is associated with hockey.
2. The skill of lofted kick is not related to football.
3. Straight bat playing is important in cricket.
4. The finger can be in any position for a catch in cricket.
5. The same ball can be used for fast and spin bowling.
6. Off-break is associated with hockey.
7. Trapping is important in football.
8. Air passes are useless in football.
9. Lay-up shot is associated with basketball.
10. Cross dribble is rarely used in football.
11. Any player can act as blocker in volleyball.

12. Good spiking is the only factor in winning a volleyball game.
13. Wrist catch is associated with kabaddi.
14. Ring play is a part of *kho-kho*.
15. TT is also known as ping-pong.

III. Skill-based evaluation

1. Perform an activity of straight flick.
2. Perform lofted kick technique.
3. Perform out flick technique.
4. Perform any one technique of fielding.
5. Perform the technique of lay-up shot.
6. Perform the technique of spiking in volleyball.
7. Perform the technique of wrist hold.
8. Perform the technique of double zig-zag.

(Note: All the above activities must be performed individually in pair, group or relays.)

IV. Things to do

1. Find out about an Indian Table Tennis player who has won a medal in the 2018 Commonwealth Games.
2. Make a list of all athletes from your area who have played district/state/national in any of the team sports and write the team sport they played.

Yoga for Concentration

6 Unit

INTRODUCTION

Concentration is the fundamental requirement for achieving anything in life. It is required for understanding a lesson, doing homework or class work, and even for leisure activities like playing games and engaging in hobbies. Concentration can be improved by developing a balance between the body and mind. Therefore, it is essential that we develop harmony for improving concentration. Yoga brings harmony between the body and mind, and thereby, improves concentration. In this Unit, teachers will be given an insight on how to encourage students to do some yogic practices that will help enhance their concentration.

Material required: Charts, *durri* or mat, posters of various *asana*, *kriya*, *pranayama* and meditation, CDs and projector.

Objectives

This Unit will enable a teacher to help students to:

- understand the concept of concentration and its importance.
- perform various yogic practices that improve concentration while developing harmony between the body and mind.

UNDERSTANDING THE CONCEPT AND IMPORTANCE OF CONCENTRATION

A teacher will first discuss the concept of concentration. The teacher will also tell the students that concentration is required for doing all kinds of work, for example learning a lesson, preparing for an examination, memorising, recollecting and analysing data, writing the answers, etc. Without concentration, we cannot do things effectively.

GUIDELINES FOR THE TEACHER

The teacher writes the following questions on a blackboard and asks the students to put a tick (✓) mark the against appropriate statements. The answer can be more than one. Learning will be faster when the students are:

- (a) studying in a classroom and listening to the teacher.
- (b) listening to the teacher and also talking to their friends.
- (c) learning the lesson and watching television simultaneously.
- (d) studying alone at home and focusing on the study.

The teacher tells the students that option (a) and (d) are the appropriate answers. The teacher will, then, explain that learning will be faster when the students are focused. Thus, concentration improves learning and performance.

YOGA IMPROVES CONCENTRATION

The following yogic practices help the students Improve concentration.

6.1: *Yama* (Restraint)

The teacher will introduce the concept of *yama* and explain its importance for improving concentration. The teacher has to explain all five *yama* — *satya* (truthfulness), *ahimsa* (non-violence), *asteya* (non-stealing), *brahmacharya* (celibacy) and *aparigraha* (non-possessiveness).

Guidelines for the teacher

- The teacher will ask the students to collect two stories each on *satya* (truthfulness) and *ahimsa* (non-violence).
- The teacher will, then, ask the students to share and discuss the stories in class.
- The teacher will conclude the activity by explaining that truthfulness and non-violence help in improving concentration.

6.2: Niyama (Observance)

The teacher will introduce the concept of '*niyama*' in the class and explain its importance for improving concentration. The teacher will explain all five *niyama* — *shaucha* (cleanliness), *santosha* (satisfaction), *tapas* (austerity), *swadhyaya* (knowing about self) and *ishwarapranidhana* (surrender and devotion to God).

Guidelines for the teacher

The teacher must inspect the *shaucha* (cleanliness) habits of the students continuously for one week and record the observations in the following table:

Roll No. of the student	Uniform						Nails						Shoes						Hair					
	M	T	W	TH	F	S	M	T	W	TH	F	S	M	T	W	TH	F	S	M	T	W	TH	F	S
1.																								
2.																								
3.																								
4.																								
5.																								

- The teacher will put 'Yes/No' in the table for each student continuously for six days.
- After a week, the teacher will share the observations and ask the students lacking in cleanliness to develop the habit of cleanliness. The teacher will, then, summarise the importance of cleanliness and tell the students that practising *yama* and *niyama* in their daily life will protect them from tension and help them to enhance their concentration.
- The teacher will, thus, conclude that yogic activities help in removing distraction and improve concentration. Attention plays an important role in increasing concentration. Practise of yogic activities help in improving attention. There are many yogic activities, which help in improving concentration. Regular practice of these show positive results in an individual.

6.3: Asana

Asana refers to the physical postures performed by coordinating the movement of the body and breath to enhance concentration. Few of them are discussed here.

Guidelines for the teacher

- The teacher will ask the students to practise micro-yogic activities like neck, shoulder, wrist, finger and ankle rotation, and so on. The teacher may show pictures or give demonstration on how to perform these micro-yogic activities.
- The teacher will, then, ask the students to perform *Surya Namaskar*, which they have learnt in Classes VI and VII.
- *Surya Namaskar* is important for improving concentration.
- For *Surya Namaskar*, the teacher may consult the book *Yoga: A Healthy Way of Living* for the upper primary stage.
- There are several *asana*, which need to be taught to the students. The teacher will teach the various types of *asana* to the students one-by-one. Some of these have been explained in the Unit.
- The teacher will give an introduction about each *asana*, telling the students about the benefits and limitations of each *asana*, which they will perform.
- The teacher will instruct the students to perform various *asana* and ensure that the guidelines for performing the different types of *asana*, given in the book — *Yoga: A Healthy Way of Living* for the upper primary stage by NCERT — are followed. The teacher may demonstrate the postures also.

Garudasana

This *asana* is named after the bird *garuda* (eagle). In this *asana*, the hands with the arms twisted in front, looking like the beak of an eagle. *Garudasana* can be done by following these steps.

Starting position

1. Stand erect with the feet together, the hands by the sides of the thighs.
2. Balancing on the left foot, raise the right leg, bend the right knee and wrap it around the left leg.
3. Keep the left elbow below as shown in Fig. 6.1. Place the palms together in front. Keep the trunk erect and maintain the posture for 5–10 seconds.



Fig. 6.1: Garudasana

Releasing position

1. Release the arms. Put the right foot down on the floor.
2. Come to the starting position. Repeat it by changing the position of legs and arms.

Table 6.1: Do's and don'ts

Do's	Don'ts
<ul style="list-style-type: none"> • Attempt it within the limitation of your body. • Keep the trunk erect. 	<ul style="list-style-type: none"> • Avoid jerks. • Do not apply force on any part of the body.

The teacher concludes this *asana* by stating the benefits and limitations.

Benefits

- It helps to loosen the joints of legs and arms.
- This *asana* helps give static stretching of the muscles of the upper and lower parts of the body.
- It enhances concentration.
- It develops balance in the body.

Limitation

Persons suffering from muscular pain, spasm, injuries of bones and joints must not practise this *asana*.

Baddhapadmasana

Baddha means 'bind' and *padma* means 'lotus'. The teacher demonstrates *Baddhapadmasana* by following the steps given below.

Starting position

1. Sit with the legs extended in front. Fix the right foot on the left thigh and the left foot on the right thigh (*Padmasana*).
2. Take the arms behind the back and cross them. Hold the right big toe with the right hand and the left big toe with the left hand. Maintain the posture for 5–10 seconds.



Fig. 6.2: *Baddhapadmasana*

Releasing position

1. Release the toes. Bring the arms by the side of your body.
2. Release the foot lock.
3. Sit with the legs extended in front and relax.

Table 6.2: Do's and don'ts

Do's	Don'ts
<ul style="list-style-type: none"> • Perform the <i>asana</i> slowly within your limitation. • Keep the spine erect. • Sit on a small cushion if difficult to perform the <i>asana</i>. • Stretch the shoulders back when trying to hold the big toes. 	<ul style="list-style-type: none"> • Do not force your legs beyond your capacity to perform this <i>asana</i>.

The teacher concludes this *asana* by stating the benefits and limitations.

Benefits

- It creates inner peace.
- It increases blood supply to the pelvic region.
- It improves concentration.
- It reduces pain in shoulders, arms and back.

Limitations

- Avoid performing this *asana* if knee and ankle joints are stiff.
- Avoid performing this *asana* if suffering from the problem of varicose veins in legs.

Gomukhasana

Go means ‘cow’ and *mukha* means ‘mouth’ or ‘face’. In this *asana*, the position of the legs looks like the face of a cow. Hence, it is called *Gomukhasana*. The teacher demonstrates *Gomukhasana* by following the steps given below:

Starting position

1. Sit with the legs extended in front.
2. Bend the right leg at the knee, bring the right foot to the left side and place it close to the left buttock.
3. Fold the left leg in the knee. Bring the left foot to the right side and place it close to the right buttock.
4. Take the left arm over the left shoulder and the right arm behind the back. Clasp the fingers of both the hands at the back.
5. Sit in this position for 10–15 seconds.



Fig. 6.3(a–b): Gomukhasana

Releasing position

1. Release the fingers. Bring the arms on the side of the body.
2. Release the left leg and extend it.
3. Release the right leg, extend it and come to the starting position.

Repeat by changing the position of arms and legs.

Table 6.3: Do's and don'ts

Do's	Don'ts
<ul style="list-style-type: none"> • Keep the heels in touch with the buttocks. • Keep one knee one over the other. • Keep the head and neck straight, without bending the joints. • Look in the front. 	<ul style="list-style-type: none"> • Do not sit on the heels. • Do not allow the knees to be raised.

The teacher concludes this *asana* by stating the benefits and limitation as given below.

Benefits

- It increases concentration and induces inner peace.
- It is helpful in correcting postural deformities like drooping shoulders.
- It is beneficial for improving the breathing capacity of the lungs.
- It is useful in reducing arthritic pain.
- It relieves backache, sciatica and stiffness in the shoulders and neck.

Limitation

Those suffering from bleeding piles must not practice this *asana*.

Ardhamatsyendrasana

This *asana* derives its name from *Yogi Matsyendranath*, who first taught this *asana* to his students. Since the full posture is difficult to be practised, its simplified form has been popularised and is known as *Ardhamatsyendrasana*. The teacher demonstrates *Ardhamatsyendrasana* by following these steps.

Starting position

1. Sit on the floor with the legs extended in front.
2. Bend the right leg and place the right foot near the left buttock.
3. The outer edge of the foot must touch the ground.

4. Bend the left leg at the knee and place the left foot flat on the floor near outside of the right knee.
5. Bring the right arm over the left knee and hold the left foot with the right hand. Slowly twist the trunk to the left side and take the left arm behind the back and wrap it around the waist.
6. Turn the head towards the left and look back. Maintain the position for 5–10 seconds.



Fig. 6.4: Ardhamatsyendrasana

Releasing position

1. Turn the neck and bring the head to the centre.
 2. Place the arms by the side of the body.
 3. Straighten the legs and extend them in front and relax.
- Repeat the same procedure with the other side.

Table 6.4: Do's and don'ts

Do's	Don'ts
<ul style="list-style-type: none"> • Keep the spine erect and abdomen must be drawn in. • Twist the trunk only to the extent of comfortable position. 	<ul style="list-style-type: none"> • Do not strain the back.

The teacher concludes this *asana* by stating the benefits and limitations as given below.

Benefits

- This is beneficial for improving concentration.
- This posture gives right and left twists to the spinal column.
- Every vertebra of the spine gets fully stretched.
- It helps to bring the trunk muscles in tone.
- It reduces digestive problems.

Limitation

A person suffering from peptic ulcer, hernia, enlarged liver or has had any surgery in the abdominal region must not practise this *asana*.

Bhujangasana

Bhujanga in Sanskrit means 'cobra'. In *Bhujangasana*, one imitates a cobra with its hood fully expanded. Let us perform *Bhujangasana* by following the steps given below.

Starting position

1. Lie flat on the stomach on the floor, with the forehead touching the floor. Extend the arms along the body.
2. Bend the arms at the elbow, place the palms by the sides of the shoulders on the floor.
3. Inhaling slowly, raise the head, neck and shoulders. Raise the trunk up to navel and arch the back. Maintain the posture for 10–15 seconds.

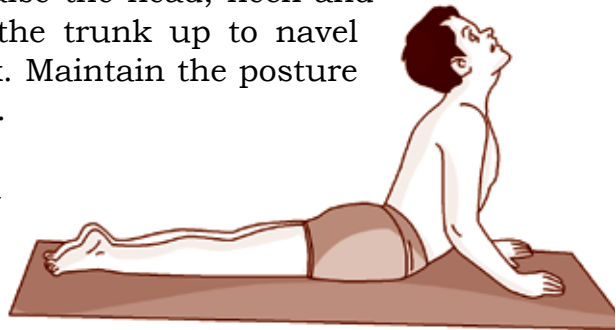


Fig. 6.5: *Bhujangasana*

Releasing position

1. Exhaling slowly bring down the torso, and then, the head and chin. Place the forehead on the floor.
2. Straighten the arms and keep them by the side of the body and relax.

Table 6.5: Do's and don'ts

Do's	Don'ts
<ul style="list-style-type: none"> • Put minimum weight on hands. • The trunk must be raised up to the navel only. 	<ul style="list-style-type: none"> • Do not raise the region below the navel. • Do not jerk the body.

The teacher concludes this *asana* by stating the benefits and limitation.

Benefits

- This *asana* makes the spine flexible.
- It solves many digestive problems.
- It helps in enhancing focus.

Limitation

Those suffering from peptic ulcer, hernia and intestinal tuberculosis must not practise this *asana*.

Shalabhasana

In Sanskrit, *Shalabha* refers to ‘locust’ (grasshopper) and *asana* means ‘posture’. The final posture of this *asana* resembles a locust (grasshopper). The teacher demonstrates *Shalabhasana* by following the steps given below.

Starting position

1. Lie flat on the stomach; legs together, hands by the side of the thighs, palms facing downward or the hands clenched.
2. Stretch both the arms and place the hands under the thighs.
3. While inhaling, raise both the legs upward as high as possible. Maintain the position for 5–10 seconds.



Fig. 6.6: *Shalabhasana*

Releasing position

1. While exhaling, slowly bring down the outstretched legs to the floor. Place the arms beside the body.
2. Lie flat on the stomach; legs together, hands by the side of the thighs.

Table 6.6: Do's and don'ts

Do's	Don'ts
<ul style="list-style-type: none"> • Use the hands to balance and control the body weight. • While lifting the legs, contract the lower back muscles. • Keep the legs straight. 	<ul style="list-style-type: none"> • Jerk must be avoided. • Do not rush through the exercise or raise the legs too much. • Do not put too much pressure on the hands.

The teacher concludes this *asana* by stating the benefits and limitation as given below.

Benefits

- *Shalabhasana* is a good exercise for the legs, thighs, hips, buttocks, the lower abdomen, diaphragm and wrists.
- It helps to reduce excessive fat formed around the knees, thighs, waist and the abdomen.
- The waist becomes flexible.
- It induces harmony and enhances concentration.
- It provides relief from lower back pain.

Limitation

Those suffering from ulcer in the stomach, hernia, high blood pressure and cardiac complaints must not practise this *asana*.

Makarasana

Makarasana is a relaxing posture. It induces peace and brings harmony. You have already practised *Makarasana* in previous classes. Continue practising *Makarasana* by following the techniques given in Unit 2 of the book, *Yoga: A Healthy Way of Living* for the upper primary stage.

Matsyasana

Matsya means 'fish'. In this *asana*, the body takes the posture of a floating fish, hence, it is called *Matsyasana*. The teacher demonstrates *Matsyasana* by following these steps.

Starting position

1. Sit in *Padmasana* in a comfortable position.
2. Now, bend backwards, supporting the body with arms and elbow. Lift the chest, take the head back and lower the crown of the head to the floor.



Fig. 6.7: *Matsyasana*

3. Place the middle part of the head on the ground. Hold the big toes. The elbow must touch the ground.

Releasing position

With the help of the elbows, lower the chest and bring the head to touch the ground. Unlock the legs. Come back to the sitting position in *Padmasana*.

Table 6.7: Do's and don'ts

Do's	Don'ts
<ul style="list-style-type: none"> • Keep the trunk erect, while sitting in <i>Padmasana</i>. • Raise the trunk only to the extent of a comfortable position, the spine must be arched to the maximum. • Take the support of elbows while bending backward and lowering the chest. 	<ul style="list-style-type: none"> • Do not bend the neck backward with a jerk. • Do not remove the support of the elbows to the neck while lifting up the chest.

The teacher concludes this *asana* by stating the benefits and limitation as given below.

Benefits

- This posture has therapeutic effect on mild backache and fatigue.
- The posture gives a gentle exercise to the spine and makes the body flexible.
- This is useful in throat problems like tonsillitis.
- It reduces anxiety and induces a feeling of floating.

Limitation

Avoid practising this *asana* in case of peptic ulcers, heart diseases, hernia and problems in the back.

Naukasana

Nauka in Sanskrit means 'boat'. The final position of this *asana* resembles a boat, hence, the name *Naukasana*. This *asana* can be performed both in supine and prone position. The teacher demonstrates *Naukasana* by following these steps.

Starting position

1. Lie flat on the back. Keep the heels and the feet together. The arms must be by the sides of the body and the palms resting on the ground.
2. While inhaling, slowly raise the legs. Simultaneously, raise the head and trunk up to 45 degree angle.
3. Stretch and raise the arms up and maintain the position for 5–10 seconds.

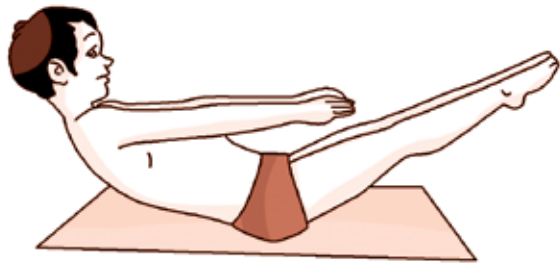


Fig. 6.8: Naukasana

Releasing position

1. While exhaling, slowly bring the head and trunk down on the floor.
2. Slowly bring down the legs and arms on the floor and relax.

Table 6.8: Do's and don'ts

Do's	Don'ts
<ul style="list-style-type: none"> • The trunk must be raised up to the navel level only. • The hands must stretch straightway without bending at the elbow. 	<ul style="list-style-type: none"> • Do not raise the trunk or legs in an unparallel way.

The teacher concludes this *asana* by stating the benefits and limitation as given below.

Benefits

- It stimulates the digestive system.
- It gives relief in gastric problems.
- It removes lethargy, resulting in improved concentration.
- It removes nervous tension and brings relaxation.
- It reduces fat around the waist and abdomen.

Limitation

Those suffering from hernia must not practise this *asana*.

Setubandhasana

Setubandha means ‘formation of bridge’. In this *asana*, the thighs, buttock, waist and dorsal region are raised in the air, resting on the feet, arms and shoulders. It resembles the position of a bridge, hence, the name *Setubandhasana*. The teacher demonstrates *Setubandhasana* by following the steps given below.

Starting position

1. Lie supine with the legs together, arms by the side of the body and palms resting on the floor.
2. Fold both the legs at the knees, with soles of the feet placed on the floor and heels closer to the buttocks.
3. Hold both the ankle joints firmly with hands or place both the hands near heels.
4. Raise the thighs and spine upward, in a comfortable position.
5. Keep the neck and the shoulders firmly on the floor. Maintain the posture at your comfort level.



Fig. 6.9: Setubandhasana

Releasing position

1. Release the hold of ankles.
2. Lower the thighs down on the floor.
3. Straighten and extend the legs.
4. Bring the legs together and the arms by the sides of the body.

Table 6.9: Do's and don'ts

Do's	Don'ts
<ul style="list-style-type: none"> • The knees must be kept apart while performing the <i>asana</i> initially. 	<ul style="list-style-type: none"> • Do not get disheartened in the initial stage, if you are unable to catch hold of the ankles.

The teacher concludes this *asana* by stating the benefits and limitation.

Benefits

- It brings coordination between the body and mind, and enhances concentration.
- It strengthens the lower back and abdominal muscles.
- It broadens the chest.
- It relieves tension and stiffness of muscles, and tones up the body.

Limitation

Do not practise this *asana* if suffering from back pain, cardiac problems, high blood pressure and obesity.

Halasana

Hala in Sanskrit and Hindi means 'plough'. In the final position of this *asana*, the body resembles the shape of a plough. The teacher demonstrates *Halasana* by following the steps given below.

Starting position

1. Lie in supine position, legs together and arms beside the body.
2. Keeping the knees straight, raise the legs up to 30 degree angle.
3. Raise the legs further up to 60 degree angle.
4. Raise the legs still further up to 90 degree angle, keeping them vertical and straight.
5. With the support of the hands, raise the trunk and lower the legs over the head. The toes must touch the ground. Push the legs a little beyond the head. The arms must be straight in the starting position. Maintain the position for 5–10 seconds.



Fig. 6.10: Halasana

Releasing position

1. Slowly lower the back and buttocks to the ground. Bring the legs to 90 degree angle position, and gradually, bring the legs to the starting position.

Table 6.10: Do's and don'ts

Do's	Don'ts
<ul style="list-style-type: none"> • Support the back with the hands while raising the buttocks. • Keep the knees straight throughout the <i>asana</i>. • Balance the weight on hands and shoulders. 	<ul style="list-style-type: none"> • Avoid giving jerk to the body. • Do not force the legs to touch the ground, if difficult.

The teacher concludes this *asana* by stating the benefits and limitations as given below.

Benefits

- It exercises the thyroid gland.
- It helps in the stretching of the spinal column and back muscles, making the spine strong and healthy.
- It helps in increasing the height of children.

Limitation

Practise of this *asana* must be avoided in case of cervical spondylitis, hernia, high blood pressure and slipped disc.

Shavasana

This is a relaxing posture. It eliminates fatigue and brings peace and harmony by relaxing the body and mind. Practise it by following the techniques given in Unit 2 of the book, *Yoga: A Healthy Way of Living* for the upper primary stage.

6.4: Kriya

Kriya refers to cleansing techniques, which detoxify the body. There are six types of *kriya*. Each *kriya* cleanses specific parts of the body.

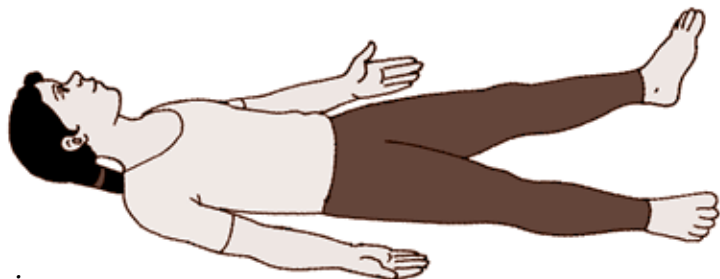


Fig. 6.11: Shavasana

Guidelines for the teacher

- The teacher will familiarise the students with the concept of *kriya* and its importance.
- The teacher will ensure that the guidelines for *kriya* given in the book, *Yoga: A Healthy Way of Living* for the upper primary stage, are followed.

Agnisara

Agnisara is considered as a yogic *kriya*. In Sanskrit, *agni* means 'fire' and *sara* means 'essence'. The essence of fire (digestive process) is supposed to be located in the navel region. This practice regulates the digestive process. The teacher demonstrates *Agnisara* by following the steps as given below.

Starting position

1. Sit in a comfortable posture.
2. Keep the hands on the knees. Exhale completely.
3. Contract and expand the abdominal muscles rapidly as long as you are comfortable while retaining the breath outside.
4. Then, slowly breathe in. Repeat the practice 2–3 times.

Table 6.11: Do's and don'ts

Do's	Don'ts
<ul style="list-style-type: none"> • It is advisable to practise it on a completely empty stomach. • Keep the abdominal muscles relaxed. 	<ul style="list-style-type: none"> • Do not practise the <i>kriya</i> after meals. • Do not strain the abdominal muscles too much.

The teacher concludes *Agnisara kriya* by stating the benefits and limitation.

Benefits

- It strengthens the abdominal muscles and nerves.
- It stimulates the appetite.
- It reduces constipation.
- It alleviates dullness and depression.

Limitation

Those suffering from high blood pressure, heart diseases, peptic ulcers or chronic diarrhoea must not perform this *kriya*.

6.5: Pranayama

Pranayama includes breathing techniques, involving inhalation and exhalation in a controlled way.

Guidelines for the teacher

- The teacher discusses the concept of *Pranayama*.
- The teacher ensures that the guidelines for *Pranayama* given in the book, *Yoga: A Healthy Way of Living* for the upper primary stage, are followed.
- The teacher introduces the following types of *Pranayama* one-by-one and asks the students to perform.
- The teacher must also demonstrate it and help the students do it correctly.

Anuloma-viloma

Anuloma-viloma pranayama involves alternate nostril breathing, which reduces anxiety and brings harmony to the mind and body. It also improves concentration.

Guidelines for the teacher

The teacher asks the students to practise *Anuloma-viloma Pranayama* by following the techniques, which they have learnt in Class VII. The teacher may consult the book, *Yoga: A Healthy Way of Living* for the upper primary stage.

Seetkari pranayama

In *Seetkari pranayama*, a sound of ‘see’ or ‘seet’ is made during inhalation, hence, it is called *Seetkari pranayama*. The teacher demonstrates *Seetkari pranayama* by following these steps.

Starting position

1. Sit erect in *Padmasana* or any other meditative posture.
2. Keep the hands in *jnana mudra* and close the eyes gently.
3. Touch the palate in the mouth with tongue.

4. Hold the front teeth lightly on each other. Separate the lips.
5. Breathe in through the teeth, making a whistling sound of 'see'.
6. Retain the breath as long as you can.

Releasing position

1. Join the lips and exhale slowly through both the nostrils.
2. During exhalation, keep the mouth closed.

Table 6.12: Do's and don'ts

Do's	Don'ts
<ul style="list-style-type: none"> • The neck and the head must not bend forward or backward. • Inhale air through the mouth. 	<ul style="list-style-type: none"> • Do not inhale from the nostrils. • Do not practise it in a polluted area because the air inhaled through the mouth cannot be filtered.

The teacher concludes *Seetkari pranayama* by stating the benefits and limitations as given below.

Benefits

- *Seetkari pranayama* keeps the mind cool and enhances concentration.
- It tranquilises both the body and mind.
- It helps in controlling thirst and hunger.
- It reduces irritation.

Limitations

- Those suffering from low blood pressure, asthma, bronchitis and constipation must avoid practising this *pranayama*.
- It must not be practised in cold weather.

Bhramari pranayama

The word *bhramari* is derived from the Sanskrit word *bhramara*, which means a 'black humming bee'. In *Bhramari pranayama*, a sound resembling the sound of a black bee is produced, therefore, it is called '*Bhramari pranayama*'. The teacher demonstrates the *Bhramari pranayama* by following these steps.

Starting position

1. Sit in *Padmasana* or any other comfortable sitting posture. Close the eyes gently.
2. Breathe in through the nose.
3. Close both the ears with thumbs, and put the fingers on forehead and eyes. Exhale while making a soft sound of a humming bee. Keep the sound low pitched and concentrate on the sound.
4. After exhaling, bring your hands back on your knees and inhale slowly. This is one round.
5. Practise 2–4 rounds in similar way.

Table 6.13: Do's and don'ts

Do's	Don'ts
<ul style="list-style-type: none"> • Make the humming sound while exhaling. • Focus on the sound. 	<ul style="list-style-type: none"> • Do not make the sound at a high pitch.

The teacher concludes *Bhramari pranayama* by stating the benefits and limitation as given below.

Benefits

- It improves concentration.
- The sound, which resonates in the brain, removes tension and anxiety.
- It helps reduce anger.
- It calms the mind and improves memory.

Limitation

This *pranayama* must not be practised during ear infection.

6.6: Pratyahara (five sense organs)

Pratyahara is an important yogic practice as it helps in enhancing our concentration. In *Pratyahara*, we learn how to control or utilise the five senses. Sometimes, we utilise two or three senses together as we eat while watching TV or study while listening to music. This is not a good practice. Yoga emphasises on work while you work, play while you play, or do whatever you do with full concentration.

6.7: Meditation

Meditation is a yogic practice, which relaxes the body and mind. It helps in improving concentration and induces peace of mind. For improving concentration, the teacher will tell the students to practise meditation.

Guidelines for the teacher

- The teacher will ask the students to practise meditation by following the technique, which they have learnt in Class VII. The teacher may consult the book, *Yoga: A Healthy Way of Living* for the upper primary stage.
- The teacher will ask the students to sit in comfortable posture, close the eyes gently and observe whatever they are thinking during that particular moment and write it down afterwards, for example a student might be thinking about food, family, song, friends, etc.
- The teacher will also ask the students to concentrate on breathing (exhalation and inhalation). Later, the students will be told to note down if inhalation or exhalation is warmer.

Assessment

The teacher can assess the students on the basis of the questions given below. More questions can also be constructed.

I. Answer the following questions

1. Why *yama* and *niyama* are important for concentration?
2. Write a short note on *pratyahara*.
3. Do you find any change in your concentration after performing an *asana* and *pranayama*? Write down your experience.
4. What changes do you experience after meditation?
5. Do you find any change in your mental state after performing *Bhramari pranayama*? Write down your observations.
6. Describe any two *asana* performed in prone position (lying on the stomach).
7. Describe the steps of *Ardhamatsyendrasana*.
8. Write a short note on *Gomukhasana*.

9. How does the control of senses (*pratyahara*) help in concentration?
10. Write the benefits of *Anuloma-viloma pranayama* improving.

II. Write Yes or No

1. *Agnisara* increases respiratory efficiency.
2. In *Garudasana*, the person stands on two legs.
3. We make forceful exhalation in *Anuloma-viloma pranayama*.
4. *Agnisara* is an *asana*.
5. In *Shalabhasana*, the body takes the shape of a locust.
6. While performing an *asana*, movements of the body are coordinated with breathing.
7. There are 10 principles of *yama*.
8. Meditation improves concentration.

III. Fill in the Blanks

1. In *Halasana*, the body looks like a _____.
2. There must be a gap of _____ hours between the meals and performing of yogic practices.
3. Alternate nostrils are used for each inhalation and exhalation in _____.
4. *Ardhamatsyendrasana* is a simpler version of _____.
5. A soft humming sound is made in _____.
6. The five types of *yama* are _____, *brahmacharya*, *asteya*, *aparigraha*.
7. The five types of *niyama* are *shaucha*, _____, *tapas*, _____, *ishwarapranidhana*.
8. In *Matsyasana*, one experiences a feeling of _____.

IV. Things to do

1. Make a chart of five practices which increase concentration.
2. Practise meditation for five minutes daily for 10 days. Prepare a report on the changes you feel after 10 days.
3. Interview two persons who have been practising yoga for a minimum of two years and prepare a report on their experiences.
4. Perform *Surya Namaskar*.
5. Perform five sitting *asana*.
6. Perform *Anuloma-viloma pranayama*.

Recreational and Outdoor Activities

7 Unit

INTRODUCTION

In the modern era of technology and development, urban children during leisure hours spend most of their time watching television and movies, and playing video or computer games. Due to less participation in physical activities, they are leading an inactive life. Such a behaviour may adversely affect their physical, mental and emotional growth. In order to avoid such a state, recreation through physical activities can help them develop as healthy citizens. Participation of children in group activities like party games, modified games and camping will provide them with fun and enjoyment. It will facilitate their physical and social health.

GUIDELINES FOR THE TEACHER

- The teacher will organise the class and explain to the students about the importance of recreational and outdoor activities.
- The teacher must explain the rules of modified and recreational games.

Objectives

This Unit will help a teacher to enable students to:

- learn party games.
- learn skills of modified games.
- learn about camping.
- utilise their leisure time in a productive manner.
- familiarise with group games.
- develop social qualities like cooperation, team spirit, fair-play, etc.
- identify their talents.
- develop their neuromuscular coordination.
- learn discipline in a joyful learning atmosphere.

- The teacher must demonstrate and explain the skills of modified games with the help of charts.
- The teacher will discuss the corrections to be made during the practise of the skills of the game.
- The teacher will promote healthy competition among the students.
- All children, including CWSN, must be provided with equal opportunities.
- The teacher will also organise camping.

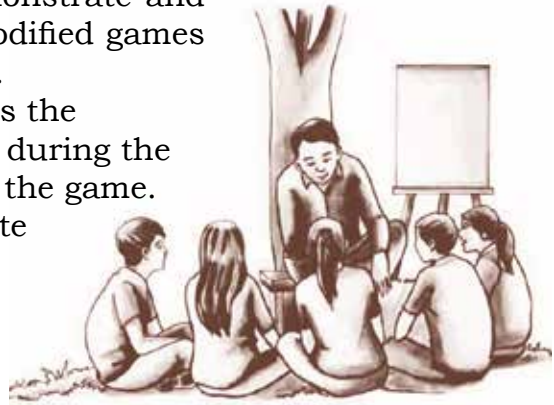


Fig. 7.1: Group activity

RECREATIONAL ACTIVITIES

Recreational games are those which are played for fun and recreation during social gatherings and functions in schools and community. These are played with some basic rules and are most enjoyed by the students.

The teacher may introduce some more games to the students and ask them to add those games to the list. Some of the popular indoor party games are as follows:

7.1: Chinese whisper

Number of players: No Limit

Equipment: None

The teacher asks the students to sit in a circle. Each student is told to whisper a long phrase to the person sitting next and the other student, in turn, whispers what s/he hears to the next person, and so on. The last person announces what one has heard.

The teacher needs a large group in order to ensure that the children enjoy the game. A variation in this game could be the following:

1. Everyone must be seated in a circle.
2. The first person needs to whisper a phrase, say in English, to the second person.
3. The second person, then, needs to translate it into Hindi (or another language) and whisper it to the third person.



Fig. 7.2: Chinese whisper

4. The third person, then, must translate it back into English and whisper it to the fourth person.
5. This pattern of alternating translation must continue until the last person.
6. The last person announces what one has heard.

7.2: Memory game

Number of players: No limit

Equipment: Tray, different items, hanky, etc.

The teacher asks the students to place about 10 to 15 small items (e.g., pencil, watch, comb, shoelace, spoon, toy car, etc.) on a tray and cover them with a cloth. The students sit in a circle. Place the tray in the middle of the circle and remove the cloth for 60 seconds. Everyone has to remember the objects. When the time is up, put the cloth back. In turn, each person has to name an object in the tray. If the first person fails to name an object, and repeats the same or names something which is not in the tray, is out. The tray is, then, removed and some or all of the objects are replaced, and the game is restarted with the person following the one who is out. If the teacher feels that the game is too easy for the group, more objects may be added or the time may be reduced.

7.3: Balloon war

Number of players: Up to 25

Equipment: One balloon per player and string

The teacher asks the students to tie a balloon to the ankle with a piece of string (about 18 inches long). Once every student has a balloon, the teacher starts playing some music. When the music plays, the students walk around the floor till the music stops. The aim is to burst the other students' balloon and protect their own. The winner is the last student left with a balloon.

7.4: Chain tag

Number of players: No limit

Equipment: None

The teacher explains and demonstrates the chain tag game. This game is just like the normal tag game. In this game, one student starts as 'in' and has to chase the



Fig. 7.3: Chain tag

other students. When this student tags the other student, that student also becomes 'in'. In chain tag, when another student gets 'in', the person holds hands with the original student. They, then, run around together trying to catch everyone else. When they touch another student, that person also joins at the end of the chain. The chain is not allowed to be broken. When one student is left, that student becomes 'in' for the next game.

7.5: Jump stick relay

Number of players: 20 to 30

Equipment: Two wooden sticks of 2 metre length

The teacher divides the students into two teams having equal number of members. The teams are arranged in parallel

columns 3 metre apart on a common line. A turning point is marked at a distance of 10 metre in front of each column. The first player of each team is given a stick. At the signal 'go', the first player of each team runs forward with a stick, touches the turning point, returns and hands on another end of the stick to the second player. Both the players, keeping the stick low, run back towards the end of the column. The remaining players in the column jump over the stick as it comes to them. After the last player in the column has jumped over the stick, the team arriving in its original position first, wins the relay.

7.6: Dodge ball

Number of players: No limit

Equipment: Ball, lime powder, cord and measuring tape

The teacher first explains the game to the students, and then, divides them into two teams. The teacher asks one team to take position on a circle of 10 to 15 metres in diameter and asks the other team to take scattered positions inside the circle. A volleyball is given to the captain of the team forming the circle. At the signal, the players on the circle will hit the players inside the circle, who avoid being hit. The players inside the circle may try to change their position as they please. The throwers may recover the ball inside the circle but throw the ball only from the outside. Any inside circle player, who is hit by the ball, is eliminated. The time during which all players have been eliminated is recorded. Now, the teams change their positions, i.e., the team on the circle comes inside and the team, which was inside the circle, assumes position on the circle. The game is played in the same manner. The time taken by each team for elimination is recorded. The team that takes less time to eliminate the other team is declared the winner.

7.7: Modified games

Modified games are those games, which can be played by modifying the procedure of playing, according to the need and requirement of a player. The modifications must be adapted

to suit the player's age, size, ability, skill and experience. The modifications are done in a way that the participants derive fun and enjoyment. The key strategies for modifying games are as follows:

- modifying the dimension of playfield or ground as per CWSN inclusive group
- making scoring easier (e.g., differential scoring)
- slowing the movement of the ball or object
- increasing opportunities to practise techniques and tactics
- sequencing games to enable learning of tactics
- changing the scoring rules
- modifying the size and weight of the ball according to CWSN needs

Modifying individual sports

- Track and field: Spring take-off board, lower hurdles, use line instead of circle for shot put or discus throw, etc.
- Swimming: Use of fins, stone finding, etc.
- Gymnastics: Use long bench for balance beam, etc.

Modifying dual sports

Racquet games

- Badminton: Move in serve lines
- Short-handled racquets
- Short, wide or longer-narrow court
- Different (i.e., slower moving) balls
- Basketball: 3 on 3 game, Russian basketball (no dribbling, only passing is allowed)
- Football: 7 A side, 5 A side
- Hockey: 7 A side with common rules
- Cricket: Leg cricket
- Volleyball: Once bounces volleyball
- TT: Play using hands only



Fig. 7.4: Modified sports

The teacher can also modify the other games according to the requirements of CWSN, school area and class size.

7.8: Outdoor activities

Picnic

Picnic is a social gathering. In picnic, all members, generally, bring eatables for sharing. Each member is expected to provide a share of entertainment and refreshments also. Picnic is, generally, organised outdoors for pleasure. It includes almost every type of informal, outdoor meal or festivity.

The teacher may organise a picnic for the students and ask them to bring food from home and share it with everyone.

Trekking

It is a part of adventure travel, which involves visit to remote areas, lodging in tents and minimal accommodation. It is done for adventure and expedition. Famous trekking places in India are — Ladakh, Zaskar Valley, Nubra Valley and various Himalayan ranges.

The teacher may organise a trekking expedition near the school for the students, if possible. The teacher organises a brainstorming session about camping topics, objectives, learning and major agencies that support the organisation of camping. The teacher summarises with the help of the following information.

Camping

Camping is an educational, as well as, a recreational activity. In modern



Fig. 7.5: Trekking

society, camping is becoming more democratic, allowing free participation in activities and planning of programmes. Camping, thus, helps to spread more ideas of education.

Objectives of camping

- Creative leadership
- Fellowship
- Self-confidence
- Group activities and cooperation
- Art of improvisation
- Disciplined life
- Obedience to rules and regulations
- Joyful learning about nature and environmental awareness



Fig. 7.6: Camping

Values of camping

- Behavioural and social adjustment
- Educational values
- Sense of maturity
- Better health
- Emotional stability
- Breaking away from monotonous routine to refreshing moments

Types of camping

- Trekking camps
- River rafting camps
- Leadership training camps
- Educational camps
- Social service camps
- High altitude camps
- Desert camping

Major agencies that support and organise camping in India

- Bharat Scouts and Guides
- National Cadet Corps (NCC)
- National Service Scheme (NSS)
- Youth Hostel Association of India (YHAI)
- Indian Mountaineering Federation (IMF)
- Ministry of Youth Affairs and Sports (MYAS)

Assessment

The teacher can assess the students on the basis of the questions given below. The teacher can also construct more questions.

I. Answer the following questions

1. Describe any one party game.
2. List modified games that can be used to learn the skills of different games and sports.
3. Explain any one outdoor activity.
4. List the objectives of camping.
5. Describe the types of camping

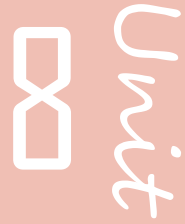
II. Write Yes or No

1. Participation in recreational games or activities helps children develop cooperation.
2. Modified games develop different aspects of one's personality.
3. Participation in trekking camps helps to develop one's overall personality.
4. Only government agencies are organising camps in India.
5. Participation in camp does not improve emotional stability.
6. CWSN must not go for trekking expeditions.

III. Things to do

1. Prepare a project on any one modified game or sport with the process of activities.
2. Prepare a two-day programme on any camp with a schedule of activities.
3. Organise a picnic that involves inclusive games for all categories of participants.

Safety, Security and First Aid



INTRODUCTION

Our lives are full of activities, ranging from taking bath to cooking food, playing games and sports, carrying things, working on machines, etc. We also come in contact with animals while playing with pets, on roads with stray animals or while moving close to animal habitats. They cause injuries to us. In previous classes, we have discussed the various measures to promote safety and security in such situations and managing minor injuries. In this Unit, we shall discuss first aid and its application in soft tissue injuries, and other safety and security measures against animal attacks.

ACTIVITY

8.1: Various animal attack injuries

A teacher divides the class into groups of 5–6 students each. The teacher asks them to prepare a list of animals, including pets, they see in their locality.

- Ask the students about various animals, which can injure them and how.
- Ask them to discuss how they manage the injury.

Objectives

This Unit will help a teacher to enable students to:

- discuss and adopt safety and security measures.
- define first aid.
- enlist various situations requiring first aid.
- learn about various safety and security measures, and injuries caused by animal attacks.
- acquire knowledge about dressing and bandaging.

- The students can be asked to prepare a chart of preventive measures against animal attacks and share this in a large group.
- The teacher can summarise the discussion based on the fact sheet.

8.2: Role-play on animal bites

The teacher divides the students in groups of four–five members each, and can give them a situation for role-play like the following:

- managing a case of dog or monkey bite
- prevention of bites
- first aid for dog bite

The teacher summarises with the help of a fact sheet and asks the students to narrate their own or observed experience of animal bite.

8.3: First aid box

The teacher discusses and prepares a first aid box and demonstrates its contents in the classroom. The students in groups assemble the material for the first aid box and submit ready-to-use first aid box.



Fig. 8.1: First aid box

Providing first aid

The teacher demonstrates the use of first aid box with the help of some students in situations of dog, monkey and snake bite. A visit to a local Primary Health Centre or Community Health Centre or hospital can also be arranged for the students to sensitise them about various ongoing health activities.

Child safety and security

Every year, children get injured due to animal bites. Parents and teachers must ensure the safety of children. Teachers and parents must always be vigilant.

The following safety measures help prevent animal bites:

1. Be vigilant.
2. Locate safe play area for children.
3. Keep children out of pet animal area.
4. Animals guarding their young ones can be more aggressive and unpredictable.
5. Insist your wards to wash hands after playing with pets.
6. Teach the children regarding safe play with pets, learning proper handling of pets, and irritable signs and symptoms.
7. Keep sick pets and other such animals away from children.

Children can be saved from many dangerous situations, if care and time is given to them. Some precautions need to be taken for ensuring better security of children at school, park, playground and home. The precautions are as follows:

1. Keep machinery and vehicles away from children's reach.
2. While travelling in a bus, mini bus, school van, etc., ask the children to always do the following:
 - (a) wear seat belt at all times
 - (b) not distract the driver
 - (c) not leave the vehicle without permission
 - (d) not touch the vehicle's controlling devices
3. Keep all pesticides, cleaning liquids, etc., in their original containers and in a secure lock.
4. Stop access to dangerous chemicals.
5. All gates and doors must be secured.
6. Time-to-time maintenance of nets, grills, barricades, ropes etc., must be ensured.
7. Supervise the children when they are near water.
8. Always encourage the children to ensure their security by teaching them SAFE (Stay Away From Edges).

First aid

First aid is the initial assistance or treatment given to a person for an injury or sudden illness before the arrival of a doctor or advanced medical care.

First aid aims

- to preserve life
- to prevent a patient's condition from worsening
- to promote patient recovery

It involves a series of simple techniques, which can be performed with minimal medical knowledge and equipment. However, first aid must always be given by a trained person, who has knowledge about the basic steps of using equipment and resources available in area of work.

Situations requiring first aid

Following are the various situations that require first aid:

- Animal bites and stings
- Bleeding and wounds
- Fracture
- Burns
- Drowning
- Electric shock
- Foreign bodies in eye, ear, nose and windpipe (choking)
- Poisoning
- Extreme temperatures (frostbite, heatstroke)
- Sprain and strains
- Headache
- Toothache

First aid box

A first aid box must be available at home, school and workplaces.

It must contain the following articles:

- A pair of disposable gloves
- Small sterile pad or dressing (4x4"): 10 pieces
- Large sterile pad or dressing (5x9"): 2 pieces
- Large sterile pad or dressing (8x10"): 1 piece
- Sterile or clean roller gauge (2"): 2 pieces
- Sterile or clean roller gauge (4"): 2 pieces
- Tape (1" width): 1 piece
- Antibiotic ointment: 1 piece
- Savlon solution: 1 bottle

- Small towel: 1 piece
- Sealable plastic bag: 2 pieces
- Triangular bandage: 2 pieces
- Folded or rolled rigid splinting material: 4 packs
- Hand sanitiser (small bottle): 1 pack
- Sturdy weather tight container: 1 pack

The above articles must be inspected regularly. Replace the used ones and discard the articles that have expired.

8.4: Cardiopulmonary Resuscitation (CPR)

CPR [Cardio (heart) Pulmonary (lungs) Resuscitation (revival)], which is an emergency lifesaving procedure, is done on people whose heart has stopped functioning (cardiac arrest). By giving CPR, one can help save someone's life. It must only be performed when a person shows no signs of life. Unconsciousness, unresponsiveness, not breathing or not breathing normally are some of the symptoms that may require CPR.

Of the 56.5 per cent of out of hospital cardiac arrest events witnessed by bystanders, about 92.5 per cent occur at home. Only 1.3 per cent of these arrests are received CPR by bystanders. (Source: *Medi Bulletin* 2018)

Step 1

Ensure that the place and position is safe and a patient is lying on the back on a flat surface. Pinch on the patient's arm and check for response.



*Fig. 8.2: The patient must lie on the back on a flat surface

Step 2

If the patient responds, then talk to the person and ask for the address and emergency contact number. At the same time, call at emergency helpline numbers 102 or 1099. If the person is breathing, then do not begin CPR, monitor until emergency care arrives.

* Source: ICMR, New Delhi [Fig. 8.2 to 8.5(b)]

Step 3

Till the emergency arrives, tilt the patient's head back and lift the chin.

Step 4

Check the patient's pulse. If there is no pulse and no breathing, then kneel beside the person. Interlock your fingers and place the heel of your hands in the centre of the patient's chest.

Step 5

Lean forward in such a way that your shoulders are directly over the patient's chest. Now, pump hard and fast to give compressions that are at least 2 inches deep. Release the pressure but do not lift your hands. Give 100 compressions in a minute. Continue until an ambulance or medical help arrives.



Fig. 8.3: Tilt the patient's head back



Fig. 8.4: Check the pulse for patient's response



Fig. 8.5(a): Interlock your fingers and place the heel of your hands in the centre of the patient's chest.



Fig. 8.5(b): The shoulders must directly be above the patient's chest

8.5: Types of injury

Both domestic and wild animals, such as cat, dog, rabbit, parrot etc., can injure us in various situations or accidentally at home or workplace. Examples are rat bite or attack by other animals, such as snake, spider, bug, wasp, etc.

- Abrasions, lacerations, punctures, minor scratches and swelling — all result from bite, teeth marks or scratching with nails.
- Muscular damage, sprain and strain are caused especially when attacked by large wild animals. Not only are muscles torn from animal bites but when attacked, a person may fall and fracture a bone or get a sprain.
- There are infections, such as bacterial infection in the wound, rabies, etc.
- Rabies or hydrophobia is caused due to virus found in the saliva of rabid (infected with rabies) dogs. In order to avoid this, tetanus injection must be given within 24 hours of a rabid dog bite, else it can become fatal.
- Mental and emotional distress because of the trauma experienced.

Let us learn to manage these injuries.

Dog bite

A dog may bite when it feels there is a threat to its position or accidentally while playing. Certain dogs are aggressive and may bite at the slightest provocation. A dog, infected with rabies, can bite even without a provocation.



Fig. 8.6: Dog bite

Why are dog bites dangerous?

A dog can scratch our skin with its paws or bite us, making a puncture or laceration in the skin. Whether a scratch or bite, it can lead to tetanus infection and needs immediate medical care.

The biggest danger from dog bite is 'rabies' infection. It is caused by a virus and affects our nervous system. The symptoms of rabies can occur even after years of dog bite. Once the symptoms of rabies appear, it is not possible to save the person. Thus, dog bites need to be taken seriously and a doctor must be consulted immediately.

What must be done after dog bite or scratches?

- Wash the wounded area immediately with soap and running water.
- If there is a puncture, cut or laceration, it must be covered with a dry dressing. The person must be taken to a doctor immediately.
- If the owner of the dog can be traced, the person must be informed about the incident and asked to take the dog to a veterinary doctor to check for the symptoms of rabies.
- If the bite is by a stray dog, there is always a possibility of rabies infection and the doctor must be consulted immediately.

Why a person with dog bite needs to be taken to a doctor immediately?

The doctor will give an injection of tetanus vaccine to prevent tetanus infection. The doctor can also provide appropriate care for the wound and prevent infection. Above all, the doctor will start the course of anti-rabies vaccine, which is a lifesaving treatment to protect the person from rabies. Anti-rabies vaccine is available in all major hospitals, Primary Health Centres and Community Health Centres.

What needs to be done in case of cat, rat, monkey or rabbit bite?

A bite by these animals also can cause tetanus-infected wound and rabies. All such cases must be treated like that of a dog bite.



Fig. 8.7: Cat bite

Preventing animal bites

- Do not tease or frighten animals.
- Always keep a safe distance from wild animals.
- Keep your hand out of pockets and do not open and throw any eatables, especially when monkeys are nearby.
- When an animal is agitated, move away from its path.
- Always get pet animals immunised against rabies.

Snake bite

Most snakes are non-poisonous in nature and people getting a snake bite die more because of fear and shock. However, it is difficult to identify poisonous snakes. Thus, all cases must be considered as bites by poisonous snakes.

What to do in case of snake bite?

- Call for emergency assistance immediately.
- Reassure the person.
- Ask the person, whom the snake has bitten, not move around but stay calm to decrease the flow of poison in the body.
- Immobilise the snake bitten area and keep it lower than the heart.



Fig. 8.8: Snake bite

- Wash the site of snake bite with soap and water.
- Take the person immediately to a Primary Health Centre, Community Health Centre or hospital.
- If the victim is unable to get medical care within 30 minutes, wrap a bandage two to four inches above the bite in order to slow the flow of the venom (snake poison). The bandage must be loose enough to slip a finger under it.

How can we save life from snake bite?

Snake anti-venom (an antidote to snake venom) saves life in poisonous snake bite cases. It is available in all major hospitals, Primary Health Centres and Community Health Centres. Immediately take the victim to a health facility (hospitals, Primary Health Centres or Community Health Centres) to save the person's life as emergency supportive care (like giving fluids or assisted respiration, etc.) is sometimes required in such cases.

Preventing snake bites

Most snake bites occur when one accidentally steps on a snake. However, there are precautions that can reduce one's chances of being bitten by a snake.

- Maintain a safe distance. Many people are bitten because they try to kill a snake or get too close to it.
- Stay out of tall grasses unless you have worn thick leather boots and remain on hiking paths as much as possible.
- Keep your hands and feet out of areas, which you cannot see (like rat holes).
- If you spot a snake, do not try to catch or kill it.
- Be cautious and alert when climbing rocks.

Assessment

The teacher can assess the students on the basis of the questions given below. The teacher can also construct more questions.

I. Answer the following questions

1. Describe the points to be kept in mind during child safety and security.

2. Define first aid. Why is first aid required?
3. How can you prevent injuries caused by animal attacks?
4. Describe in brief the treatment to be given in case of dog bite.
5. Explain how snake bites can be prevented.
6. What first aid steps must you take in the case of snake bite?

II. Write Yes or No

1. Keep sick pets away from children.
2. First aid is helpful in saving life.
3. Every snake is poisonous.
4. Dog bite leads to rabies infection.
5. Monkey bite is not harmful.

III. Practical Exercises

1. Students can be asked to prepare a report on visit to a Primary Health Centre.
2. Students can be asked to prepare a first aid box and a chart showing the items in it.

NOTES

Social Health

9 Unit

INTRODUCTION

Social health can be defined as the health of a person with reference to one's ability to interact with others. It also refers to the health of a society, in general.

Social health is one of the three major components of health. How the members of a society treat each other, and what kind of social environment prevails in the society also form a part of social health. It is also how customs and traditions guide the behaviour of individuals towards self, each other and the society as a whole. Social health deals with individual skills, social awareness and social norms, and reinforces a close relationship with perceptions like social functioning and social adjustments. Social support amongst members of the society can also be seen as a part of social health.

Who is a socially healthy person?

Being socially healthy means an individual's interests that focus on one's interpersonal relations with

Objectives

This Unit will help a teacher to enable the students to:

- understand the concept of social health.
- understand the relationship between health and society.
- learn how social customs and traditions affect social health.



Fig. 9.1: Social support among members of the society can be seen as part of social health

other members of the society and vice versa. Socially healthy persons have better chances of developing psychological and physical fitness, and promote personal growth.

ACTIVITY

9.1: Recognising a socially healthy person

The teacher may give a handout as given below and ask every student to put a tick (✓) mark in the appropriate column of 'Yes/Agree' or 'No/Disagree':

S.No.	Statements	Agree/ Yes	Disagree/ No
1.	I form friendships outside the family.		
2.	I often live in my own world.		
3.	I listen to others.		
4.	I take decisions impulsively.		
5.	I am respectful to myself, as well as, others.		
6.	I blame others for negative things in life.		
7.	I engage in only talking and not listening.		
8.	I am concerned about my own and others' interests.		
9.	I do not make fun of or bully anybody.		
10.	I appreciate all existing rituals in the society.		

After the students have responded to the sentences, the teacher must ask them to count their 'Agree/Yes' and 'Disagree/No' responses. If responses to serial number 1, 3, 5, 8, 9 are 'yes' or 'agree' and others are 'no' or 'disagree', it means the person is socially healthy.

The teacher asks the students to respond to the above statements by raising their hands. The teacher may explain the facts about these personality statements, and may even apply

some personality traits that are common for the age group of the students.

9.2: Assertiveness skills

Raju used to study all the time, whether at school or home. He always scored good marks. He did not have any other interests or hobbies. When he joined a new school in Class XI, he became friends with Zaheer and Moti. Both were keen cricketers. Raju started to play cricket with them and discovered that he was a good spin bowler. His parents are now concerned that he is spending too many hours in the playground, which may affect his studies.

Questions for discussion

1. Do you think Zaheer and Moti are a good influence on Raju?
2. Do you think that Raju's parents are justified in being concerned about his new hobby?
3. What role can Raju's teacher(s) play in decreasing his parents' anxiety?
4. Should Raju continue playing cricket? Why?

After discussion, the teacher concludes that:

- self-confidence and assertiveness are essential for maintaining positive relationships.
- trust is an important element in all relationships.
- there is a need for mutual respect and honesty in all relationships.

9.3: Qualities of a socially healthy person

The teacher may divide the students into groups of five–six members each. Each group is asked to discuss the qualities of a socially healthy person and note them down. A rapporteur of a smaller group would be asked to make a presentation to a larger group. The teacher notes down the important points on the blackboard and summarises the qualities as follows:

- Integrity
- Usefulness
- Forgiveness
- Sense of fairness
- Cooperation
- Healthy competition
- Understanding
- Listening skills
- Caring for the nature and others

There can be many qualities listed by the children. The teacher categorises the above mentioned socially healthy person's qualities in one column and others in another column. The teacher may conclude by stating that those who have the above mentioned qualities are considered as 'socially healthy persons'.

9.4: Caring for elders and the aged

Elderly members need special care and emotional security because with growing age functional ability of our body reduces. Muscles become weak, joints become stiff and vision gets impaired. Therefore, there is a need of developing healthy attitude and values among children to respect and take care of the elderly at home, neighborhood and society. The teacher may organise the following activity to help the students understand their attitude towards elderly people

The teacher may give a handout of the following statements to every student in the class and ask them to put a tick (✓) mark or answer in 'Yes' or 'No'.

1. While travelling in a public transport, always offer your seat to an elderly person.
2. Help the needy, such as the blind and elderly persons cross the road.
3. Help others climb staircases.
4. Enjoy playing loud music at night even when your grandparents are sleeping.
5. Offer to serve food to your grandparents, elderly relatives, friends and neighbours.

6. Spend time with your grandparents at home.
7. Help your grandparents to do their daily chores.
8. Go for outings with your grandparents or the elderly sometimes.
9. Enquire about their well-being and requirements every day.
10. Once in a while watch TV or listen to music with them.
11. Read out for them and tell them about news item of importance in the country or world so that they remain informed at all times.
12. Provide elderly persons space and opportunity to walk first in crowded situations.

If you have more than 50 per cent 'yes', it shows that you are a socially concerned person toward elderly people. If a member has less than 50 per cent 'yes', it is a matter of concern and there is a need to change one's attitude towards elders.

9.5: For relaxation

The teacher can organise recreational games with the students as suggested in Unit 8. The games will help in relaxation and developing leadership qualities, listening skills and empathy, and help the students in decision making. These recreational games will also help develop confidence among the students. The teacher can ask the students to develop more recreational games.

9.6: Me and my relationships

The teacher encourages the students to reflect on which relationships are the strongest and the closest to them. For example, a friend or a relative could also be closer for some students.

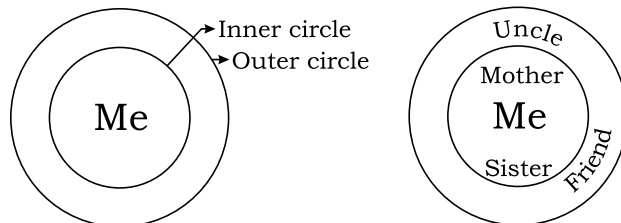


Fig. 9.2: Relationship circle

1. Write 'Relationships' on the blackboard and ask 'what do they understand by the word and what is the importance of relationships in their life?'
 2. Summarise the students' responses by emphasising that relationships are an important aspect of our lives.
 3. Ask the students to take an A4-size paper, write 'Me' at its centre and encircle it. Next, ask them to draw two circles around 'Me' as shown in Fig. 9.3.
 4. Explain the meaning of the two circles.
 - (a) Inner circle: Those people who you love dearly and with whom you share a lot of time and emotions are standing the closest to you in the 'inner circle'.
 - (b) Outer circle: Those people with whom you are not connected emotionally, i.e., you know them but do not feel close to them are standing in the 'outer circle'.
 5. Explain that people with whom the relationship is the strongest must be placed closest to 'Me'. Ask the students to plot their relationships on the map.
 6. Imagine you are standing in the centre of the circle. All people or relationships in your life — family, relatives, friends, teachers, people from school or neighbourhood, etc., are standing around you in one of the two circles.
 7. It does not matter how many relationships we have plotted on the map or how many are in the inner or outer circle. The important thing is to know whether we are satisfied and happy with our map.
- Each person's relationship map is different and unique. Some people may be closest to their family members (such



Fig. 9.3: Relationship circle

as parents, siblings or relatives) only, whereas, others may also bond with people outside their family (such as, friends and teachers). Some people may have close relationships with people from both within and outside their families (Fig. 9.4).

The teacher concludes by saying that people who have good relationships with others are considered as socially healthy.

FACT SHEET

Social health determinants

Economic and social conditions and their distribution among the population are the main social health determinants that influence individual and group differences in health status. Social health determinants are also considered as risk factors in one's living and working conditions. According to the World Health Organization (WHO), "This unequal distribution of health facilities is not in any sense a 'natural' phenomenon but is the economic arrangement which enables already well-off and healthy to become richer and the poor who are more likely to be ill, become even poorer. This is the result of bad policies." Workers and assisting personnel provide population-based preventive, curative and rehabilitative care services. This care is extended at the primary, secondary and tertiary (super-specialty care) levels. The social and economic indicators of health are as follows:

1. Number of people
2. Income
3. Income distribution
4. Working conditions
5. Adult literacy rate
6. Housing facilities
7. Food availability
8. Security



Fig. 9.4: A teacher discussing qualities of a socially healthy person

Qualities of a socially healthy individual

Each individual in the society has basic social needs, such as recognition, feeling of belongingness, self-respect, love and affection. Attainment of these social needs ensures the development of the social health of an individual. Education plays an important role in order to ensure the attainment of the above qualities.

Listening skills

A person has to concentrate, understand, respond and remember what is being said. For active listening, it is necessary to listen to the speaker(s) — what the person is saying and how. The speaker is not to be interrupted often. The listener is expected to avoid distracting movements and paying attention to outside disruptions.

Attending skills

Students need the focused attention of the teacher while interacting. The teacher is expected to make the students feel comfortable and respond to them with interest. The teacher needs to win the confidence of the students through attentive listening. The students are not to be criticised or put down. The teacher has to encourage the students to speak.

Negotiation skills

To negotiate means to deal or bargain with another person or group to confer for mutual agreement, manage and cope with a certain situation successfully. It is true that without even realising it, negotiation is something we do all the time not only for business purpose but also in our social lives to resolve our problems or conflicts. One also negotiates with oneself quite often.

These skills help one in maintaining a healthy and happy life, and most importantly, overcoming peer pressure. The students have to develop skills for understanding others' points of view, being firm on one's values and beliefs, and being assertive

rather than aggressive. They have to negotiate not only with others but also with the self in order to cope with emotions and stress, withstand peer pressure and say 'no' to harmful behaviour.

Negotiation skills may be developed and sharpened through experience and practice. Educational interventions for negotiation skills development have to involve the students in activities that focus on the following abilities:

1. being hard on the issue and soft on the person(s): talking firmly
2. position on the issues without spoiling the relationships with the other person or other members of the group
3. focusing on needs and not positions: emphasising on the points needed to convey your point of view on the issues without considering whether the position you are taking is being liked or not
4. responding and not reacting: being assertive with the other person or other members of the group with patience without being aggressive
5. emphasising on common ground: insisting on whatever common ground has been covered and not disrupting the negotiation in between
6. being inventive about options and re-focusing on the issue: trying to put forth innovative points in favour of the position you have taken
7. making clear agreements: reaching a consensus on clear terms

Assessment

The teacher can assess the students on the basis of the following questions. The teacher can also construct more questions.

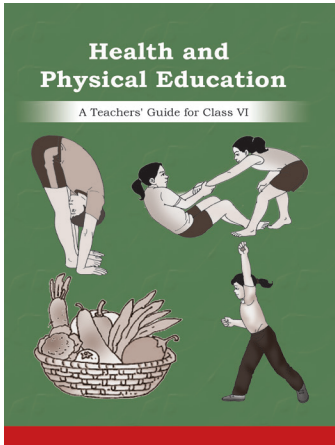
I. Answer the following questions

1. Explain the meaning of 'social health'.
2. What are the determinants of social health?
3. Who is a socially healthy person?

4. List the characteristics of a socially healthy person.
5. List the characteristics of a socially healthy person that are present within you.
6. Share one characteristic of a socially healthy person that you want to develop within yourself. Why?
7. What does the term 'custom' mean to you?
8. Explain how social dimensions affect the health of an individual.
9. Discuss gender preferences in relation to social health.
10. Make a list of socially desirable behaviours.

II. Write 'Yes' or 'No'

1. Social health deals with individual skills and social skills.
2. Social support amongst members of the society can also be seen as part of social health.
3. Many customs have a negative impact.

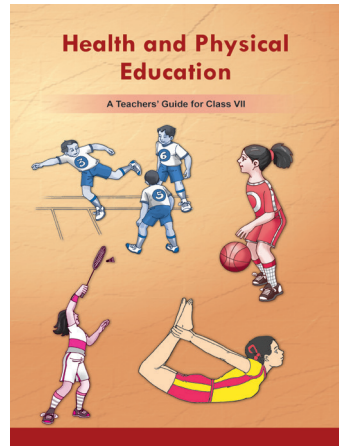


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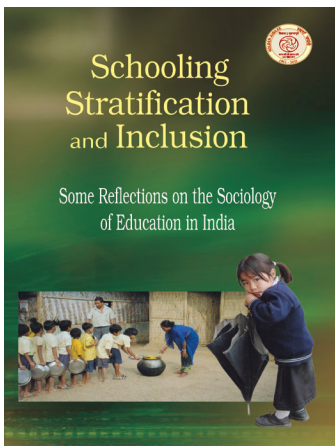


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