



# **Diabetes Awareness and Prevention Education**

## **Peer Leader Manual**





***Congratulations!***

*You have been  
selected by the students  
in your class  
to be a*

***Peer Leader***

*You were chosen because  
your classmates*

***Admire***

*and*

***Respect you!***





# Acknowledgement

The manual is developed by Arogya World ([www.arogyaworld.org](http://www.arogyaworld.org)) and is based on materials developed in partnership with HRIDAY (Health Related Information Dissemination Amongst Youth - [www.hriday-shan.org](http://www.hriday-shan.org)).

The original pilot programme was supported by an educational grant from Merck/MSD India to Arogya World.

The manual is designed to promote healthy living and prevent diabetes and other NCDs, noncommunicable diseases.

## Contributors:

- Ms. Shalini Bassi, Head Programmes, HRIDAY
- Ms. Ima Chopra, Project Officer, HRIDAY
- Ms. Sakshi Dudeja, Health Educator, HRIDAY
- Ms. Sukhmani Singh, Health Educator, HRIDAY

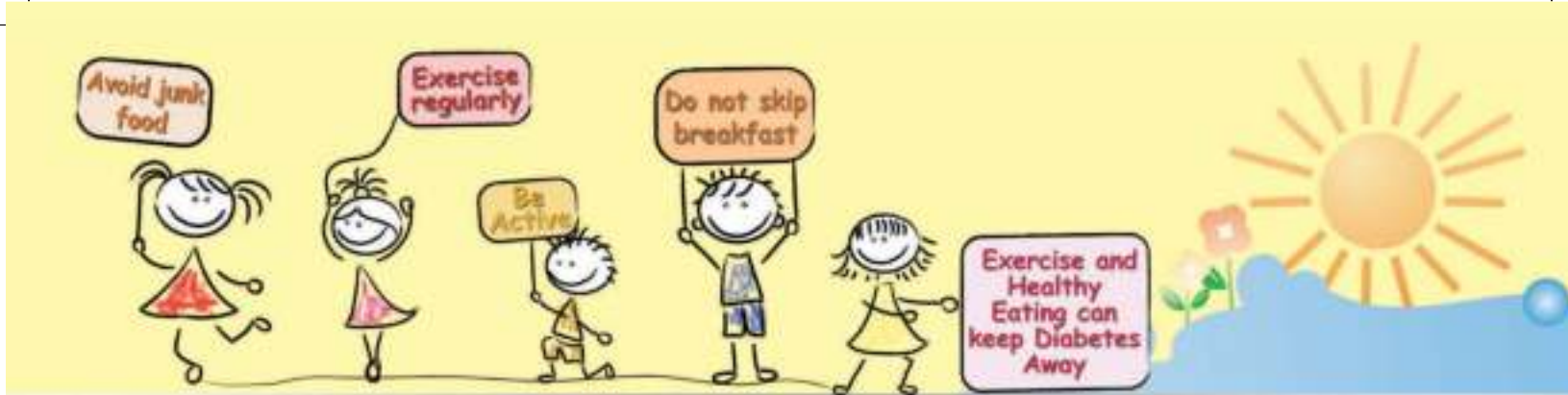
## Reviewers

The manual was developed with the input of Shalini Bassi and her team at HRIDAY.

- Dr. Monika Arora, Senior Director, HRIDAY and Head-Health Promotion and Tobacco Control, Public Health Foundation of India
- Dr. Ranjani Harish, Head – Translational Research, Madras Diabetes Research Foundation, Chennai, India
- Dr. Linelle Blais, Director, Diabetes Training and Technical Assistance Center (DTTAC), Associate Professor, Department of Behavioral Sciences and Health Education, Rollins School of Public Health, Emory University
- Dr. Zoe Hellman, Dietitian, Weight Watchers Company
- Dr. Francine Kaufman, Chief Medical Officer and Vice President, Medtronic Diabetes, Distinguished Professor Emerita of Pediatrics + Communications at USC, The Center for Diabetes, Endocrinology & Metabolism, Children's Hospital Los Angeles
- Mr. Sukanti Ghosh, Managing Director, India APCO Worldwide
- Ms. Andrea Falls, Executive Vice-President, Consumer Marketing, Edelman
- Dr. Nalini Saligram, Founder &CEO, Arogya World



Topic	Page No.
Background and Significance	01
Activity No.1: Way to Health	03
Worksheet No.1	06
Activity No.2: Climb the Health Ladder	09
Worksheet No.2	14
Activity No.3: "Pass it On" - The Traffic Signal	15
Worksheet No.3	21
Activity No.4: Jump Forward and Race with Pace	22
Activity No.5: Doctor says "Be Fit, Eat Right"	28
Worksheet No.5	29
Feedback Forms:	
· Activity No.1	32
· Activity No.2	33
· Activity No.3	34
· Activity No.4	35
· Activity No.5	36



## Background and Significance

How often have you heard this saying?

Health is wealth

And do you believe in this?

The World Health Organization defined good health as; "Health is a state of complete physical, mental and social well being, and not merely the absence of disease or infirmity (illness)."

Health is not just how you feel, it's how you are functioning; on every level — physical, mental, emotional and social. It includes a feeling of well-being and freedom from fear of disease and untimely death.

How often you or your school friends have to miss school because of ill-health. What problems you/they face on missing school?

- People who are not healthy are not able to work effectively
- Unhealthy children/adults are not able to enjoy anything in life
- They are not able to appreciate the beauty of each day; they become irritable and do not live up to acknowledge the joys of life; be it with family or friends or for that matter all alone

Good health is all about striking the right balance between healthy eating and regular physical activity. One who has a healthy lifestyle i.e. one who eats well and is physically active will:

- Build strong bones
- Grow and develop healthy
- Improve his/her concentration at school
- Maintain a healthy weight
- Be alert and active

Unhealthy habits can lead to problems in later life, such as:

- Type 2 diabetes
- High blood pressure and high cholesterol levels
- Some types of cancers
- Heart related problems
- Stroke
- Joint problems and breathing problems
- Being overweight and obese and its related problems

To help stay fit and healthy, children should:

- Get active each day
- Choose water as a drink
- Eat more fruit and vegetables
- Turn off the TV or computer and Get Active
- Select healthier eating alternatives
- Quit unhealthy vices and habits

Prevention is better than cure... And it's cheaper too!





**Arogya World** is a US based non - profit organisation striving to change the course of chronic disease and also works to reduce the global impact of chronic NCDs, one community at a time. To further advance this work , Arogya World India Trust was established in Bengaluru , India in 2012. Our India based programs are building a chronic disease prevention model for the developing world. Through programs such as mDiabetes , Healthy Schools, mHealth , My Thali and Healthy Workplaces , we are educating and empowering people to take definitive steps towards leading healthier lives.

**Description of the Programme**

This is a two-year peer-led program with compelling age-appropriate activities designed for students in class VI and VII. The aim is to encourage the adoption of increased physical activity and healthy eating habits in school children so that they can prevent or delay diabetes later in life. A pilot done in 2000 children in private schools and government schools in Delhi with HRIDAY in 2011-2013 showed significant public health impact. Since then the program has been adapted to rural South India with Agastya International Foundation and has been implemented among thousands of school children.

**Description about the Manual**

This manual includes 5 classroom activities for sensitizing students of classes VI and VII about diabetes and its prevention.

**What does it mean to be a Peer Leader?**

As a Peer Leader, you can play a significant role in this programme and the success of these activities. You were selected for this position by your classmates and teachers, because you are respected and admired by them. Throughout this year, you will work with your teacher to implement these activities. Your job as a peer leader is very important to the success of this programme. You will lead many of these activities, facilitate small group discussions, will help engage your classmates and motivate them to participate in this programme.



**Selection of Peer Leaders**

Four students from each section (one per 10 students) can be

selected as peer leaders by the teacher coordinator. Peer leaders should be those students who have good leadership qualities and are respected, admired and liked by other students in the class.



You as a peer leader will help us achieve these goals. Congratulations on being selected as a PEER LEADER. You are chosen a peer leader by your teachers and class mates because you are respected and admired by them. You will help your teacher in creating awareness about diabetes by helping her conduct activities described in this manual. You will also motivate your classmates to fully participate in all the activities.







## ACTIVITY NO.1

### Name of the Activity: Way to Health

#### Background Information

#### A Healthy Way of Living

Health is not just about avoiding a disease or illness. It is about physical, mental and social well-being too. Lifestyle is how we live, what we eat and drink, the physical activities we engage in. Lifestyle can be healthy or unhealthy based on food choices, activity level and behaviour. If one follows a good lifestyle, one could fall ill less often; be full of energy and be happy. With a bad lifestyle, life could be cut short and made difficult by disease and disability. Picking up good habits and leaving harmful ones during childhood, may help you to remain disease free and lead a happy life.



#### Steps to Healthy Living



#### With a Healthy way of living one can

- **Look Healthy** with strong muscles, bright eyes, healthy skin and hair.
- **Feel Good** with more energy, sleep better and be more relaxed.
- **Be Happy** and perform better in studies at school and enjoy life much with family at home and friends at play.

You can choose to live healthy by eating healthy food and being active.





## ACTIVITY NO.1

**Name of the Activity:** *Way to Health*

### Material Required

Worksheet No.1-Identify the Action  
Pen/Pencil

### Class Time

40-45 minutes

### Objectives

- To explain the concept and educate the students about various healthy lifestyle practices.
- To initiate healthy practices in the day-to-day lifestyle of the students.
- To recognize the importance of healthy lifestyle practices in disease prevention.
- To create conducive class room environment where in students can maintain these practices.



### Steps to follow

1. Your teacher will brief the students about the objective of the programme and activities to be undertaken under the project. She will then introduce you to your group. Each group will comprise of 10-12 students.
2. You will be responsible for coordinating all the activities in your group.
3. Help your teacher initiate a classroom discussion on the following topics:
  - What is health?
  - What are healthy and unhealthy lifestyles?
  - What is the importance of healthy lifestyle in childhood?
  - What is the significance of healthy lifestyle in preventing lifestyle related diseases?
  - How to maintain a healthy life?
4. After the classroom discussion, distribute the Worksheet No.1 "**Identify the Actions**" to all the students of your group. The worksheet has pictures highlighting the various components of healthy and unhealthy lifestyle.





5. Teacher will instruct the students to identify and classify the given activities as healthy and unhealthy habits (*Classify pictures in Table 1*).
6. Teacher will also ask the students to mention three healthy and three unhealthy habits which they do every day (*Classify habits in Table 2*).
7. Collect back the worksheet and check the responses of your group by referring to the answers given in this manual.
8. Return the worksheets to the students.
9. Your teacher will sum up the discussion by highlighting the importance of healthy lifestyle practices.

#### **Learning Outcomes**

- The activity will be an engaging discussion with students and a means of learning with fun.
- Students will learn about the importance of following healthy lifestyle practices.



# WORKSHEET No1: Identify the Action

Name:..... Date:.....

Class and Section:...../.....

Aren't these familiar scenes? How often do you go out to play with your friends or do you rather prefer to watch cartoons or play your favourite computer games?

Can you identify the actions from the picture and classify these as healthy and unhealthy habits?

Table 1 (*Identify healthy and unhealthy habits from the given set of pictures*)

Healthy Habits

Unhealthy Habits

Table 2 (*List 3 healthy and 3 unhealthy habits which you follow in your day to day lifestyle*)

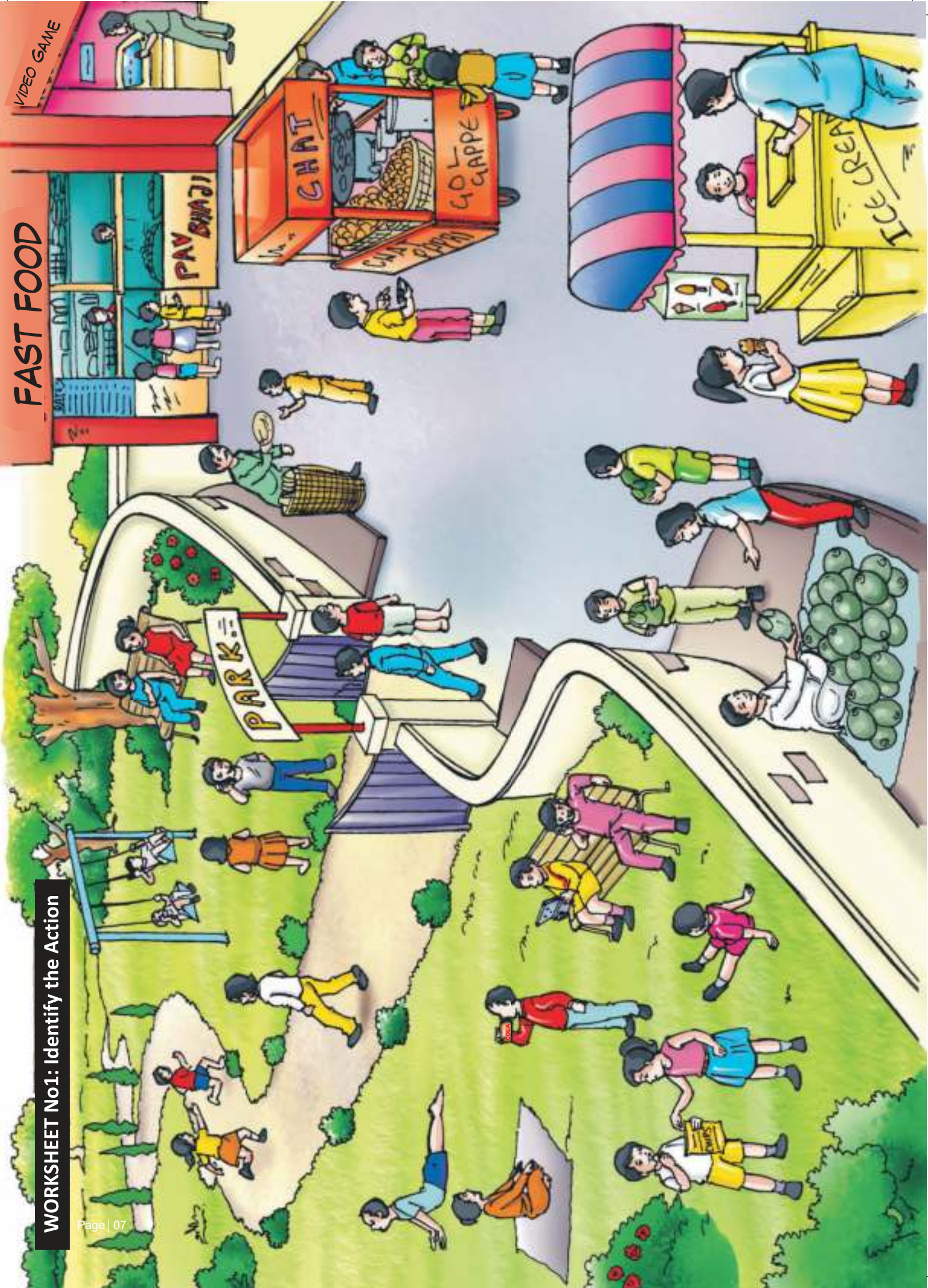
Healthy Habits

Unhealthy Habits



# FAST FOOD

## WORKSHEET No1: Identify the Action



# WORKSHEET No1: Identify the Action

Aren't these familiar scenes? How often do you go out to play with your friends or do you rather prefer to watch cartoons or play your favourite computer games?

Can you identify the actions from the picture and classify these as healthy and unhealthy habits?

## Answers

Table 1 (*Identify healthy and unhealthy habits from the given set of pictures*)

Healthy Habits
Children are running
One child is walking
Two children are exercising/doing yoga
Children are playing on the swings
Children are purchasing and drinking coconut water

Unhealthy Habits
Child is drinking cola
Children are eating chips
Two girls are sitting on the bench and talking
One boy is playing video game sitting on the bench
Two children are talking on the mobile phone
Children are buying food from the fast food corner, buying papad, having chat and ice cream
One child is playing video game in the video game parlour





## ACTIVITY NO.2

### Name of the Activity: Climb the Health Ladder

#### Background Information

##### What is Diabetes?

Have you ever heard someone talk about 'sugar', not the sugar which you put in a glass of milk or in 'nimbu pani'. We want you to learn about a disease called 'Diabetes mellitus' which in a layman's language is often referred to as "sugar ki bimari".

To know about diabetes you must learn about two terms '**Glucose**' and '**Insulin**'. When we eat food, it is digested in the digestive tract. Most of the food we eat is broken down into glucose. **Glucose** is a form of sugar in the blood - it is the principal source of fuel for our body which gives us energy and helps us grow.

**Insulin** is a hormone that is produced by the pancreas. Insulin makes it possible for our cells to take in the glucose.

A person with diabetes has a condition in which the quantity of glucose in the blood is too high (hyperglycemia).

If someone is diabetic, the pancreas makes little or no insulin or the cells cannot use insulin very well. Glucose builds up in the blood and cannot get into cells resulting in high blood glucose levels. If blood glucose stays too high, it can damage many parts of the body such as the heart, eyes, kidneys, nerves and blood vessels.

#### Types of Diabetes

**Type 1 Diabetes Mellitus**, previously referred to as Juvenile Diabetes or Insulin Dependent Diabetes Mellitus (IDDM), develops when the pancreas does not produce insulin at all. Type 1 diabetes is the least common and accounts for only 5 – 15% of all people with diabetes.

**Type 2 Diabetes Mellitus**, previously referred as Non-Insulin Dependent Diabetes Mellitus (NIDDM), occurs when the body is able to produce some insulin, but not enough for it to function properly, or when the cells in the body do not react to insulin - known as insulin resistance. It accounts for 85% - 95% of all people with diabetes. More children are now being diagnosed with this condition, some as young as 7 years of age.

**Gestational Diabetes Mellitus (GDM)** is a type of diabetes that develops only during pregnancy.

**World Diabetes Day is on November 14th every year.**

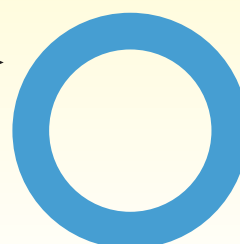
#### We will learn about Type 2 Diabetes:

- Type 2 diabetes can happen at any age, young people and children can develop type 2 diabetes.
- It can be prevented by eating the right foods and keeping active.

**What is this blue circle?** →

- The universal symbol for diabetes
- The purpose of the diabetes symbol is to give diabetes a common identity

(Source: International Diabetes Federation)





**What puts one at risk?**

- Unhealthy eating habits (too much junk food, low intake of fruits and vegetables, low fibre intake)
- Being overweight/obese
- Physical inactivity/when you don't get enough physical activity
- Mother, father, brother, sister or grandparents have or had diabetes
- Addictions like tobacco use, drug and alcohol abuse
- High blood pressure
- High cholesterol level
- Stress







### Know the warning signs of diabetes

The signs can be so minor that we don't even think about them as being an early warning sign of diabetes at all. But, it is extremely important to get the right medical assistance as soon as possible. Take a look at these diabetes symptoms, if anyone spots two or more of them, he/she should seriously consider getting checked for diabetes.

- Increased frequency of urination
- Increased hunger
- Unusual thirst
- Blurred vision
- Feeling of tiredness
- Weight loss without any reason
- Numbness or tingling in feet and/or hands
- Frequent infection of the skin
- Delayed wound healing
- High cholesterol level
- Irritability

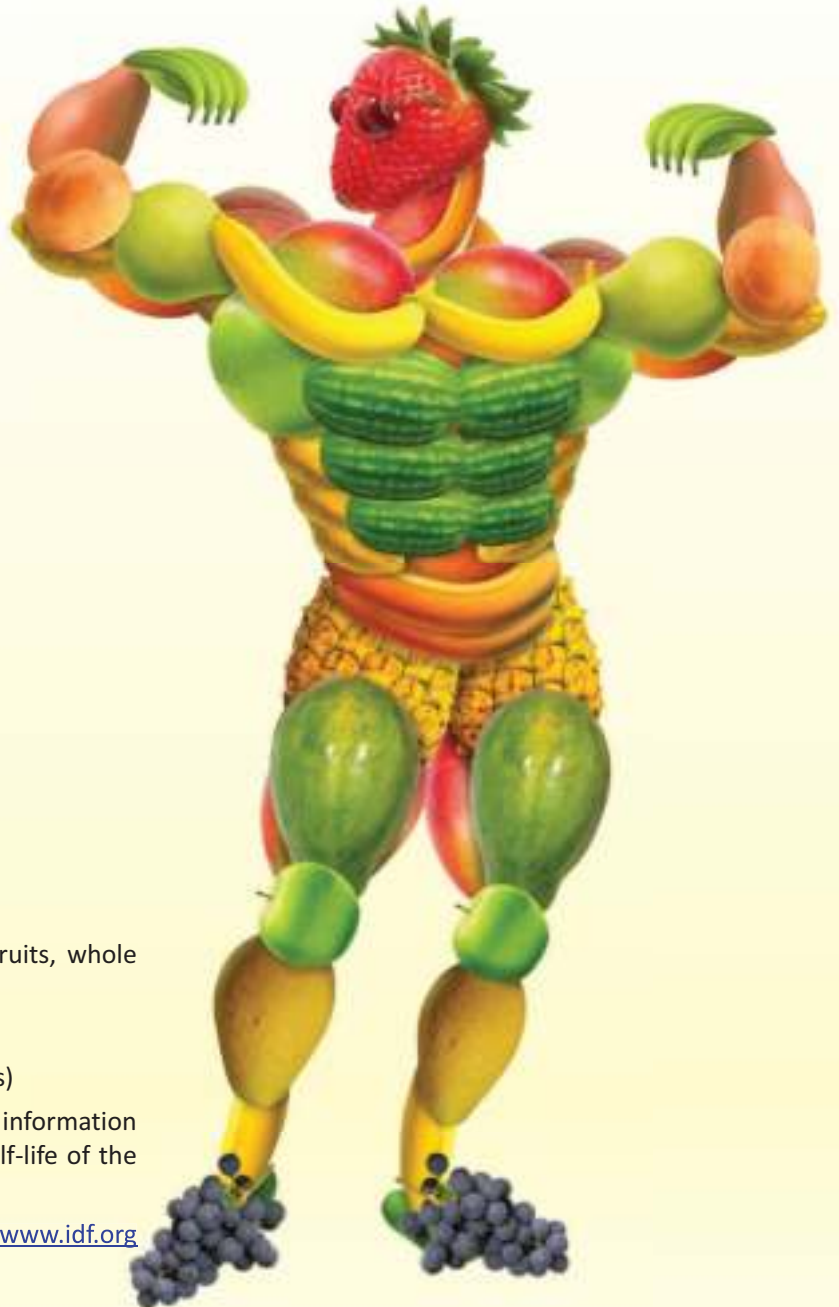




## Do you know?

### People with type 2 diabetes are:

- Four times more likely to develop **heart disease and stroke**
- Fifteen times more likely to have an **amputation**
- Develop **kidney damage** at three times the rate of people who do not have type 2 diabetes
- **Eye damage** caused by type 2 diabetes (retinopathy) affects one in six people with type 2 diabetes

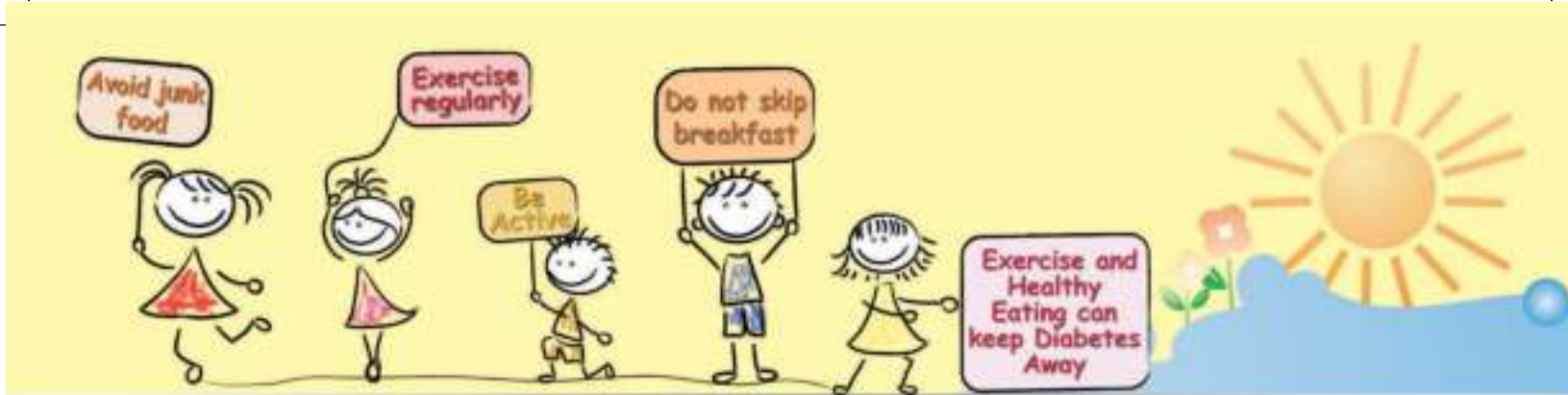


### Ways to prevent and control diabetes

- Maintaining a healthy body weight
- Be physically active regularly
- Maintain a healthy balance in your diet
- Do not include too much fat or sugar in your diet
- Eat foods that are high in fibre like salads, fruits, whole grains, cereals, whole pulses and its products
- Avoid tobacco use, drug and alcohol abuse
- Avoid consuming aerated drinks (e.g. cola drinks)
- Read the food label on packaged food items like information about the nutritional value of a food and shelf-life of the food product

For more information on diabetes, you may refer to [www.idf.org](http://www.idf.org) (International Diabetes Federation)





## ACTIVITY NO.2

**Name of the Activity:** *Climb the Health Ladder*

### Material Required

Snakes and Ladders Game set (Worksheet No.2-Climb the Health Ladder; dice set and counters)

### Class Time

40-45 minutes

### Objective

To understand about diabetes and learn the ways to prevent the onset of diabetes.

### Steps to follow

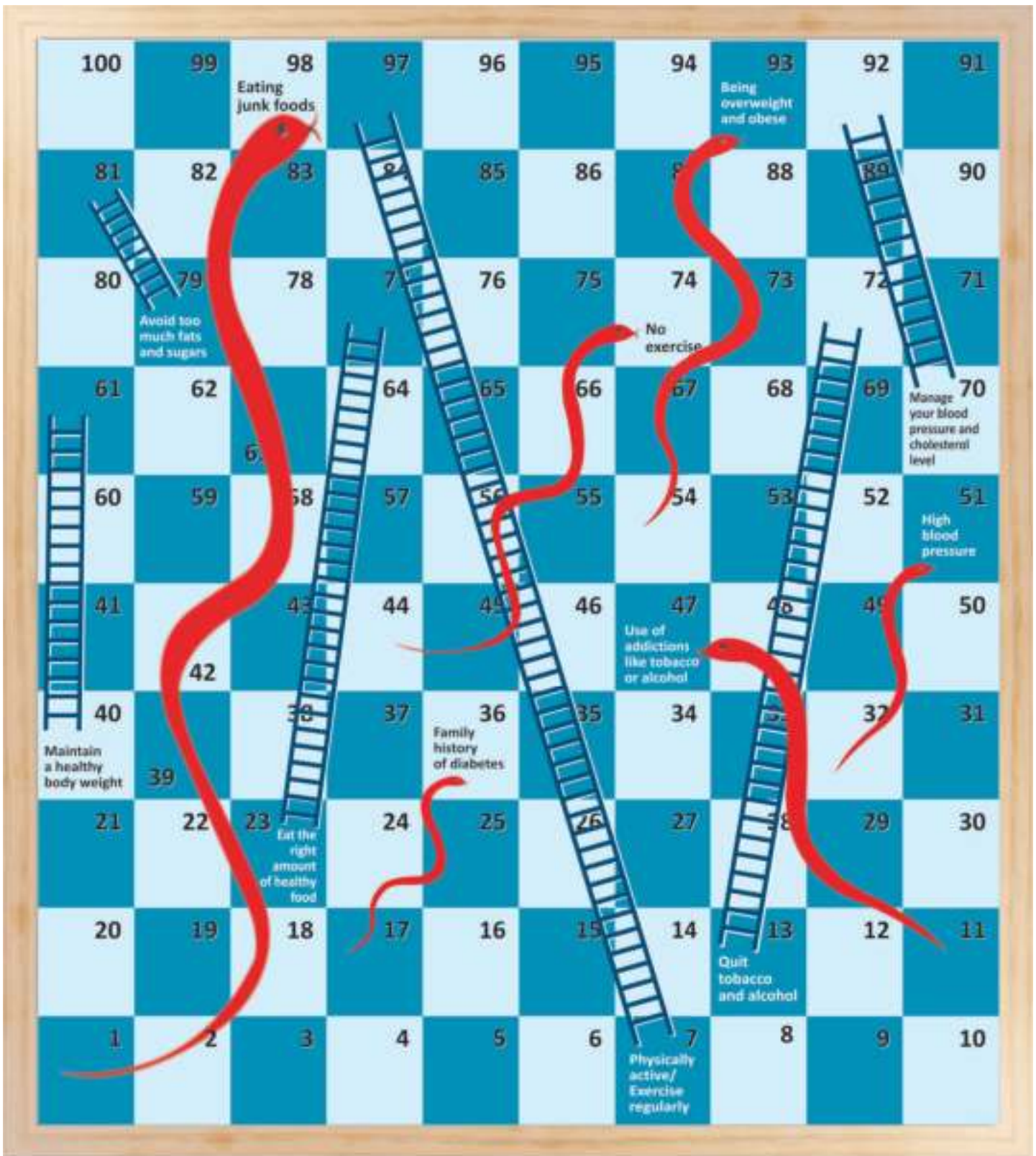
1. Your teacher will introduce the activity to the students and lead a classroom discussion on the following topics:
  - What is Diabetes?
  - Types of diabetes?
  - What puts one at risk of getting diabetes?
  - Risk factors of diabetes?
  - Ways to prevent and control diabetes?
2. Your teacher will divide the class into small groups, i.e. 4 students in one group. Help your teacher in dividing the class.
3. Distribute Worksheet No. 2 "*Climb the Health Ladder*", along with the dice and counters to each student. For the purpose of conducting the class room activity only 1 out of 4 students can take out his/her game set.
4. Your teacher will give the details of the game (including how to play this game). Each group will play the game.
5. After each group completes the game, help the teacher to reinitiate the discussion and encourage the students to participate by sharing their knowledge about diabetes. The teacher will sum up the discussion by giving their perspective about preventing the onset of diabetes by following healthy lifestyle practices.
6. Each student will take the game set home and ask them to take out sometime to play the game with their family members.

### Learning Outcome

Students learn about diabetes, its risk factors and ways to prevent diabetes using a game.



# WORKSHEET No.2: Climb the Health Ladder





## ACTIVITY NO.3

Name of the activity: "Pass it On" -The Traffic Signal

### Background Information

#### Healthy Nutrition

Nutrition is very important for everyone, but it is especially important for you all because it is directly linked to all aspects of your growth and development; factors which will have direct ties to your level of health as adults. You reap what you sow; you can enjoy the benefits of healthy eating in your adulthood and old age.



#### YOU ARE WHAT YOU EAT



Eating habits start developing in childhood so awareness and adoption of healthy dietary practices in childhood ensures good health throughout life.

Unhealthy eating habits can be a cause of various chronic diseases - such as diabetes, cardiovascular diseases, cancers, obesity, etc. Diet and inactivity-related diseases are expensive. Better nutrition could reduce the cost of heart disease, cancer, stroke, and diabetes.

#### A guide for healthy eating

**Balanced Diet** can be defined as one which contains different types of foods in such quantities and proportions that the needs for all the nutrients are adequately met and a small extra allowance is made as a margin of safety.

#### What are Food Groups?

Food can be divided into different groups. We need to eat from each of the groups to stay healthy. A diet consisting of foods from several food groups provides all the required nutrients in proper amount. A nutritionally adequate diet is essential for optimal growth and development. The major food groups are:

- Cereals and Whole grains (Rice, Chappati, Bread, etc.): Eat adequately (6 servings per day)
- Meat, Pulses/Legumes and Nuts: Eat moderately (2-3 servings per day)
- Milk and milk products like curd, cheese, etc.: Eat Moderately (2-3 servings per day)
- Fruits and vegetables: Eat liberally (5-6 servings per day)
- Fats/oils and sugars: Eat sparingly

**Serving size** means the recommended portion of food to be eaten.

- **Energy Providing Foods (Go Foods):** Foods which give us energy to do our everyday work, e.g. cereals (chappati, rice, etc.), oils, fats and nuts.
- **Body Building Foods (Grow Foods):** Provide mainly protein for growth repair and replacement of tissues, e.g. pulses/dals/ milk and milk products/egg, chicken, fish, etc.
- **Protective Foods (Glow Foods):** Foods which protect us from illness and keep us healthy, e.g. green leafy vegetables, other seasonal vegetables/fruits.





## Food Pyramid

The Food Guide Pyramid is a nutritional guide divided into sections to show the group of foods and proportions you need to stay healthy. It is an outline of what to eat each day. The base of the pyramid is made up of foods that should be the foundation — or the bulk — of your healthy diet. In contrast, foods you should eat in smaller amounts or less frequently are shown in the smaller sections of the pyramid. Each food group provides different nutrients and no single food group can supply all the nutrients our body needs. The food pyramid can help to:

- understand how to eat healthy.
- choose from a variety of foods to get the nutrients you need.
- suggested serving sizes to control the amount of calories, fat, sugar or salt in your diet.



**Empty calories:** Empty calories are calories found in foods with little or no vitamins, minerals, fibre or other nutrients such as soft drinks, soda, pastries, candy, and table sugar. Empty calories are typical of 'junk' foods.

**Junk food:** Junk food is usually a term used to describe foods that are not particularly good for our health and in fact can be harmful to our health. Unhealthy foods are those containing little or no proteins, vitamins or minerals but are rich in salt, sugar, fats and are high in energy (calories). Some examples are chocolates, artificially flavoured aerated drinks, potato chips, sweets, burgers, chips, ice creams, french fries, etc.






*Source: Dietary Guidelines For Indians  
A Manual, National Institute of Nutrition, 2010.*





### For a Healthy Diet

You can notice a lot of variation in the way the food is cooked and processed. Vegetable sandwich made of white bread comes in the yellow zone, but when the same sandwich is made in brown bread or dalia bread, it becomes a very healthy food item and comes in the green zone. Based on the way food items are prepared, they can be put under three different zones i.e. red, yellow and green.

- 
**Red zone** - These foods are rich in fat and in refined carbohydrates/sugars, low in fibre. These should be eaten in very limited quantities.
- 
**Yellow zone** - These foods should be eaten in moderation since they are low in fibre and have moderate amount of fat.
- 
**Green zone** - These foods are healthy choices because they are high in fibre and low in fat.

Food can move from green to the red zone depending on the method of processing and cooking.

Food items	Green zone	Yellow zone	Red zone
<b>Cereals</b>	Whole grain cereals and products	Refined cereals and products	Cakes, pastries & biscuits
• Rice	Steamed rice, steamed brown rice	Pulao, polished steam rice	Fried rice / biryani
• Bread	Whole wheat bread and dalia bread	White bread	
• Indian Bread	Whole wheat flour like roti / chappati	Plain naan (made from white flour)	Butter naan/puri/parantha
• Noodles	Steamed noodles		Deep fried noodles
• Potatoes	Baked potatoes		French fries
<b>Pulses</b>	Boiled or steam peas, whole / husked dals like whole moong and kidney beans like rajmah, soyabean, lobia, etc.		Dhuli / dehusked dals
<b>Vegetables and Salad</b>	Steamed vegetables, green salad	Sautéed vegetables, salad with low-fat dressing like lemon juice, vinegar or low-fat curd, olive oil	Deep fried vegetables, salad with mayonnaise
<b>Fruits</b>	Whole fruits like apple, peach, guava, etc.	Unsweetened fruit juices	Sweetened fruit juices
<b>Milk and milk products</b>	Low fat milk / skimmed milk and its products	Toned milk and its products	Full fat / cream milk like whole milk and its products
<b>Meat</b>	Lean meats like fish and poultry	Processed meats like ham	Fatty red met like mutton, processed meats like sausage rolls, salamis
• Fish	Steamed, grilled or roasted fish	Fish curry	Fried Fish
• Chicken	Steamed, grilled or roasted chicken	Chicken curry	Butter chicken
• Eggs	White of eggs		Egg yolk
<b>Fat</b>	Olive oil, mustard oil, or any refined oil		Butter, desi ghee
<b>Sugar</b>			Chocolate, confectionary, sweetened drinks e.g. cola drinks, etc

Source: International Diabetes Federation (IDF), 2005





**Importance of Breakfast!**

Breakfast is the most important meal of the day because you do not eat anything during the night and your stomach is empty in the morning. Not eating breakfast is like starting on the car trip with no petrol in the tank of the car. By breaking the fast from the night, the brain is provided with nourishment to get it going again.

If you do not eat a good breakfast you will become tired in school, have shorter attention spans, decreased classroom performance, including poor test scores and grades. You can also suffer fatigue, nausea and headache.

In a misguided attempt to cut calories, many children skip meals, particularly breakfast. Not only does this affect academic performance, it also results in a higher overall caloric intake throughout the day.

**Tips to make time for breakfast**

- Do some of your morning work the night before, such as arranging your school uniform and getting backpacks ready for school.
- Set the alarm for 15 minutes earlier to allow more time to eat breakfast.

**Healthy food choices: A way of life!**

- Eat a balanced diet. Include foods from all food groups
- Eat plenty of fresh fruits and vegetables every day
- Eat foods that are high in fibre like whole grains, cereals, whole pulses and its products instead of refined grains and dehusked pulses
- Eat fresh foods rather than packaged foods
- Avoid intake of junk foods e.g fried foods, chips, samosa, etc
- Do not include too much fat or sugar in the diet
- Don't skip meals
- Avoid consuming aerated drinks (e.g. cola drinks)
- Drink atleast 8-10 glasses of water daily
- Eat your breakfast regularly
- Read the food label on packaged food items like information about the nutritional value of a food and shelf-life of the food product







## ACTIVITY NO.3

Name of the activity: *“Pass it On” -The Traffic Signal*

### Material Required

Worksheet No.3 - Make Your Own Recipe  
 Pen / pencil  
 4 set of cards of three different colours- Red, Yellow and Green  
 Set of stickers (Red, Yellow & Green)

### Class Time

40- 45 minutes

### Objectives

- To recognize the importance of a balanced diet.
- To introduce to the concept of the food pyramid, different food groups and food zones.
- To educate about the ways of cooking by which a food can be made healthier.



### Steps to follow

1. Your teacher will explain the activity to the students and also introduce you to your group.
2. Help her conduct a classroom discussion on:
  - What are healthy and unhealthy foods?
  - What is a balanced diet and what is its importance?
  - What are different functions of food?
  - Food pyramid, food zones (*based on the colours*) and food groups and give examples for each food group.
  - How food can move from green to the red zone depending on the method of cooking and processing.
3. Help your teacher divide the class into three to four groups with 10-12 students in each group.
4. Tell each of the groups to form a circle and hand over the 3 colour cards (provided by HRIDAY) to any three students within the circle.
5. Start the activity and tell the students to start clapping and pass the cards round from one student to the other in the circle (*Similar to playing passing the parcel*).
6. At a random point of time the teacher will tell students to stop clapping, select 1 group out of the formed groups, tell the 3 students holding the cards to identify the food zone according to the card colour and to speak about the foods that belong to that particular colour zone (*Speaking time should not exceed 1 minute*).





7. Repeat this activity and follow the same procedure as discussed in steps 5 and 6 (*Select a different group every time*).
8. The teacher will sum up the discussion while laying stress on consuming food items in the 'Green Zone' and explaining that food can be made healthier by the way it is cooked.
9. After this activity is complete with every group, distribute Worksheet No. 3 "**Make Your Own Recipe**" and a set of stickers (Red, Yellow & Green) to each student.
10. Your teacher will ask the students to write one recipe and will explain the students by giving some examples regarding the method of processing and cooking of food.
11. Teacher will ask the students to rate their recipe by placing one out of the three stickers on Worksheet No. 3. **Red sticker:** Recipe to be completely avoided, **Yellow sticker:** Recipe to be consumed less frequently and **Green sticker:** Recipe to be consumed regularly.
12. After the students rate their recipe, collect back the worksheets.
13. Help your teacher in checking the worksheets.

**Learning Outcomes**

- Activity links the concept of making healthy food choices with common practices which students adopt in their lifestyle.
- The students will learn about the different methods of cooking and processing food which can take them from red zone to green zone.
- The students will be actively involved in suggesting healthy food choices for their whole family or suggest in planning healthy food options/menus in planning their families' diets.



# WORKSHEET No 3 :

## Make Your Own Recipe

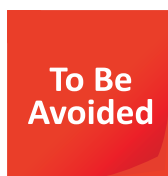
Name:..... Date:.....

Class and Section:...../.....

### WRITE YOUR RECIPE HERE

<b>Name of your Recipe:</b>	
<b>Ingredients:</b>	
<b>Method of Cooking:</b>	

### RATE YOUR RECIPE



To Be Avoided

Poor



Less Frequently

Average



Consumed Regularly

Good

Score:





## ACTIVITY NO. 4

**Name of the Activity: Jump Forward and Race with Pace**

### Background Information

#### Physical Activity keeps us Fit for Life

Physical activity involves any body movement that results in our body expending energy (burning calories). Any body movement, therefore, involves physical activity. When we walk briskly, climb stairs, cycle, play sports, dance or even clean the house, we are being physically active. Depending on the energy required for these activities, physical activity can be of different levels of intensity: light, moderate, vigorous or strenuous.



Regular moderate levels of physical activity are adequate to provide many health benefits, especially in preventing several diseases. While higher levels of physical activity (vigorous or strenuous activity) serve to increase fitness by increasing the efficiency and endurance levels of the heart, lungs and muscles, they are not essential for gaining other health benefits.

**Regular Moderate Physical Activity=Health Benefits (Reduced Risk of Diseases)  
Frequent Vigorous Physical Activity=Increased Fitness+ Health Benefits**

#### Minimum physical activity levels for individuals:

- **5 – 17 year old:** Children and youth should accumulate atleast 60 minutes (30 minutes, twice a day) of moderate to vigorous physical activity daily; include aerobic exercises such as playing active sport, dancing, running, etc.
- **18 – 64 year old:** 150 minutes (30 minutes, 5 times a week) of moderate or 75 minutes (15 minutes, 5 times a week) of vigorous activity per week is recommended; include muscle strengthening exercise like running, walking, cycling, dancing, etc.



- **65 years or above:** 150 minutes (30 minutes, 5 times a week) of moderate or 75 minutes (15 minutes, 5 times a week) of vigorous activity per week is recommended; include physical activity in your recreational activities, walking, exercise as yoga, etc.

**If you cannot do the recommended physical activity, be active as your ability and condition allows.**

#### The benefits of regular physical activity



*Source: Global Recommendations on Physical Activity for Health, World Health Organization 2010.*





### INCREASES

- Concentration
- Flexibility and balance
- Healthy body weight
- Confidence
- Muscle and bone strength
- Problem solving, decision making & observation skills
- Performance in sports
- Resistance to diseases
- Feeling of wellbeing/happiness



### LOWERS

- Risk of becoming overweight/obese
- Blood cholesterol
- Risk of high blood pressure
- Stress, anxiety and depression
- Risk of dying prematurely
- Risk of developing heart diseases, diabetes, stroke and cancer
- Risk of developing postural abnormalities



### HELPS TO

- Control weight
- Build and maintain healthy bones, muscles, and joints
- Prevent or control risky behaviours like tobacco, alcohol or other substance abuse, unhealthy diet or violence
- Improve the functioning of body's immune system and thereby protects against infections
- Manage painful conditions, like back pain or knee pain
- Improve productivity by protecting health and promoting fitness

### Easy ways to incorporate physical activity in your daily life...

**By Being Physically Active you gain Stamina, Strength and Flexibility**

- Being active everyday for atleast 60 minutes is important for children and youth
- Find time for exercise-plan it into your day
- Start slowly and build up gradually. Keep it regular
- Make it a daily routine if possible and aim for atleast 5 days a week. However, some exercise is better than no exercise
- Physical activity during your daily routine is also important for staying fit
- Brisk walk around your neighbourhood daily
- Use stairs instead of elevators





- Get up to change the TV channel instead of using the remote control
- Play any sport you like for at least 10 minutes without stopping
- When you travel, walk around the train platform, bus stop rather than sitting and waiting
- Dance to your favourite music
- Walk around while you talk on the phone
- Help in household chores like cleaning the house, gardening, etc

**If you take some time off for exercise, it will add lots more time to your life**

### What is Obesity?

Obesity is the presence of excess body fat i.e., when a person is 20% or more than the ideal BMI. Overweight is a condition when a person is 10-20% more than the ideal BMI.

### What is BMI?

Body Mass Index (BMI) is a way to estimate the amount of fat in a person's body to evaluate risk factors associated with obesity. BMI indicates whether your body weight is appropriate for your height. It tells you whether you need to lose weight or not.

### Benefits of normal BMI

- Prevent diabetes
- Improve sugar level if somebody is already diabetic
- Control blood pressure
- Prevent heart disease & stroke
- Prevent certain types of cancer
- Prevent osteoarthritis (joint pains)
- Increase your life expectancy
- Make you look younger



**Check out whether you are overweight or underweight**

You need to know your body weight and your height. You must check your body weight without your shoes/chappals/slippers and without any heavy clothing. With the help of these you will be able to calculate your Body Mass Index.

### Check your BMI by measuring your

- Weight
- Height





## CHECK IT NOW!!

The table describes BMI cut-offs for boys and girls (09 - 15 years of age)

BMI Cut offs (For Boys)				
*Age (Year)	Under weight	Normal	Over weight	Obese
09	<16.2	16.2-18.2	>18.2	>20.9
10	<16.7	16.7-18.8	>18.8	>21.9
11	<17.2	17.2-19.5	>19.5	>23.0
12	<17.9	17.9-20.4	>20.4	>24.2
13	<18.6	18.6-21.3	>21.3	>25.3
14	<19.4	19.4-22.2	>22.2	>26.5
15	<20.1	20.1-23.1	>23.1	>27.4

BMI Cut offs (For Girls)				
*Age (Year)	Under weight	Normal	Over weight	Obese
09	<16.3	16.3-18.7	>18.7	>22.0
10	<16.9	16.9-19.4	>19.4	>23.1
11	<17.6	17.6-20.3	>20.3	>24.3
12	<18.4	18.4-21.3	>21.3	>25.6
13	<19.2	19.2-22.3	>22.3	>26.8
14	<19.9	19.9-23.1	>23.1	>27.8
15	<20.5	20.5-23.8	>23.8	>28.6

\*Age (Year) = mean value

Source : 2007 WHO Reference ([http://www.who.int/growthref/who2007\\_bmi\\_for\\_age/en/](http://www.who.int/growthref/who2007_bmi_for_age/en/)).

### What puts you at risk ?

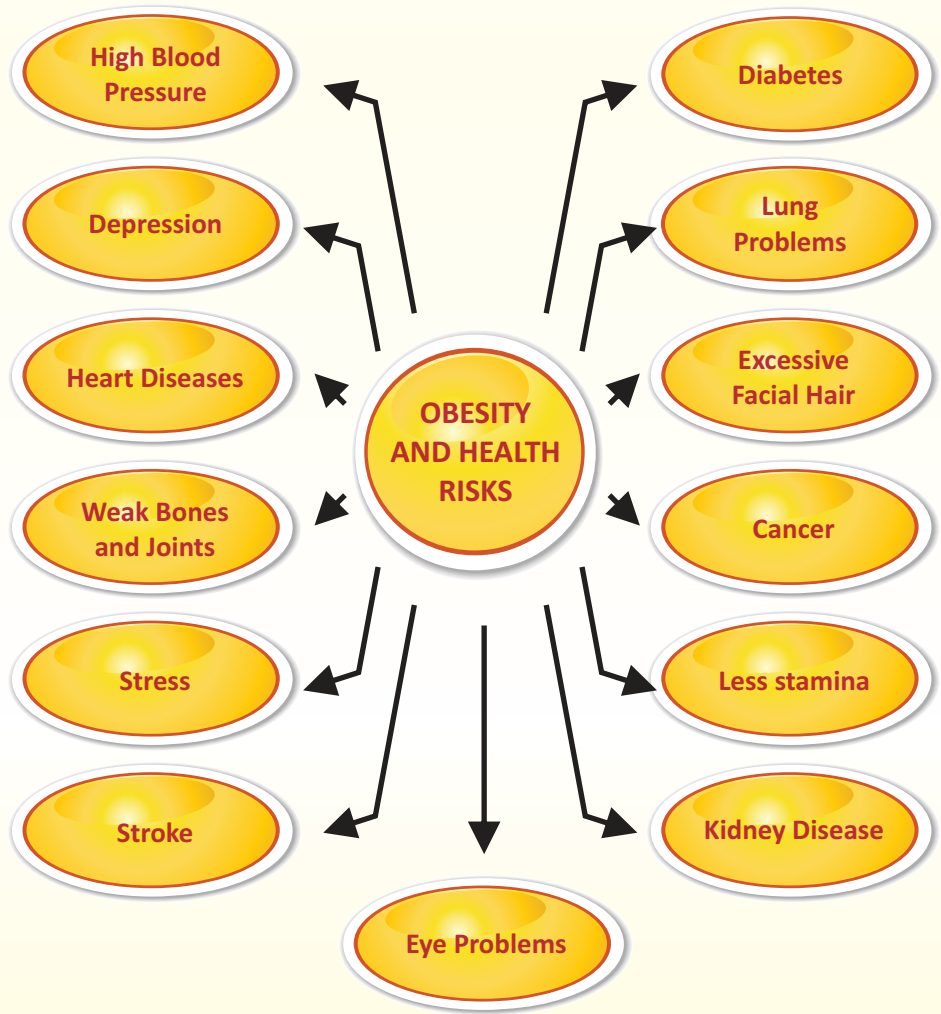
A person can become obese when the body consumes more calories than it burns off. These extra calories get deposited in the body as fat.

- **Family history:** If one or both of parents are overweight, you also have a tendency to put on weight easily.
- **Diet:** Overeating or too much consumption of calorie dense foods/intake of junk foods/soft drinks/processed foods.
- **Physical Inactivity:** Sedentary lifestyle, excessive TV viewing/playing video games, computer.





## COMPLICATIONS OF OBESITY



### How to minimize the risk of obesity?

- **Stay Active:** Decrease the amount of time spent on the computer, watching TV, and playing video games. Increase or start with outdoor activities like walking, running, playing outdoor games, etc.



- **Healthy Diet/Avoid junk foods:** Make your plate healthy and colourful to include all food groups.
- **Manage Stress:** Manage stress by means of yoga, having a positive attitude, planning the activities, sharing problems, socializing and having sound sleep.







## ACTIVITY NO: 4

**Name of the Activity:** *Jump Forward and Race with Pace*

### Material Required

Playground

School Bags

**Class Time:** 40-45 minutes

### Objective

As excess body weight and physical inactivity are among the leading risk factors for diabetes, this activity aims to educate you all about importance of healthy weight and physical activity to prevent onset of diabetes.

### Steps to follow

#### DAY 1

1. Your teacher will recap the discussion about the risk factors of diabetes stressing on the importance of physical activity and healthy weight.
2. The teacher will introduce the activity to the students and lead a classroom discussion on:
  - Advantage of being physically active
  - Various forms of physical activities/exercises
  - The amount of time you spend on outdoor games
  - Reasons why you are not able to include physical activities/exercises in your daily routine
  - Steps you can take to include physical activities as part of your daily routine
  - What is obesity/overweight?
  - Health hazards of obesity and overweight

- What puts one at risk?
- What is Body Mass Index (BMI)?
- Benefits of Normal BMI

#### DAY 2

3. Help your teacher divide the class into small groups of 8-10, each group will jump forward the race at a time with their school bags like jumping and moving forward, similar to the sack race.
4. Each student will be required to carry their school bag while they race.
5. After the race is over, students will be given rest for 15 minutes.
6. The students will again be asked to jump forward the race but now without their school bags.
7. Similar activity can be conducted with other remaining groups.
8. Assimilate the class after the race and the teacher will ask the students to share their experience of running the two races i.e with and without their school bags. The teacher will make the students understand that it is much easier to jump forward with less weight.
9. Facilitate your teacher to sum up the discussion highlighting the importance of physical activities and how one can prevent diabetes by being physically active and maintaining a healthy body weight.

### Learning Outcome

Students will understand that they can prevent diabetes and can also run faster when they do not have extra weight.





## ACTIVITY NO: 5

Name of the Activity: Doctor says “Be Fit, Eat Right”



### Material Required

Worksheet No. 5 – Doctor says “Be Fit, Eat Right”

Pen / Pencil

**Class Time:** 40-45 minutes

### Objective

To recognize the importance of small lifestyle modifications to prevent the onset of diabetes.

### Steps to follow

1. In the previous four activities you have been informed about diabetes, its types, risk factors and preventive measures. The students have also been made aware of the various lifestyle modifications which can prevent the onset of diabetes.
2. Distribute Worksheet No.5 “*Doctor says “Be Fit, Eat Right”*”, to all students in your group. The worksheet has a case study.
3. The teacher will ask the students to read the case study.
4. Your teacher will hold a discussion about Sachin and his problems and will ask the students to segregate the lifestyle practices into three traffic zones that are “Red- Practices to be avoided completely”, “Yellow – To be practiced less” and “Green- To be practiced regularly”.
5. The teacher will ask the students to write down some suggestions to improve Sachin's daily routine.
6. Ask one of the students to read out one of the suggestions he/she suggested.
7. The students will raise their hand if they agree with the suggestion.
8. This activity will be repeated with four other students giving one suggestion each.
9. Help the teacher in holding a discussion and sum up the suggestions.



# WORKSHEET No 5: Doctor says “Be Fit, Eat Right”

Name:..... Date:.....

Class and Section:...../.....

Sachin is a 11 year old boy weighing 51 kilograms. He goes to bed at 10 P.M in the night and wakes up at 5.30 A.M in the morning. Sachin is often tired and hates to exercise. He eats his breakfast everyday. Sachin likes to go to school in his father's car. At break time he prefers to eat the home made tiffin. He dislikes playing sports and always makes excuses so that he doesn't have to go out of the class in the games period as he often feels tired. Sachin often feels hungry that is why he always has a burger and cold drink while going back home from school. After coming back home he spends long hours playing video games. In the evening he goes for a walk with his mother and has an ice-cream everyday while walking. He watches TV for half an hour in the night.

**Imagine yourself as a doctor and suggest lifestyle modifications for Sachin**

**A. Segregate Sachin's lifestyle practices in zones:**

Red zone (Avoid completely)	Yellow zone (Practiced less)	Green zone (Be regular)



**B. Give some suggestions to improve Sachin's daily routine**

- 1) .....
- 2) .....
- 3) .....
- 4) .....
- 5) .....
- 6) .....

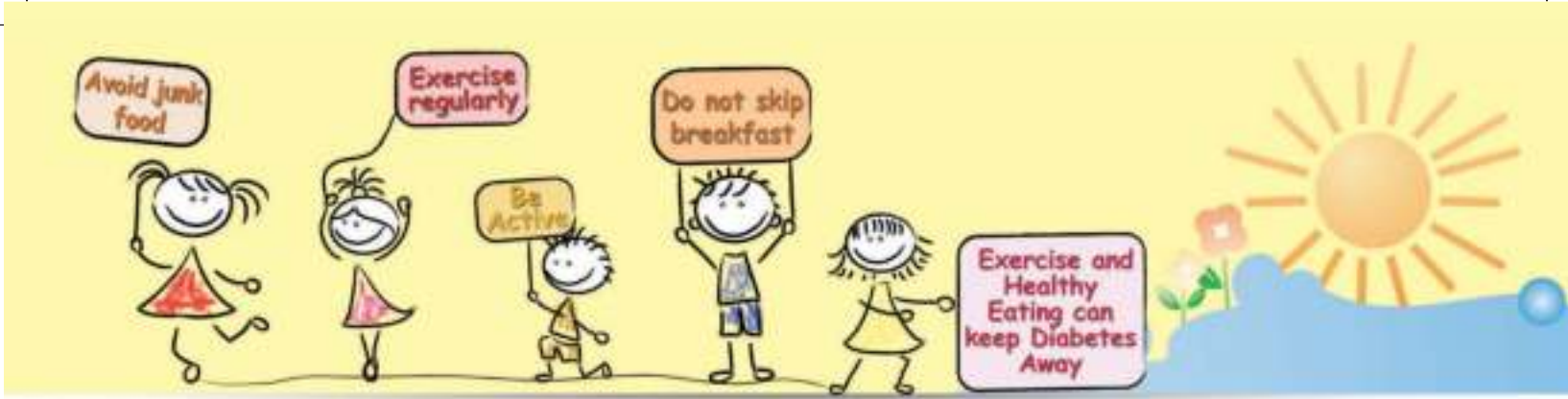
**C. Being a doctor, track the treasure below to find a health message for Sachin**

T	A	S	E	T	V	I
O	END	I	B	E	E	G
U	T	START	A	I	D	T
G	H	B	R	I	G	H
H	G	E	T	A	E	E
F	I	A	C	T	I	V

Use a pencil or sketch pen to connect the letters. Start in the square that says "start", then follow the arrows till the "end". You may use the space below to help you spell out the secret message. Good luck!!!

-----, -----  
 -----!!





## Answers

### A. Segregate Sachin's lifestyle practices in zones:

Red zone (Avoid completely)	Yellow zone (Practiced less)	Green zone (Be regular)
<ol style="list-style-type: none"> <li>Sachin is often tired and hates to exercise</li> <li>He dislikes playing sports and always makes excuses</li> <li>Sachin often feels hungry and has a burger and cold drink while going back home from school</li> </ol>	<ol style="list-style-type: none"> <li>Sachin likes to go to school in his father's car</li> <li>After coming back home he spends long hours in playing videogames</li> <li>He has an ice-cream everyday while walking</li> </ol>	<ol style="list-style-type: none"> <li>Goes to bed at 10 P.M in the night and wakes up at 5.30 A.M in the morning</li> <li>He eats his breakfast everyday</li> <li>In the break time he prefers to eat the home made tiffin</li> <li>In the evening he goes for a walk with his mother</li> <li>He watches TV for half an hour in the night</li> </ol>

### B. Suggest lifestyle modifications for Sachin

- 1) .....
- 2) .....
- 3) .....
- 4) .....
- 5) .....
- 6) .....

### C. Being a doctor, track the treasure below to find a health message for Sachin

Answer:

**BE ACTIVE, EAT RIGHT, GIVE DIABETES A TOUGH FIGHT!!**





## FEEDBACK FORM

### Activity No. 1: Way to Health

#### School Details:

Name of the School: \_\_\_\_\_

Address of the school: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Class & Section \_\_\_\_\_ Total number of students participated in the activity: \_\_\_\_\_



1. Was the activity helpful to the students? Yes  No
2. If yes, how (please tick any of the choices given below)
  - Helped the students to gain knowledge
  - Helped them in altering their behaviour
3. Did the students participate in the activity enthusiastically? Yes  No
4. Was the information provided in the module useful? Yes  No
5. Things you liked about the activity.

---

---

---

6. Things you disliked about the activity.

---

---

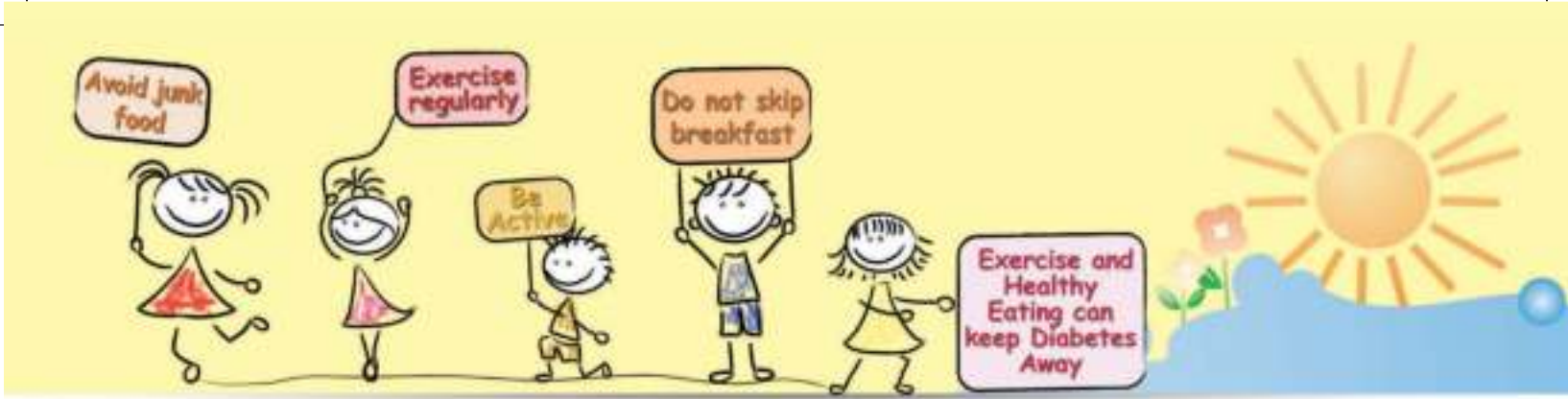
---

7. Please rate this activity:

Excellent  Good  Average  Poor

Name and signature of the Peer Leader





## FEEDBACK FORM



### Activity No. 2: Climb the Health Ladder

#### School Details:

Name of the School: \_\_\_\_\_

Address of the school: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Class & Section \_\_\_\_\_ Total number of students participated in the activity: \_\_\_\_\_

1. Was the activity helpful to the students? Yes  No

2. If yes, how (please tick any of the choices given below)

- Helped the students to gain knowledge
- Helped them in altering their behaviour

3. Did the students participate in the activity enthusiastically? Yes  No

4. Was the information provided in the module useful? Yes  No

5. Things you liked about the activity.

---



---



---

6. Things you disliked about the activity.

---



---



---

7. Please rate this activity:

Excellent  Good  Average  Poor

Name and signature of the Peer Leader





### FEEDBACK FORM



**Activity No. 3: "Pass it On" - The Traffic Signal**

**School Details:**

Name of the School: \_\_\_\_\_

Address of the school: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Class & Section \_\_\_\_\_ Total number of students participated in the activity: \_\_\_\_\_

1. Was the activity helpful to the students? Yes  No

2. If yes, how (please tick any of the choices given below)

- Helped the students to gain knowledge
- Helped them in altering their behaviour

3. Did the students participate in the activity enthusiastically? Yes  No

4. Was the information provided in the module useful? Yes  No

5. Things you liked about the activity.

---



---



---

6. Things you disliked about the activity.

---



---



---

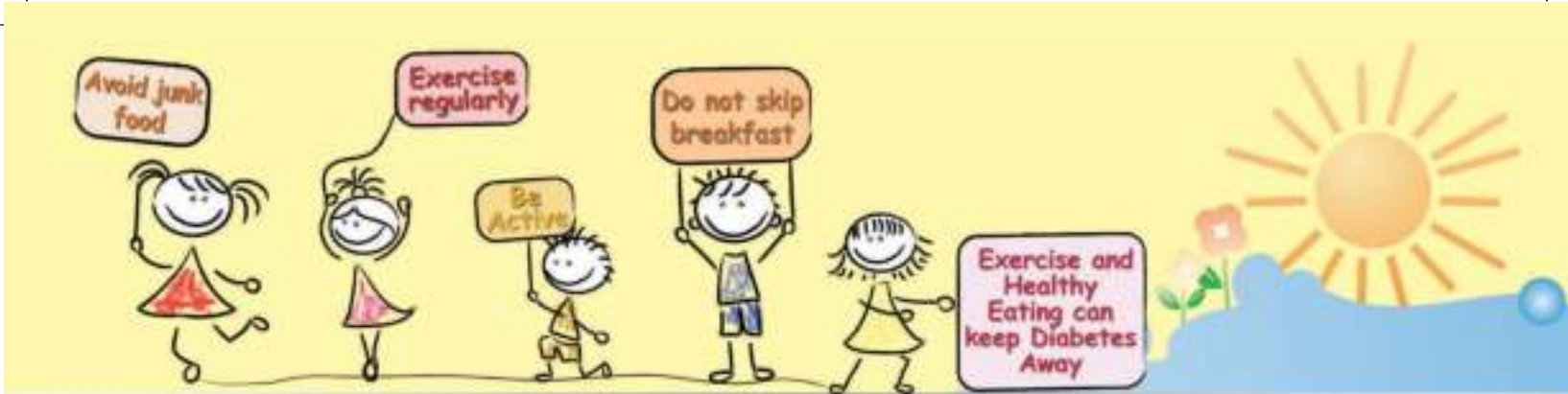
7. Please rate this activity:

Excellent  Good  Average  Poor

Name and signature of the Peer Leader







## FEEDBACK FORM

### Activity No. 4: Jump Forward and Race with Pace

#### School Details:

Name of the School: \_\_\_\_\_

Address of the school: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Class & Section \_\_\_\_\_ Total number of students participated in the activity: \_\_\_\_\_



1. Was the activity helpful to the students? Yes  No

2. If yes, how (please tick any of the choices given below)

- Helped the students to gain knowledge
- Helped them in altering their behaviour

3. Did the students participate in the activity enthusiastically? Yes  No

4. Was the information provided in the module useful? Yes  No

5. Things you liked about the activity.

---



---



---

6. Things you disliked about the activity.

---



---



---

7. Please rate this activity:

Excellent  Good  Average  Poor

Name and signature of the Peer Leader





## FEEDBACK FORM

### Activity No. 5: Doctor says “ Be Fit, Eat Right”

#### School Details:

Name of the School: \_\_\_\_\_

Address of the school: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Class & Section \_\_\_\_\_ Total number of students participated in the activity: \_\_\_\_\_



1. Was the activity helpful to the students? Yes  No

2. If yes, how (please tick any of the choices given below)

- Helped the students to gain knowledge
- Helped them in altering their behaviour

3. Did the students participate in the activity enthusiastically? Yes  No

4. Was the information provided in the module useful? Yes  No

5. Things you liked about the activity.

---



---



---

6. Things you disliked about the activity.

---



---



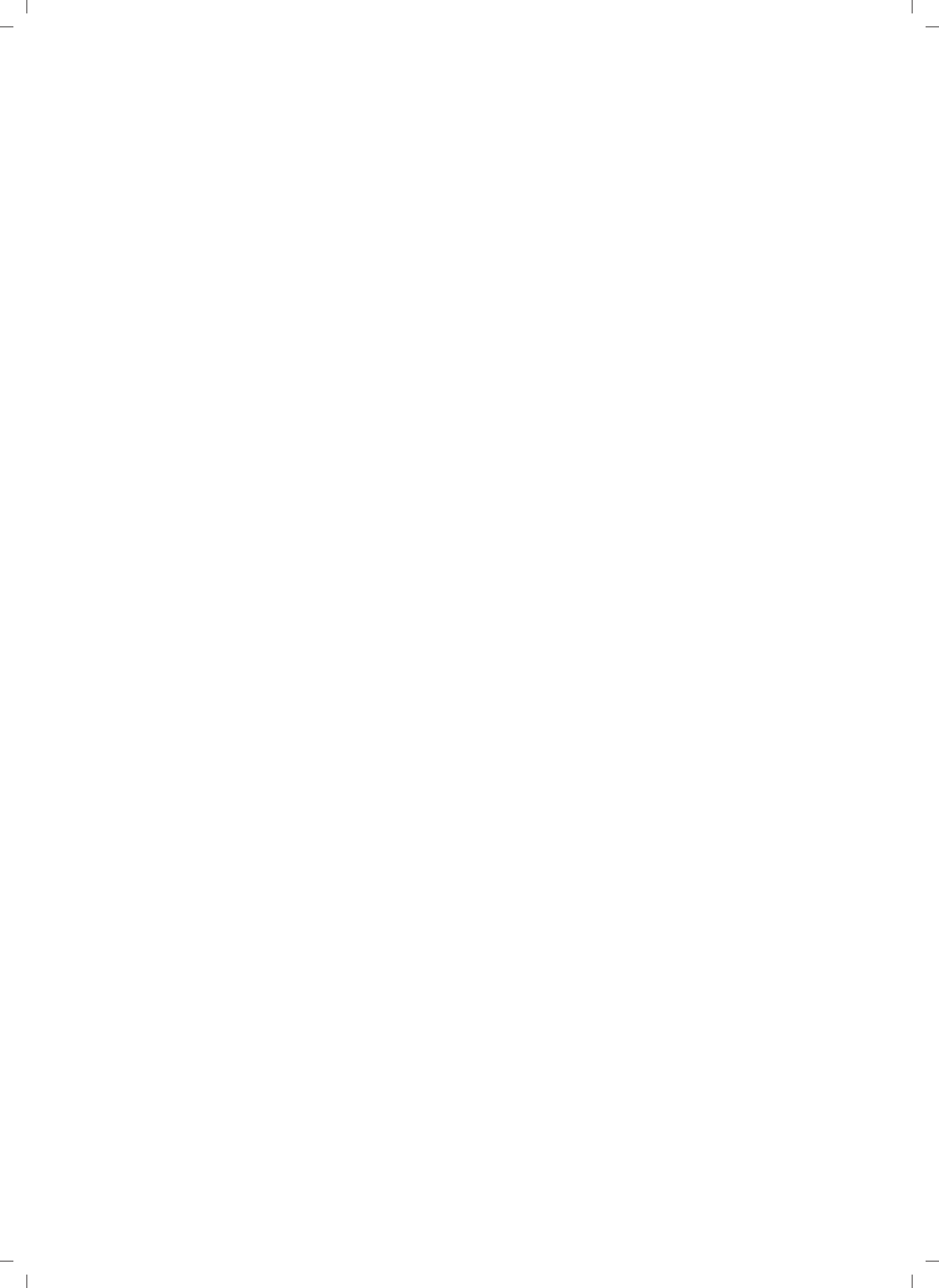
---

7. Please rate this activity:

Excellent  Good  Average  Poor

Name and signature of the Peer Leader







eat healthily and be active

AROGYA  
WORLD