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FOOD SAFETY AND STANDARDS **AUTHORITY OF INDIA**

Inspiring Trust, Assuring Safe & Nutritious Food

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All comments on the SNF SOURCEBOOK are welcome, particularly suggestions on its improvement and corrections wherever they might be required.

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PREFACE

If ever there was a time to take charge of our food choices and habits, it is now. With our fast changing lifestyles, India faces a silent epidemic today; of rising childhood obesity coupled with under nutrition and micronutrient deficiencies. Each one of us, be it parents, teachers or children, has a right and a responsibility to make an informed choice. The Yellow Book of the Food Safety and Standards Authority of India (FSSAI) is your guide to making such choices, to assuring safe and nutritious food at school.

The 'Yellow Book' is aimed at inculcating wholesome food habits at a young age, as habits formed in our early years stay with us for life. It would aid the School Health and Wellness Teams in carrying out effective activities in the classroom. The content is divided into age appropriate modules. The activities and guidelines have been designed to encourage adoption of safe and nutritious food practices at schools. The book is a resource-pool of facts, information and concepts, along with a diverse range of supportive material and tools.

The SNF program mascots, 'Master Sehat' and 'Miss Sehat', are the superheroes and the 'health champs' to carry the message forward. They come with a 'School Crew', additional characters who provide an interactive means of bringing the central themes into focus.

A team of food technologists and nutritionists has brought the book together from various premier institutions in the country. Experts have carefully reviewed it. FSSAI would welcome any suggestions and feedback on this publication so that 'The Yellow Book' becomes a trusted companion and part of the Schools in our Country.

Lets join hands in building a Healthy and Happy India.

PAWAN AGARWAL

CEO, FSSAI

SNF@SCHOOLS VISION

Catch 'em young!

Create awareness of the benefits of eating healthy, thereby build lifelong habits that would significantly enhance health standards of the future generation.

Build capacities though knowledge:

Equip all School Health and Wellness Coordinators with resources to reach out to teachers, parents and school children, for generating awareness on safe and nutritious food based on the Core Guiding Principles.

ROAD MAP TO SNF@SCHOOL SOURCE BOOK

It is an established fact that eating safe and nutritious food is of vital importance for mental and physical health, longevity, productivity and overall wellness.

To ensure this, authentic knowledge becomes a must for parents, teachers & students. To this effect, a source book has been designed that serves as a ready reckoner that includes material for classroom narrative lectures as well as laboratory practicum or exercises.

For appropriate interventions to reach the entire target population, it is necessary to understand the two main segments of the SNF @ SCHOOLS TOOL KIT that are:

SNF@SCHOOL 'YELLOW BOOK' on SAFE AND NUTRITIOUS FOOD

SNF@SCHOOL TRAINING MANUAL FOR SCHOOL HEALTH AND WELLNESS COORDINATORS

Care has been taken to convert the most vital aspects into concise information capsules for easy retention. The sessions are expected to introduce concepts/practices and enhance knowledge through demos, activities, fun games, followed by check-lists to reiterate key learnings, and finally self-evaluation exercises to ensure lessons are soundly instilled and retained. For periodic rating individual student's progress, trackers (e.g., the smart 'rainbow tracker') are also provided.





YELLOW BOOK

The treatment given to any book that deals with children has to be to be appealing and participative. The 'Yellow Book', thus is an amalgamation of activities that are age appropriate, culturally appropriate and readily adaptable to available resources and context. The activities and guidelines are designed to encourage adoption of safe and nutritious food at schools extending to healthier lifestyles.

It is equipped with range of supportive material and tools to provide a comprehensive basis for presentation of the content areas in sessions, through slides, charts, activities, posters, handouts, and Power Point Presentations (PPTs). The 'Yellow Book' can be used independently as a guide, an activity book or in conjunction with the learning aids provided.

The resources include pointers on safe food, methods of detecting adulteration, essential nutritional facts, food groups and their health benefits. Instructive features are provided in the resource books for all levels which include, animation videos, audios, activities, stories, role-plays, on-/offline games, puzzles, mix-n-match exercises, etc. Components used uniformly through the books are, SNF Alerts, Did You Knows, Fact Files, Habit Forming Tools, Feature Story, Key Messages, Expected Learning/Queries, Ideas For Learning More, etc.

ROLE OF SCHOOLS

In this context, schools will play a vital role in ensuring the information reaches every household through the children. The teacher is their role model and children have a lot of faith in what is taught in school and what their teachers have to say& do.

Schools need to set examples by taking measures to ensure that food hygiene, personal hygiene and environmental hygiene i.e. hygiene of the classrooms and surroundings is maintained. Food served in schools must be healthy and palatable. Physical activity plays an important role in the overall growth and development of the child and this should not be neglected. Children will speak about the cleanliness, care and good food habits taught in school to their parents and this message in turn will percolate to the community.





DR. SARA



inspiring trust, Assuring Sare & Nutritious Food

INDEX

1	I STAY CLEAN	1
2	I KEEP FOOD SAFE AND CLEAN	12
3	I EAT CLEAN AND SAFE FOOD	20
4	I STAY NOURISHED	33
5	I BALANCE MY FOOD PLATE	48
6	I PLAN MY MEALS	60
7	MY TOOLS AND TRACKERS	78

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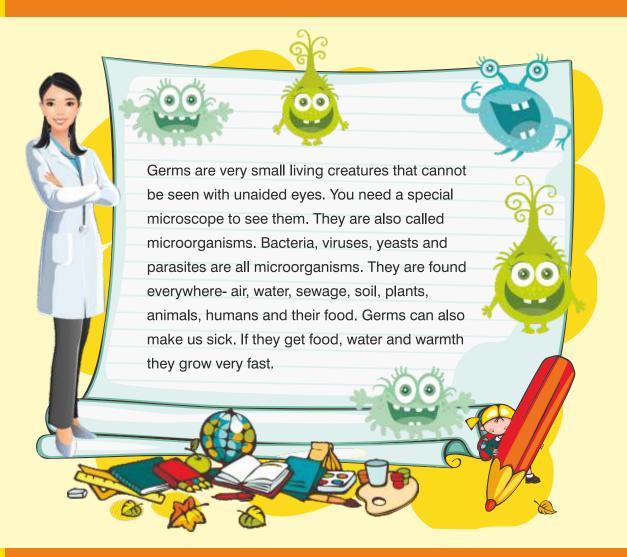
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GERMS ARE INVISIBLE



UNDERSTANDING HOW GERMS SPREAD

GLITTERY GERMS

All you need is some glitter or sawdust, some Vaseline or a drop of oil to rub it on your palms. Now sprinkle some glitter on your hands. You will see how the glitter or the 'pretend germs' travel from your hands to any object your hand comes in contact with. This is how the germs spread all over and you cannot even see them with your naked eyes.



Aaaachoooo! THE GERMS

You will learn how germs can spread through the nostrils and spread everywhere. When you sneeze, the germs are spread through droplets and can travel up to six feet to another person. Remember to cover your mouth and nose when you sneeze. Sneeze into a tissue or a handkerchief to avoid the spread of germs



Germs in the Air

A single cough may contain as many as 2 hundred million germs. Remember to cough in your elbow to avoid coughing on to somebody and also to avoid the germs getting on to your hands.



GERMS IN THE AIR

I'll show you! Just see how long the talcum hangs in the air and how long it takes to settle down.

> This is how germs spread when a person coughs. We inhale the same air and can get infected!





HYGIENE OF SELF!

Personal hygiene is generally defined as cleanliness of the body and proper maintenance of personal appearance. This generally includes all body areas and clothing.

Personal hygiene includes all personal practices which need to be followed to keep our body clean and healthy. The following personal hygiene practices should be followed every day.

HOW I STAY CLEAN

I wash my hands properly after going to the toilet



I have a bath every day



I wear clean clothes and clean shoes



I wash, comb and tie my hair neatly



I wash my ears and eyes while bathing



I brush my teeth twice a day





I clean and clip my nails regularly



I keep my cuts and wounds covered with a bandage



DO YOU KNOW HOW GERMS SPREAD?

The 5 F's Responsible for the spread of diseases



FOOD: Water and food contaminated by poor handling or through diseased animals and their products

FINGER: Unwashed hands and dirty fingernails



FAECES: Food contaminated by sewage or dirty water or by unwashed hands after using the toilet.

FOMITES: Such as unclean utensils, equipment, door knobs, taps, towels and others.





FLIES & PESTS: Like houseflies, cockroaches, rats or house pets.







TEAM SEHAT'S FACT FILE

Food Funda

- Germs spread from one dirty hand to the other.
- Always wash your hands with soap and water.
- Germs are dangerous, especially because we cannot see them.

- Cover your mouth and nose while sneezing and coughing.
- Keep food and drink covered during sweeping and dusting.



TOILET HYGIENE

TOILET HABITS

Visit the toilet regularly to clean your bowels every morning. Flush the toilet after use and wash hands well in the wash basin using soap and preferably warm water.

FUN ACTIVITY: To know your score on good toilet habits go to page 24 for the Germi-check score card.



WASH YOUR HANDS LIKE THIS

We need to wash away germs hiding on our hands.



Wash your palms



Scrub each finger and between fingers



Rub back of hands and between fingers



Rub the base of the thumbs



Back of Fingers



Scrub your nails on palms



Wash your wrist



Dry hands with clean towel or tissue

BRUSHING TEETH







- **Discomfort and pain**
- **Infection and pus formation**
- **Tooth loss**
- **Bad Breath**







DO YOU BRUSH LIKE THIS?

FUN TIME 4

SMILE PLEASE

Spaces in between the teeth should also be brushed properly to remove food stuck in between teeth.



EGG-CEPTIONAL SMILES

MATERIAL







MY GERMI-CHECK SCORE CARD



FUN TIME 5

Let's see what is your Germicheck score



- I bathe every day in winter or in summer.
- I take a bath even on a cold winter day.
- I take a bath even when I have a cold.
- I brush my teeth twice daily.
- I clean my tongue with a tongue cleaner.
- I visit the toilet daily.
- I wash my hands with soap and water.
- I wear clean washed and ironed clothes.
- I polish my shoes everyday.
- I wash my hair regularly and comb my hair daily.
- I clean my nose daily while bathing and do not pick my nose.
- I clip my nails regularly and keep them dirt free.

WORK, RELAXATION AND EXERCISE

Balance your time between doing your home-work, relaxing and exercise for good health.

EXERCISE

Regular exercise and physical activity are important to maintain a healthy weight, develop strong bones and muscles and reduce the risk of getting sick later in life. Atleast engage in 1 hour of physical activity every day.



SLEEP



A good 8 to 10 hours of sleep will make you feel active and alert in class

RECREATION

Listening to music, dancing, singing, painting are some forms of recreation that are necessary for a healthy mind.







- Inform your teacher if you are not feeling well
- Stay back home in case of cold & cough or vomiting & diarrhea





NOTE TEACHER

A

THE HYGIENE SUPERSTARS!

Teach children to use the habit forming Hygiene Tracker given on page 83 to urge them to inculcate good practices to stay clean.



MY LEARNING LIBRARY



Give a live demo on hand washing techniques with soap and water. Teach them to turn off tap while they are scrubbing their hands well before rinsing the soap lather.



SUCCESS-O-METER

NOW YOU KNOW

- Germs are dangerous, especially because you cannot see them.
- Germs need to be washed clean by following all the 8 steps of hand washing.
- Germs rocket out into the air when you sneeze or cough. It is important to cover your nose and mouth when you sneeze and wash your hands after that. Or sneeze into the tissue or a handkerchief to avoid the spread of germs.



BEHAVIOUR CHANGES

Have the learners shown any behavioural changes observed a week after the training program.

CONCEPTUAL DEVELOPMENT

Has knowledge about the relevant topic increased?

PERFORMANCE CHANGE

Has the training contributed to any improved performance.











HOW DO GERMS GROW?

Like us, microorganisms also need certain conditions for their growth and multiplication. These are their basic growth requirements.

FOOD - Germs grow rapidly in protein rich food such as milk, meat, poultry, and leftover moist cooked food.



MOISTURE -Moisture helps them grow. Dry foods will not spoil.



TEMPERATURE - They love to grow within the danger zone. Food remains safe when refrigerated or frozen. There they do not die but simply remain inactive.

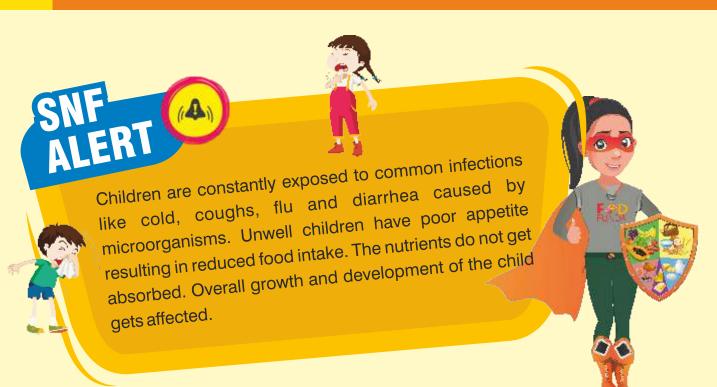


TIME - Microorganisms need time to grow to numbers large enough to spoil our food.





EFFECT OF MICROORGANISMS ON HEALTH OF CHILDREN





HOW TO PREVENT GROWTH OF GERMS?



We must follow these rules to keep germs away.





Before eating wash and dry hands properly

Eat food in a clean plate and bowl and finish your packed lunch in the break itself



If food falls on the ground, do not eat it





Wash fruits before eating them



Drink clean water

Eat clean, healthy and covered food



If flies sit on food do not eat





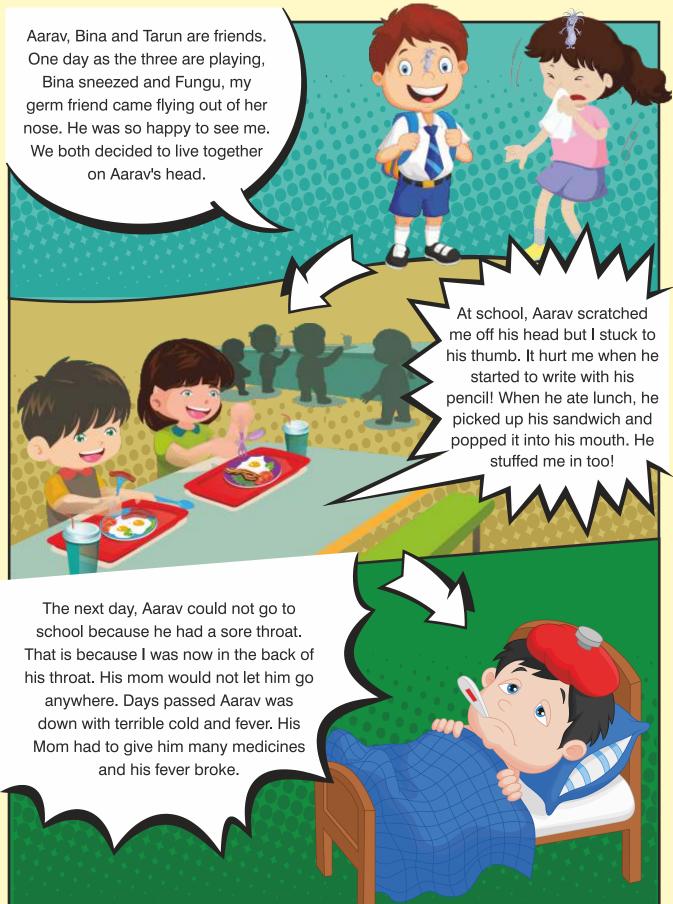
Flush Toilet and wash your hands

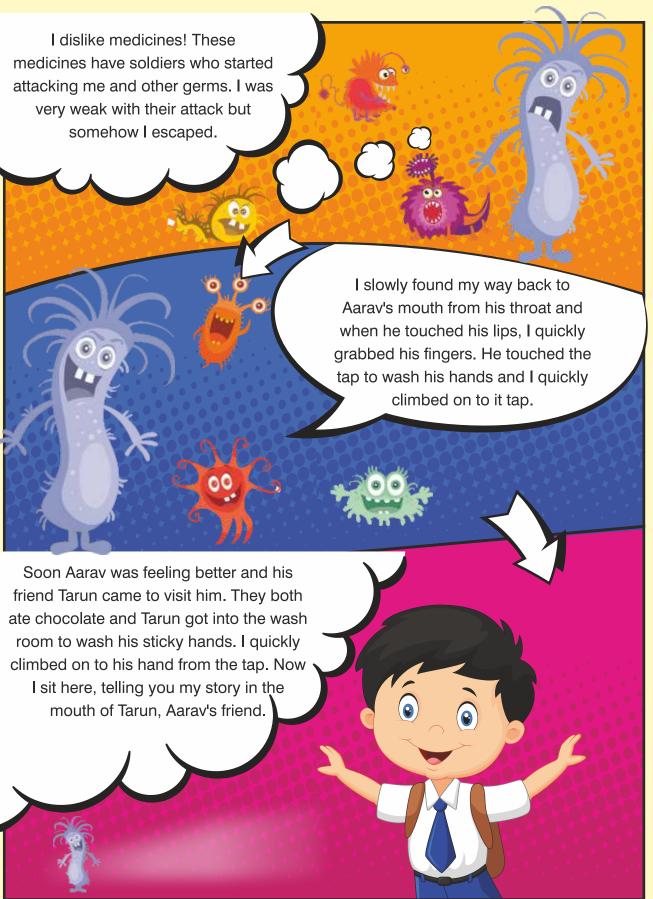




STORY OF FUNGU & GERMY

STORY OF FUNGU & GERMY

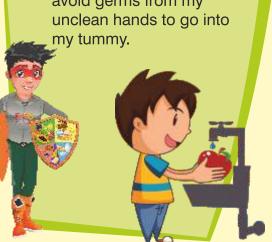




Teaching the concept of germs is quite a challenge. Try explaining

Food Funda

I always wash the fruit well before eating to stay healthy and not fall sick. I also wash my hands with soap before eating to avoid germs from my



your students the spread of germs through this little exercise -Everything You Touch: Get children to write the alphabet G for germs on pieces of paper or use smiley stickers or bindi's and stick these little germs to everything they touch for the next 20 minutes. Then ask them to look around at the classroom to see how germs spread.

NOW YOU KNOW

- Children will understand the importance of eating safe food only.
- They would know the 5 F's causing these germs to spread.
- Children will have a clear understanding of what are microorganisms.
- They will also know which factors are needed for their growth and multiplication.



SUCCESS-O-METER



Have the learners shown any behavioural change? For e.g. Keeping flies out of the food area. Or washing hands before eating tiffin

CONCEPTUAL DEVELOPMENT

Has knowledge about the relevant topic increased?

PERFORMANCE CHANGE

performance in daily routine.

Has the training contributed to any inproved



You can show video clips on germs.

https://www.youtube.com/w atch?v=2elxz5x2s1Y

https://www.youtube.com/w atch?v=jEy0Ltlm3nU



own story on Germs and narrate in class. Read our story on Fungu and Germy.



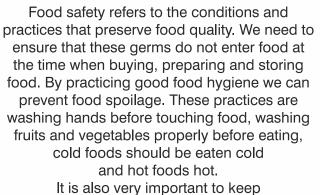






WHAT IS FOOD SPOILAGE?

INTRODUCTION



our surroundings clean, throwing garbage and litter into a covered dustbin.





FUN WITH FOODS -CHECK IT OUT!

- 1. Ever noticed an over ripe fruit about to fall off a tree? Foods spoil naturally due to enzymatic reaction.
- 2. Ever noticed a cracked egg or blood specked egg?

 Damaged food gets spoilt.
- 3. Ever noticed rust on canned foods? Food spoils due to chemical reaction.
- 4. Ever noticed insects like weevils in grains? Insects spoil food.
- 5. Ever noticed molds on bread or souring of milk? Food spoils due to action of germs.
- 6. Ever noticed stone or grit in boiled rice or any other food? Foods spoil due to contamination.

Other common reasons why food gets spoilt-

- Buying more than required.
- Buying poor quality food.
- Not checking commodities, packaging and labels.
- Not refrigerating or freezing. Purchased food promptly.
- Refrigerators or freezers not working properly.
- Using refrigerator space incorrectly.

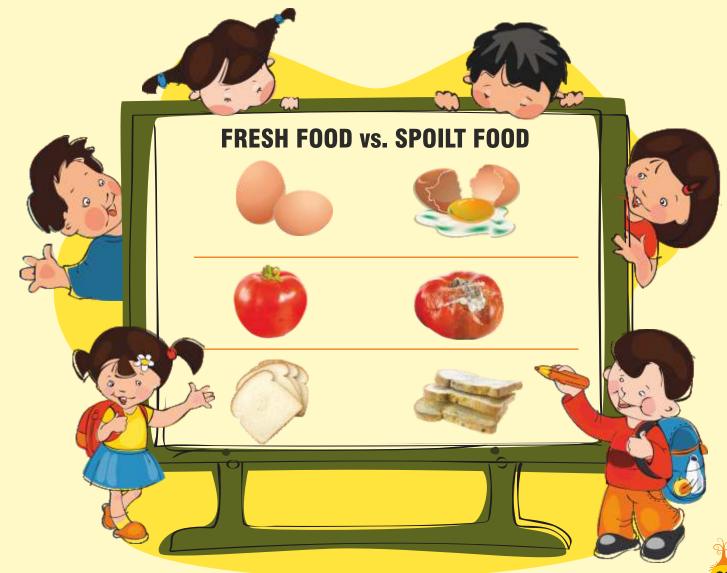




SIGNS OF FOOD SPOILAGE

FUN WITH FOOD 1

Circle the food you will not eat.



HOW TO AVOID FOOD SPOILAGE?

FOOD STORAGE

Food should be stored at proper temperatures and at right places to avoid food from getting spoilt.

Perishable foods get spoilt within a day such as eggs, fish, poultry, milk, some of the fruits and vegetables.

Semi-Perishable Foods stay good upto a few weeks or months such as flours of grains, onions, potatoes, frozen foods.

Non-perishable Foods stay good upto a year such as sugar, legumes, oil, pickles, whole grains.



FOOD POISONING, FOOD INFECTION AND FOOD ALLERGIES

Sometimes after eating food from outside, you end up with a bad tummy ache or fever, it is possible that you have a stomach infection or food poisoning.

ALLERGIES

A Food allergy occurs when our body reacts soon after eating a certain food. Only some of us react to certain foods that are otherwise harmless to others. Substances which cause allergies are called Allergens'.



SYMPTOMS OF FOOD INFECTION



- Nausea
- Diarrhoea
- Abdominal pain
- Vomiting Fever
- The incubation period is longer, approximately 12 to 24 hours.



Did you know? For bacterial food poisoning or food infection to occur, approximately one million or more bacteria must be present in food.

CROSS CONTAMINATION

Cross-contamination is one of the most common causes of food poisoning. It happens when harmful germs are spread onto food from other sources such as uncooked food, unclean surfaces, hand or equipment.

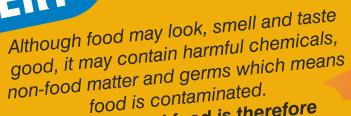


TYPES OF CONTAMINANTS

Into three main categories namely

- **BIOLOGICAL CONTAMINANTS** –Visible contaminants like rat droppings, beetles and weevils, insect body parts, flies and worms which can be seen in food as well as invisible contaminants, like bacteria, viruses, molds, algae, and parasites which cause food borne diseases
- CHEMICAL CONTAMINANTS Like non-permissible food additives, adulterants, cleaning chemicals, packaging adhesives and inks and refrigerants, heavy metals (lead, mercury, cadmium) pesticide residues, veterinary drugs, naturally occurring toxins in food.
- **PHYSICAL CONTAMINANTS** Glass, metal, bone, shell, hair, sticking plasters, stones, grit, feathers, cigarette stubs etc.





Contaminated food is therefore considered as spoilt.



Food Funda

TO AVOID CONTAMINATION -

- Keep raw and cooked food apart.
- Store cooked food above raw food in the refrigerator to prevent drip.
- Colour code chopping boards and knives
- Practice hand hygiene







TYPES OF GERMS

Living things that cannot be seen with the unaided eye.

- Good Germs are useful in
- Making food and drinks eg cheese, yoghurt
- Making medicines eg penicillin
- Digesting food
- Bad Germs
- Do not usually make people sick
- Cause food to smell bad, taste horrible and look disgusting
- Dangerous Germs
- Make people sick, even kill!
- Called "pathogens"

HOW DO PESTS TRANSMIT DISEASE?

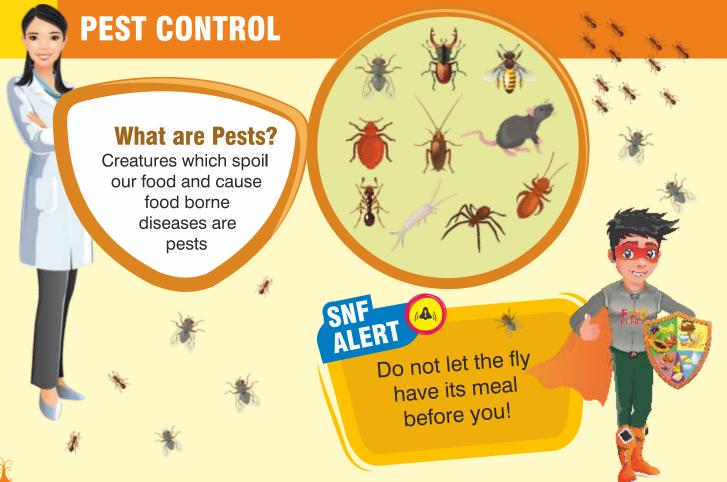
- They live in dirty places like garbage dumps, in kitchen and bathroom drains
- They collect many disease causing microbes on their bodies and in their stomachs and contaminate uncovered foods, utensils and other surfaces.
- They spread diseases like diarrhoea, dysentery, typhoid fever, intestinal worms and food poisoning.

HYGIENIC SURROUNDINGS

Don't we like to study in a neat and clean classroom? We do not like to eat food at a place where there are too many flies and insects. We should learn to keep our classroom, our school our homes and surroundings clean.

Even our kitchens need to be very clean because this is the place where our food is cooked. All kitchen items must be kept in their proper places. Utensils must be used only after cleaning them properly.





FUN TIME 3 DUNK THE JUNK Learn to dispose off the classroom waste properly. Waste like wrappers, fruit peels, dry leaves, pencil shavings, used tissue should be disposed off in the green bin and other waste in the blue bin. Objective: Dispose the waste as Biodegradable and Non-biodegradable after sorting, It should be disposed off in labeled waste baskets.

NOW YOU KNOW

- The importance of Food safety to preserve food quality.
- Storing food at the right temperature is important.
- Food allergies are caused by allergens present in foods we eat every day like eggs, wheat, tree nuts, groundnuts, fish, shellfish, chocolate, strawberries and cow's milk.
- Foods spoil naturally or at the time when germs enter food. Food can also spoil due to any physical damage or with any chemical reactions.
 - Just like personal hygiene is important for good health, our surroundings also need to be neat and clean.

SUCCESS-O-METER

BEHAVIOUR CHANGES

Check for any noticeable change in the behavior of the learners. For e.g. Keeping flies out of the food area or washing hands before eating their tiffin food.

CONCEPTUAL DEVELOPMENT

Has knowledge about the concepts of food spoilage increased?

PERFORMANCE CHANGE

Are there noticeable changes in the day to day practices on Keeping the classroom neat and tidy?

STAR CLASS

Children may follow good Hygiene practices only for a day or two. For such practices to become a habit, they need to follow everyday.

A Star Class rating system in each class will encourage them to keep class and surroundings clean and other such habits will become part of their routine.



MY LEARNING LIBRARY





Teaching the concept of germs is quite a challenge. Try explaining your children the spread of germs through this little exercise - **Everything You Touch**: Get children to write the alphabet G for germs on pieces of paper or use smiley stickers or bindi's and stick these little germs to everything they touch for the next 20 minutes. Then ask them to look around at the classroom to see how much germs spread.



WHAT IS FOOD?

OLD LADY AND GINGERBREAD MAN



- Any substance which nourishes the body and is fit to eat
- It is the source of energy and nutrients in our body
- Food contains chemical components similar to those that make up the body called nutrients



PLANT AND ANIMAL FOOD SOURCES



Food comes from plants and animal sources.

Have you ever seen fruits growing on big trees?

Have you visited any vegetable garden? Some foods we eat come from plants such as fruits, vegetables, wheat, rice, pulses and nuts. Foods such as milk, eggs, chicken, fish or meat comes from animals sources.





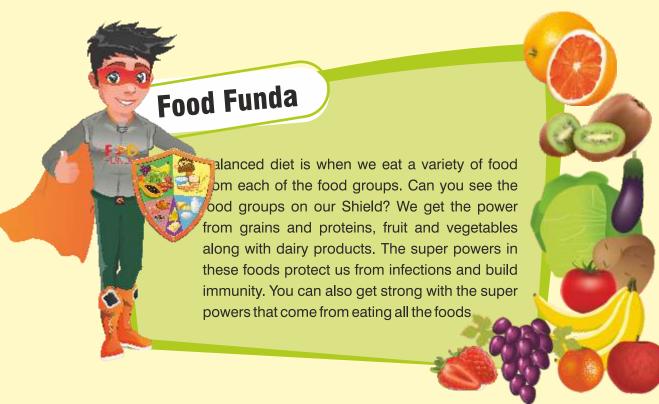
OLD LADY AND GINGERBREAD MAN





MY BALANCED DIET





THE GO GLOW GROW FOODS

Food Funda

foods to stay healthy and super strong

We eat the GO, GROW AND GLOW

THE 3 G FOODS

GO FOOD

GO FOODS give us energy to run, walk, hop, skip and jump.

The main nutrients in this food group are carbohydrates and fats.

Carbohydrate rich foods: Bread, Chapaties, Poories, Cake, Rice, Maize, Potatoes.

Fat: Cooking oil, butter and ghee.



GROW FOOD

Grow Food are the protective foods. The main nutrient in this group is protein. The foods in this group are meat, fish, poultry, eggs, milk and milk products like curd, cheese etc., dried Pulses and nuts like almonds, walnuts, pistachios.



GLOW FOOD

Glow foods are for good health and well being. They provide good eyesight and healthy skin.

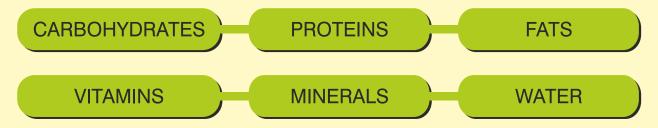
The main nutrients are vitamins and minerals. The foods in this group are fruits, green leafy vegetables, red and yellow vegetables and other vegetables.

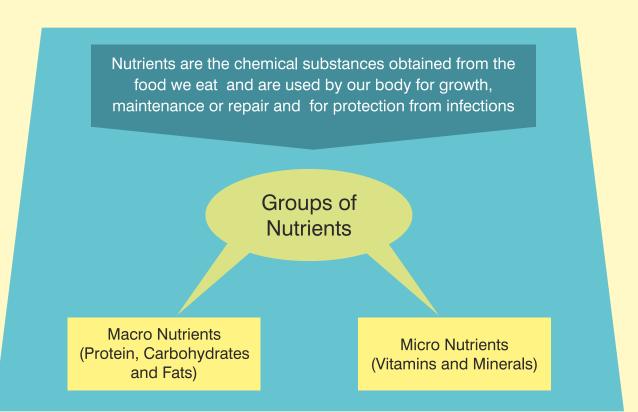




LET US NOW STUDY THEM IN MORE DETAIL

There are six groups of nutrients which are essential. They are broadly classified as follows:-





PROTEIN

Protein is essential for growth and repair and keeping cells healthy. Protein also provides energy: 1 gram of protein provides 4 kcal.

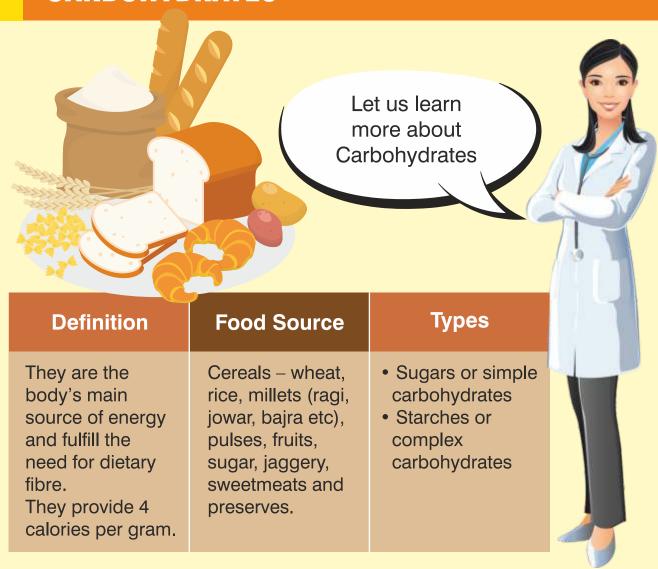
SOURCES OF PROTEIN



Plant: Pulses, lentils, beans, nuts and seeds, soyabean products.



CARBOHYDRATES



FATS

One gram of fat gives 9 Calories.

Food Sources:
Butter, ghee,
vegetable oil, salad
dressings, nuts & oil
seeds, dairy
products made with
whole milk or cream
and meats.





THE MYSTERY BASKETS

Place TWO labeled food baskets in the School common area. Label them as "Protein Basket" and "Carbs Basket". Students need to bring food pictures or empty cartons and place in the corresponding basket.

FUN WITH FOOD 2

BASKET

BASKET

Fat - Soluble Vitamins

Sources of Vitamins A

- Vitamin A is pre formed in liver and whole milk.
- Can also be produced from the beta carotene found in dark green leafy vegetables, carrots and orange coloured fruits such as papaya.



Water - Soluble Vitamins

Sources of Vitamin C

- Citrus fruits and berries.
- Citrus fruits like sweet lime, orange, grape fruit, tangerine, lemon, keenow, carambola.
- Types of berries: Amla, ber, Karonda, Mulberries, Black Currants, Strawberries, Jamun, Raspberries, Blueberries, Cranberries





Did You Know?

The skeleton contains about 99% of the body's calcium with approximately 1kg present in adult bones. The body requires different amounts of each mineral.

People have different requirements, according to their age, gender & physiological state.

IRON

Iron is essential for the formation of hemoglobin in the red blood cells. RBC's carry oxygen and transport it in the body. Lack of iron in the body leads to anemia. Iron is also required for normal metabolism and removing waste substances from the body.

Sources of IRON:

Liver, Red meat, pulses, nuts, eggs, dried fruits, fish, whole grains, dark green leafy vegetables, water cress seeds, niger seeds, flax seeds



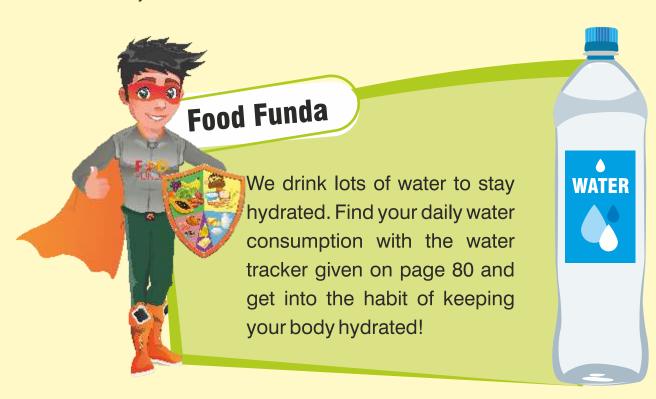


WATER

Did you know that water is also a nutrient?

Water is essential for all body functions

- Our body is nearly two-thirds water
- Water is essential for life and it is very important to get the right amount of fluid to be healthy





NUTRIENT QUIZ

FUN TIME 3

- 1. I serve many functions in the body. I help carry nutrients to the body's cells and I also help regulate body temperature. I am
- 2. I can be converted into energy. I am also used to build, maintain and repair body tissues. I am
- 3. I have a bad reputation in many people's minds but I do serve many functions in the body. For example, I am the most concentrated source of energy and I also am needed for growth and healthy skin. I am .
- 4. I am the body's main source of energy and I come in two forms, simple and complex. I am
- 5. I do not provide energy (calories) but I do help regulate many of the chemical processes in the body. You need 13 different forms of me everyday. I am
- 6. I am depended on for nearly every process necessary for life. The body requires 16 types of me everyday from calcium to iron. I am

Key Words: vitamin, fat, minerals, protein, water, carbohydrates.

NOW YOU KNOW

- The importance of food and the nutrients present in them.
- Micronutrients are required in relatively smaller amounts by the body. They are vitamins and minerals.
- Macronutrients are required by the body in large amounts. They are carbohydrates, proteins and fat.







SUCCESS-O-METER



3

BEHAVIOUR CHANGES

Noticeable change such as eating more colours of fruit and vegetables. MY RAINBOW TRACKER given at the end of the chapter is a measurable habit forming tool for the children. They should evaluate their process.

CONCEPTUAL DEVELOPMENT

Has the concept of 3-G foods been understood by them. Has the knowledge on the basics of Nutrition increased?

PERFORMANCE CHANGE

Has the learning contributed to any improved performance such as developing healthier eating habits, trying new food or dishes?

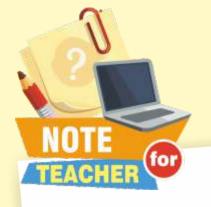


MY LEARNING LIBRARY



Ask a vegetable vendor to visit school. Students will get to see a variety of vegetables.

Dedicate any one day in a week as "Banana eating day" which the students can bring from home. This will encourage all students to eat that fruit. You can also make the days of the week based on a colour of the Food rainbow. Ask the student to bring any vegetable or fruit of the same colour in the tiffin.



Getting children to eat green vegetables or other vegetables at home can quite a task. Do encourage the parents to sit with their child everyday and fill the RAINBOW TRACKER featuring in the Habit forming tools and evaluation Trackers section. This exercise will encourage the child to eat a variety of vegetables to complete the rainbow tracker.







YOU ARE WHAT YOU EAT!



UNDERWEIGHT

If you eat less than what you need, you can fall ill.



NORMAL

When you eat as much you need, your weight is normal and you are healthy and fit.



OVERWEIGHT

When you eat more than you need you become overweight and remain unfit.

MIRROR ON THE WALL, AM I HEALTHY, FIT AND TALL?



Do you know what Nutritional Deficiency is?

- When you do not eat healthy food, you can fall ill or show signs of poor health.
- This is because the nutrients present in the food will not reach your body.





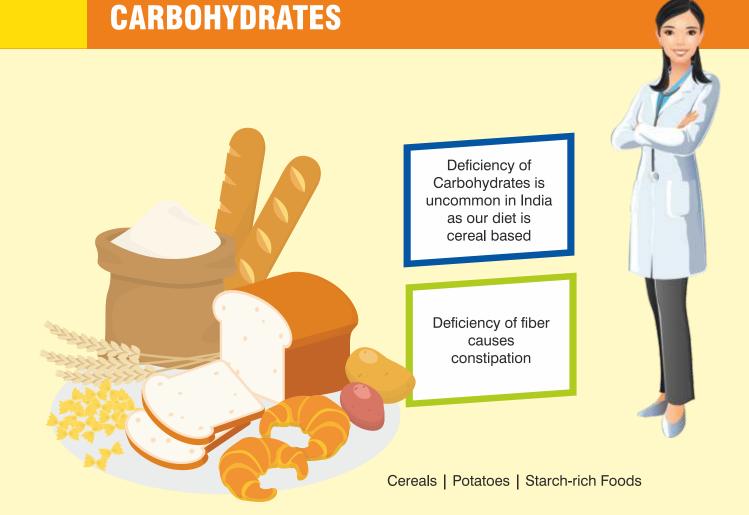


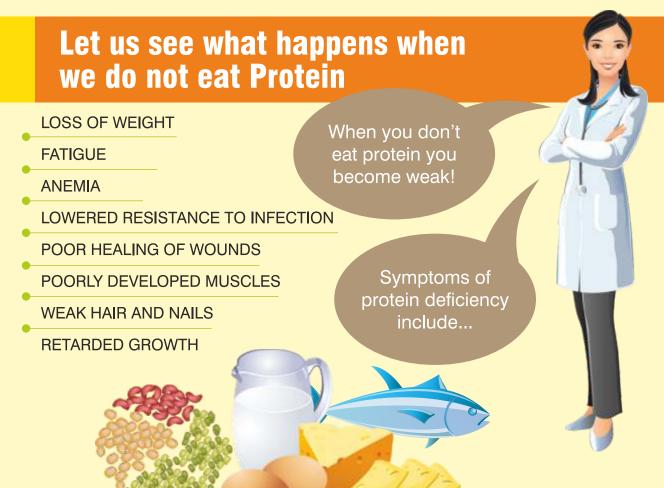
DO YOU LOOK
LIKE ANY OF
THEM?
These are signs of
not eating a
healthy diet.

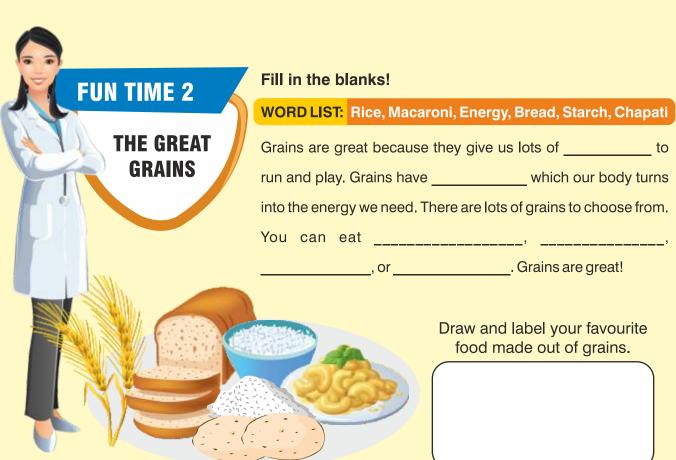














When there is a deficiency of Fat

- Skin becomes rough and dry, growth is poor and the body weight is low.
- Fat deficiency can lead to deficiency of other vitamins such as A, D, E and K. These vitamins are soluble in fats.



VITAMIN D AND CALCIUM DEFICIENCY

If legs are not straight, it indicates that bones are not strong. Weak bones can bend and even break.

Calcium and Vitamin D are required for strong bones. Vitamin D and calcium are best friends. They both are needed to make the bones and teeth stronger. Drink milk everyday to keep bones healthy and strong.



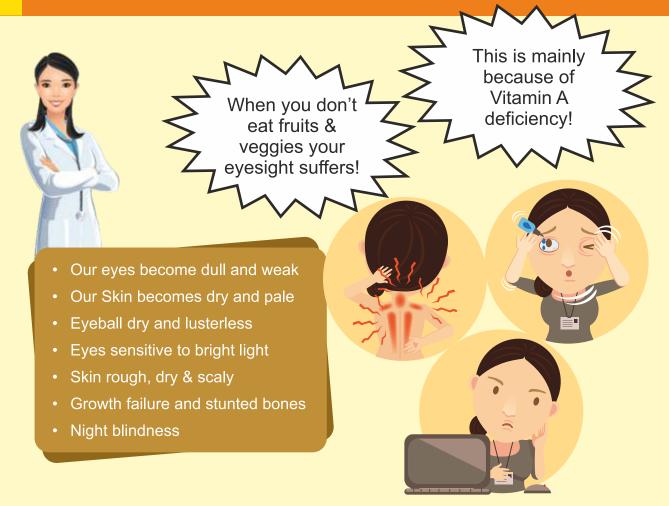




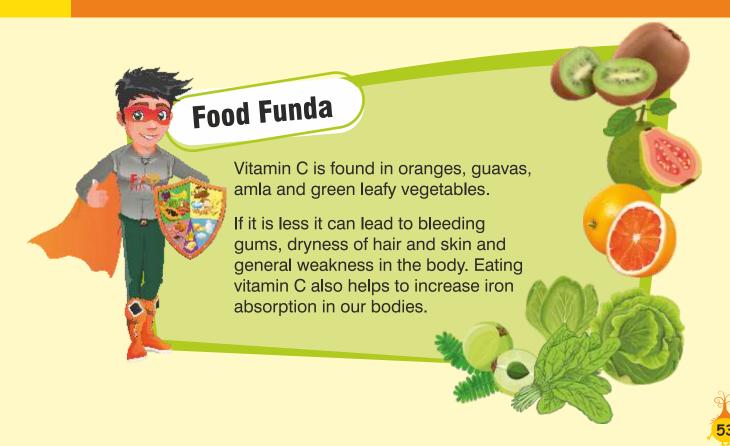
Bow Legs

Knocked Knees

VITAMIN A DEFICIENCY



VITAMIN C





Symptoms of Vitamin C deficiency

- Bleeding gums
- Frequent colds and fever
- Low resistance to infection
- Easy bruising
- Slow healing of Wounds



WATER

The word for water deficiency is **DEHYDRATION!**

Dehydration symptoms are...

- Mild to severe dehydration leads to dry mouth, sunken eyes, and skin when pinched remains elevated.
- Restlessness
- Irritability
- Lethargy
- Unconsciousness in extreme cases









LESS FREQUENT URINATION

HEADACHE

VITAMIN B GROUP DEFICIENCY

- Vitamin B1 or Thiamin
- Vitamin B2 or Riboflavin
- Vitamin B3 or Niacin
- Folic acid or Folate
- Vitamin B12 or Cobalamin

They occur in different forms in our body!

Vitamin B is a family of water soluble Vitamins!

Symptoms are...

- General apathy
- Irritability
- Depression
- Loss of appetite
- Indigestion
- Tiredness/fatigue

IODINE

lodine deficiency results in poor growth of body

- Goiter or swelling in the neck
- Flabby muscles
- Dry skin
- In case of severe lodine deficiency, stunted growth and mental retardation occurs.





Minerals are as important as Vitamins. Diets insufficient in these minerals can lead to deficiencies.









FUN WITH FOOD 3

THUMBS UP FOODS THUMBS DOWN FOODS

Put a tick in the box for Healthy food and cross in the box for Unhealthy food



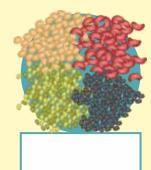














JUNK FOOD

Junk foods contain little or no proteins, vitamins or minerals.



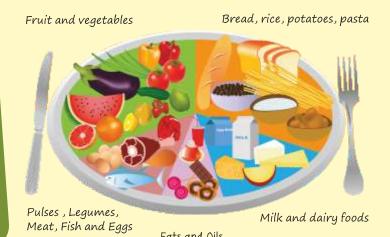
Junk food is any food which is low in essential nutrients and high in sodium, sugar and fats. They also include foods that are processed and packaged.



BALANCED DIET

Here are simple steps to overcome deficiencies

- Eating a balanced diet with variety of fresh wholesome food.
- Following proper cooking and storage practices.
- Using simple measures to enhance the nutrient content of food like sprouting of grains and fermentation of cereal/pulse batters.



NOW YOU KNOW

You show signs of poor health or deficiency when you do not eat balanced diet.

- Protein deficiency leads to loss of weight and retarded growth.
- Vitamin A Strengthens our immunity which helps us fight off infections Improves vision in dim light Keeps the skin and hair shiny and bright.
- Fat deficiency can lead to deficiency of other vitamins such as A, D, E and K. These vitamins are soluble in fats.



SUCCESS-O-METER

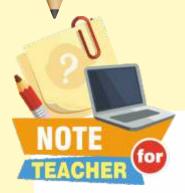
BEHAVIOUR CHANGES Nutrient deficiencies that have been explained will bear some impact on children's food acceptance and behaviour.

CONCEPTUAL DEVELOPMENT

Has the concept of My healthy plate or Team Sehat's protecting shield been understood by them?
Has the knowledge on the basics of Nutrient deficiencies increased?

PERFORMANCE CHANGE

Has the learning contributed to any change in their food consumption?



Build interest through stories around eating healthy to avoid nutrient deficiencies. You could also do a quick recall on children's dinner eaten the previous night and help them assess if it was healthy and balanced.











DO YOU REMEMBER WHY DO WE NEED FOOD?

Food is important for life. Food provides us energy to stay active, work and play. Food helps us to grow tall and build strong muscles. It helps to fight infections and stay healthy.





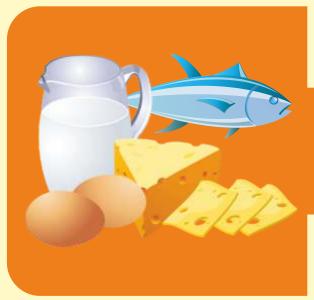
FOOD IS MADE OF NUTRIENTS

There are two type of nutrients

 Macro nutrients are needed by the body in larger amounts.

• Micro nutrients are needed by the body in small amounts.



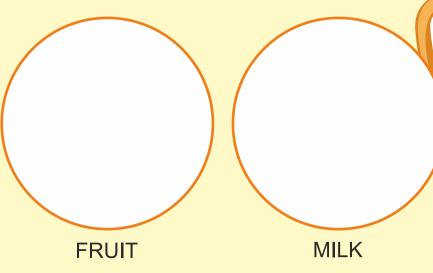


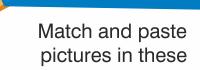
THE GROW FOODS Proteins



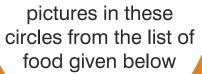


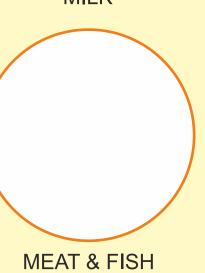
FOOD PICTIONARY





FUN WITH FOOD 1









VEGETABLES



































MY BALANCED DIET

What is a balanced diet?

Balanced diet is one which contains different types of foods (from all food groups).

In such quantities and proportions that the need for all the nutrients such as carbohydrates, proteins, fats, vitamins, minerals, water and fibre are adequately met.

It not only meets our day-to-day nutrient requirements but also provides for an extra allowance of the nutrients to be stored in our body, which can be used in conditions of stress.



HEALTHY FOOD

Fruit and vegetables

Bread, rice, potatoes, pasta



Pulses , Legumes, Meat, Fish and Eggs

Milk and dairy foods

Fats and Oils

NUTRIENTS AT A GLANCE

Nutrients	Found in	Function in the body
Protein	Meat, fish, poultry, eggs, nut, legumes (dried beans, peas and lentils), milk, yoghurt and cheese.	Essential for growth and repair and maintenance of a healthy body. Makes up part of the structure of cells in the body.
Carbohydrate	Bread, cereals, rice, pasta, noodles, potatoes, legumes, fruits milk and yoghurt.	Essential for giving energy to perform all body functions and all other physical activities such as run, walk, study and play sports.
Fats Saturated Fats Monosaturated Fats Polyunsaturated Fats	Butter, coconut oil, sunflower oil, other vegetable oils, ghee, cream, nuts and oilseeds.	Most concentrated source of energy. Fat is used in the structure of every cell in the body. Supplies fat-soluble vitamins (A, D, E and K) as well as essential fatty acids. Some fats help protect the heart whilst others are a problem for heart health.
Vitamins and minerals	Found in lots of different foods. For example, Vitamin C is found mostly in fruit and vegetables while the Vitamin B Group is found mostly in cereals as well as fruit and vegetables.	Needed in small amounts for normal growth and health everyday. Essential for the body to help carbohydrate foods to release energy. Important for other body structures.

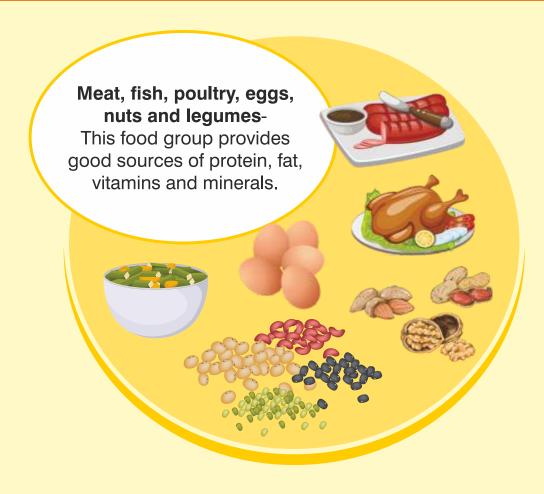


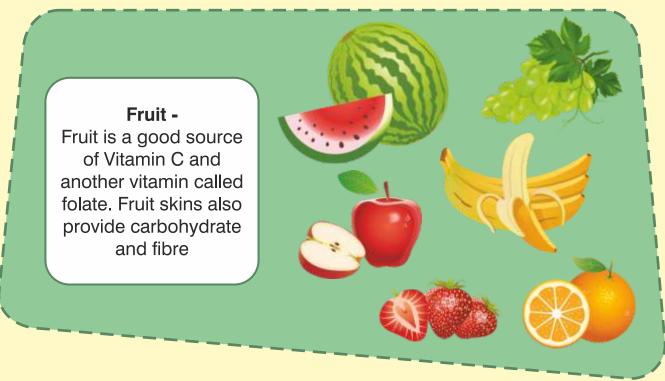


THE FOOD GROUPS

















COMPOSITE FOODS

Many recipes and dishes we eat are made up of foods from more than one group of the healthy eating plate.

These are called composite foods. Can you think of some examples?

- Idli / dosa & sambhar
- Stuffed Veg. Parantha / Kathi rolls
- Sindhi Kadhi
- Shepherds pie
- Lasagne
- Pizza



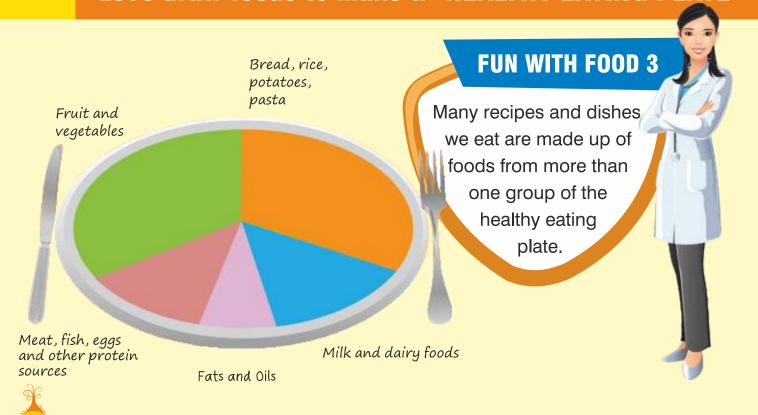


CHOOSE WHAT YOU EAT WISELY!

FUN WITH FOOD 2



Let's draw foods to make a "HEALTHY EATING PLATE"





CORRECT FOOD GROUPS

FUN WITH FOOD 5

Which 2 foods belong to the Fruit and vegetables group?









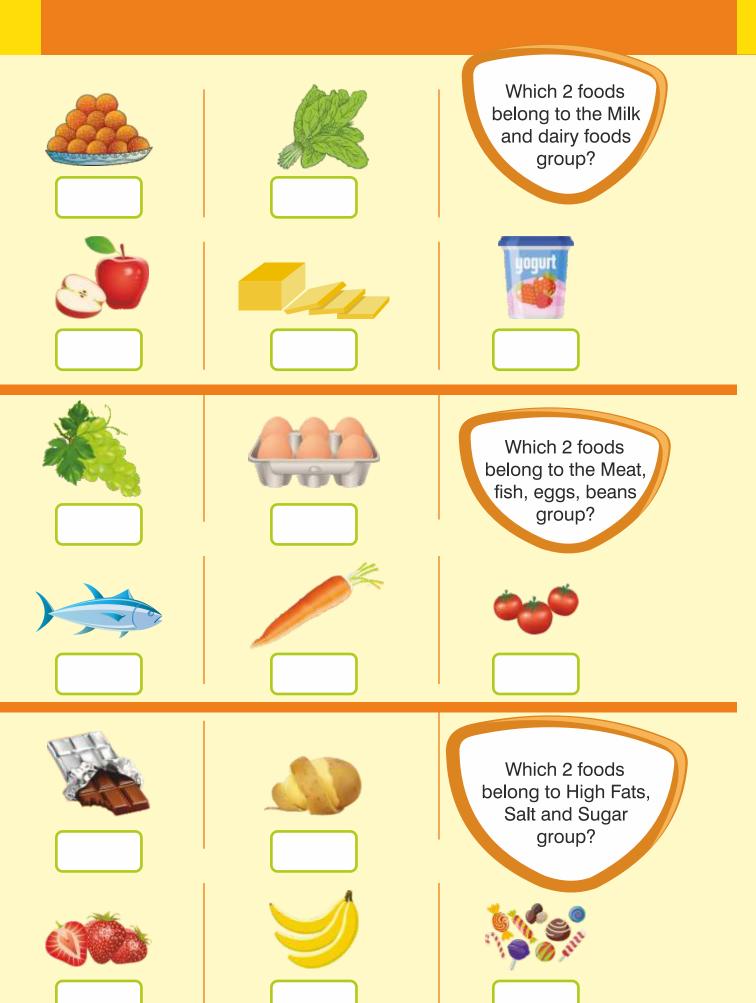






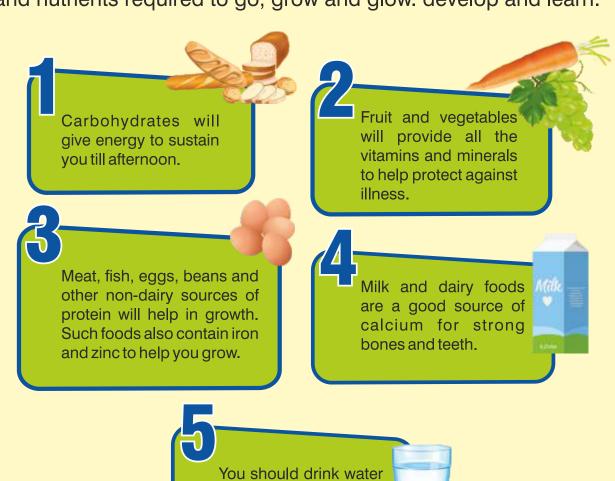


MY HEALTHY LUNCH BOX





A healthy, balanced and nutritious lunch box will provide the energy and nutrients required to go, grow and glow. develop and learn.



and stay hydrated.





MY SCHOOL TIFFIN

Good and Not so good food choices

GO FOR THE WHOLE WHEAT SANDWICH INSTEAD OF WHITE BREAD SANDWICH!





GO FOR THE WHOLE FRUIT INSTEAD OF ITS JUICE!









SALAD STICKS IN TIFFIN TASTE YUMMY!



CARRY FRUIT IN THE TIFFIN INSTEAD OF CANDIES!









CHOOSE BETWEEN GOOD TIFFIN OPTIONS AND NOT SO GOOD TIFFIN OPTIONS



PARENTS, PLEASE NOTE-

A Protein source (such as Daal ka chilla, Chana chaat, sprouts.)

A Healthy Carb (such as Parantha rolls, vegetable wrap, whole wheat bread or pasta.)

A Dairy source (such as cheese, buttermilk, paneer stuffings, a small dessert.)

A Seasonal fruit.

Vegetables as stuffing, (steamed corn, salad sticks.)

Vary lunchbox contents for a good balance of nutrients.

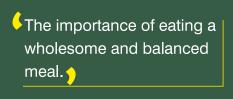






NOW YOU KNOW

MY LEARNING LIBRARY



- All food groups are important for our growth and development.
- Foods that are high in salt, sugar and fat are bad for our health.
- A healthy, balanced and nutritious lunch box will provide the energy and nutrients required to grow, develop and learn.



SUCCESS-O-METER

BEHAVIOUR CHANGES

Are there any noticeable changes in children's food acceptance?

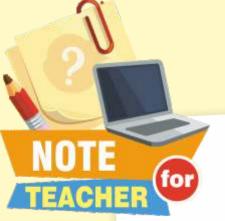
CONCEPTUAL DEVELOPMENT

Do they have an understanding /of the importance of eating balanced meals? Do they know that many nutrient deficiencies can be avoided by eating food from all food groups

PERFORMANCE CHANGE

Has the learning contributed to any change in their tiffin menus? Has the junk food consumption in tiffins decreased?



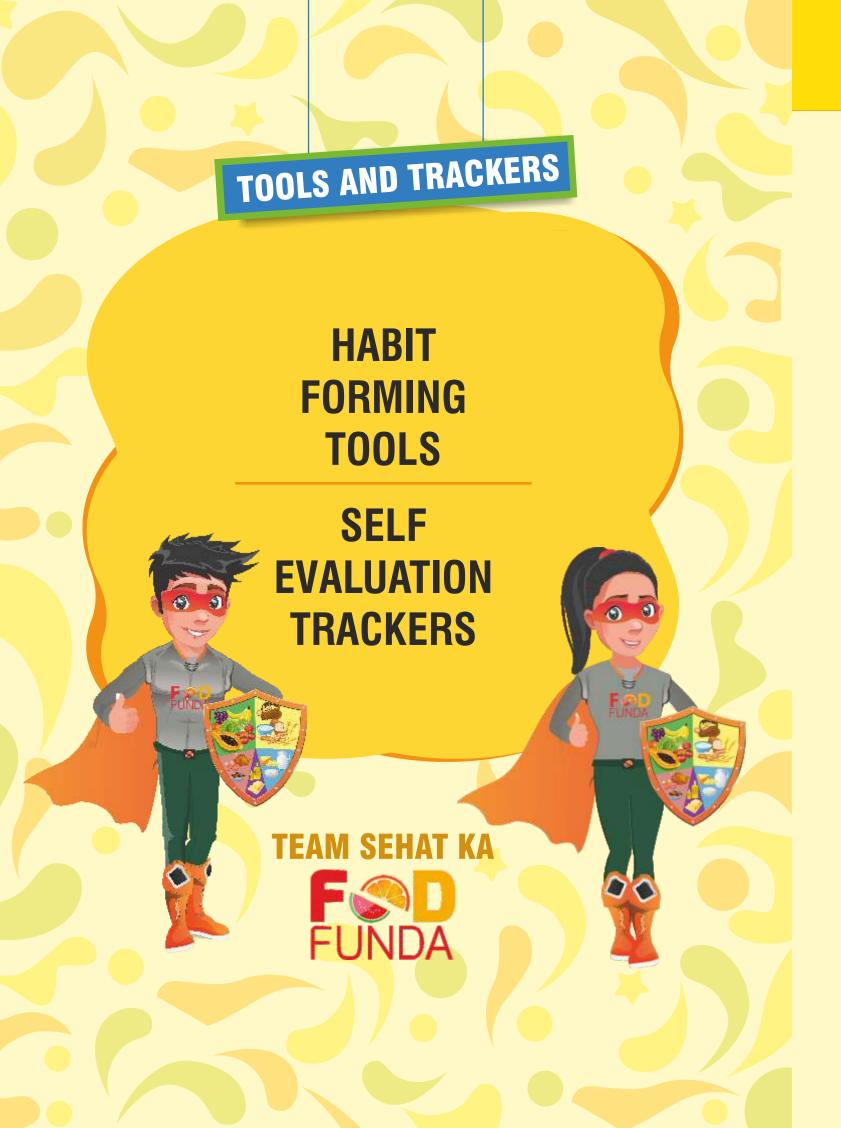


Children must be encouraged to bring healthy and wholesome meals in their tiffins. You can do a quick 'peep-in-tiffin' check and reward the children with smiley stickers for healthy tiffins.





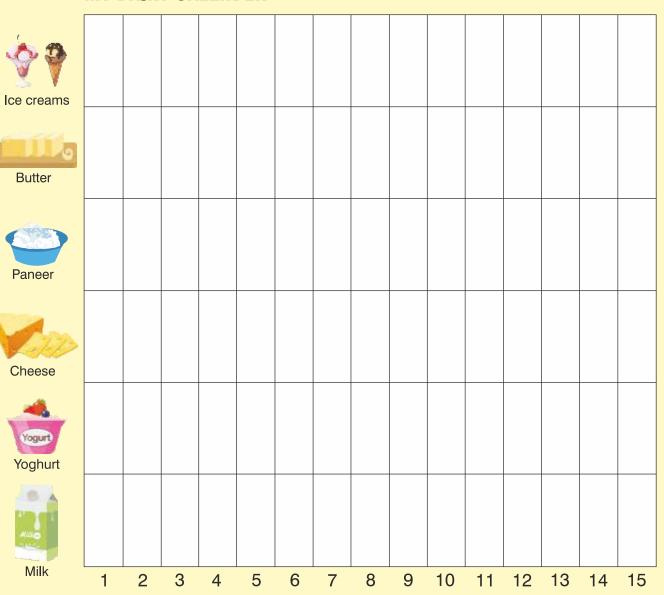




MY DAIRY - DOT TRACKER

Name	
Class	_ Section

MY DAIRY CALENDER



Stick 1 dot for each dairy serving. Dairy gives Calcium and Protein. Let us see how strong you are.



SOURCE: TOOLS AND TRACKERS -ARNEY'S FITKIDS-PROMOTING HEALTHY CHILD DEVELOPMENT



MY SUGAR TRACKER

FOOD ITEM	EXAMPLE	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7	FOOD TYPE TOTAL
Dairy Control of the	///								
Cold Drinks	>								
Chocolates & Candies	<i>>>></i>								
Packaged Foods	×								
Bakery ()	>								
Day's Total									

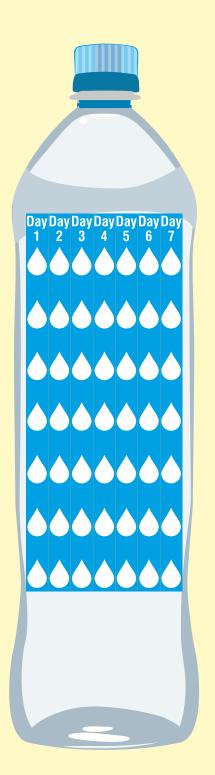
INSTRUCTIONS: Put a tick against the food item eaten in a day. You can put more than one tick in the same box if the food has been consumed more than once. See example as given.



SOURCE: TOOLS AND TRACKERS -ARNEY'S FITKIDS-PROMOTING HEALTHY CHILD DEVELOPMENT

MY WATER TRACKER

Name	
Class	Section



INSTRUCTIONS

Track your water intake over a week by colouring one drop blue each time you drink a cup of water. (1 cup = 150 ml)

Recommended Daily Amount of total water intake (including other beverages)

5-6 cups for 4 to 8 years

7-8 cups for 9 to 12 years

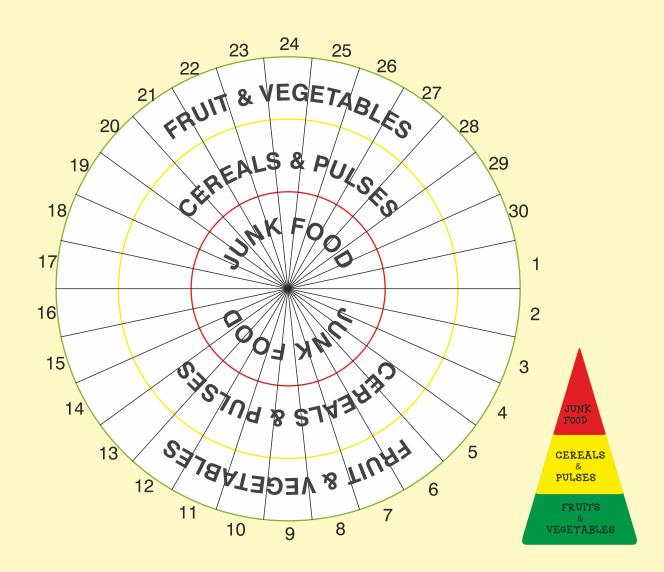
8 to 10 cups for 13+ years





MY JUNK FOOD TRACKER

Class Section



INSTRUCTIONS

Each numbered band indicates one day of monthly calendar. Match and Tick the colour of the food group consumed in the day on the tracker. Ensure the consumption of junk food goes down daily.

JUNK FOOD EXPLAINED

Any food item that has high fat content, contains saturated fats, has high sugar-salt content, low on nutrients, contains msg/flavour enhancers. They contain preservatives and chemicals.

MY HYGIENE TRACKER

Name	
Class	Section











CHANGE CLOTHES

- After Bath
- After School
- Before Play
- Before Bedtime

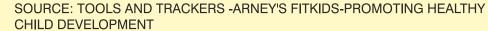
Before Brushing Before any Meal
 After any Meal - After any Meal
- After Play
- After visiting
the washroom
- Before Bedtime

Activities							
BRUSH TEETH	;38 1 ;381 ;381	ंडक् (हें डक्	(1888 1888 (1888	;;	हुंबर् हुंबर्ग हुंबर्ग	हें ब्रह्म हें ब्रह्म	
BATHE	April	interest	(Àte s) (Àte s)	April	April		Care
CHANGE CLOTHES							
WASH HANDS							

INSTRUCTIONS

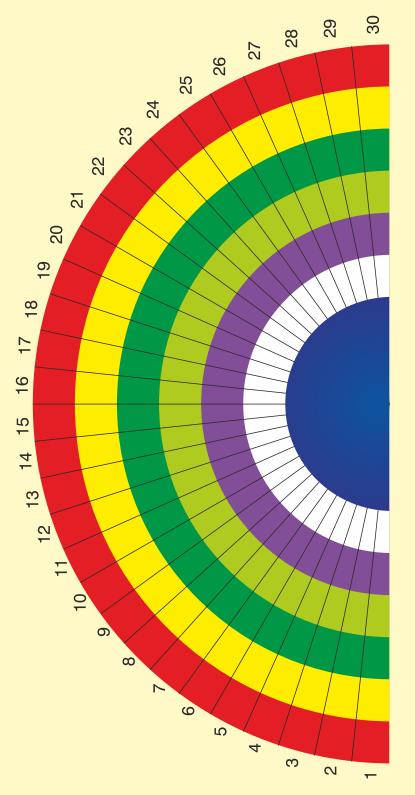
- 1. Work on your tracker by slaying the germs with your pencil.
- 2. Kill one germ each time you perform the personal hygiene activity.





MY FRUIT TRACKER

Class



Red: Apple with skin, Pomegranate, Cherries,

FRUIT COLOUR KEY

Strawberries, Water Melon Orange: Papaya, Orange Yellow: Pineapples, Golden Apple, Mango,

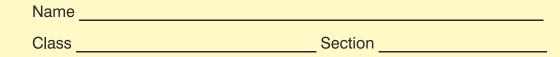
Indian Ras-bhari

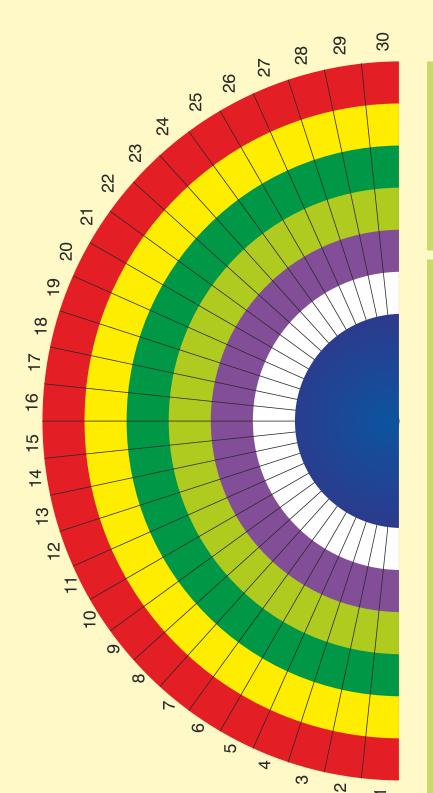
Each numbered band indicates one day of monthly calendar. Match and Tick the colour of the fruit consumed in the day on the tracker. Ensure the consumption of different coloured fruits goes up daily.

Green : Pears, Green Apple Kiwi Purple : Jamun, Black Grapes White : Banana, Litchi, Mangosteen, Dragon Fruit

INSTRUCTIONS

MY VEGGIE TRACKER





INSTRUCTIONS

Each numbered band indicates one day of monthly calendar. Match and Tick the colour of the vegetable consumed in the day on the tracker. Ensure the consumption of different coloured vegetable goes up daily. vegetable

Onions, Zucchini, Karela, Torai, Okra, Green Pumpkin, Parwal : Cabbage, Cucumber, Peas, Lauki, Tinda, Lettuce, Celery

Green

Light

Dark

Spinach, Methi, Broccoli, Green Beans, Capsicum, Spring

Tomatoes, Carrot, Beet, Red Peppers Bell Pepper, Yellow Squash, Sweet Corn, Yellow Tomato, Pumpkin, Sweet Potato

VEGETABLE COLOUR KEY

Red : Yellow : F

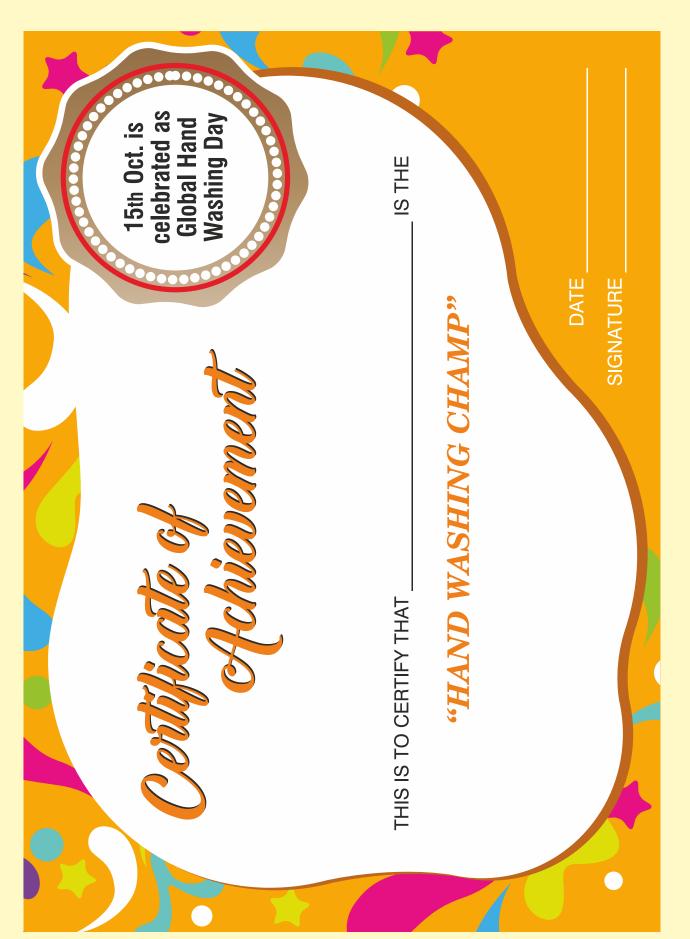
Green Purple : Purple Cabbage, Brinjal, Black Olives White : Potato, Mushroom, Arbi, Turnip, Lotus Stem, Cauliflower,







CERTIFICATE OF ACHIEVEMENT



FEEDBACK FORM

Name Name							
Address Address							
Contact Information							
Gender: Male Female							
Name of School							
Did you find the Yellow Book useful? Yes No							
Did you find the Yellow Book easy to read? Yes No							
Would you like to know more about food safety and nutrition? Yes No							
What do you think should be added to the book?							
What do you think should be removed from the book?							





Inspiring Trust, Assuring Safe & Nutritious Food



Food Safety Connect



