



Master Lesson Plan

For

Components of Food

Board	Standard	Subject	Chapter	Language	Reference Link	Creation
CBSE	STD VI	Science	Components of Food	English	Components of Food	2020-10

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Components of Food

1. MS_Objectives_Components of food

Notes to the teacher: This asset lays down the proposed plan for transacting this chapter. It states the asset objectives of the MLP. This asset is for teacher's reference and need not be taught to the students:

Students will be able to..

- recall their previous understanding on food
- discuss the different food items they eat everyday explain the components of food
- detect the presence of nutrients in food items
- have the advantage of knowing the facts about carbohydrates
- appreciate the value of nutritious food to stay contented and happy
- review the nutritional values present in the food
- recognize the ill effects of junk food
- explain about balanced diet
- take delight in learning more about food pyramid
- make a salad
- list the deficiency diseases
- appreciate the value of healthy food for the body
- revise the various concepts of the topic 'Components of food'.

Time to teach	Asset Type	Theme	SubTheme
3 Minutes	Main Script	Food & its production	Balanced diet, Balanced diet

2. IQ_What's in the Food

[Notes to the teacher - Teacher may enable the students to think and come out with as many answers as possible before giving out the right answer/ answers]

1. Why do we eat food everyday?

Suggested Answer: Food gives us the energy required to carry out our daily activities. It is required to repair and maintain the body. It also helps to fight diseases.

2. Do we eat only single type of food?

Suggested Answer: No

3. What are the different types of food we eat?

Suggested Answer: We eat rice, chapattis, fruits, vegetables etc.

4. Why do we eat variety of food?

Suggested Answer: To get different vitamins and minerals for our body.

5. Why some types of food are taken in large quantities and others in small quantities?

Suggested Answer: Body needs balanced diet so accordingly the food is taken.

6. What types of food are considered as healthy food?

Suggested Answer: Food that contains all the nutrients is good for health.

7. What happens if we eat only single type of food?

Suggested Answer: Single type of food gives only certain types of minerals but others become deficient in our body which starts creating problems by increasing the diseases.

8. Which nutrient of food gives us instant energy?

Suggested Answer: Glucose gives us instant energy. We sometimes feel very weak after long time of play outside. Having glucose instantly energises us.

9. Do all organisms eat the same type of food?

Suggested Answer: No, some eat meat flesh; some eat only vegetables, some organisms eat insects etc.

10. Where does the food come from?

Suggested Answer: It comes from plant and animal source.

11. If you eat only fried food and have cold drinks, will you remain healthy?

Suggested Answer: No, as they are junk food, and they do not even provide the necessary nutrients.

12. Who will need more carbohydrates in the diet -an athlete or an office employee? Why?

Suggested Answer : An athlete, as he is continuously running and his energy is being used up faster than the office employee.

Time to teach	Asset Type	Theme	SubTheme
5 Minutes	Inquisitive Questions	Food & its production	Balanced diet, Balanced diet

3. SA_Today's Menu

Aim: To list the variety of food eaten by the students.

Class setting: Whole class/ Individual activity

Materials required: Pencils, crayons, books, eraser

Procedure:

1. Students have to enlist the food items they have in the morning, afternoon and evening.
2. Students should also draw the food items in their books as shown below.

Observation:

BREAKFAST	PICTURE
1.	
2.	
3.	

SNACK	PICTURE
1.	
2.	
3.	

LUNCH	PICTURE
1.	
2.	
3.	

SNACK	PICTURE
1.	
2.	
3.	

DINNER	PICTURE
1.	
2.	
3.	

Conclusion: This activity helps the students to list down the variety of food items they eat everyday.

Questions to ponder over:

1. Why is there a variety of food items in the menu that we eat everyday?

Suggested Answer: There is variety in food items because different food items provide different types of nutrients.

2. Which food is unhealthy?

Suggested Answer: Food with a lot of oil or fats is not good for health.

3. Which food items are healthy?

Suggested Answer: Vegetables, fruits and food that contain a lot of fibre are healthy foods.

Image source:

<https://pixabay.com/en/breakfast-idli-indian-foods-2408818/>

<https://www.pexels.com/photo/sweet-snack-crumb-digestive-8061/>

<https://pixabay.com/en/india-food-indian-meal-2731817/>

<https://pixabay.com/en/indian-diwali-food-laddu-sweet-2290593/>

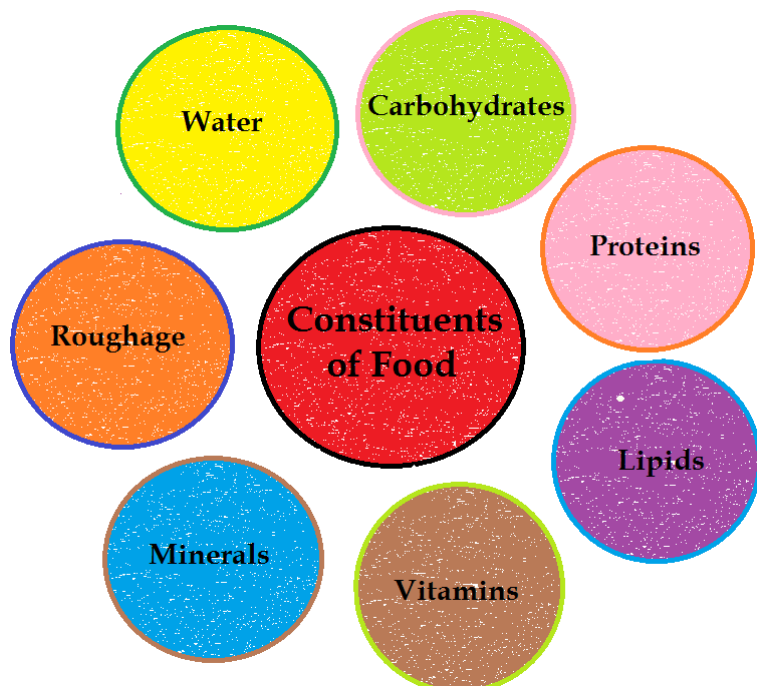
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Time to teach	Asset Type	Theme	SubTheme
10 Minutes	Suggested Activity	Food & its production	Nutrients, Nutrients

4. MS_Food and its Components

All the food that we eat contains essential substances that help our body to grow and develop. Such substances which provide nourishment essential for the maintenance of life and for growth are called as nutrients.

These nutrients keep our body fit and fine. The major nutrients which are most essential for our body are as follows:

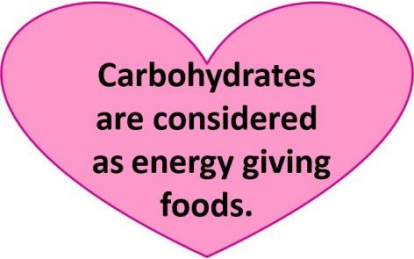
**2. The nutrients of food are classified as follows: Macro-nutrients and micro-nutrients**

a. Macro-nutrients are those that are needed in large quantities (tens or hundreds of grams) everyday. These are: Carbohydrates, protein and fats.

b. Micro-nutrients are those that are needed in minute quantities (micrograms or at best milligrams). These are: Minerals and Vitamins.

3. Besides these nutrients, our body needs dietary fibre or roughage and water.

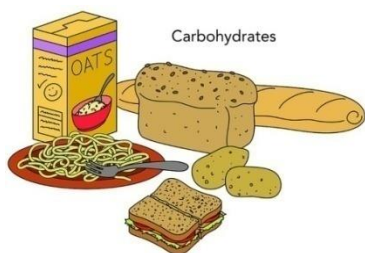
Carbohydrates:



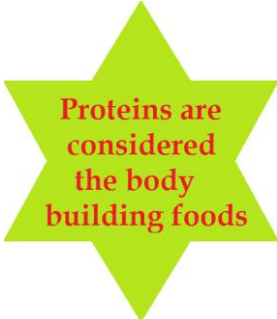
**Carbohydrates
are considered
as energy giving
foods.**

- They are one of the major constituents of a healthy and balanced diet.
- Carbohydrates maintain the functional activity of the cells.

Sources of Carbohydrates: White bread, rice, popcorn, potatoes, cookies, spaghetti, soft drinks, corn, sweet potato, etc.

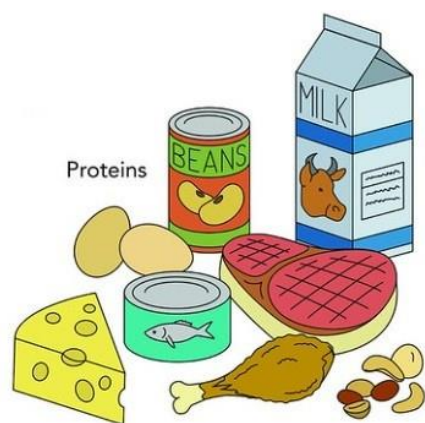


Proteins



**Proteins are
considered
the body
building foods**

- Proteins are the most important molecules necessary for our body.



Sources of Proteins

Proteins are found in legumes, meat, poultry, seafood, beans, peas, eggs, nuts, seeds, fish, etc.



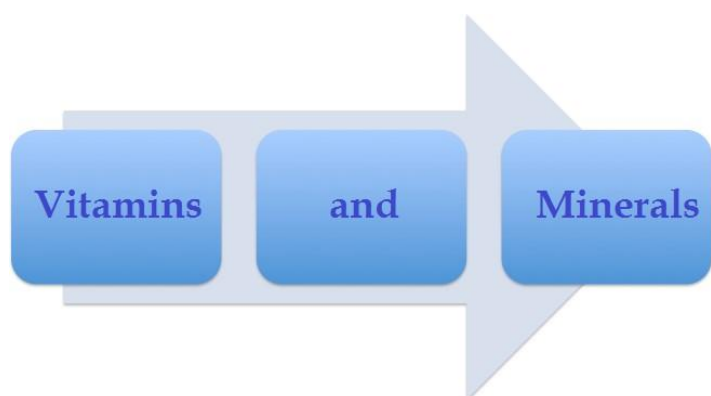
Lipids

Lipids namely fats and oils are yet another class of energy providers.



Sources of Lipids

Sources of lipids include sunflower oil, coconut oil, ghee, cheese, nuts, butter, dairy products, meat and other animal products.

Protective foods

- The food which is rich in vitamin and minerals forms the protective food.
- Protective foods are those foods which safeguard us against a wide range of diseases.
- They act as a natural defense against infections and keep us fit and healthy.

Vitamins:

- Vitamins are the nutrients our bodies need in order to maintain functions such as immunity and metabolism.
- Vitamins A, D, E, and K, the four fat-soluble vitamins, tend to accumulate in the body.
- Vitamin C and the B vitamins dissolve in water and so are called water soluble Vitamins.

Sources of Vitamins:

Vitamin	Sources	Functions
A	Carrots, sweet potatoes, pumpkins, spinach, papaya, fish liver oils, eggs, tomatoes, etc.	Healthy skin, teeth and eyes. Night vision.

Vitamin	Sources	Functions
B	Meats, whole grains, beetroot, fish, cereals, legumes, green leafy vegetables.	Maintains good health and proper growth

Vitamin	Sources	Functions
C	Bell peppers, dark leafy greens, kiwis, broccoli, berries, citrus fruits, tomatoes, peas, papaya.	• Healing of wounds • Resistance to diseases • Prevents infections, cold, fatigue and stress • Keeps gums, skin and teeth healthy

Vitamin	Sources	Functions
D	Egg yolk, Milk, Mushrooms, Exposure to sunlight	• Builds strong bones and teeth • Helps utilisation of phosphorus and calcium. • Prevents rickets

Vitamin	Sources	Functions
E	Nuts, Seeds, Vegetable oils, Green leafy vegetables, Soya beans	• Protects body's store of vitamin A • Helps blood flow to heart • Helps in body functions and develops resistance against infections.

Vitamin	Sources	Functions
K	Green vegetables, Eggs	• Clotting of blood • Proper functioning of liver

Minerals:

Minerals are essential for proper growth of the body and for maintaining good health. Important minerals required by the body are calcium, phosphorous, iron, Iodine and sodium.

Sources of minerals:

1. Calcium: Milk, green leafy vegetables.
2. Iron: Liver, eggs, meat, dry foods, green leafy vegetables.
3. Phosphorous: Milk, green leafy vegetables.
4. Iodine: Sea food, egg, green leafy vegetables.

Roughage

It is also called as dietary fibre. It is a type of carbohydrate found exclusively in plants. Unlike other types of carbohydrates, it is not digested in the small intestine. It helps in free bowel movements and prevents constipation.

Sources of dietary fibre

Whole grain cereals, oats, beans, lentils, fruits and vegetables, nuts and seeds, peels of some fruits and vegetables.



Water:

Water acts as a lubricant to help the food move in our digestive tract. It helps in digestion and many other body processes.

Sources of water

Water is provided by food and drinks.

It has been roughly estimated that about 20% of water consumed is from foods like soups, yogurt, fruits and vegetables while 80% is from drinks such as milk, water and fruit juice.

Functions of food:

- It provides energy to do work.
- It provides material for growth and development of body.
- It provides regulation of body processes to maintain life.

Image source:

<https://www.flickr.com/photos/121935927@N06/13579052954> (Attribution - SiyavulaEducation)

<https://commons.wikimedia.org/wiki/File:Soy-whey-protein-diet.jpg> - public domain

[https://commons.wikimedia.org/wiki/File:Foods_\(cropped\).jpg](https://commons.wikimedia.org/wiki/File:Foods_(cropped).jpg) - public domain

Time to teach	Asset Type	Theme	SubTheme
15 Minutes	Main Script	Food & its production	Nutrients, Balanced diet, Nutrients Balanced diet

5. SA_Nutrients inFood**ACTIVITY I**

Aim: To detect the presence of starch in different food items.

Materials required :

A dropper, brown iodine solution and a variety of food items like bread, cooked rice, a slice of apple, a biscuit, cooked dal and a raw potato.

Procedure :

- Take a small piece of bread and put a drop of the iodine solution on it.
- Test each of the other items in the same way and note down the observations.
- Always wash your hands well after any experiment which uses chemicals.

Observation :

Sl. No	Food items	Colour changed to blue black
1.	Bread	
2.	Cooked rice	
3.	A slice of apple	
4.	A biscuit	
5.	Cooked dal	
6.	Raw potato	

Conclusion: This activity shows that the food items containing starch turn blue black when iodine solution is introduced into each of these food items.

Activity II

Aim: To detect the presence of fat in a given sample of food.

Class setting: Whole class

Materials required: Food sample, white paper

Procedure:

Teacher should take a small quantity of a fatty food item. Wrap it in a piece of paper and crush it. Carefully straighten the paper.

Observation: Oily patch appears on the paper.

Conclusion: It shows that food item contains fats.

Precaution: After rubbing an item on paper, paper must be allowed to dry for a while so that water may dry up after sometime.

Activity III

Aim: To detect the presence of protein in given sample of food.

Class setting: Whole class

Materials required: Food sample, distilled water, test tubes, dropper, copper sulphate solution, caustic soda.

Procedure:

- Take a small amount of each food sample and pour some distilled water to make a test liquid in a test tube.
- Put 2 drops of copper sulphate solution and 10 drops of solution of caustic soda into the test tube which contains the food sample.
- Shake well and let it stand for few minutes.

Observation:

FOOD ITEMS	PROTEIN PRESENT	FOOD ITEMS	PROTEIN PRESENT
Milk	a violet colouration is seen which indicates presence of protein	Boiled egg	
Ground nut		Dal	
Apple		Oats	
Cooked rice		Powdered almond	
Wheat flour		Any vegetable	

Conclusion: This activity helps the students to understand the nutrients present in each food item.

Questions to ponder over:

1. What happened when you test the dal for starch and why?

Suggested Answer: Dal did not show any change in colour. It shows that the dal does not contain starch.

2. Which nutrient is present in dal?

Suggested Answer: Protein

Time to teach	Asset Type	Theme	SubTheme
20 Minutes	Suggested Activity	Food & its production	Test for presence Of different Sources Of nutrients, Balanced diet, presence of different sources of nutrients, Balanced diet

6. IA_Facts about Carbohydrates

1. Carbohydrate present in sugar is called sucrose, present in milk is called lactose and present in fruit is called fructose.

2. Sucrose is present in sugarcane and in beetroot. It is a sweetening agent in biscuits, cookies, cakes, ice-creams, etc.

3. Fructose is present in honey, tree fruits, berries, melons and in some root vegetables.

4. Lactose is found mainly in milk. It is extracted from sweet or sour whey.

Time to teach	Asset Type	Theme	SubTheme
2 Minutes	Interesting Asides	Food & its production	Nutrients, Balanced diet, Nutrients, Balanced diet

7. VC_Healthy Food

Learning Domain: Classroom

A balanced meal creates a healthy body. A healthy body creates a healthy mind. Practice of silent sitting, brings peace to the mind. A peaceful heart is the fountain of joy.

Guided Visualisation

Children! Sit with your back straight..... close your eyes..... and relax.....

Breathe in.....breathe out..... (3 times)

Visualise your mother working in the kitchen.....

Washing the vegetables and grains.....

Cooking food for you, your brothers and sisters, for the family, with lot of love and care.....

She serves each one of you fragrant, warm, healthy food.....It has carbohydrates,.... proteins,.... fats,.... vitamins,.... dietary fibres.....minerals.....

Your mother knows that for growth and maintenance of good health, you get all major nutrients in your food.....

In right quantities.....

Not too much of one and not too little of the other. It is a balanced diet..... the prayer begins

Thanking the Almighty for His abundant Grace..

May this food give me energy, happiness, peace and love..

So I can grow happy and healthy, be a good student, helping others....

“I thank Almighty and my parents....For this blessing of eternity!”

Before opening your eyes, send a silent prayer for all beings in the universe to enjoy what you are enjoying – a good, balanced diet.

Slowly open your eyes.

Time to teach	Value Type	Value Sub Type	Value Attribute
5 Minutes	Right Action		Silent Sitting

7. SA_ThinkTank

Aim: To list out your favourite snacks/food item/vegetable, etc and analyse the nutritional values present in it.

Materials required: Pencil, pens, books, internet to search for information

Procedure:

1. Students will have to list down their favourite snacks or food items in their notebooks.
2. Few of the food items such as chips/drinks have the nutritional values written on them.
3. Students have to note nutritional values present in their favourite food as shown in the below picture.
4. If they do not know the nutritional values, they have to find it out from different sources.

Observation:

For example: The nutritional fact of yogurt is as follows:

Nutrition Information			
Typical values	Per 100g	Per 1/4 pot	% based on GDA for women
Energy	256 kJ 61 kcal	320 kJ 76 kcal	3.8%
Protein	4.9g	6.1g	13.6%
Carbohydrate	6.9g	8.6g	3.7%
of which sugars	6.9g	8.6g	9.6%
of which starch	nil	nil	-
Fat	1.5g	1.9g	2.7%
of which saturates	0.9g	1.1g	5.5%
mono-unsaturates	0.4g	0.5g	-
polyunsaturates	nil	nil	-
Fibre	nil	nil	nil
Salt	0.2g	0.3g	5.0%
of which sodium	trace	0.1g	4.2%
Vitamins & minerals			
Calcium	168mg	210mg	26%

SL.No	Name of the snack/vegetable/food item	Nutritional value
1		
2		
3		
4		
5		

Conclusion: This activity will help the students to analyse the nutritive value of food.

Questions to ponder over:**1. What is meant by nutritional value?**

Suggested Answer: Nutritional value is the measure that gives the consumer a well-balanced ratio of the essential nutrients present in the food.

2. Why are nutrition labels important?

Suggested Answer: Nutritional labels give us the information to choose a healthy diet and make it easier to choose the most nutritious foods.

3. What if the nutritional value shows 51 grams fat per hundred grams. Is it a healthy food?

Suggested food: This food item has a lot of fat content in it and hence not good to eat this often.

Image source- Original contribution – puttyrevankar@gmail.com

Time to teach	Asset Type	Theme	SubTheme
5 Minutes	Suggested Activity	Food & its production	Test for presence of different Nutrients, Test for presence of different nutrients,

9. DD_Say No to Junk Food

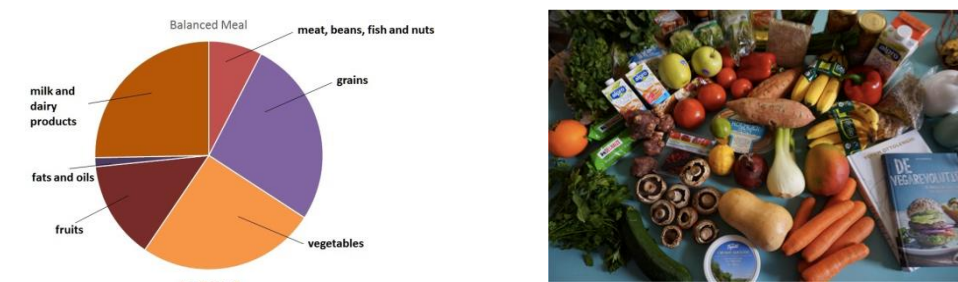


1. Even though you think junk food tastes great, it can have bad effects on your health. Some examples of junk food are donuts, potato chips and burgers. These foods are high in sugar, salts, white flour, etc., which can lead to obesity.
2. Eat vegetables, follow a balanced diet and drink 2–3 litres of water everyday to stay healthy.
3. Use natural food colours.
4. Avoid using foods with artificial preservatives, food colours and flavours.
5. Stop drinking carbonated drinks or soda; these can harm your teeth and can make you unhealthy.

Image source:
<https://pixabay.com/illustrations/eatables-junk-food-snack-potato-3873462/>

Time to teach	Asset Type	Theme	SubTheme
2 Minutes	Day-to-day Relevance	Food & its production	

10. MS_Balanced Diet



- A diet that contains adequate amounts of all necessary nutrients required for healthy growth and activity.
- It is also rich with sufficient amounts of fibre and various nutrients to ensure good health.
- Food should also provide the appropriate amounts of energy and water.
- It should be both adequate and wholesome.
- A proper combination of fruits, vegetables, grains and dairy products ensures a balanced diet.

Nutrients that comprise our diet can be divided into:



The food we normally eat in a day is our diet. The food that we eat everyday should have all the nutrients needed for our body, in the right quantities so that we grow and maintain good health. Not too much of one and not too little of the other. We should also drink a good amount of water. Our diet should also have a good amount of roughage. Such a diet is called a balanced diet

What we need for a balanced diet depends on



A balanced diet does not need to contain expensive food items. Locally produced and seasonally available items would contain adequate nutrition required by the body .

For example: Pulses, groundnut, cereals, soybean, sprouts, fermented foods such as idlis, dosas, etc roti, chapati, banana, spinach, jaggery available vegetables and other such foods provide many nutrients.

To ensure that we get the most out of the food we eat, cooking the food correctly is also important.

We should always wash the vegetables and fruits before cutting them. This is because the skins of vegetables and fruits contain vitamins and minerals. If we cut the vegetables and wash them later, then these vitamins are lost. Similarly, rice and pulses should also not be washed repeatedly so as to avoid the loss of vitamins and minerals.

We all know that cooking improves the taste of food and make sit easier to digest. At the same time, cooking also results in the loss of certain nutrients. Many useful proteins and considerable amounts of minerals are lost if excess water is used during cooking and is then thrown away.

It is essential to include fresh fruits and vegetables in your diet since they provide not only vitamins and minerals but also water and roughage. So it would be apt to say an apple a day keeps the doctor away!

Too much of a nutrient like fat would lead to a disease like obesity that causes other diseases. If a person gets too little of a nutrient then they may suffer from deficiency diseases.

Why is balanced diet important?

For a healthy body and a healthy mind.

To maintain weight

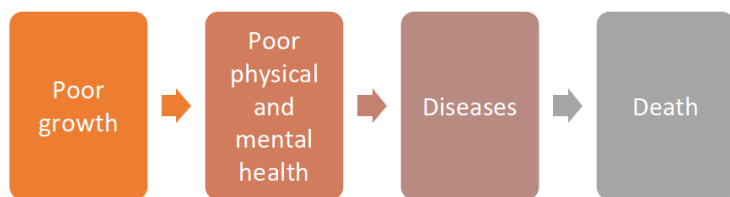
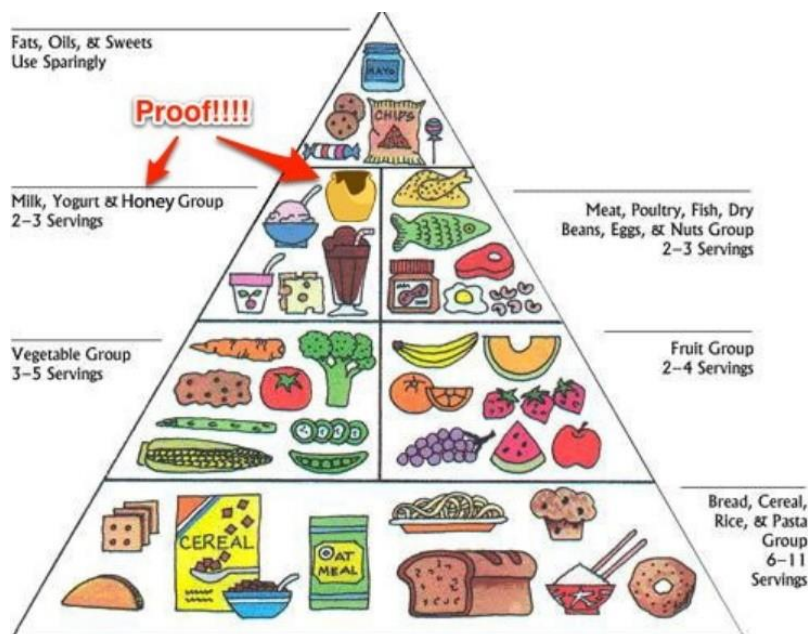
Improper diet may result in

Image Source:
<https://pxhere.com/en/photo/1040940>

Time to teach	Asset Type	Theme	SubTheme
8 Minutes	Main Script	Food & its production	Balanced diet, Balanced diet

11. IA_Food Pyramid

- The United States Department of Agriculture has created a guide for nutrition known as food guide pyramid.
- It was published in 1992.
- This pyramid, shows how much of each category of food should be consumed by an individual on a daily basis.

- This food pyramid arranges the food starting from the high calorie food at the top to the low calorie food at the base.
- There are different food pyramids for different persons. The children's food pyramid is easy to understand for children because it explains things by using colours and geometric patterns.
- The food pyramid emphasizes on the five major food groups, all of which are required for good health,
- It also tells which food include a lot of fats, oils and sweets and should be consumed in limited amounts.
- The base of the pyramid is the carbohydrate food items. This implies that carbohydrates have to be taken in larger amounts as compared to the other food groups. Eating fresh fruits is recommended more than taking fruit juice since it adds to the fibre content and avoids unwanted sweeteners and preservatives.
- At the top of the pyramid are fats and sweets which contain high energy but low nutritional value.

Image source :

<https://www.flickr.com/photos/cjmartin/5408464655/in/photolist-9eVN7B-CC-BY-2.0-> Chris Martin

Time to teach	Asset Type	Theme	SubTheme
4 Minutes	Interesting Asides	Food & its production	

12. SA_Cooking and tasting

Aim: To prepare salad and taste

Material required:

2 cups of sprouted moong beans, 1 small or medium sized onion, finely chopped, 1 medium sized tomato, finely chopped, 1 green chilli (optional), finely chopped, 1 tsp lemon juice, a few coriander leaves, salt and pepper for taste.

Procedure:

- Rinse the sprouted moong beans in water.
- You can either steam them or boil them till they are completely cooked.
- Strain the cooked sprouts.
- Mix all the ingredients except the salt and lemon.
- Season with salt and add a few drops of lemon juice. Garnish with coriander leaves
- Serve immediately

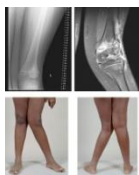
Conclusion: This activity helps the students to make salad.

Time to teach	Asset Type	Theme	SubTheme
5 Minutes	Suggested Activity	Food & its production	Balanced diet, Balanced diet

13. DD_Deficiency Diseases

Calcium:

- Required for strong bones and teeth
- Deficiency symptoms:
- Bones become weak and brittle.
- Rickets, tooth decay, muscle cramps, osteomalacia (soft bones) and osteoporosis in adults.

**MUSCLE CRAMP****RICKETS****TOOTH DECAY****Recommended diet:**

- The best diet rich in calcium are milk and milk products such as cheese, curds, etc.
- Most essential to drink a glass of milk everyday.
- Calcium tablets along with Vitamin D are the supplements.

**CALCIUM****VITAMIN D TABLETS****FRUITS****CURDS****MILK****BUTTER**

IRON:

- Deficiency of iron in the blood is called Iron deficiency anaemia. Iron is present in haemoglobin in the blood. It helps in distribution of oxygen to all parts of the body.

Symptoms:

- Tiredness
- Dark eye circles
- Weakness and fatigue
- Low red blood cells in the blood
- Low haemoglobin level

**RED BLOOD CELL****MUSCLE CRAMP****Recommended diet:**

- Grapes, spinach, all green vegetables
- Whole grain, cereals, fruits, dates, raisins
- Liver and egg yolk
- Iron tablets along with folic acid and Vitamin B12 tablets

**FRUITS****WHEAT****RAISINS****GRAPES****EGGYOLK**

**IRON TABLETS****IODINE:**

- Deficiency of iodine in the body is called Goitre. Iodine is required for the proper functioning of the thyroid gland.

Symptoms:

- Swelling of the thyroid gland that causes a lump to be formed in the front of the neck.

Recommended Diet:

- Sea foods
- Turnip greens, garlic,
- Pineapples, pears, citrus fruits,
- Egg yolk.
- Iodised salts instead of normal salts

**FRUITS****SEA FOOD****CITRUS****EGGYOLK****GARLIC**



IODISED SALT

Image Source

Pain - <https://pixabay.com/en/pain-ill-healthy-problem-disease-1015576/>
 Rickets - https://en.wikipedia.org/wiki/Genu_valgum (Attribution - BioMed Central - <http://www.biomedcentral.com/1471-2407/4/57>)
 Tooth decay - <https://www.flickr.com/photos/figgenhoffer/3661358131-CC-BY-2.0-D.C.Attv>
 Calcium tablet - <https://pixabay.com/photos/vitamin-d-calcium-tablets-healthy-3091385/>
 Vitamin D - <https://pixabay.com/en/pill-yellow-isolated-316601/>
 Curd, milk and cheese - Original contribution - putty.revankar@gmail.com
 Red blood cells - <https://pixabay.com/illustrations/red-blood-cell-blood-human-micro-5280112/>
 Muscle cramp - <https://pixabay.com/vectors/bend-bent-over-heaving-human-1296747/>
 Iron Pill - <https://pixabay.com/en/pills-medicine-capsule-health-161087/>
 Fruits, SSSVV Gallery
 Grapes, Eggs_OC - putty.revankar@gmail.com
 Wheat - <https://pixabay.com/en/breads-cereals-oats-barley-wheat-1417868/>
 Raisins - <https://pixabay.com/en/food-raisins-plum-624603/>
 Garlic - <https://pixabay.com/en/garlic-purple-garlic-head-of-garlic-618400/>
 Sea food - <https://pixabay.com/en/seafood-platter-crustaceans-food-1232389/>
 Iodine Salt, Citrus - Original contribution - putty.revankar@gmail.com

Time to teach	Asset Type	Theme	SubTheme
5 Minutes	Day-to-day Relevance	Food & its production	Deficiency diseases, Deficiency diseases

14. VC_Health is Wealth

Learning Domain: Classroom Dear

Children,

We are what we eat.

We are born of food, nourished by food, we grow because of the energy we draw from food.

So we have to be very careful what 'we take in.'

Let us read this poem, and memorise it –

Health is Wealth

Good Health is a state of Harmony,
With Food from Nature's pharmacy;
Healthy Food is what my body needs,
Carbs, protein & Fat I should not exceed;
A balanced Diet is food for the body,
Take care of it, for it's no hobby;
Ample prayer is food for the Spirit,
With Divine Grace, Thy shall inherit.
No success, no bounty, nor Wealth
Can give you more joy than
Health!

Time to teach	Value Type	Value Sub Type	Value Attribute
3 Minutes	Peace		Songs

15. QA_Components of Food – A Recap**I. Fill in the blanks:-**

1. If our daily diet lacks one nutrient or the other, it may lead to _____ diseases.
2. Sunlight provides us with Vitamin _____.
3. Animal proteins are found in _____ and _____.
4. Minerals like _____ and _____ are essential for making bones strong.
5. Deficiency of proteins causes a disease called _____.
6. _____ is caused by deficiency of Vitamin C.

Suggested Answer:

1. Deficiency
2. Vitamin D
3. Chicken and Egg
4. Calcium and Potassium
5. Marasmus
6. Scurvy

II. Identify the source of nutrient from the picture:**Suggested Answer:**

A) Protein B) Fats C) Carbohydrates

3. Circle the odd one out:

- | | | | | |
|----|---------------|----------|----------|-----------|
| 1) | Carbohydrates | Proteins | Potatoes | Fats |
| 2) | Beriberi | Scurvy | Obesity | Rickets |
| 3) | Butter | Ghee | Nuts | Orange |
| 4) | Iodine | Iron | Vitamins | Magnesium |
| 5) | Fish | Milk | Eggs | Butter |

Suggested Answer: a) potato b) Obesity c) Orange d) Magnesium e) Butter

4. Look at the following picture and fill the table:

Picture	Disease	Caused by deficiency of:	Picture	Disease	Caused by deficiency of:
					

Suggested Answer:

- a) Rickets- Vitamin D & Calcium
b) Goitre-Iodine

5. CORRECT THE STATEMENTS:

1. Materials needed to prepare a particular dish is called menu.

Suggested Answer: Ingredient

2. Animals which eat only animals are called herbivores.

Suggested Answer: Carnivore

3. Bees collect hive from flowers, convert it into nectar and store it in their honey.

Suggested Answer: Bees collect nectar from flowers convert it into honey and store it in their hives.

4. Carbohydrates are needed for the growth and repair of our body.

Suggested Answer: Carbohydrates are needed to provide energy for our body.

5. Minerals do not provide any nutrient to our body, but it is an essential component of our body and add to its bulk.

Suggested Answer: Dietary fibres do not provide any nutrient to our body, but it is an essential component of our body and add to its bulk.

6. A diet that contains the correct proportions of all nutrients is equal diet.

Suggested Answer: Balanced diet.

7. Deficiency diseases occur due to proper nourishment of nutrients over along period of time.

Suggested Answer: Deficiency diseases occur due to lack of nutrients over a long period of time.

8. Iron is required for keeping our bones healthy.

Suggested Answer: Calcium is required for keeping our bones healthy.

9. Deficiency of vitamin C leads to night blindness.

Suggested Answer: Vitamin A

10. Citrus fruits are rich in vitamin A.

Suggested Answer: Vitamin C.

VI. SHORT ANSWERS:

1. What is sprouting? Name any two types of seeds which are used for making sprouts in our homes.

Suggested Answer: Sprouting is a process in which plants put out shoots during germination. Greengram, bengal gram are few seeds that are used for sprouting.

2. What are body building foods?

Suggested Answer: Protein rich food are body building foods.

3. What is meant by nutrients?

Suggested Answer: The components of food which are needed by our body for growth and development are called nutrients.

4. Define roughage.

Suggested Answer: The fibrous indigestible material present in any food is called roughage.

IV. DIFFERENTIATE:-**1) Kwashiorkor & Marasmus**

Suggested Answer:

Kwashiorkor

1. Occurs due to deficiency of proteins in the food.
2. Children develop edema in lower legs, lower arms and face.
3. Poor appetite.
4. It occurs in children from 1 to 5 years of age.

Marasmus:

1. Occurs due to deficiency of carbohydrates proteins and fats.
2. No swelling.
3. Appetite is good.
4. It occurs in infants up to 1 year of age.

2) Herbivores, Carnivores, Omnivores

Suggested Answer:

Herbivores:

Animals that eat only plants.

Carnivores:

Animals that eat other animals.

Omnivores:

Animals that eat both plants and animals.

V. DETAIL:**1. What is meant by edible parts of a plant? Write in detail about parts of plants used as a food.****Suggested Answer:**

A plant has six parts; they are roots, stem, seeds, flower, fruit and leaves. Each part of a plant can be used as food and are called as vegetables. Edible part is one part of a plant which is used for consumption.

Parts of a plant being used as food:

1. Roots are the underground part of a plant that can be eaten as vegetables. Examples of edible underground roots are radish, carrot, potato, beetroot.
2. Stem of some plants can also be used as food. Best example of stem is ginger, turmeric and asparagus.
3. Seeds of plant can also be eaten. Seeds are most commonly used by humans, for example maize(corn), wheat, rice.
4. Broccoli and cauliflower are the examples of flowers that we eat as vegetables.
5. Fruits are very good for human consumption and have many health benefits. Some of the fruits that we get from plants are grapes, papaya, banana etc.
6. Leaves of some plants are also consumed as vegetables, for example lettuce, spinach, cabbage.

2. Mention the functions and deficiency of vitamins.**Suggested Answer:**

Functions: Vitamins help in protecting our body against diseases. They also protect our eyes, bones, teeth and gums.
Deficiency: Rickets, night blindness, anaemia, beriberi, scurvy are few of the deficiency diseases caused by lack of vitamins.

3. Elaborate the functions and deficiency of minerals.**Suggested Answer:**

Functions: Minerals are protective parts of foods occurring naturally and are needed by our body in small amounts. They are essential for proper growth of the body and to maintain good health. They do not provide energy.
Deficiency: Anemia, osteomalacia, goiter

4. What are the functions of water?**Suggested Answer:**

- i) Regulates body temperature
- ii) Helps with metabolism
- iii) Helps organs to absorb nutrients
- iv) Transports nutrients and oxygen to cells
- v) Protects vital organs
- vi) Detoxifies

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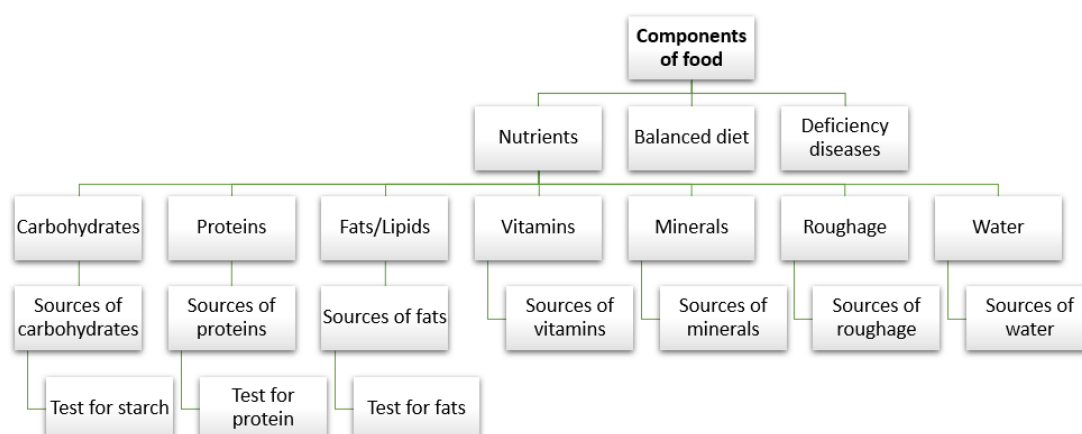
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https://en.wikipedia.org/wiki/Goitre#/media/File:Kone_med_stor_struma.jpg

Time to teach	Asset Type	Theme	SubTheme
20 Minutes	Assessments	Food & its production	Test for presence of different Sources of nutrients, Nutrients diseases, Balanced diet, Test for presence of different nutrients, Sources Nutrients, Deficiency diseases balanced diet

16. MS_Summary_Components of food



Time to teach	Asset Type	Theme	SubTheme
5 Minutes	Main Script	Food & its production	Balanced diet, Balanced diet