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P.5 SCIENCE LESSON NOTES 2020

IMMUNIZATION CARD / CHILD HEALTH CARD (C H C)

This is a card given by health workers at a health centre to every child (baby) who receives immunization.

A child health card shows the following information about a baby

- Date of birth (D.O.B)
- Date of next visit for immunization
- Vaccine received and date
- Birth weight of the child
- Child's name
- Parent's name, place of residence, parent's occupation.
- Birth order
- Doctor's advice to health growth and nutrition of the child.

Importance of immunization

- Helps to remind the parent of the next date of visit for immunization
- Helps the parent to monitor the child growth
- Helps both the doctor and the parent to know which vaccine was already given and which one is remaining.

QN. Apart from using a Child Health Card, how else can a school tell that a child was immunized from Tuberculosis?

- By seeing a scar on the right upper arm.

Roles of individual families and communities in immunization

a) Individuals

- Helps to inform other family members and neighbors on immunization dates and venue.
- Learning how to immunize so that they can help the health workers.
- Help to accept and convince other people to accept immunization as an important programme
- Encourage others to take their children for immunization.

- Assisting health workers in arranging the places selected for immunization.

b) Family

- Share all information that they know about immunization.
- Parents should make sure that all children and pregnant women are immunized.
- Bigger children should take younger ones for immunization

c) Community

- Organize seminars, workshops, plays and concerts to educate others about immunization
- Schools should perform plays and concerts about immunization on open days and speech days.

NOTE: The common immunization centers in our communities include; hospital, clinics, dispensaries, health centers etc.

UNEPI

- Uganda National Expanded Programme on Imunisation

Roles of UNEPI

- It provides vaccines
- It sensitizes communities about the importance of immunization.
- It organizes national immunization days(NIDs)

Which ministry is concerned with immunization of children in Uganda?

Ministry of Health

Activity

1. Name one kind of information found on a Child Health Card.
2. Give one responsibility of an individual in the immunization of children.
3. Write UNEPI in full.
4. How is a Child Health Card useful to a health worker.
5. Which vaccine do health workers give to pregnant mothers and girls above 15 years?

HUMAN BODY

THE DIGESTIVE SYSTEM

Digestion – Is the process by which food is broken into simple forms that can be absorbed in the blood stream.

Terms used in digestion

- **Ingestion:** The act of taking in food.
- **Egestion:** The removal of undigested matter from the body.
- **Indigestion:** A condition when food is not properly digested.
- **Absorption:** The process by which digested food enters the blood stream.

Types of digestion

- **Chemical digestion**

This involves use of enzymes. It starts from the mouth to the ileum.

- **Mechanical digestion or physical digestion**

This involves the use of teeth. It takes place in the mouth.

THE DIGESTION SYSTEM

This is a group of parts which work together to digest food in the body.

The alimentary canal (digestive gut)

This is the tube in the body of animals in which food moves by peristalsis

Alimentary canal

This is the muscular tube that runs from the mouth to the anus.

Parts of the alimentary canal

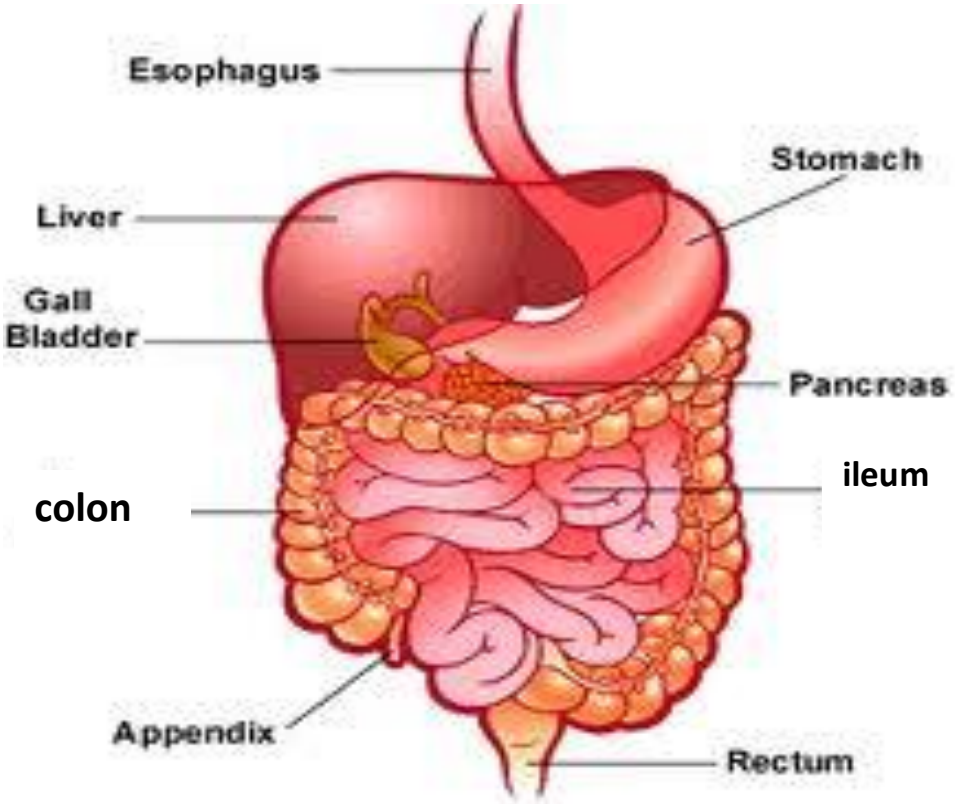
- Mouth
- Gullet Colon
- Appendix
- Rectum
- Pancreas
- Liver
- Appendix
- Rectum
- Pancreas
- Liver

Activity

1. Explain the term digestion.
2. Mention the two types of digestion.

3. Which type of digestion involves chewing of food with the teeth?
4. Give the difference between ingestion and egestion.
5. How do we call the process by which digested food enters the blood stream?

THE DIGESTIVE SYSTEM OF MAN.



Uses of the parts of the digestive system

1. **Mouth**
    - It is where digestion begins.
    - Food is broken into simpler forms.
    - Food is mixed with saliva to make it soft for easy swallowing.

    Saliva
    - It is a digestive juice produced by the salivary glands in the mouth
    - It has an enzyme called salivary amylase or ptyalin which digests carbohydrates (cooked starch).
    - Ptyalin breaks down starch into maltose.
    - It also has mucus which lubricates the food.
2. **The tongue**
    - It rolls food into bolus
    - It is used for tasting.
    - It pushes the food into the gullet.

3. **Teeth**
    - It chews food and mixes it with the saliva

Importance of chewing food during digestion

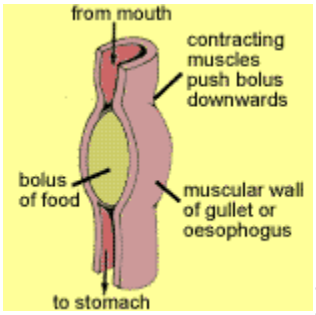
- It increases the surface area of enzymes to work on food.

Activity

1. Where does digestion of food start?
2. What is the importance of teeth in the mouth?
3. Give one use of saliva in the mouth.
4. Name the enzyme found in the mouth.
5. Which digestive juice is found in the mouth?
6. Name the class of food digested in the mouth.

4. **Gullet (oesophagus)**
    - It leads food from the mouth to the stomach.
    - Food passed through the gullet by the process of peristalsis.
    - **Peristalsis** is the wave-like movement of food along the alimentary canal.

Illustration of peristalsis.



]\

5. **Epiglottis**
    - It prevents food from entering the wind pipe.\

6. **Stomach**
    - It keeps food for 1-4hrs depending on the type of food.
    - The stomach walls produce the gastric juice and hydrochloric acid

Hydrochloric acid – kills most of the germs brought by the food into the stomach.

- The gastric juice enzymes that start the digestion of proteins.

Alcohol is absorbed in the stomach.

7. The duodenum

- It is the first section of the small intestine.
- It receives bile juice and pancreatic juice through the pancreatic duct.

8. The liver

It is the largest internal organ in the body. The liver receives digested food from the ileum through hepatic portal vein.

Functions of the liver

- It helps to regulate blood sugars with the help of insulin hormone
- The liver produces the bile
- It stores iron
- It produces heat
- It stores vitamins [vit A,D,E and K]
- It makes poisons in the body harmless (detoxication)
- It breaks down amino acids by converting them to carbohydrates

Diseases of the liver

- Cirrhosis (Hardening due to alcoholism and malnutrition)
- hepatitis B (Waterborne - viral
- liver abscess (Caused by boils that form pus in the liver)

How to maintain the liver

- Avoid drinking alcohol.
- Drink safe water
- Eat a balanced diet.
- Have regular physical exercise.
- Have regular medical check-ups.

Activity

1. Name two enzymes found in the stomach.
2. What is the importance of hydrochloric acid found in the stomach?
3. Which digestive juice is found in the stomach?
4. By what process does food move along the alimentary canal?
5. Where does absorption of alcohol take place?
6. What is the importance of the stomach?

9. Gall bladder

- It keeps or stores the bile juice.

- Bile has salts that breaks (emulsify) fats for easy digestion.

10. The pancreas

- It produces the pancreatic juice.
- The pancreatic juice has enzymes that complete the digestion of carbohydrates, proteins and fats.

11. The Small intestines/ileum

- It is the second part of the small intestine
- It is where the digestion of food ends.
- It is where the absorption of food takes place.

Absorption

- This is a process by which digested food is taken into the blood stream.
- The ileum has finger like projection called the villi
- The villi absorbs food
- The walls of the ileum produce a juice called intestinal juice that completes the digestion of food.

How the small intestines is adapted to its function

- It has a large surface area made of villi and micro villi
- It has a lot of blood capillaries which allow the transportation of blood molecules all over the body.

The large intestine (colon)

- It is where water and mineral salts are absorbed or take place

Rectum

- It keeps the undigested waste materials before they are passed out

Anus

- It passes out the undigested materials
- It is used for digestion

Components of faeces

- Water
- Dead cells
- roughage
- Bacteria

Activity

Where does digestion of food end?

Name one process that takes place in the ileum.

Apart from water what else is absorbed in the colon?

Give two components of faeces.

How do we call the finger-like structures in the ileum?

1.

ENZYMES

Enzymes are chemical compounds that help to speed up the digestion of food.

Examples of enzymes

- Salivary amylase
- Rennin
- Pepsin
- Pancreatic amylase
- Lipase
- Sucrase etc

CHARACTERISTICS OF ENZYMES

- They ant on one kind of food.
- They are destroyed by heating since they are proteins in nature
- They work best in a narrow temperature range.
- They always form the same end products.

CONDITIONS UNDER WHICH ENZYMES WORK;

- Acidic conditions eg -rennin and pepsin
- Alkaline condition eg salivary amylase, lipase, trypsin etc

Disorder and disease of the digestive system

Disorder

They are problems that can make the alimentary canal fail function well.

Constipation

It is when the undigested matter stays in the rectum for too long.

Causes

- Lock of roughage in the diet

- Drinking little water
- Lack of physical exercise

How to prevent constipation

- Eat fruits and vegetables e.g. mangoes, apples e.t.c.
- Doing plenty of physical exercises.
- Drinking water before and after eating food.
- Eating a balanced diet.

B) Indigestion

It occurs when the food we eat is not properly digested

Causes of indigestion

- Improper chewing of food
- Over eating

Symptoms of indigestion

- Stomach ache
- Heart burns
- Tiredness/ fatigue

Prevention of indigestion

i. Chewing food properly before swallowing.
ii. Drinking enough water before and after eating food.

Vomiting

i. It is a disorder caused eating poisonous food or over eating
ii. It can also be caused due to some diseases e.g. malaria

ACTIVITY

1. Write down two disorders of the digestive system.

2. Give one cause of constipation

3. Suggest one way how constipation can be prevented

4. What causes indigestion?

5. Why are we advised to eat fruits and vegetables?

Diseases of the digestive system

1. Appendicitis

- It is caused by bacteria that enters the appendix
- It leads to swelling of the appendix
- It causes too much pain in the lower right side of the abdomen.

- It can be treated by cutting it off.

2. cholera

- cholera is used by bacteria
- it is spread by houseflies, cockroaches.
- It is also spread by drinking contaminated water, eating contaminated food.

Symptoms of cholera

Pain around the abdomen

Control of cholera

i. Boil water before drinking it.
ii. Kill houseflies by spraying
iii. Wash hands before eating, serving or handling food.
iv. Wash hands after visiting the toilet or latrine
v. Cover cooked food to keep away houseflies.
vi. Properly dispose human faeces

3. Typhoid

i. It is caused by bacteria
ii. It can be spread by house flies
iii. Typhoid can be spread by drinking contaminated water and eating dirty food

Signs of typhoid

- Diarrhea

Symptoms of typhoid

- Headache
- Fever

Prevention of typhoid

- Boiling water for drinking
- Spraying insecticides to kill houseflies
- Washing hands before eating food
- Wash hands after visiting the latrine or toilet
- Properly disposing rubbish and faeces

4. Dysentery

- The frequent passing out of watery stool with blood stains.
- Amoebic dysentery is caused by amoeba.
- Bacillary dysentery is caused by a bacteria

Spread of dysentery

i. Drinking contaminated water
ii. Eating contaminated food
iii. Houseflies carry germs onto the food and hands.

Control of dysentery

i. Boiling water for drinking
ii. Washing fruits before eating them
iii. Spraying insecticides to kill houseflies
iv. Washing hands before eating, serving food
v. Wash hands after visiting the toilets

Dangers of dysentery

i. It leads to dehydration
ii. It leads to anaemia

5. Peptic ulcers (stomach ulcers)

- They are wounds formed in the stomach or small intestine
- They cause a lot of pain especially when one is hungry

LESSON 5 AND 6

CARE FOR THE ALIMENTARY CANAL

i. Wash hands before eating
ii. Chew food properly before swallowing it
iii. Wash hands after visiting a toilet or latrine
iv. Eat well looked food
v. Avoid eating very hot or cold food
vi. Having regular physical exercise
vii. Having enough rest after eating
viii. Brushing the teeth after eating food

ACTIVITY

1. Give two diseases of the digestive system.

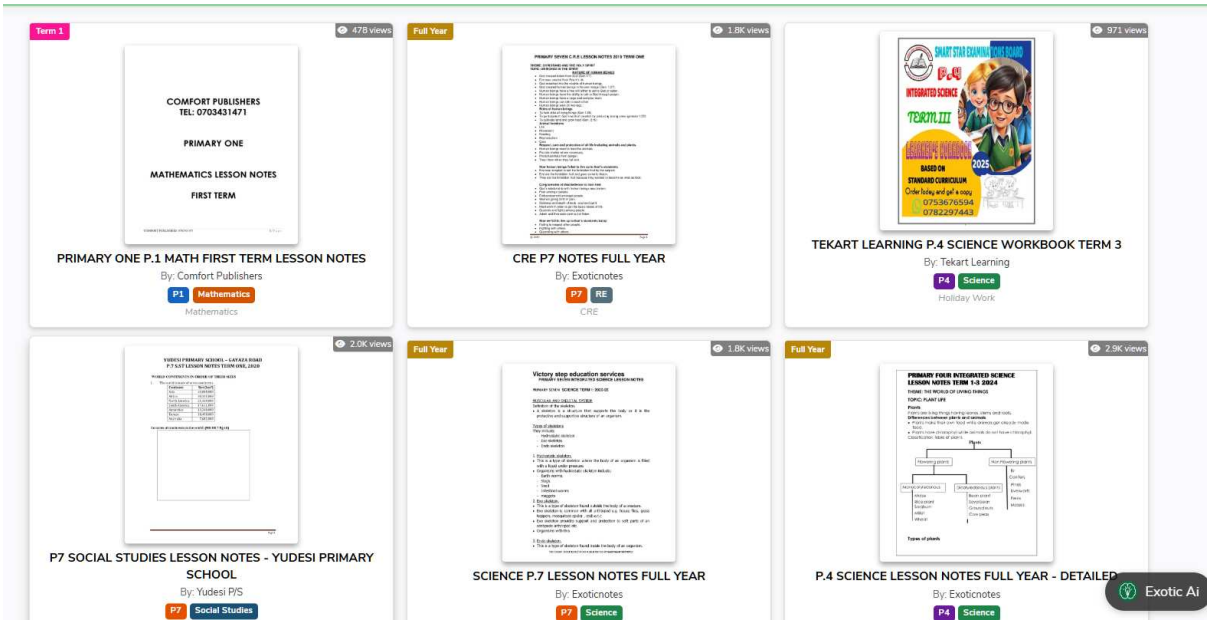
2. What germ causes cholera?

3. Why should one take enough water after eating?

4. What condition will one develop for having failed to empty his rectum in time?

Give two ways of caring for the digestive system.

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