**SECOND TERM E NOTES**

**SUBJECT: BASIC SCIENCE**

**CLASS: BASIC FOUR**

**WEEK TOPIC**

1. PLANTS (WEEDS)
2. PLANTS (WEEDS)
3. GROWING OF PLANTS
4. PESTS AND DISEASES OF CROP PLANTS
5. THE HUMAN BODY (THE FEEDING SYSTEM)
6. THE COMPOSITION OF SOIL
7. EVAPORATION AND CONDENSATION OF WATER
8. FOOD
9. FOOD:HARMFUL FOODS
10. REVISION

**WEEK** **ONE** **AND TWO**

**WEEDS**

Weeds may be defined as unwanted plants growing in an unwanted place. There are weeds in farms, school flower garden, football fields and even around homes. Some scientists also describe weeds as volunterr plants, which means that such plants chose to grow where they do by themselves.

IMPORTANCE OF WEEDS

Weeds are harmful to crops in the following ways:

1. Weeds occupy the space intended for crops.
2. Weeds absorb water mearnt for crops from the soil.
3. Weeds absorb fertilizers mearnt for crops from the soil
4. In addition to the harm that weeds do to crops, the farmer also spends money in removing them. This increases the cost of production.

**CONTROL OF WEEDS**

1. Biological control

Living things such as grasshoppers or other animals eat up the weeds and reduce their effect.

1. Cultural control

Cultural control of weeds includes all the things that a farmer does in normal farm practice to kill the weeds.

1. Chemical control

This is the use of chemicals to control(kill) weeds.

**Side effects of chemical control of weeds**

1. Weed killers may kill; useful living things in the farm such as earthworms.
2. Weed killers, as they are sprayed, get into the air and may pollute it.
3. Weed killers may be harm=ful to crops

**Evaluation**

1. What is a weed?
2. Name five common weeds in your area
3. List three ways in which weeds are harmful to crops
4. List three common methods of controlling weeds

**WEEK THREE**

**GROWING OF PLANTS**

**Plsnts are important to human beings.**  We grow different kinds of plants such as food crops, cash crops, flowers, medicinal plants and timber plants.

**GARDENING TOOLS**

Common gardening tools includes:

1. Cutlass
2. Hoe
3. Spade
4. Basket
5. Rake
6. Watering can
7. Wheel barrow

**Conditions for growing crops**

The things needed for growing healthey plants are adequate water, air, sunlight and nutrients. Plants obtain water from rain that has fallen on the soil. However, a farmer may provide additional water to plants by watering them. When plants are given adequate spacing one from another in a farm, they can obtain adequate sunlight and air.

Fertile soils have enough nutrients for healthy growth of plants. If, however a soil is not fertile, fertilizers must be added to it to make plnats grow well. Compost manure, animal dung and chemical fertilizers are forms of fertilizers.

**EVALUATION**

1. list six gardening tools and and explain their uses
2. list three things that plants needs to grow well
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
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**WEEK FOUR**

**PESTS AND DISEASES OF CROP PLANYTS**

Pests and diseases are common in croo plants growing in garden and farms. Crop plants that area affected by pests and diseases do not grow well, their leaves may be rotten by pests, or their fruits may be rotten because they are diseased. Such crop plants do not produce good harvests.

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| --- | --- | --- |
| **Pest** | **Example of plants** | **Effect on plants affected** |
| Caterpillar | All crops | Eats leaves of all crops |
| Beetle | Many crops | Eats leaves of all crops |
| Beetle | Okro | Eats leaves and fruits of okro |
| Grasscutter | Cassava | Eats cassava tuber |
| Monkey | Cocoa | Eats fruits of cocoa and other plants |

**Common diseases of crop plants**

|  |  |  |  |
| --- | --- | --- | --- |
| **Crop** | Disease | **Organism that causes disease** | **Effects of disease** |
| Maize | **Rust on leaves** | **Bacterium** | death of parts leaves, which turn into brown patches. Low yield |
| Tomato, spinach | **Wilt of vegetable seedlings** | Fungus | **Fungus grows on leaves and stems of vegetables.** The vegetables die and decay |
| **Yam tuber** | **Brown spots leading to decay** | **Fungus** | **Causes decay and wastage of yam** |

To reduce the damages caused by pests to crop plants, farmer need to control the pests and diseases. They can do this in many ways

1. Farmer can hand-pick the large pests and kill them.
2. Farmers should use natural enemies to kill pests.
3. Farmers should keep the farm very clean, by removing weeds.

EVALUATION

1. Give five examples of pests
2. Why some animals are called farmers’ friends? Name two farmers’ friends
3. Name a simple way of controlling pests of crop plants.

**WEEK FIVE**

**THE HUMAN BODY (THE FEEDING SYSTEM)**

The human feeding system consist of the lips, tongue and teeth. An adult human being has 32 teeth in his mouth. But little children have less than 32 because of your age.

**SPECIAL NAMES FOR THE TYPES OF TEETH IN YOUR JAW**

1. **The biting teeth are called incisors. There are four of them in each jaw**. They are in the center position.
2. The single tooth on each side of the incisors are called **canines.** Those in flesh eating animals are very large and sharper than your own. Give two examples of animals which eat only eat.
3. The next two teeth on each side of the canines are flat and little rounded. They are used for crushing and breaking down food. They are called **premolars**
4. The last three teeth on each side of the premolars are broader than the premolars. They have more ridges on them. They are also used for crushing grinding. they are the **molars**

**EVALUATION**

1. The human adult has \_\_\_\_\_\_\_\_\_\_ teeth?
2. How many types of teweth do you have? Name them
3. When you eat boiled yam, which teeth do you use most?
4. What is the **canine** used for?

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WEEK SIX

**THE COMPOSITION OF SOIL**

Soil is the top surface of the earth. Soil is made of particles of different sizes. Besides sizes there are m,any other thiongs in the soil. All plants grow in the soil, and their roots are inside the soil. Some animals live in the soil but, but from time to time, tthey come to the surface.

When plants and animals die,their dead bodies remain in the soil where they become rotten and later form part of the soil as humus. Let us find out more about things in the soil.

TYPES OF SOIL

There are three tyoes of soil namely:

1. Clay soil
2. Sandy soil
3. Loamy soiul
4. Clay soil

Clay soil is smooth when you touch it, you will feel as if you have just touched powder. When it is wet with water, it becomes sticky. When the solid wet clay sries up, it becomes very hard.

1. Sandy soil

Sandy soil is made of tiny particles. The stone particles are not closely packed together. Sandy soil contains some quantities of clay and silt. Sandy soil does not have decayed plants and animals materials. It is not a good soil for growing crops.

1. Loamy soil

Loamy soil is made up largely of decayed veegetale matter, some sand and a small amount of clay. Loamy soil is the best soil for growing crops.

Oraginjsmsm found in the soil are: grub, earthworm, ant, termite, rats etc.

EVALUATION

1. What is soil?
2. Mention the three different typs of soil you know
3. The best soil for growing cros is \_\_\_\_\_\_\_\_\_\_\_
4. Why is sandy soil not good for growing crops?

**WEEK SEVEN**

**EVAPORATION AND CONDENSATION OF WATER**

In your daily experience, there are many evens which seems water seems to disappear from a container or from your body. For example, when you sweeat, you may wip it off, or you may allow it to dry off. You must also have observed that a glass of ice water on a table, after a few minutes, the outer surface of the tumbler is covered with drops of water. How and why these things happen? Lets find out.

**MEANING OF EVAPORATION**

When water disappear into the air, we say it evaporate. So, instead of saying the water disappears, we shall noy say I evaporates. Heat is the major factor affecting evaporation eg. Heat fromk the sun dry uo water on the earth surface and heat from the gas cooker boils water in a kettle.

**MEANIN OF CONDENSATION**

Water that evaporates into the sky gathers together and form clouds. After some time the clouds become heated and fall down as rain. When water returns back to the earth as rain, we call say it condenses. This process is known as **evaporation.**

**EVALUATION**

1. Explain the meaning of evaporation
2. What is the major factor affecting evaporation?
3. Explain the meaning of condensation
4. When we heat water it \_\_\_\_\_\_\_\_\_\_\_\_\_

WEEK EIGHT

FOOD

**MEANING OF FOOD**

Food may be defined as edble substance taken into the body through the mouth to nourish our body and give us energy to work. Common examples of food are rice, plantain, ototo, mango, banana, yam, egg.

CLASSES OF FOOD

There are six classes of food namely:

1. Carbohydrates
2. Protein
3. Vitamin
4. Fats and oils
5. Mineral salt
6. Water
7. Carbojhydrate

Carbohydrates are energy giving foods such as rice, yam, bread, sweet pototo, etc. energy foods contain a lot of starch. Our body uses the starch to make energy for itself.

1. Protein

Proteins are body building food. These foods come mainly from animals. Examples of proteins are: meat, beans, egg, milk, fish chicken.

1. Vitamins

Vatimins are also known as health foods. Health foods are mostly fruits and vegetables. They keep yur body heatlthy and against illness. Examples are: carrot, lime, orange, lettuce, cabbage, mango.

1. Fats and oils

Our body also getes energy from fats and oils. Examples are: palm oil, vegetable oi, peanut, coconut oil, butter and magarine.

1. Mineral salts

Mineral salts are food supplements. They are needed in only small quantities. Examples are table salt, soda, pepsi etc.

HARMFUL FOODS

Foods become harmful when they contain disease-causing organisms, such as bacteria, fungi and viruses, or if they contain poisons

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| --- | --- | --- |
| **Harmful foods** | Harmful things present | Harmful effects |
| Rottren vegetable, over ripe fruits | Bacteria | Stomach ache, vomiting |
| Foods contaminaterd by dirty water or faces | Bacteria | Cholera, diarrhea, typhoid fever |
| Foods exposed to flies | Bacteria | Dysentery, diarhoea |
| Expired canned foods or drinks | Poisons produced by bacteria or fungi | Food poisoning |

EVALUTTION

1. Which food item do you eat most?
2. Explain the meaning of food
3. Lsit the types of/ classes of fpod
4. Define harmful foods
5. Give five examples of harmfull foods