

SECOND TERM (2nd)

FOOD AND NUTRITION

SSS 1

SCHEME OF WORK FOR SIGMA TERM

1. Revision scientific study of foods.
 - a. Measurement: units of measurement.
 - b. Effects of heat on food.
2. Food tests (tests for carbohydrates, protein and fats),
 - The food composition table.
 - Meal planning.
3. Reproductive health.
4. Reproductive health –malnutrition e.g. Over nutrition and under nutrition.
5. Kitchen management.
6. Kitchen plan/ layout.
7. Kitchen equipment.
 - Materials used in making kitchen equipment.
8. Cleaning agents and abrasives.
9. Safety in the kitchen.
 - a. Methods of handling kitchen equipment properly, precautions to prevent accident.
 - b. Contents and use first aid box.
 - c. Treatments of simple injuries e.g. Cuts, burns and scalds.
10. Hygiene.
 - a. Personal– rules of personal hygiene in the kitchen.

b. Kitchen hygiene rules.

11. Revision.

12. Examination.

WEEK 1

TOPIC: Scientific study of food

CONTENTS:

Units of measurement

Energy value of food can be measured in *calories or joules* but a large unit of energy is measured in *kilo-calories*. It is the most common unit of measuring energy. The international unit of energy is "*joule*". Therefore kilocalories is the amount of heat required to rise the temperature of a thousand gram (1000) of water by 1 degrees Celsius. For example one gram (*gm.*) of carbohydrate will produce four kilocalories of energy. One gram of protein will produce four kilocalories of energy and one gram of fat will produce nine kilocalories of energy.

Food weight: the raw or processed food can be measured in grams or kilograms.

1000 grams = 1 kilogram.

The macro nutrients are measured in grams while the vitamin and trace elements are measured in smaller units because they are required in relatively small quantity by the body and are also present in food in a small quantity.

Vitamins and trace elements are measured in milligrams (mg.) and micrograms (*g.*).

$$1\text{g} = 1000\text{mg} (10^3\text{mg})$$
$$1\text{gm} = 1\,000,000\text{ g} (10^6\text{ g})$$

Or

$$1\text{mg} = 0.001\text{ or }10^{-3}\text{gm}$$
$$1\text{ g} = 0.000001\text{gm or }10^{-6}\text{gm}$$

Other units often used in measuring vitamins are the international unit (I.U) and standard unit (S.I).

EFFECTS OF HEAT ON NUTRIENTS

Effects of heat on carbohydrates

1. They are dextrinized i.e. broken down into simpler units and therefore easier to digest.
2. In moist heat, carbohydrates gelatinize i.e. they expand and...