L2 : NUTRIENTS FOR HEALTH

BIG QUESTION: What would happen if we just ate donuts all of the time?

DO NOW: If you could eat one type of food for the next 10 years what would it be and why?

How might this effect your health?

LESSON OBJECTIVES: SWBAT

Describe the 6 main nutrients

Explain why these nutrients are important

Give examples of Nutrient deficiencies

RICKETS:

Rickets is a disease which is caused by a deficiency in Vitamin D.

It causes the bones in the body to release calcium and phosphate, making them soft and weak, this results in misshaped bones like in the picture.

Good sources of vitamin D include milk and fish. You can also get it from sunlight.

ANEMIA

Anemia, is a disease which is caused by a deficiency in Iron.

Someone with Anemia, has blood which is unable to carry oxygen efficiently.

This is due to the lack of Iron, which is a key component in blood.

Iron helps make hemoglobin, which makes blood red, and helps blood carry oxygen.

Your body needs iron to make red blood cells.

Good sources of iron include: Red meat, Dark leafy greens, beans, dried fruits (raisins) and egg yolks.

EATING A BALANCED DIET

It is important to eat right. Rickets and Anemia, are just a few of the diseases that you can develop from not eating a good balance of the essential nutrients.

There are 6 main NUTRIENTS. These nutrients include

PROTEIN

CARBOHYDRATE

FATS

MINERALS

WATER

VITAMINS

CARBOHYDRATES

CARBOHYDRATES: these are starches and sugars that provide energy.

Carbohydrates are classified as being

SIMPLE CARBOHYDRATES or COMPLEX CARBOHYDRATES

COMPLEX CARBOHYDRATES:

CARBOHYDRATES: these are starches and sugars that provide energy.

Starches are complex carbohydrates, they consist of 3 or more sugars and take time to be digested by the body, releasing a steady flow of energy.

They can be found in foods such as rice, pasta, bread, potatoes, beans and corn.

SIMPLE CARBOHYDRATES

Simple carbohydrates are simple structures that consist of one or two sugars, they are digested very quickly and raise the blood sugar level very quickly.

Simple carbohydrates occur naturally and can be found in milk, fruit and honey.

PROTEINS

PROTEINS: are used to repair body cells and tissue.

Proteins are classified as being:

COMPLETE PROTEINS or INCOMPLETE PROTEINS

COMPLETE PROTEINS

PROTEINS: are used to repair body cells and tissue.

-Proteins are made of amino acids.

-A large proportion of our cells, muscles and tissue is made up of amino acids, meaning they carry out many important bodily functions, such as giving cells their structure

-Complete proteins, contain all of the essential amino acids, they are found in foods that come from animals such as meat, dairy products and eggs.

INCOMPLETE PROTEINS

Incomplete proteins come from foods that that lack one or more essential amino acids.

Incomplete proteins come from plant foods such as beans, nuts and grains.

By eating a variety of incomplete proteins it is possible to get all of the proteins that you need.

FATS

FATS: these are nutrients which provide energy, keep the skin healthy and promote normal growth.

They can be classified as:

SATURATED OR UNSATURATED FATS

SATURATED FATS

FATS: these are nutrients which provide energy, keep the skin healthy and promote normal growth.

Saturated fats are solid at room temperature.

They include; butter, margarine, and the fats in meat, poultry and dairy products,

Scientists believe that eating a diet that is high in saturated fats can lead to heart disease.

UNSATURATED FATS

Unsaturated fats are liquid at room temperature.

They mainly come from plants.

They include vegetable oils, nuts, olives and avocados, they are considered the healthy fat.

VITAMINS

VITAMINS: are substances that help regulate the body’s functions.

Examples of vitamins include vitamin C, B, A, D, E and K.

VITAMINS

Your body needs vitamins to produce energy, to fight infection and to help with other daily functions.

Some vitamins can be stored in the body until they are needed, however other vitamins are water soluble meaning that they dissolve in the bodies water, therefore need to replaced daily.

examples of water soluble vitamins include Vitamin B and C.

Fruits and Vegetables are the best source of vitamin A and C.

Whole grain and enriched breads and cereal supply B vitamins.

Milk is a good source of Vitamin D and Vitamin riboflavin.

MINERALS: these are substances that strengthen bones, teeth and help keep the blood, heart and other organs healthy.

MINERALS

Examples of minerals include:

IRON, CALCIUM, MAGNESIUM, SODIUM, PHOSPHORUS, CHLORIDE, POTASSIUM

Calcium, phosphorus and magnesium are minerals that help build and renew your bones.

Calcium and phosphorus can be found in milk.

Magnesium can be found in Pumpkin seeds, spinach and Swiss Chard.

Iron, is needed for making red blood cells,

Iron, can be found in meats, spinach, leafy greens, fruits and beans.

Potassium, sodium, and chloride help maintain the body’s balance of fluids.

Sodium can be found naturally in food and can be added to foods for taste.

Potassium can be found in Beet Greens, Swiss Chard, Spinach and potatoes.

Chloride can be found in tomatoes, lettuce and celery

WATER

WATER: the human adult consists of up to 60% water. It is therefore very important that we drink water to ensure that our body’s can function properly.

Water helps in digestion, carries nutrients through the body, removes waste from the body and regulates body temperature.

It is recommended that you drink between 8-10 glasses of water a day.

Foods that contain water include: cucumber, fruit and other items.

The consumption and absorption of nutrients are an important daily task which our body’s need to take part in.

Luckily for us many of the foods that we eat contain more than one type of nutrient.

NUTRIENTS FOR HEALTH

Nutrients contain the raw materials that our body’s need to make new substances and function properly.

The intake of nutrients into our body is made possible by the digestive system, which is a finally tuned body system which breaks down the food and absorbs the nutrients into the body.

NUTRIENTS FOR HEALTH

One key ingredient which can help in the digestion of food, is FIBER.

This is the part of fruits, grains and vegetables that your body is not able to digest.

The fiber acts as a lubricant helping waste pass through your digestive system.

L2: NUTRIENTS FOR HEALTH: ACTIVITY

Complete the graphic organizer for this lesson

Explain the difference between a simple and complex carbohydrate. Give examples of each.

Scenario: You have been asked by your old elementary school teacher to Create a rap/song for her students about the key nutrients.