

Student's Name: _____ Date: _____

Read and describe how calcium gets from the soil to your teeth. Discuss with a partner

Vitamins and Minerals

Instead of providing your body with energy, vitamins and minerals work as molecules that help in your body's processes. Your body only needs a small amount of vitamins and minerals compared to carbohydrates, fats, and proteins. Vitamins are made by living things. Vitamin C, for example, is found in oranges, other fruits and dark green vegetables. It is essential for fighting infections.

Minerals are not made by living things, but can be found in food. Plants absorb minerals from the soil through their roots. When you eat plants or products from animals that eat plants, you get the minerals your body needs. Calcium, for example, can be found in milk. Your body uses calcium to build bones and teeth. Iron can be found in dark green vegetables, like spinach, and in red meat.

Read and calculate how many kilograms of water are in your body.

Water

Why is water the most important nutrient? Because all of your body's processes take place in water. About 65 percent of a healthy person's weight is made up of water. Water also helps to control your temperature and to eliminate wastes your body makes. On a normal day, you need to drink about two liters of water to stay healthy.

- 1.- Enter your weight in kilograms. _____ kg
- 2.- Multiply by 65% x .65
- 3.- Record the weight of the water in your body. _____ kg

What are healthy and unhealthy diets?

Read and use the food label to answer the questions. Circle the correct answers.

Food Labels

Many food products you buy in a grocery store have food labels printed on their containers. These labels tell you some of the basic information about the food you are buying. They can help you to compare different food products and choose more healthy options.

One of the first things to look for is the serving size. This will tell you how much of the food in the container is used to calculate all the other information on the label. Near the top of the label, you will find the number of Calories (kcal) in one serving. Children around the age of ten should eat about 1800 Calories each day.

What are healthy and unhealthy diets?

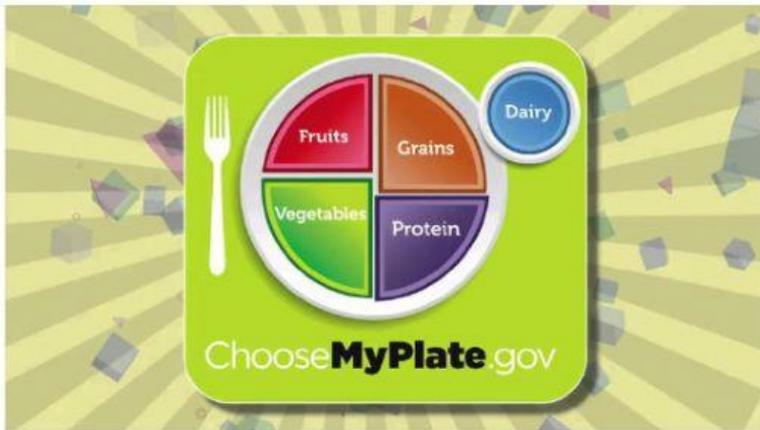
Lesson 2- What are healthy and unhealthy diets?

Read and label the pie chart to show the amounts of grains, vegetables, fruits, and proteins in the “My Plate” guidelines.

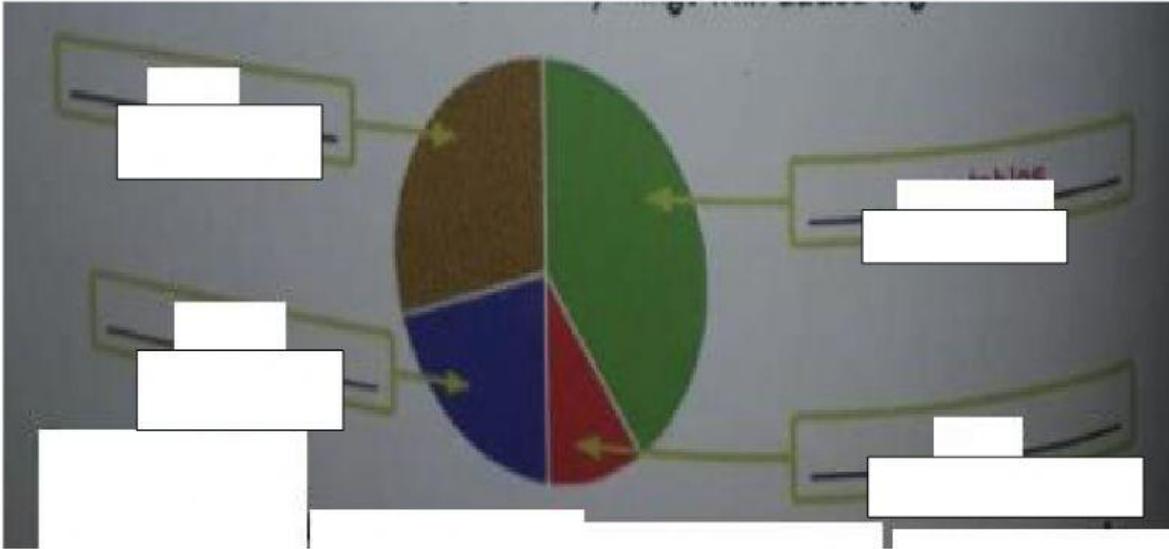
Guidelines for Healthy Diets

A healthy diet gives your body all the energy it needs and all the nutrients necessary for it to grow and repair itself. There are some features that any healthy diet should have. First, it should provide enough Calories (kcal) and nutrients. Next, it should include a variety of different foods.

Finally, it should be balanced, or not include too much or too little of one type of food.



Most countries' governments issue guidelines for healthy diets. In the United States, the government uses the “My Plate” nutrition guide. It shows the amounts of different types of food that make up a healthy diet. It recommends that 30% of your diet should be grains, like wheat or rice; 40% vegetables; 10% fruits; and 20% proteins, like those in meat, fish, or beans. It also recommends including some dairy products. Dairy products, like milk and yogurt, are made from milk and contain a lot of calcium. These products are pictures in the glass. Other countries' governments may have different guidelines for healthy diets, but most agree that people should avoid eating or drinking too many things with added sugar or fats.



2.- With a partner research your country's guideline for a healthy diet. How is it the same as and different from the "My Plate" guidelines? Discuss.

Read and use the food label to answer the questions. Circle the correct answers.

Food Labels

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One of the first things to look for is the serving size. This will tell you how much of the food in the container is used to calculate all the other information on the label. Near the top of the label, you will find the number of calories (kcal) in one serving. Children around the age of ten should eat about 1800 Calories each day.

The label will also list the percentage of daily values for various nutrients, vitamins, and minerals. These values tell you what portion of the recommended amount one serving contains.

It is important to notice that containers often hold more

| Nutrition Facts | | | |
|--|-----------------------|---------|---------|
| Serving Size 5 oz. (144g) | | | |
| Servings Per Container 4 | | | |
| Amount Per Serving | | | |
| Calories 310 | Calories from Fat 100 | | |
| % Daily Value* | | | |
| Total Fat 15g | 21% | | |
| Saturated Fat 2.6g | 17% | | |
| Trans Fat 1g | | | |
| Cholesterol 118mg | 39% | | |
| Sodium 560mg | 28% | | |
| Total Carbohydrate 12g | 4% | | |
| Dietary Fiber 1g | 4% | | |
| Sugars 1g | | | |
| Protein 24g | | | |
| Vitamin A 1% | Vitamin C 2% | | |
| Calcium 2% | Iron 5% | | |
| *Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs: | | | |
| | Calories | 2,000 | 2,500 |
| Total Fat | Less Than | 65g | 80g |
| Saturated Fat | Less Than | 20g | 25g |
| Cholesterol | Less Than | 300mg | 300mg |
| Sodium | Less Than | 2,400mg | 2,400mg |
| Total Carbohydrate | | 300g | 375g |
| Dietary Fiber | | 25g | 30g |
| Calories per gram: | | | |
| Fat 9 • Carbohydrate 4 • Protein 4 | | | |

than one serving. So, if you eat everything in the container

at one time, you will have to multiply the numbers on the label by the number of servings!

1.- How many servings are there in the container? **4** / **5** / **144**

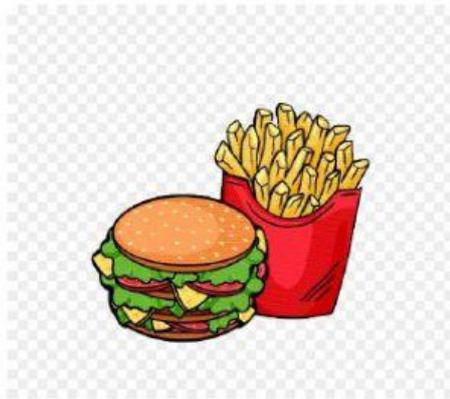
2.- How many Calories are there in the whole container? **100** / **310** / **1240**

3.- If you ate the whole container, what percentage of your **285** / **56%** / **112%**

Daily sodium, or salt, would you have eaten?

4.- What type of food do you think this label describes? Discuss as a class.

5.- With a partner, research on the internet the nutrition facts for two fast food items.



- Read and answer T (true) or F (false).
Correct the false statements with a partner.

Malnutrition

When someone does not have a healthy diet, they suffer from **malnutrition**. There are two ways that someone can be malnourished. They can be **undernourished** or **overnourished**.

When someone lacks Calories (kcal) or some nutrients, they are **undernourished**. Approximately 800 million people in the world suffer from undernourishment. This may mean that they do not get enough Calories (kcal). Most undernourished people in the world are impoverished and cannot get enough food. However, some people in the developed world are undernourished as well. **Anorexia nervosa** is an eating disorder that typically affects girls and young women. Its symptoms include very low body weight, an irrational fear of gaining weight, and unrealistic body image. Anorexia can lead to rapid weight loss and severe malnourishment.

Undernourishment may also occur when someone's diet lacks, or is **deficient** in, a particular nutrient. Anemia, for example, is a disease that can develop if someone does not get enough iron in their diet. When someone is anemic, they do not have enough red blood cells to carry oxygen to the rest of their body. They can become tired, weak, short of breath, and even have a hard time thinking.

When someone gets too many Calories or nutrients in his or her diet, they can become **overnourished**. This is a growing problem in the richer countries in the world. Foods like fast foods and soda pop often contain large amounts of added sugar, fat, and sodium. Overnourishment can cause people to gain weight and can also lead to other diseases. Type 2 diabetes is often caused by people having too much sugar in their diet.

1. Only people in poor countries are malnourished.
2. Too much of a nutrient can cause malnourishment.
3. When someone is anemic, they have too much iron in their diet.
4. Type 2 diabetes can be caused by undernourishment.

T / F
T / F
T / F
T / F



7.- If you had anemia, what should you eat more of? Circle the correct options.

1 Read and calculate the body mass indexes of the boy and the girl.

Body Mass Index

One way that doctors and scientists can see whether someone is malnourished is to measure their body mass index. Body mass index (BMI) compares how much someone weighs to how tall they are.

To calculate someone's body mass index, first measure how much they weigh in kilograms. Then measure how tall they are in meters. Next, divide their weight by the square of their height. (To get the square, multiply their height by itself. For example, if someone is 1.5 meters tall, the square of their height is $1.5 \times 1.5 = 2.25$.) This will give the body mass index, which you can compare with the chart below. The values in this chart are those used in the US. Your country may use different values.



weight = 30 kg
height = 1.4 m
height squared = 1.96
BMI = 15.3



weight = 32 kg
height = 1.5 m

height squared = 2.25
BMI = 14.2

Body Mass Index

| boys | girls | |
|-------------------|-------------------|---------------|
| less than 14.2 | less than 14.0 | underweight |
| 14.2-19.4 | 14.0-19.9 | normal weight |
| 19.4-22.1 | 19.9-22.9 | overweight |
| greater than 22.1 | greater than 22.9 | obese |

9 Read and list two ways a person could reduce the number of Calories (kcal) in their diet. Discuss as a class.

Obesity

Being underweight or overweight can be unhealthy. When an adult's body mass index is greater than 29.9, they suffer from **obesity**. Being obese can lead to many diseases, including heart attacks and liver disease. If someone is obese, they need to eat a balanced diet, but they need to reduce the number of Calories they eat. They also need to exercise.



- 1) _____
- 2) _____