Biology and Geology

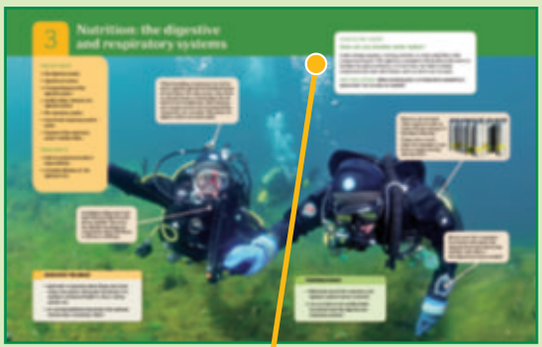
3

SANTILLANA Richmond

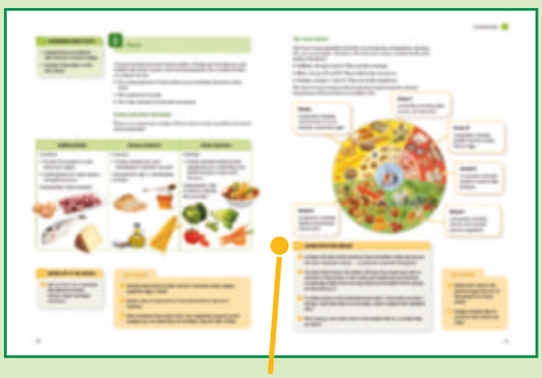
FIND OUT ABOUT

Key competences

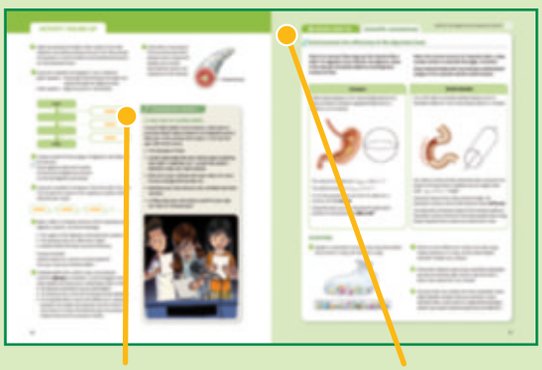
- Linguistic competence
- Competence in Mathematics, Science and Technology
- Digital competence
- Social and civic competence
- Cultural awareness and expression
- Learning to learn
- Initiative and entrepreneurship



How do we know?



Work with the image



Cooperative project **Know how to**

2 Food and health

FIND OUT ABOUT

- Food and nutrition.
- Food.
- The energy value of food.
- Daily energy needs.
- A healthy, balanced diet.
- Food preservation and handling.
- Food-related illnesses.

KNOW HOW TO

- Plan a healthy menu.
- Interpret food labels.

After cocoa beans are harvested, they undergo several processes before they are shipped to the factory.

At the factory, the beans are cleaned. Then they are roasted at about 150 °C. The shells are removed and the seeds are ground into a thick liquid called cocoa mass.

The cocoa mass is mixed with other ingredients to make different types of chocolate.

The chocolate is poured into moulds to cool and harden into different shapes. Finally, the chocolate is packaged and distributed to shops.

WORK WITH THE IMAGE

- Ask a classmate questions about the processes, for example, *When are the beans roasted? After they are cleaned.*
- What general principles of food hygiene is the person in the picture using?

HOW DO WE KNOW?

How is chocolate produced?

From the time the raw materials are selected until they reach the consumer, many foods go through industrial processing. The main objective is to maintain or improve quality and preserve the foods.

GIVE YOUR OPINION. Do you think industrial processing actually improves food quality?

STARTING POINTS

- Give two examples of each type of food:
  - Foods needed for growth and repair of the body.
  - Foods that provide energy.
- Why is it important to have a varied diet?
- What healthy habits do you know?

LEARNING OBJECTIVES

- Differentiate between eating and nutrition.
- Understand the importance of nutrients, their types and functions.

1 Food and nutrition

Eating is one of the most important activities people do. **Food** provides the body with the **nutrients** needed to build new structures and maintain the existing ones, as well as the energy required to carry out life functions.

Eating or feeding is a conscious, voluntary action and depends on different factors: economic, cultural, climatic, religious, etc.

Through **nutrition**, nutrients enter the cells to be absorbed and used in various metabolic processes. Unlike eating, nutrition is an involuntary, unconscious process. Four systems are involved in nutrition: the digestive, respiratory, circulatory and excretory systems.

Nutrients can be classified into two groups: **inorganic** and **organic**.

Inorganic nutrients

Inorganic compounds include water and minerals.

- **Water.** The human body is about 75 % water at birth, and about 60 % in adulthood. Its primary functions are:
  - Solvent: many substances dissolve in water.
  - Transportation of substances.
  - Chemical reactions: all occur in water, including metabolic reactions.
  - Regulation of body temperature.

We get water by drinking it and by eating foods that contain water. We also get a small amount of water, called **metabolic water**, through metabolic processes.

Water is lost from the body in urine, sweat and faeces. As a result, the body has to maintain a balance between water intake and water loss.

- **Minerals.** They make up about 4 % of total body weight. They have two types of functions in the bodies of living things:
  - Regulating functions: for muscle contraction and nerve transmission, etc.
  - Building functions: for bones and teeth; for the formation of parts of structures: cell membranes, and proteins, such as haemoglobin.

Minerals are taken into the body in several ways: dissolved in drinking water, as part of food, or added to food, such as salt. Like water, minerals are lost in urine, sweat and faeces.

DID YOU KNOW?

Watermelon has a very high water content.

Dark chocolate is high in magnesium. Milk contains calcium and phosphorus.

Organic nutrients

These are biomolecules found only in food from organic sources, both plant and animal. They include **carbohydrates**, **lipids**, **proteins** and **vitamins**.

Carbohydrates

They provide most of the energy. Monosaccharides, such as glucose, are the fuel for our cells. Disaccharides, sucrose and maltose are digested quickly. Glycogen is a complex carbohydrate. It functions as an energy reserve and is stored in muscle tissue and in the liver.

Carbohydrates can come from plant sources, such as fruit, cereals or potatoes, and from products made with them, such as sugar and flour.

Lipids (fats and oils)

They also provide energy. Excess energy is stored in adipocytes. These cells form adipose tissue, which gives shape to the body and protects the organs.

Lipids can come from plant sources: vegetable oils, nuts and margarine; and from animal sources: butter and bacon.

Proteins

They are the most important building nutrients. They are part of many tissues and organs and carry out other important functions, such as the defence of the body and carrying oxygen in the blood.

Proteins can come from animal sources: fish, meat, milk and eggs or plant sources: legumes and cereals.

Vitamins

They are organic biomolecules the human body cannot synthesize, so they must be obtained from the foods we eat. Very small amounts are needed. Depending on their chemical composition, they are contained in lipids and proteins. They are important for growth and for many organic processes. Vitamin deficiencies or excess can cause disease.

Vitamins are found in fresh produce such as fruits and vegetables. They are also in milk, eggs, nuts, fish oil and cereals.

ACTIVITIES

1. What is the difference between *food* and *nutrients*?
2. Why is water so important for your body? How can you get water into your body?
3. Haemoglobin carries oxygen in the blood because oxygen binds to the iron ion (Fe+2). Anemia can result from iron deficiency or other causes. Search for information on the symptoms of anemia. Then explain how all this information is related.
4. Make a table to summarize the functions of organic and inorganic nutrients in the body. Use these headings: *nurient, how it gets into the body, function, examples.*
5. The table shows the composition of 100 g of whole milk. What organic and inorganic nutrients are found in milk?

Component	Amount in 100 g
Water	88.4 g
Carbohydrates	4.7 g
Fats	3.8 g
Proteín	3.06 g
Vitamin D	0.03 µg
Calcium	0.124 g
Phosphorus	0.092 g

LEARNING OBJECTIVES

- Classify foods according to their function in human beings.
- Interpret information on the food wheel.

2 Food

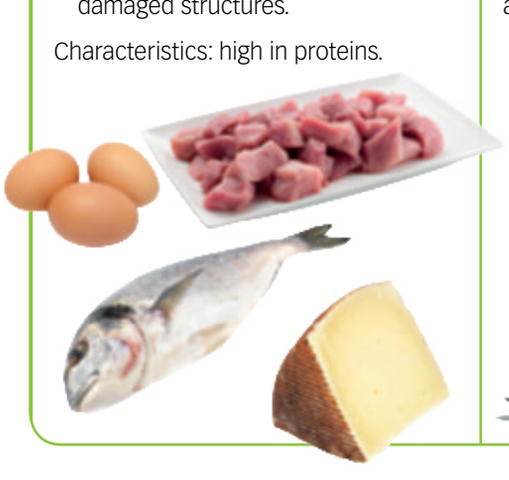
A balanced diet keeps the body healthy. It helps prevent disease and enables the body to grow and develop properly. For a balanced diet, you need to know:

- The characteristics of the foods you eat and their function in the body.
- The nutrients in foods.
- The daily amount of nutrients necessary.

Foods and their functions

There is an enormous variety of food, but it can be classified into three main categories:

Building blocks	Energy producers	Body regulators
Functions: • Provide the structure for cells, tissues and organs. • Enable growth and repair; replace damaged structures. Characteristics: high in proteins.	Functions: • Produce energy to be used immediately or stored for use later. Characteristics: high in carbohydrates and lipids.	Functions: • Provide essential substances that regulate the use of other foods, and enable the body to carry out its functions. Characteristics: high in vitamins, minerals, fibre and water.



WORK WITH THE IMAGE

1 Name a food. Your classmate describes its function. *Cheese. Repairs damaged structures.*

ACTIVITIES

2 Classify these foods by their function: *tomatoes, olive oil, apples, spaghetti, eggs, a steak.*

3 Explain why it is important to know the functions that each food has.

4 Write sentences about five foods. Your classmates guesses which category you are describing, for example, *They are high in lipids.*

The food wheel

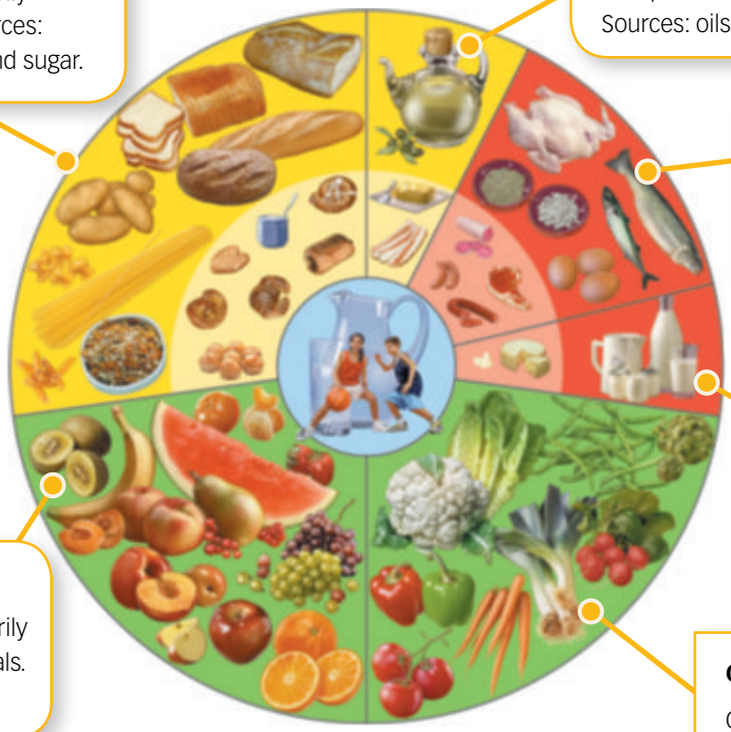
The food wheel classifies food into six groups by composition (protein, fats, etc.) and origin. Sections with the same colour contain foods with similar functions.

- **Yellow.** Groups I and II. They produce energy.
- **Red.** Groups III and IV. They build body structures.
- **Green.** Groups V and VI. They are body regulators.

The size of each section of the food wheel represents the relative importance of the section in a healthy diet.

Group I
Composition: primarily carbohydrates. Sources: potatoes, cereals and sugar.

Group II
Composition: primarily lipids. Sources: oils and butter.



Group III
Composition: primarily proteins. Sources: meats, fish and eggs.

Group IV
Composition: primarily proteins. Sources: dairy products.

Group V
Composition: primarily vitamins and minerals. Sources: vegetables.

Group VI
Composition: primarily vitamins and minerals. Sources: fruit.

WORK WITH THE IMAGE

5 Compare the size of the sections in the food wheel. Which groups are the most important? *Group … is more/less important than group …*

6 The size of the food on the wheel indicates the amount you need to consume. If the picture is very small, you should only eat that food occasionally. Which foods are very small on the wheel? Which groups do they belong to?

7 To which group on the food wheel does each of the foods in Activity 1 belong? If you drew them on the wheel, which would be the smallest? Why?

8 What can you see in the centre of the wheel? Why do you think they are there?

ACTIVITIES

9 Match each food on the previous page with one of the groups in the food wheel.

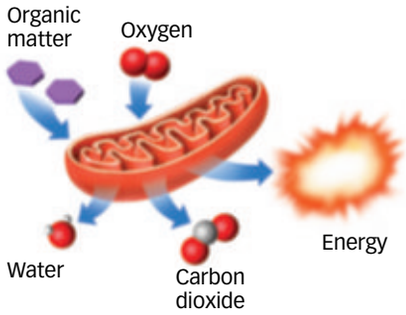
10 Design a healthy diet for someone who does not eat meat.

LEARNING OBJECTIVES

- Understand the energy provided by food.
- Recognise different consumptions of energy.

THINK ABOUT IT

Cellular respiration process



Can you summarize this process in terms of *input* and *output*?

WORK WITH THE IMAGE

1. Compare the energy content of the foods on this page. Ask questions: *Which has a higher energy content, a glass of juice or an apple?*
2. Make true-false statements about the energy expenditure of activities: *You use more energy for swimming than for eating.* Your classmate says *true* or *false*.

3 The energy value of food

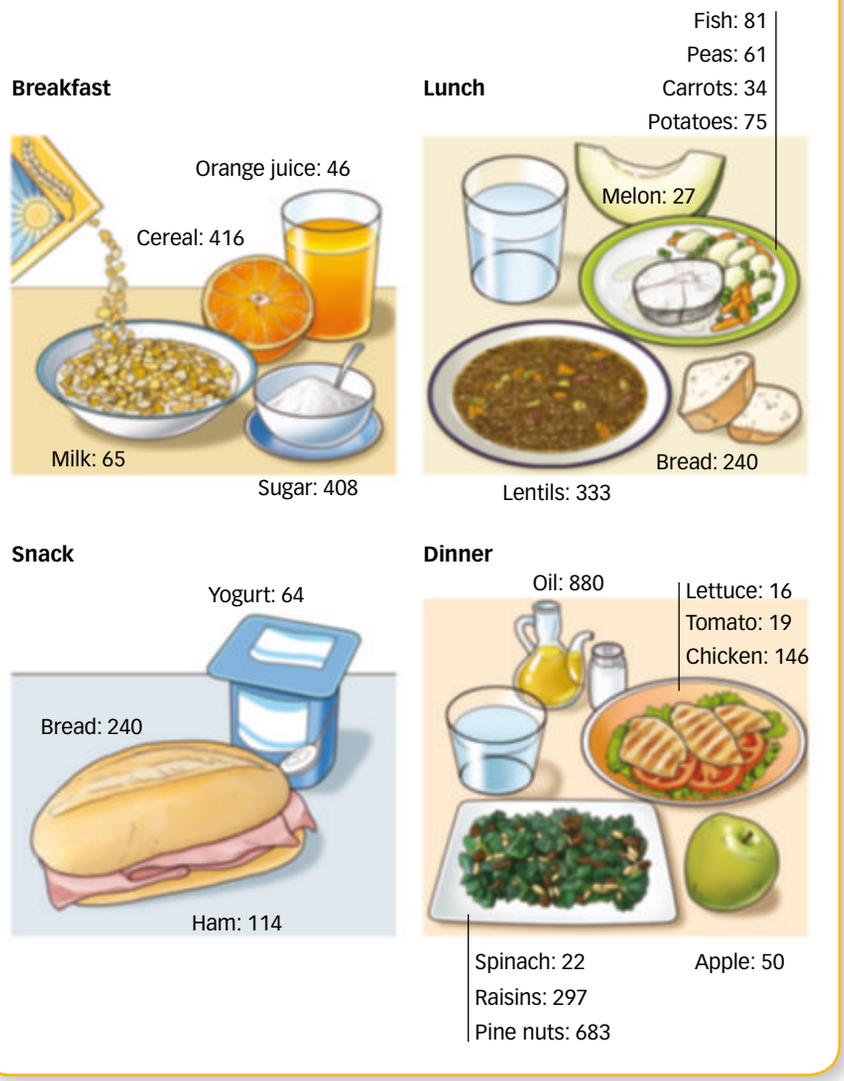
When nutrients from food enter the cells, they are used like fuel to produce energy. Food molecules are oxidized (broken down) in the mitochondria to release energy. This process is called **cellular respiration**. Carbon dioxide and water are formed as by-products.

Energy is measured in units. The most common units are:

- **Calories (cal)** or **kilocalories** (1 kcal = 1 000 cal)
- **Joule (J)** or **kilojoule** (kJ) (1 kcal = 4.18 kJ. The joule is the international unit of energy.

Each type of nutrient produces a different amount of energy. For example, 1 gram of carbohydrates has about 4 kcal, but 1 gram of lipids has 9 kcal. Vitamins, minerals, water and fibre do not provide energy.

Energy content in typical foods shown as kcal/100 g



4 Daily energy needs

Your body needs energy all the time. Even when you are resting, your body uses energy.

The amount of calories the body consumes at rest in one day is called the **basal metabolic rate (BMR)**. The BMR is the energy (calories) needed to maintain body temperature and the function of vital organs like the heart, lungs, brain, liver and kidneys, etc.

The BMR varies depending on a person's age, sex, weight and the environmental temperature. Consequently, everybody has a different BMR. In general, the BMR is higher when a person is growing and lower when the person is older or has a low body mass.

Most people are not at rest all day. They usually perform many different activities, so their energy needs vary depending on these activities. Based on the activity level of a person, additional calories must be added to the BMR .

DID YOU KNOW?

Energy expenditure varies by sex and age. These figures are for people aged 15 to 19.

	Female	Male
BMR (Kcal / day)	1460	1820
Light activity	2300	2900
Moderate activity	2600	3300
Intense activity	2900	3600

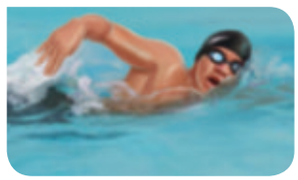
Source: World Health Organization (WHO).

Energy expenditure for different activities (in kcal per kg body weight per minute)


Sleeping: 0.016


Eating: 0.025


Going to class: 0.031


Swimming: 0.166


Running: 0.141


Watching TV: 0.021


Playing basketball: 0.142


Climbing stairs: 0.250

ACTIVITIES

3 What are the most common units of measurement for energy?

4 Why is cellular respiration important? What by-products does it produce?

5 Calculate the total amount of energy (in kcal) in a meal with the following amounts of food:

- *100 g lentils* • *50 g of bread* • *150 g of fish*
- *50 g of potatoes, peas and carrots* • *100 g of melon*

6 Define these terms: *kilocalorie*, *diet* and *basal metabolic rate*.

7 Calculate your energy expenditure for yesterday. Use the information from the WHO and the Internet. Compare your results with a classmate's. Who needed more energy? Why?

8 How many kilocalories did you need to carry out one of your activities yesterday?

LEARNING OBJECTIVES

- Understand the concept of a balanced diet.
- Identify the main foods in a Mediterranean diet.
- Plan a healthy menu.

5 A healthy, balanced diet

A **diet** consists of all the food a person usually eats. Each person's physical characteristics and daily activities vary, so diets should vary too.

A healthy diet leads to good health and proper development. Diets should be **balanced** and contain nutrients in the right amounts to guarantee a healthy body.

The World Health Organization (WHO) recommends daily intakes for certain nutrients: proteins 15 %, carbohydrates 55-60 %, lipids 30 % or less than the total calories.

ACTIVITIES

1. What makes a diet *healthy* and *balanced*?
2. What is the *Mediterranean diet* and why is it considered so healthy?
3. Summarize the beneftis of *dairy products*, *olive oil*, *fruit* and *vegetables*. Make a table.

The Mediterranean diet

People in Mediterranean countries traditionally eat a very balanced, healthy diet referred to as the **Mediterranean diet**. This diet has several health benefits: it prevents cardiovascular disease and some cancers associated with diet (colon cancer) and it is less likely to lead to obesity.

The Mediterranean diet is based on fresh, local and seasonal produce when possible. This contributes to sustainable agriculture and also protects the environment.

Dairy products: cheese and **yogurt**, for example, provide an additional source of calcium.

Olive oil: a higher proportion of unsaturated fats than other oils. It contains vitamin E.

Fruit and vegetables: vitamins, minerals and fibre.

Pulses and cereals: fibre and fat-free, vegetable proteins.

Fish: source of calcium, phosphorus, iodine, vitamins A and D, unsaturated fats and proteins.

KNOW HOW TO

Plan a healthy menu

Healthy eating is always important, but it is critical in adolescence. During this stage, many physiological changes take place which require proper nutrition. A balanced diet can ensure a person is getting all the essential nutrients required.

Some recommendations are:

- Adapt your diet to your individual needs. Eat the right amount of nutrients based on your energy needs.
- Eat a variety of foods in the right amounts as shown in the table.
- One serving of vegetables should be raw, for example, in a salad. This provides more vitamins and minerals.
- Eat foods high in fibre such as vegetables, pulses, fruits and cereals. Fibre helps digestion.

- Limit the intake of sugary beverages, industrial pastries, and salted snack foods containing animal fat.
- Drink water: 1-2 litres a day.
- Eat five times a day. Breakfast is a very important meal. It should contain dairy products, cereals and fruit.
- Exercise regularly.

	Foods	Servings
Daily	Rice, pasta, bread, potatoes, etc.	4-6
	Fruits	≥ 3
	Vegetables	≥ 2
	Olive oil (cooking and seasoning)	3-6
	Dairy	2-4
Weekly	Fish and seafood. Lean meats. Eggs	3-4
	Legumes	2-4
	Nuts	3-7
Occasionally	Fatty meats, sausages. Fats (butter, margarine)	
	Sweets, soft drinks, ice cream	

ACTIVITIES

4 Analyse your daily diet and see if it matches the recommendations given for a healthy diet. Explain your answer.

5 Plan a weekly menu that is healthy and suitable to your needs. Take into account the recommendations given by the WHO for a balanced diet and the Mediterranean diet. Present your diet as a slide show with illustrations or as a comic.

6 Some people who want to lose weight will eat unbalanced diets that can cause serious, sometimes irreversible, damage to their health.

a) Why do you think people put their physical appearance before their health?

b) How does advertising influence what you eat?

c) If someone wants to lose weight in a controlled and healthy manner, what would you recommend?

LEARNING OBJECTIVES

- Understand the techniques used in food preservation.
- Identify some industrial processes used with food.

6 Food preservation and handling

Most food is perishable. It spoils due to environmental and biological factors. Environmental factors include temperature, moisture and oxidation. The main biological factor is the growth of microorganisms.

The following processes can preserve food:

- **Cooling and freezing.** Food is preserved at low temperatures. Cold slows the growth of microorganisms and the deterioration of food. The temperature for **refrigeration** is a little above 0 ºC, and for **freezing**, below 0 °C.
- **Heating.** Food is exposed to high temperatures to eliminate microorganisms. **Pasteurization** is carried out at temperatures lower than 100 °C for about 15 seconds. Sterilization requires temperatures higher than 100 °C. **Sterilization** leads to longer preservation but can change the properties of food.

  Ultra-pasteurization (UHT) uses higher heat than pasteurization, but for less time, about 2 seconds. This process is used to preserve foods such as milk, creams, fruit juices, yoghurts, which do not require refrigeration, and processed foods.
- **Dehydration** (drying). This process reduces or eliminates water from food. This inhibits the growth of microorganisms. It also reduces food volume and weight so products are easier to manipulate, package and transport.

  Freeze-drying (lyophilization). This process consists of freezing food, and then dehydrating it. When the food is rehydrated, it regains its original properties.
- **Chemical preservation.** Substances are added to food to impede the growth of microorganisms. Sometimes, this process can change the colour, taste, smell and consistency of food, for example, sugar preserves fruit in jams and marmalade. **Salt** can preserve meat and fish. **Vinegar** preserves cucumbers as pickles. Sometimes, **artificial additives** and **preservatives** are added to food.

THINK ABOUT IT

Foods are preserved by different techniques. How many can you name?

WORK WITH THE IMAGE

1. Classify the food in the photo by food group: *I, II, etc.* Work with a classmate.
2. Name a food and ask a classmate: *What processes are used to preserve ...? Ultra-pasteurisation.*

ACTIVITIES

3. What is the main purpose of all food preservation processes? Why is this necessary?
4. Listen and identify the preservation process that is described.
5. Give three examples of foods preserved by each of the four processes described above.

Food manipulation and food hygiene

From the time food is produced until it reaches the consumer, it undergoes many processes to prevent it from spoiling or deteriorating. Good food practices must be used in all these processes to keep food safe to eat.

For this reason, everyone in the food industry who handles, stores, sells or serves food must have a **food handlers card** or **food hygiene certificate**. This ensures that the person has been trained in food safety practices.

WORK WITH THE IMAGE

4 Look at the picture and name the hygiene and preservation process used in each step of cheese production and distribution. Take turns with a classmate: *First … Next …*

Genetic engineering: genetically modified food

A **genetically-modified organism (GMO)** is an organism that has genetic material from another organism. This material has been inserted into it in order to obtain some of its qualities. Any food obtained from genetically-modified plants or animals is called a **genetically-modified food** or **GM food**.

People who support GMOs say crops are more productive and more resistant to insects, diseases and environmental conditions such as drought, heat or cold. Critics of GMOs, however, question the safety of GM food and point to possible health risks, such as new diseases and allergies. These critics also warn of environmental risks caused by introducing GMOs into areas where they can displace native species.

DID YOU KNOW?

To the naked eye, GM and non-GM foods look the same.

ACTIVITIES

4 Explain why some preservation processes are preferred over others for a particular food.

5 Search for information about food handlers cards or certificates. Explain what skills and knowledge are needed to get a card or certificate.

6 What are the advantages of GM foods? And the disadvantages?

LEARNING OBJECTIVES

- Identify causes of food poisoning.
- Define *food allergy* and give examples.
- Describe illnesses caused by unbalanced diets.
- Give examples of eating disorders and their effects.

THINK ABOUT IT

Salmonella bacteria live in the intestinal tract of animals and people. What should you do to prevent infection?

DID YOU KNOW?

Gluten is a protein found in wheat, rye, barley and oats. In people who suffer from celiac disease, gluten destroys intestinal villi, which leads to a reduced absorption surface. As a result, the person cannot assimilate nutrients properly, so abdominal pain and diarrhea are common. Find out what products you can get locally that do not contain gluten.

7 Food-related illnesses

A variety of illnesses and disorders are associated with food. Some are related to the action of microorganisms in food, and with food allergies. Others are caused by improper nutrition resulting from socioeconomic problems or eating behaviour.

Food poisoning

Food poisoning is caused by eating food that has been contaminated by microorganisms or toxins. Microorganisms are present in food that has not been properly preserved, prepared or manipulated. These microorganisms cause infectious diseases. For example, ***Salmonella*** bacteria cause gastrointestinal infections.

Some microorganisms produce toxins when they grow in food. These toxins can cause severe poisoning. For example, botulinum toxin is produced by the bacterium *Clostridium* botulinum. Poisonous mushrooms also contain toxins that can cause death.

Food allergies

Some people have **food allergies**. This means that their bodies are sensitive to substances in food called **allergens** and react to them. Their bodies cannot tolerate foods with those substances. For example, if you are allergic to **gluten**, a protein in some cereals, you may suffer from **celiac** disease.

ACTIVITIES

1. What is the difference between a food allergy and food poisoning?
2. Give examples of three microorganisms that can cause food poisoning.
3. What are the most common food allergies? Explain the problems each allergy causes for the person who has them.
4. What do you think the symbol on the left means?

Illnesses caused by unbalanced diets

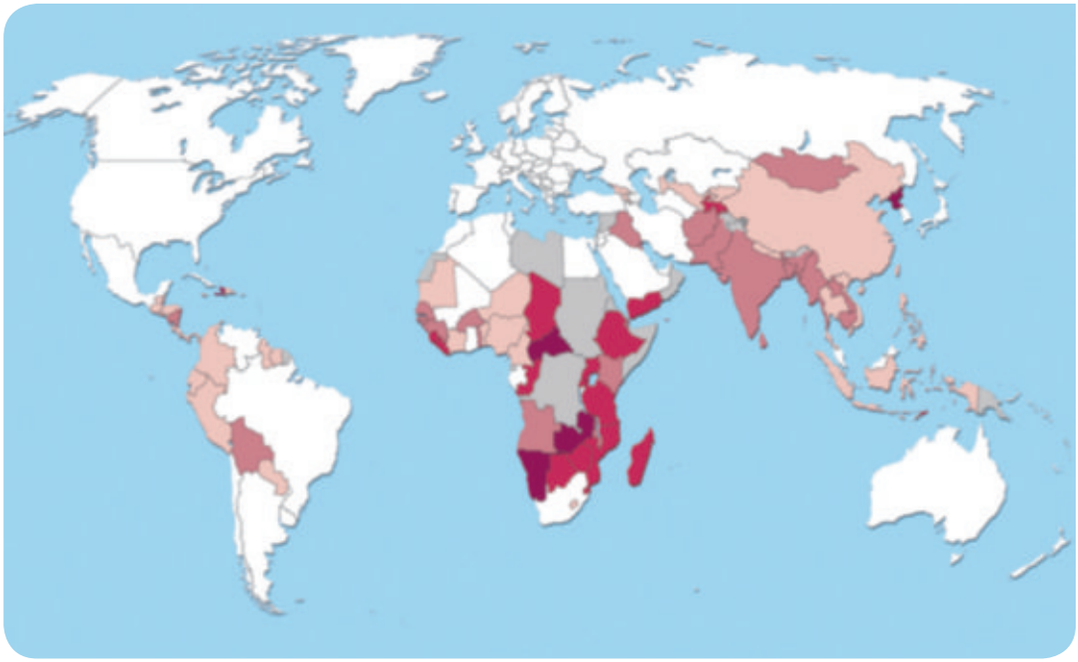
People with an unbalanced diet get too many or too few nutrients:

- **Excess weight gain and obesity.** This illness is generally caused by excess consumption of foods high in fats and sugars, and a sedentary lifestyle. However, sometimes obesity is caused by a medical condition. Obesity is associated with increased risks of other diseases such as diabetes and hypertension. To prevent obesity, reduce the consumption of energy foods and increase physical exercise.
- **Malnutrition.** This is caused by a lack of nutrients due to an unbalanced diet or no food. It is the principal cause of death among children in developing countries. Children require greater amounts of energy than adults in order to grow and carry out life functions.

WORK WITH THE IMAGE

5 Ask questions about the map, for example, *Which African countries have the highest level of malnutrition?*

6 What could be done to change this situation?



Hunger Map (2012-2014). Source: United Nations Food and Agriculture Organization (FAO).

Eating disorders

Eating disorders are psychological illnesses characterized by abnormal eating habits.

- **Anorexia.** People with anorexia think they are fat even when they are not. They try to lose weight by not eating. As a result, they become extremely thin and weak as their body starves. Anorexia can cause serious health problems and can lead to death.
- **Bulimia.** People with bulimia are obsessive about their weight and body image. First they overeat, then they induce vomiting to prevent weight gain.

ACTIVITIES

7 Find out what can be done to prevent *obesity*.

8 Make a table of food-related illnesses. Use these headings: *food poisoning, food allergies, eating disorders.* State the causes and effects associated with each one.

ACTIVITY ROUND-UP

1 List the characteristics of a *healthy diet*.

2 Explain the differences between each group of terms. What preservation process does each belong to?

- *refrigeration / freezing*
- *pasteurization / sterilization / ultra-pasteurization*
- *dehydration / freeze-drying*

3 Look at the pictures and answer the questions.

a) What is the main nutrient in each of these foods?

b) Which of these foods is most abundant in the Mediterranean diet? What advantage does that food have over the other?

A

B

4 Define the following terms.

- *malnutrition*
- *obesity*
- *anorexia*
- *bulimia*

5 What foods can cause *food poisoning?* Explain why.

6 What are common consequences of the consumption of high-calorie foods and lack of exercise? Create a comic to show them.

7 The food pyramid is another way of graphically representing a balanced diet. Find out about the pyramid and compare it with the food wheel. How are they similar? How are they different?

8 Describe the preservation process used with each of these products.

A

B

C

9 Imagine you had some food made up of 40 g of glucids, 40 g of lipids and 100 g of proteins. How many kilocalories would it represent? How many kilojoules?

10 Explain the importance of each shopping guideline.

- Start your shopping with the food items that do not need to be kept cold; then select those that should be refrigerated. Select frozen foods last.
- If a food is packaged, be sure that the container has not been damaged.
- When placing food in a shopping cart or bag, keep it away from cleaning products.

COOPERATIVE PROJECT

Design a food package

Design the package for a new breakfast food. Form groups of three. Follow these steps:

- Choose a product: cereal, juice, etc.
- Think of a name for the product. It should be short, easy to remember and create an impact.
- Collect labels from foods containing the same ingredients as your product and use them to create a new label.
- Indicate the packaging date, expiry date, how to store it, the ingredients and nutritional information.
- Design and draw the label. Write all the necessary information on the label. Write a slogan or a short text that will encourage a customer to buy and consume it.

- Be sure to indicate if your product is healthy. Explain the types of consumers you are targeting: children, adolescents, adults, athletes, etc.

Interpret food labels

Food information laws try to ensure that consumers have detailed information about packaged foods. This enables consumers to decide freely which ones they want to consume.

The European directive regulating food labelling defines labels like this: «*Labels can be words, particulars, trade marks, brand names, pictorial matter or a symbol which relates to a foodstuff and is placed on any packaging, document, notice, label, ring or collar accompanying or referring to such foodstuffs.*»

In addition to *Best before dates / or expiry dates*, look at nutritional information on food labels. It can help you to calculate the nutrients provided in relation to the servings indicated.

ACTIVITIES

11 What are the main ingredients in this cereal? Match each one with a group of nutrients.

12 Look at the nutritional information.

a) What does *Proteins 6 g* mean?

b) What does % *RDA* mean?

c) What is niacin? Why do you need it?

13 Could people with celiac disease eat this product? Why or why not?

14 If you had 200 ml of milk and 100 g of cereal:

a) How many kcal would that represent?

b) What percentage of the total daily values for sugars, lipids and proteins does this meal represent?

c) Is it a good breakfast? Explain your answer.

Ingredients: corn 60 %, sugar, peanuts 7 %, honey 2 %, aroma of malt barley, molasses, salt, chocolate.

Vitamins and minerals: niacin, vitamin B6, B2, B1, B12 and folic acid, iron, calcium.

NUTRITION FACTS	Per 100 g	
ENERGY	1701 kJ 402 kcal	
PROTEIN	6 g	
CARBOHYDRATES Sugars Starch	 35 g 47 g	
FATS (saturated)	 0.9 g	
FIBRE	2.5 g	
SODIUM	0.35 g	
SALT	0.9 g	
VITAMINS AND MINERALS		*%CDR
Niacin	13.6 mg	85%
Vitamin B6	1.1 mg	81%
Riboflavin (B2))	1.21 mg	86%
Folic acid	145 µg	73%
Thiamine (B1)	0.9 mg	83%
Iron	8.0 mg	57%

***% RDA** = % Recommended daily allowance.

Date packaged: 15/10/2014

Best before:
26/06/2015

Store in a cool dry place.

Ingredients list.
Ingredients and additives.

Nutrition information.
Energy values (in kcal) and the nutrients it contains.

«Packaged on» date.
The date the product was packaged.

«Best before» date.
This date refers to quality, not safety. Food can still be used after this date, but may begin to lose some of its flavour or texture.

Expiry date. The date after which a product should not be consumed/eaten.

Directions for storage.
Special conditions to keep the food fresh.