

# KNOWING YOUR NUTRIENTS

## FOCUS AREA

Food, Drink & Health



## KEY MESSAGES

- Foods and drinks have variable nutritional and energy value

## LEARNING AREA

- Health and Physical Education
- Design Technologies

## YEAR

8, 9 or 10

## TYPE

Quiz card game, group discussion, fact cards

## Introduction

In this Quick Bite students learn about the essential nutrients of food and drinks, and explore the roles and importance of nutrients, energy, and fibre through a series of quiz cards. *Nutrient Facts* cards, highlighting essential nutrients, support learning and provide a useful reference tool to be used or displayed in the classroom.

## Learning Intention

This resource will enable students to

- identify components of food and drinks (nutrients, fibre, water, energy) and explain how a balance and variety of these are required for good health

## Materials and equipment

- *Australian Guide to Healthy Eating* poster. Download from <https://www.eatforhealth.gov.au/guidelines/australian-guide-healthy-eating> - 1 per class
- *Do you know what you're eating?* Activity sheet (cut into cards with questions and answers separated) – 1 full set of cards per group
- *Nutrient Facts – Carbohydrates, Protein, Fats, Vitamins, Minerals, Water* (printed in preferred size as a classroom resource)

## Teacher background notes

- Relevant information about energy, nutrients, fibre, and water are provided in the *Do you know what you're eating?* Activity sheet.
- [Australian Dietary Guidelines Summary](#)
- [Vitamins and Minerals](#)
- [Nutrients](#)

## To complete this activity

- Explain there are different nutritional elements in food and drinks, including energy, nutrients, fibre, and water. If we eat foods in the balance and variety recommended by the *Australian Guide to Healthy Eating*, we will be eating the correct types and amounts of nutrients to maintain good health.
- Explain that everything we eat and drink, except water, contains a certain amount of energy. Energy comes from the nutrients - fat, protein, and carbohydrates
- Ask students to suggest foods or food groups that provide each of these nutrients and refer to them on the *Australian Guide to Healthy Eating* poster.
- Ask students to form groups of 3-4.
- Distribute the *Energy* quiz cards from the *Do you know what you're eating?* Activity sheet to each group. Ask students to match energy questions with correct answers.
- Discuss as a class what the six main nutrients are (protein, fat, carbohydrate, vitamins, minerals, and water).
- Distribute the *Nutrient* quiz cards from the *Do you know what you're eating?* Activity sheet to each group. Ask students to match nutrient questions with correct answers.

- Explain fibre helps prevent some chronic diseases, helps with weight control, and prevents some bowel problems. Fibre is not absorbed by our bodies but helps our gut and intestinal tract stay healthy. Foods that are good sources of fibre include whole wheat, muesli, bran, vegetables, and fruit.
- Distribute Fibre quiz cards from the *Do you know what you're eating?* Activity sheet to each group and ask them to match fibre questions with correct answers.
- Each group discusses and decides on three key new things they have learnt from this learning task.

## Additional Refresh.ED resources linked to this topic

- [Year 6 – HEALTH – A Closer Look at Nutrients and Energy](#)

### Acknowledgements

Australian Government National Health and Medical Research Council Department of Health and Aging. (2013). *Eat For Health Australian Dietary Guidelines Summary*, ([https://www.eatforhealth.gov.au/sites/default/files/files/the\\_guidelines/n55a\\_australian\\_dietary\\_guidelines\\_summary\\_book.pdf](https://www.eatforhealth.gov.au/sites/default/files/files/the_guidelines/n55a_australian_dietary_guidelines_summary_book.pdf), accessed on 17 January 2022

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Department of  
Health



Refresh.ED is produced at Edith Cowan University with  
funding from the Department of Health

# Do you know what you're eating?

## Student Activity Sheet

### Energy

Q: Where does our energy from food come from?	A: Protein, carbohydrates and fats in foods we eat provide energy for our bodies.
Q: What is the unit of measurement on a food label that tells us how much energy is in food?	A: Energy in food is measured in kilojoules, which is shown on food labels as kJ.
Q: Which is the most energy dense nutrient – fat, protein or carbohydrate?	A: Per gram fat provides double the energy of protein and carbohydrate.
Q: What happens to energy from food that is not used for energy by the body?	A: Energy from food not used by the body is stored as fat in the body.
Q: Does everyone need the same amount of energy every day?	A: The amount of energy someone needs will vary with age, body size, their activity level and whether they are pregnant or breastfeeding.

### Nutrients

Q: What are the main nutrients in foods needed by the body to be healthy?	A: There are five main nutrient categories: carbohydrates, proteins, fats, minerals, vitamins. Water is considered a nutrient because it is essential for life.
Q: Why are carbohydrates important for a healthy body?	A: Carbohydrates are the main source of energy for the brain. Without them our bodies would not function properly.
Q: What are the healthiest sources of carbohydrate?	A: Whole grains, starchy vegetables and fruit are rich sources of carbohydrates as well as vitamins, minerals and fibre.
Q: What is the main purpose of protein in the body?	A: Protein is important to build and repair body tissue.
Q: What are the healthiest sources of protein?	A: Protein is best obtained from lean meat, low fat dairy, eggs, legumes and beans.
Q: What is the main purpose of fats in the body?	A: Fats help the body absorb fat soluble vitamins like A, D, E and K. Fats are also the building blocks of hormones and cell membranes.

## Nutrients

Q: What are the healthiest forms of fat?	A: Unsaturated fats found in foods like <b>fish</b> , nuts, plant based oils, avocado and seeds have many health <b>benefits</b> .
Q: What is the main purpose of vitamins and minerals in the body?	A: Vitamins and minerals are important to regulate body functions. These functions include muscle contractions, oxygen transport in the blood and fighting off infection.
Q: What vitamins can't be stored long in the body because they are water soluble?	A: Unlike fat soluble vitamins A, D, E and K, vitamin C and most types of Vitamin B are water soluble and can't be stored long in the body.
Q: Which vitamin comes mainly from action of sunlight on our skin?	A: Our main source of vitamin D is from the action of sunlight on our skin. Vitamin D is low in most foods but it is added to some dairy foods and margarines.
Q: What are the names of some common minerals found in food?	A: Calcium, iron, sodium and potassium are important minerals commonly found in food. Too much sodium (salt) in food is not healthy for our hearts and blood pressure.

## Fibre

Q: What is the main role of dietary <b>fibre</b> in the body?	A: Dietary <b>fibre</b> is important to keep the digestive system healthy. It also slows food absorption and helps control weight, blood glucose and blood cholesterol.
Q: What are the healthiest sources of <b>fibre</b> ?	A: Wholegrain cereals and breads, fruit, vegetables, seeds and nuts are all good sources of <b>fibre</b> and many other essential nutrients.
Q: Why do some older people need to eat more <b>fibre</b> in their diet?	A: As people get older their digestive system slows down, so more dietary <b>fibre</b> helps prevent constipation.
Q: Do Australians eat enough <b>fibre</b> in their diet?	On average Australians eat less <b>fibre</b> than they need. 9-13 year old girls need about 20 grams per day and boys need about 24 grams.
Q: Is <b>fibre</b> a nutrient?	A: Fibre is not a nutrient because it is not digested or absorbed by the body. It is still important in the diet for its health <b>benefits</b> .