

# Eating Energetics



**KLAs:**  
Health Science

**YEAR LEVEL:** K-10

**LESSON TOPIC:**  
Nutrition

**DURATION OF ACTIVITY:**  
45-50 minutes

## Why do we need food?

Just like cars, our bodies need fuel to run! The energy we take in as food, and that we use up through everyday activity and exercise, represents an equation that must balance if our bodies are to stay healthy. This activity explores how the different foods we eat contain different amounts of energy, as well as different nutrients that we need for our bodies to work at their best. Students will take part in a calorimetry experiment, releasing and measuring the chemical energy found in several types of food. They will also assemble their favourite meals and, after engaging with the Australian Guide to Healthy Eating, fine-tune these to reflect a more balanced diet.



### SYLLABUS OUTCOMES

#### ES1 – S3: PDHPE

- Personal Health Choices: PHES1.12, PHS1.12, PHS2.12, PHS3.12

#### S4 – S5: SCIENCE

- Skills – Working Scientifically: SC4-6WS, SC5-6WS

#### MATHEMATICS

- Working Mathematically: MA4-2WM, MA4-3WM, MA5.1-3WM; Number and Algebra: MA4-5NA

#### FOOD TECHNOLOGY

- 4.3.1, 4.3.2, 5.3.1, 5.3.2

### LEARNING OUTCOMES

Students will:

- Understand the physiology and evolutionary benefits of taste
- Develop an understanding of energy transfer from food into the body, and that different types of food require different amounts of energy to burn
- Recognise that different foods provide the body with different nutrients that we need to stay healthy
- Appreciate the importance of balance when choosing what foods to eat

### EXPLORATORY AND PLAY-BASED COMPONENTS

Primary students will create their own favourite meals from a selection of play food, and negotiate a healthier plate as we discuss balancing the different types of food we eat.

Secondary students will carry out a first-hand investigation using calorimetry, to measure how much energy is stored in different types of food.

## VOYAGER

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