



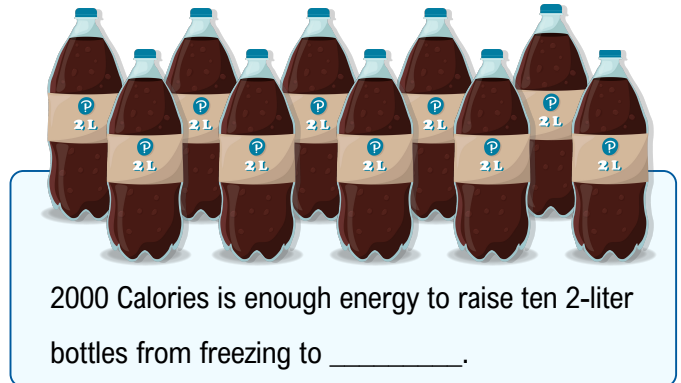
Study Prep

Available on Pearson+

TOPIC: ENERGY IN FOOD**Defining Calories**

- ◆ **Metabolism:** the set of chemical _____ that break down and use food molecules.
 - Energy released in food through metabolism is measured in _____.
- ◆ There is more than ____ definition of the word “calorie”.
 - **calorie:** energy needed to heat 1 g (ml) of H_2O 1°C .
 - Not typically used in discussing _____.
 - **Calorie or _____ calorie (kcal):** equal to _____ calories.
 - Energy needed to raise 1 _____ of H_2O 1°C .
 - Nutrition _____ use “Calorie”.

NOTE: This course will always use “Calories” or “Kcal”

**PRACTICE**

What is the relationship between a “calorie”, a “Calorie”, and a “Kcal”?

- a) A “calorie” is equal to 1000 “Calories”. A “Kcal” is equal to a “calorie”.
- b) All three units can be used interchangeably.
- c) A “Kcal” and a “Calorie” can be used interchangeably; A “calorie” is equal to 1000 “Calories”.
- d) A “Kcal” is equal to a “Calorie”. A “Calorie” is equal to 1000 “calories”.

TOPIC: ENERGY IN FOOD**Calculating Calories in Food**

- ◆ Different ____ nutrients contain different amounts of energy (Calories).
 - Carbohydrates: ____ Calories per gram
 - Proteins: ____ Calories per gram
 - Fats: ____ Calories per gram
 - Alcohol: ____ Calories per gram
- ◆ We can use these values to determine the Calories in food.

In 30 g of cheese,
we have:



Nutrient	Grams	Calories per gram	Calories
Carbohydrates	1 g		
Fats	8 g		
Proteins	7 g		
Total Calories			

EXAMPLE

Use the information about the number of Calories per gram of each macronutrient to fill in the nutrition labels below.

Oatmeal	
Total Calories per Serving	
Carbohydrates	27 g
Fats	2.5 g
Proteins	5 g

Roasted Peanuts	
Total Calories per Serving	
Carbohydrates	6 g
Fats	15 g
Proteins	7 g

Low-fat Refried Beans	
Total Calories per Serving	155
Carbohydrates	24 g
Fats	3 g
Proteins	

TOPIC: ENERGY IN FOOD**PRACTICE**

For the following nutrition label, use the mass of each macronutrient to calculate the total Calories per serving.

- a) 84 Calories.
- b) 99 Calories.
- c) 124 Calories.
- d) 139 Calories.

Total Calories per Serving	
Carbohydrates	10 g
Fats	8 g
Proteins	3 g

PRACTICE

According to the following nutrition labels, which has more total Calories?

- a) Food #1
- b) Food #2
- c) The number of Calories is equal.

Food #1	
Serving Size	13 g
Total Calories per Serving	?
Carbohydrates	3 g
Fats	9 g
Proteins	1 g

Food #2	
Serving Size	22 g
Total Calories per Serving	?
Carbohydrates	20 g
Fats	2 g
Proteins	0 g