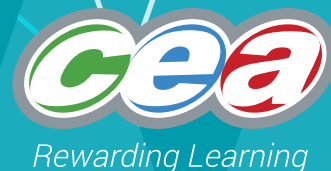


# FACTFILE: GCSE HOME ECONOMICS: Food and Nutrition



## Calculate energy and nutritional values of recipes/meals/diets

Energy requirements are dependent on a range of factors and include our Basal Metabolic Rate (BMR) and Physical Activity Levels (PAL). Energy is measured in kilocalories or kilojoules.

Nutrient	1g provides kcal	% Energy value
Carbohydrate	3.75	50
<i>Of which sugars</i>		Of total, no more than 5
Protein	4	
Fat	9	35
<i>Of which saturates</i>		Of total, no more than 11

To calculate energy in a food item, take the energy value in kilocalories for the nutrient i.e., carbohydrate, protein and/or fat and multiply by the weight of the food in grams.



### Learning Outcome Link

#### Energy and Nutrients

**Explain the factors that influence individual energy requirements**

**Analyse the relationship between food intake, portion size, BMR, PAL, in achieving energy balance and maintaining a healthy weight**

**Identify the percentage of recommended energy values provided by protein, fat and carbohydrates**

The example below demonstrates the energy values for a simple lunch of a ham and tomato sandwich and a carton of apple juice.

Food	Weight in grams	Calculation	Energy provided in kilocalories
Bread, wholemeal 2 slices	90g protein 9g fat 2g carbohydrate 38g	$9 \times 4 = 32$ kcals $2 \times 9 = 18$ kcals $38 \times 3.75 = 142.5$ kcals	193
Ham 1 slice	30g protein 6g fat 1.5g carbohydrate 0.2g	$6 \times 4 = 24$ kcals $1.5 \times 9 = 13.5$ kcals $0.2 \times 3.75 = 0.75$ kcals	38
Tomato	25g protein 0.1g fat 0.0g carbohydrate 0.75g	$0.1 \times 4 = 0.4$ kcals $0.75 \times 3.75 = 2.8$ kcals	3
Butter	25g protein 0.0g fat 5.8g carbohydrate 0.0g	$5.8 \times 9 = 52$ kcals	52
Apple Juice Carton	150g protein 0.2g fat 0.0g carbohydrate 14.6g	$0.2 \times 4 = 0.8$ kcals $14.6 \times 3.75 = 35$ kcals	56
<b>Total Energy</b>			<b>342</b>

### Explore Food (Food a Fact of Life)

There are many online programmes available to calculate the nutritional content of recipes. 'Food a fact of life' has launched 'Explore Food' to make nutritional analysis easy and accessible for everyone.

Use the following link to guide your way through the programme.

<http://explorefood.foodafactoflife.org.uk/assets/files/Explore-food-teachers-notes.pdf>

