FACTFILE:
GCSE HOME ECONOMICS: Food and Nutrition

Rewarding Learning

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
Of which sugars		Of total, no more than 5
Protein	4	
Fat	9	35
Of which saturates		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	9×4 = 32 kcals 2×9 = 18 kcals 38×3.75 = 142.5 kcals	193
Ham 1 slice	30g protein 6g fat 1.5g carbohydrate 0.2g	6×4 = 24 kcals 1.5×9 = 13.5 kcals 0.2×3.75 = 0.75 kcals	38
Tomato	25g protein 0.1g fat 0.0g carbohydrate 0.75g	0.1×4 = 0.4 kcals 0.75×3.75 = 2.8 kcals	3
Butter	25g protein 0.0g fat 5.8g carbohydrate 0.0g	5.8×9 = 52 kcals	52
Apple Juice Carton	150g protein 0.2g fat 0.0g carbohydrate 14.6g	0.2×4 = 0.8 kcals 14.6×3.75 = 35 kcals	56
		Total Energy	**342**

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