

FOOD FUEL

Exercise 2

2. Now select the **activities** you might do in one day. Put them on the activity grid and fill in the table as before.

(Choose activities that closely match what you might actually do)

All your activities should take about 24 hours when you add them up.

Food	Number of squares on grid	Amount of Energy (kJ)
<i>E.g. Running</i>	<i>8</i>	<i>800</i>
TOTAL ENERGY OUTPUT		

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3 a) Which food (from **Exercise 1**) contained the most energy?



b) What type of activity (from **Exercise 2**) used the most energy?

4 a) Complete the table using the information from **Exercise 1** and **Exercise 2**.

Total Energy Input (kJ) A	Total Energy Output (kJ) B	Energy Difference (kJ) A - B

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b) Does the energy **input** from the food you have selected balance the energy **output** from the activities?

Tick the box that agrees with your energy difference:

Energy input greater is greater than energy output

Energy input is balanced (*or nearly balanced*)

Energy output is greater than input

c) Explain what would happen to your body if:

Your energy input is greater than your energy output?

Put on weight

Your energy input and output are balanced?

Weight stays the same

Your energy output is greater than your energy input?

Lose weight/ tired/ inactive

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5. **Exercise 1** and **2** model the way in which our bodies use energy.

Can you suggest some ways in which the model could be made more accurate?

e.g. Portion of food might be larger or smaller depending on the person

Bigger range of activities

Different times for each activities

Energy used depends upon size/ weight/ gender of person/ intensity of exercise

People have different metabolic rates

6. Why does your body still use energy when you are asleep?

All your cells, organs etc are still respiring/ require energy to keep alive

7. **Respiration**

- Food is used to provide energy for all the cells in our body
- Cells use **glucose** from food and release the energy in a process called respiration.
- This reaction also uses **oxygen**, and produces **carbon dioxide** and **water**.

Complete the word equation below, using the words in bold above.

Glucose + _____ + _____ + **ENERGY**

oxygen



carbon dioxide

water