Paul investigated the energy transferred by different snacks when they are burnt. The table below shows his results.

Food	Mass burnt (g)	Temperature rise (°C)	Temperature rise per gram of food (°C/g)
salted peanuts	4.0	24	
cashew nuts	3.0	18	
sunflower seeds	2.0	12	
raisins	5.0	15	
dried apricots	15.0	27	

1 Copy the table and complete the last column to show the temperature rise per gram of food.

2 Write the foods in order of the temperature rise, starting with the one that had the smallest temperature rise per gram of food burnt.

3 a Explain why it is useful to work out the temperature rise per gram.

   b Explain why it is useful to write the foods in order of temperature rise per gram.

4 Work out the ratios of the temperature rise per gram obtained with:

   a dried apricots and sunflower seeds

   b raisins and cashew nuts.

Write your ratio in the form 1 : n.

5 Write out in words what the answer to question 4a tells you.

6 The tables show part of the labels from a packet of raisins and a packet of dried apricots.

Raisins: typical values	100 g contains	1 serving (20 g) contains
energy	1240 kJ	250 kJ

Dried apricots: typical values	100 g contains	1 serving (30 g) contains
energy	755 kJ	225 kJ

   a Compare the energy per 100 g of the two foods.

   b Compare the energy per serving of the two foods.

   c Why do you think that food packets usually give the energy per 100 g and the energy per serving?

I can…
- make a fair comparison of experimental results
- calculate ratios.