



# Land, water and bees – don't take us for granted:

## A healthy diet

### Student activity sheet

### What's on the menu?

#### Questions

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Some meals are described below. Look at each of them and think about whether they are balanced meals with a good combination of the five food groups, then answer the questions.

- Breakfast 1: sweet breakfast cereal with milk, Danish pastry, cup of tea  
Breakfast 2: scrambled eggs on toast, fruit yoghurt, cup of coffee  
Breakfast 3: sausage, bacon, fried egg, mushrooms, baked beans, fried bread, glass of orange juice

Many nutritionists consider breakfast to be a very important meal. There is evidence to suggest that young people who eat breakfast learn better at school.

Which breakfast do you think would be the best one for a student to eat? Explain why you think this.

- Packed lunch: egg sandwich with brown bread, crisps, bar of chocolate  
What do you think is good about this packed lunch and what could you change about it to make it healthier? Explain why.
- Canteen lunch: four-cheese pizza, chips  
This meal is very high in one food group because of the foods chosen but also because of the cooking methods used. Which food group is this? What health issues can arise from a diet high in this food group?  
Name two food groups that are lacking in this meal.
- Lunch: baked potato with kidney bean chilli, mixed salad, apple pie, milkshake  
Say which parts of this meal are healthy choices, and how you would replace the other items to improve it.
- Light lunch: bowl of green salad with oil and vinegar dressing, fruit salad with whipped cream, can of soft drink  
What would you add to increase the protein content of this meal?  
What would you take away to improve the nutrition of the meal? Explain why you would do this.
- Main meal: vegetarian lasagne with cheese topping, piece of cake with butter icing  
This meal is very high in one food group. Which one?  
Which nutrients are missing from this unbalanced meal?
- Roast dinner: roast chicken, gravy, peas, carrots and potatoes, a glass of water, fruit salad with yoghurt  
Which food groups do the foods in this meal contain, and is it balanced?



# Tasting healthy options

## Aim

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Supermarkets usually have a display of 'healthy option' foods. These may be lower in fat, salt or sugar than the standard versions, or they may be free from substances which some people cannot tolerate such as gluten. It is a good idea to read labels carefully, as packaging may be designed to create an impression that food is healthy. For example, sometimes a low-fat version of a food may contain extra sugar instead. Nevertheless, if the levels of all three – fat, sugar and salt – can be reduced, the food will be better for us – but will we buy it?

High levels of fat and sugar in foods may be responsible for the high levels of obesity we now have in the UK, and so scientists are interested in whether human beings naturally prefer the taste of foods with high levels of fat. They are also interested in whether people can become 'addicted to sugar' so that they crave sweet foods. High-sugar drinks are also considered to be a big cause of weight gain. The government is planning to tax sugary drinks in an attempt to limit the amount that people drink.

## Method

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You may be provided with some food and drink samples, or you may be asked to provide some yourself. The foods will be in pairs, with one being the 'healthy' option and the other the standard variety. You will work with your teacher to design a fair test in which the people doing the tasting do not know which sample is which.

### Safety

You should never eat or drink in a laboratory, so this investigation must be carried out in a classroom or the school dining room.

If you have any food allergies, let the teacher know beforehand. The labels on the foods should give details of possible allergens (for example biscuits produced in factories that also handle nuts).

For each sample you will be asked to taste a small piece and then to decide which is the 'high or low' sample, and also to rate which tastes better. Do not share your opinions with anyone else in the class. The results can be collated afterwards to show whether everyone in the class agrees.



## Results

Use a table to record your results. The first line has been filled out as an example.

sample	A	B
food:	<i>baked beans</i>	
preferred	<i>✓</i>	<i>x (too sweet)</i>
identification (revealed after test)	<i>low-fat, low-sugar</i>	<i>normal</i>
food:		
preferred		
identification (revealed after test)		
food:		
preferred		
identification (revealed after test)		
food:		
preferred		
identification (revealed after test)		
food:		
preferred		
identification (revealed after test)		

Once the foods have been sampled you will be told which ones are which. Fill out the empty rows in your table and compare the identifications with your results. Were you able to tell which sample was higher in sugar, salt or fat?

As a class you will discuss how it might be possible to combine the whole set of results and draw conclusions from them.