

TWENTY FIRST CENTURY
science

Module C3

FOOD MATTERS

Practice test

FOUNDATION

Name:.....

Form/teaching set:.....

Answer all of the questions.

Write your answers in the spaces provided on this paper.

1 When crops are grown and harvested, elements essential to the growth of plants are removed from the soil.

(a) Which of these is an essential element removed from soil?

Put a **ring** around the correct answer.

argon nitrogen oxygen sodium

[1]

(b) Intensive farmers and organic farmers use different methods to replace essential elements lost from the soil.

Put a tick (✓) in the one correct box after each statement.

	used by intensive farmers	used by organic farmers
growing different crops in the field each year	<input type="checkbox"/>	<input type="checkbox"/>
spraying herbicide on the field	<input type="checkbox"/>	<input type="checkbox"/>
spreading manure on the soil	<input type="checkbox"/>	<input type="checkbox"/>
spreading synthetic fertilizer on the soil	<input type="checkbox"/>	<input type="checkbox"/>

[2]

[Total marks: 3]

2 A group of teenagers were asked how often they eat breakfast cereals.

The results of this survey are shown in the table below.

How often breakfast cereal is eaten	Boys		Girls	
	Number	%	Number	%
more than once a day	59	14	24	5
once a day	235	55	194	40
most days	52	12	76	16
once or twice a week	43		66	14
less than once a week	26	6	68	14
never	15	3	51	11
total	430	100	479	100

(a) What percentage of boys eat breakfast cereals once or twice a week?

You should show your working.

percentage =% [1]

(b) What does the table show about the eating habits of teenagers?

Put ticks (✓) in the boxes next to the **two** correct answers.

More girls than boys eat breakfast cereals less than once a week.

More boys than girls eat breakfast cereals less than once a week.

More boys than girls eat breakfast cereals.

More girls than boys eat breakfast cereal once a day.

More boys than girls eat breakfast cereal once a day.

[2]

(c) (i) Breakfast cereals contains starch.

What is made when starch is broken down during digestion?

Put a **ring** around the correct answer.

amino acid glucose polymer protein [1]

(ii) Why is it important for food to be broken down during digestion?

Put a tick (✓) in the box next to the **one** correct answer.

to make it easier to swallow food

to make waste insoluble so that it can be removed from the body

to make soluble compounds that can be absorbed into the blood

to make it easier for food to travel through the digestive system

[1]

(d) Most breakfast cereals contain a lot of sugar.

(i) What are the immediate effects of eating food containing a lot of sugar?

Put a tick (✓) in the box next to the **one** correct answer.

the sugar gives you lots of energy

the sugar passes quickly through the digestive system

there is a rapid fall in the blood sugar level

there is a rapid rise in the blood sugar level

[1]

(ii) What disease could result from eating food containing a lot of sugar?

Put a **ring** around the correct answer.

arthritis cholera diabetes influenza [1]

[Total marks: 7]

3 The food that we eat sometimes contains harmful chemicals.

(a) How can these harmful chemicals get into the food?

Put ticks (✓) in the boxes next to the **two** correct answers.

Toxic chemicals used as herbicides by farmers may remain in the food.

Toxic chemicals may be added by food manufacturers during food processing.

Toxic chemicals may be formed in the food during food processing

Toxic chemicals may be absorbed from the air by food.

Toxic chemicals may be added during cooking of the food. [2]

(b) Harmful chemicals can also get into the food from the packaging it is wrapped in.

What harmful chemicals may get into food from cling film?

Put a ring around the correct answer.

pesticides plasticizers polymers proteins [1]

(c) Which of these actions will most reduce the risk of exposure to harmful chemicals?

Put a tick (✓) in the box next to the **one** correct answer.

Cook food very well before eating.

Do not eat meat.

Eat only organic food.

Eat more fruit and vegetables. [1]

[Total marks: 4]

4 Read this newspaper article about salt.

Dangers of hidden salt

Salt is added to food as a preservative or flavouring. For years we've been told that eating too much salt can be unhealthy. But how much salt should we really be eating?

According to nutritionists, a small amount of salt on a daily basis is essential for the functioning of healthy cells. For example: sodium – contained in salt – is essential for nerve and muscle function.

However, research shows that too much salt can lead to increased blood pressure, heart disease, asthma and stomach cancer.

The Department of Health recommends that our average intake of salt should be reduced to 5 g a day for women and 7 g for men. Figures show that the average person consumes over 9 g of salt per day.

But most people eat too much salt without even knowing it. About 80 per cent of our sodium intake comes from processed foods and not from the salt cellar. Bread, cereal, biscuits, and even yoghurt are all major sources of salt. A recent report revealed that the amount of salt in crisps and snacks has almost doubled in the past 25 years.

Research suggests that sticking to the advised intake of salt would save 34 000 lives a year.

According to the British Dietetic Association, the less salt you have, the quicker your taste buds adapt. In fact it only takes three or four weeks to wean yourself off salt altogether. 'Try alternative flavourings, such as fresh herbs and spices, instead of adding salt to food.'

Use information from the article to help you answer these questions.

(a) Why is it important to your health to have some salt in your diet?

.....
.....

[1]

(b) Eating too much salt is bad for you.

Write down **two** ill-effects that may result from eating too much salt.

.....
.....

[2]

(c) Explain why people may not realize that their health is put at risk when they eat processed foods.

.....
.....

[1]

(d) What advice does the British Dietetic Association give to help people eat less salt?

.....
.....
.....
.....

[2]

[Total marks: 6]

[Total marks for test: 20]

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Practice test

HIGHER

Name:.....

Form/teaching set:.....

Answer all of the questions.

Write your answers in the spaces provided on this paper.

1 In the disease diabetes the body does not produce enough of the hormone insulin.
There are two types of diabetes: type 1, which often occurs in young people,
and type 2, also called late-onset diabetes, which more commonly occurs in older people.

(a) Which organ in the body produces insulin?

Put a ring around the correct answer.

adrenal gland duodenum pancreas stomach thyroid gland [1]

(b) What is a possible cause of late-onset diabetes (type 2)?

Put a tick (✓) next to the best answer.

- a diet rich in fat
- a diet rich in sugar
- a diet rich in protein
- a diet rich in alcohol

[1]

(c) Many people with type 2 (late-onset) diabetes do not require insulin injections.

How do they control their disease?

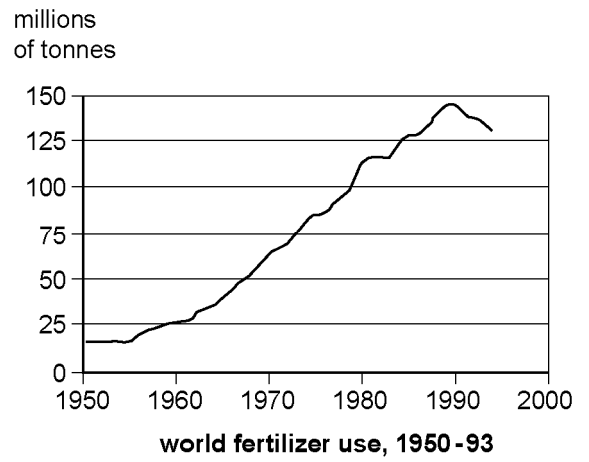
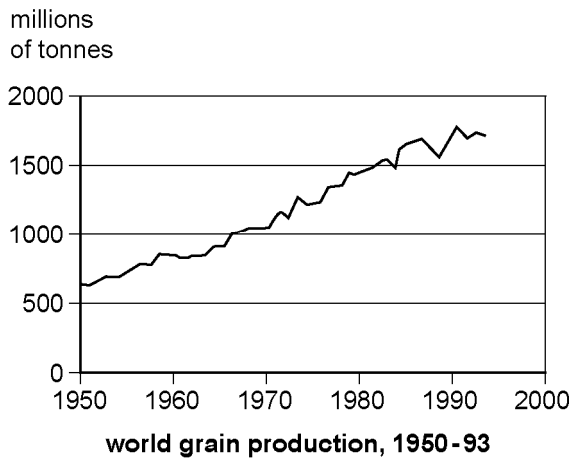
Put ticks (✓) in the boxes next to **each** correct answer.

- eating a diet low in fat
- eating a diet low in sugar
- taking exercise
- taking antibiotics

[2]

[Total marks: 4]

2 The two graphs show how grain production and fertilizer use has increased in the second half of the 20th century.



(a) Intensive farming methods have been used to increase the production of grain.

This has involved the use of more fertilizer.

(i) Fertilizers supply plants with nitrogen compounds.

Which are the other most important elements supplied by fertilizers?

Put a **(ring)** around the **two** correct answers.

calcium magnesium phosphorus potassium sodium sulfur [2]

(ii) Why has more fertilizer been used as more grain has been produced?

Put ticks (✓) in the boxes next to the two best answers.

Fertilizer has become less effective during this time.

When a crop is harvested, elements absorbed by the plants are taken away and not returned to the soil.

New varieties of crops require different essential elements than the old varieties.

As more grain is produced, more of the elements are absorbed from the soil and have to be replaced.

Most of the fertilizer is used for other things than production of grain.

[2]

(b) The yield of grain from crops can be affected by many factors other than use of fertilizer.

Which of these factors **increase** the yield of grain?

Put ticks (✓) next to the **two** best answers.

use of herbicides

low rainfall resulting in drought

use of genetically modified crops

attack by pests

use of organic farming methods

[2]

[Total marks: 6]

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(a) How can these harmful chemicals get into the food?

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Toxic chemicals may be added during cooking of the food. [2]

(b) Food that is kept in storage for a long period of time may become harmful.

How can food become harmful while it is in storage?

Put ticks (✓) in the boxes next to the **two** correct answers.

The level of vitamins in the food falls.

Toxic chemicals leach out from packaging.

The water content of the food falls.

Toxic chemicals enter the food from mould growing on it.

Toxic chemicals are absorbed from the air. [2]

[Total marks: 4]

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Research suggests that sticking to the advised intake of salt would save 34 000 lives a year.

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Use information from the article to help you answer these questions.

- (a) The recommended daily intake of salt for men is higher than for women.

Suggest why.

.....
.....

[1]

(b) Explain why people may not realize that their health is put at risk when they eat processed foods.

.....
.....

[1]

(c) Suggest how people can reduce the risk of ill-health from eating too much salt.

Use ideas of risk and benefit in your answer.

.....
.....
.....
.....

[2]

(d) What advice does the British Dietetic Association give to help people eat less salt?

.....
.....
.....
.....

[2]

[Total marks: 6]

[Total marks for test: 20]