

Cambridge International Examinations Cambridge International General Certificate of Secondary Education

0511/12
ber/November 2014
1 hour 30 minutes

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name on all the work you hand in. Write in dark blue or black pen. Do not use staples, paper clips, glue or correction fluid. DO NOT WRITE IN ANY BARCODES.

Answer all questions. Dictionaries are not allowed.

At the end of the examination, fasten all your work securely together. The number of marks is given in brackets [] at the end of each question or part question.

This document consists of 13 printed pages and 3 blank pages.



Read the following article about the cacao tree, and then answer the questions on the opposite page.

Spotlight on Chocolate

In this month's magazine, Anna Lee, our expert on agricultural matters, reports on a trip to Belize.

Like many people, I love chocolate, and on a recent visit to Central America, I found out more about where this delicious, sweet-tasting substance comes from.

Cacao Trees

I travelled deep into the beautiful rainforest in Belize. There, I was introduced to the cacao tree farmers whose crop is used for making chocolate. The farmers pointed to colourful pods the size of footballs growing straight out of the cacao tree trunk. They told me that one pod of white beans contains enough cacao to make two small bars of chocolate.



Making Chocolate

After the cacao beans have been harvested, the growers send them to a factory where they are roasted and turned into an oily paste called cocoa liquor. Some of this liquor goes straight into chocolate; the rest is pressed to make cocoa butter. If you have ever wondered why chocolate melts in your mouth, it is due to the addition of cocoa butter, which melts at body temperature. In order to make different kinds of chocolate, sugar and vanilla are also added in varying amounts.

Growing Cacao

In Belize, the farmers that I spoke to were proud to be growing cacao the traditional way. This age-old method has many advantages: the cacao trees are shaded by the tall forest canopy, which prevents the trees drying out when it gets hot. Furthermore, in this environment natural predators thrive, and they destroy the insects that would eat the cacao crop. The farmers also showed me the cacao leaf litter which covers the forest floor. Leaf litter is a thick layer of fallen leaves, which enriches the soil and helps plants grow. Without leaf litter, chemical fertilisers have to be used, which can get into streams and pollute the water supply.

The farmers that I met knew about protecting the rainforest. But in other areas, not all growers are as environmentally aware. Some growers cut down the rainforest and plant cacao trees on the cleared ground. Cacao trees grow well in sunshine, but this way of farming can cause problems for the ecosystem.

Organic Chocolate

If you buy chocolate, consider buying organic chocolate. The organic approach to growing cacao supports the rainforests as well as the farmers and their families.

Competition!

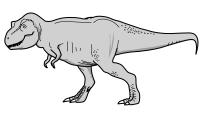
Enter our chocolate competition and if you win, you will receive a ticket to visit the Maya Gold chocolate factory. To enter the competition, just tell us where Maya Gold chocolate comes from. Put your answer on a postcard, and remember to give us your name, address and age.

[1]
[1]
[1]
141
[1]
[2]
[1]
l: 7]

Read the following article about the Tyrannosaurus rex, and then answer the questions on the opposite page.

T-rex

Millions of years after its lifetime, the dinosaur *Tyrannosaurus rex* (T-rex) has become a legend. More than any other extinct creature, T-rex has gripped our imagination. Children in particular enjoy learning about dinosaurs and playing with models of T-rex. Just over a century ago, however, no-one knew that such a creature had ever walked the earth.



People have known about dinosaurs since the 1820s, but it was not until 1905 that the most fearsome dinosaur, T-rex, was identified. T-rex was about the height of a two-storey building, with a bite eight times greater than a lion's and, if alive today, it could easily swallow an adult human whole.

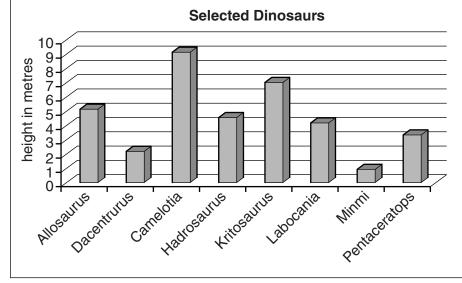
T-rex inhabited swampland and forest in the part of the world we now call North America. Dinosaurs became extinct about 65 million years ago, during the end of the Cretaceous period, and T-rex was one of the last dinosaur species to exist.

The story of the discovery of T-rex is complex. The first significant T-rex finds were a fossilised jaw and backbone, which were unearthed in 1901 by an expert from the American Museum of Natural History, Barnum Brown. The specimens were found on a river bank in Wyoming. In the next few years, Brown made further discoveries of fossilised parts of the T-rex neck and leg. Brown's most successful find came in 1908. One day, on his way back from camp, he noticed four tail bones sticking out from a sandstone hillside, and he was excited to see that the parts belonged to another T-rex skeleton. Using a plough, then dynamite, he gradually exposed more bones and a complete skull.

All the bones were sent to a museum in New York, where experts reconstructed a T-rex skeleton. This first T-rex reconstruction went on display in the American Museum of Natural History in 1915, where it still stands today. T-rex was thought to be the largest meat-eating dinosaur, until 10 years ago, when a creature two tonnes heavier was identified in South America.

In the hundred years since its discovery, T-rex has continued to intrigue the public. Children are always enthusiastic about visiting exhibitions which feature T-rex. It may be the enormous size of T-rex that people find so amazing, or its strange and ferocious appearance. Museum reconstructions show that an average adult T-rex weighed 7 tonnes, stood up to 4 m tall and 12 m long. Its pointed, rigid tail aided movement and helped to counterbalance the enormous head. The jaws contained 50–60 sharp teeth, which, unlike those of other species, could grow again when broken. These teeth were perfect for eating meat.

Analysis of the skull indicates that T-rex had a very strong sense of smell. Scientists have established that all dinosaurs had tough, scaly skin, but there is no evidence to indicate their original colour. It is possible that the creature developed camouflage to increase the chances of survival. In addition, no-one can say how many bones T-rex had, as a complete specimen has yet to be discovered.



Some experts believe that T-rex was a scavenger and ate animals that had already died, rather than hunting live animals. One reason for this view is that it is thought to have been a slow, lumbering creature, which many potential victims could outrun.

Novels and films featuring dinosaurs, especially T-rex, are enduringly popular. The most well-known film about dinosaurs is possibly the box-office hit, *Jurassic Park*. The fact that T-rex is from the Cretaceous not the Jurassic period of history, does not seem to have deterred the film-makers at all!

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(a)	When were people first aware of dinosaurs?
(b)	[1] What kind of environment did T-rex live in? Give two details.
(c)	[1] Which T-rex bones did Barnum Brown discover first? Give two details.
(d)	[1] Where could people first see a life-size model of T-rex?
(e)	What advantages did the stiff tail give T-rex? Give two details.
(f)	[2] What was unusual about T-rex's teeth?
(g)	How do we know that T-rex had a powerful sense of smell?
(h)	What do experts know about the appearance of dinosaurs' skin?
(i)	Why was it difficult for T-rex to catch live animals? [1]
(j)	According to the chart, which was the second smallest dinosaur, and what was its height? [1]
	[Total: 11]

Gordon Fraser, 17, is learning to play the saxophone, and he and some of his school friends have formed a jazz band called The Bass Clef. The band meets on Fridays after school. There are seven players in total in the band, and they all encourage each other to practise regularly.

Each year the friends go to see a live musical performance. This year, Gordon has heard about a jazz concert in which famous musicians will be performing. Jed Jones, a musician they all admire, is performing in the concert. Gordon has told the other players about the concert and they are keen to go. Unfortunately, the concert, called World Jazz, is going to take place in Taupo, a town many hours' drive from Auckland, where Gordon and his friends live. The band members feel that the town is too far away for a day trip, and hotels in the area are very expensive, because the town is situated near a beautiful lake which is popular with tourists.

However, Gordon's sister, Kate, has told him of a company called Sounds Fun, which organises coach trips to concerts and shows. World Jazz is on their programme of coach trips. Overnight accommodation is included and the prices are affordable. For these reasons, the band members think booking through Sounds Fun would be ideal, and they decide to book the tickets. Gordon has finished his exams earlier than his friends, and has volunteered to do the booking online.

Gordon's home address is 112 Benbow Street, Howick, Auckland, 1024, New Zealand. He would prefer the tickets to be sent to him by email at gordon123@yipee.nz and then he will send them to band members.

To get a good view, they would like to get tickets for front row seats, even though these are expensive. They would prefer to go on November 23 after the exams are over, and see the evening performance. They are happy to economise on accommodation and stay in a low-cost hotel, but they do not want to camp. They think setting up tents for one night is too much trouble.

Imagine you are Gordon. Fill in the booking form on the opposite page using the information above.

Sounds Fun
Booking Form
Section A: Customer details
Full name:
Address:
Age:
Email:
Section B: Booking details
Which performance are you booking for? (please tick \checkmark)
Jim Janselm Billy Sings Blues World Jazz
Lee and the Boy Band
Performance date: (please circle)
November 3 November 6 November 13 November 23
Number of tickets required:
How would you like to receive your tickets? (please delete)
by email / collect in person
Seating preference:
Type of accommodation preferred:
Section C
In the space below, write one sentence saying why you have booked through Sounds Fun and one sentence explaining your choice of concert.

7

Read the following article about the uses of garlic, and then complete the notes on the opposite page.

Garlic: the lifesaver

Often bitter, sometimes sweet, garlic is a real attack on the senses. Love it or hate it, it is impossible to ignore this ancient member of the onion family, and it might just save your life.

Garlic dates back over 6000 years, and is a native plant of central Asia. In ancient Egypt, garlic was included in religious ceremonies. Interestingly, clay models of garlic have been found in the tomb of Tutankhamun. Apart from its spiritual uses the Egyptians valued it as a form of currency when exchanging goods. The Romans thought of it in health terms, as an internal cleanser.

Today, garlic is used as a seasoning in Asia, Africa and Europe. It is appreciated by cooks because it has a distinctive taste and can bring out the flavour of other ingredients. It is also easy to grow, as long as you protect it from birds. They mistake the emerging garlic bulbs for worms and enjoy eating them. After harvesting, the garlic can be dried in the sun, or in an airy place for the skin to mature so that it remains fresh for longer.

In scientific terms, garlic is a member of the allium family, which includes onions, leeks and chives. Crushing garlic produces allicin, which is known to scientists for its unique health-giving properties. It is also the substance which gives garlic its characteristic aroma.

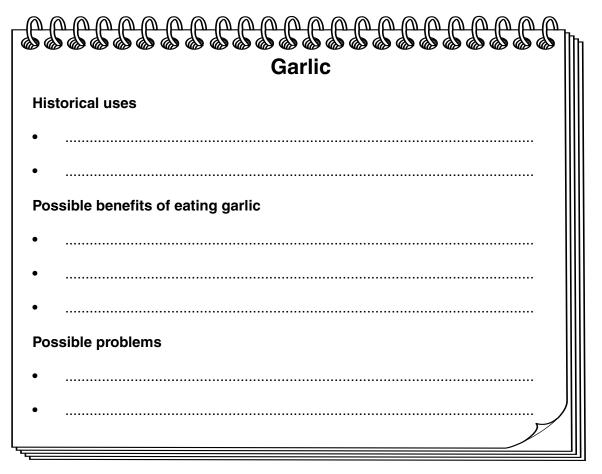
Scientists are researching the health benefits of garlic and have discovered some encouraging facts. In the well respected scientific investigation called the 'Seven Countries Study,' scientists found a clear connection between the consumption of garlic and low rates of heart disease, even when other factors which might also reduce heart disease, such as a healthy diet, were taken into account. Furthermore, studies in Asian countries found that eating garlic every day reduced the rates of some kinds of cancer. Some people who suffer from asthma have said their health improved after they began to include garlic in their diet, but so far there is not enough scientific evidence for doctors to recommend it for this condition.

It seems wise to include garlic in your diet, but only in moderate amounts. Eating excessive amounts of garlic can be harmful, because the high sulphur content destroys the natural bacteria in the gut. This can cause the irritating skin condition, dermatitis. It has also been known to cause a distressing and painful inflammation of the stomach. There has even been some evidence that a very high intake of garlic can cause difficulties with blood clotting.

Garlic has always been part of people's diet in some parts of the world, but in other areas it is a more recent addition and is increasing in popularity. For people who like eating garlic, but who are worried about their breath smelling of it, the best cure seems to be to take a sauna or just sweat a lot. This is far more effective than eating mint or chewing parsley. An informal alternative is to make sure your close friends eat the same amount of garlic as you do.

You are going to give a talk to your class about garlic. Prepare some notes to use as the basis for your talk.

Make short notes under each heading.



[Total: 7]

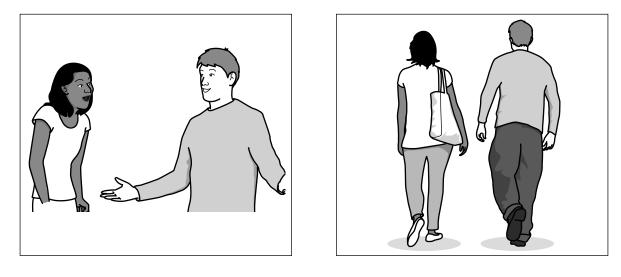
Exercise 5

Imagine that you have given your talk to your class. Your teacher has asked you to follow it up with a summary for homework.

Look at your notes for Exercise 4. Using the ideas in your notes, write a summary about garlic.

Your summary should be about 70 words long (and no more than 80 words long). You should use your own words as far as possible.

[Total: 5]



10

You unexpectedly met a friend you had not seen for a long time. You decided to spend the day together.

Write a letter to a relative about your day.

In your letter:

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- explain what you were doing when you met your friend
- describe what you did together
- say how you felt about the day.

The pictures above may give you some ideas, and you should try to use some ideas of your own.

The letter should be 100–150 words long. Do not write an address.

You will receive up to 7 marks for the content of your letter, and up to 6 marks for the style and accuracy of your language.

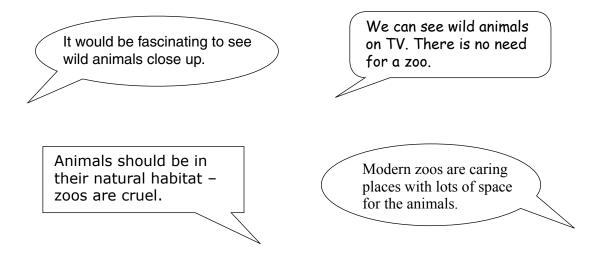
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You have read in your local newspaper that developers would like to build a zoo in your town.

Here are some comments on the topic from people living in the town:



Write an article for the newspaper, giving your views.

The comments above may give you some ideas, and you should try to use some ideas of your own.

Your article should be 100–150 words long.

You will receive up to 7 marks for the content of your article, and up to 6 marks for the style and accuracy of your language.

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