



## SECTION A

Read *10 Great Gifts for your Child* and answer questions 1 to 10. Identify which Sections (A – H) contain the information listed in questions 1 to 10 by marking (X) for the correct answer. Paragraphs may be used more than once. If you change your mind, put a line through the box (X) and then indicate your new answer with a (X).

You can use any letter more than once.

**10 Great Gifts for your Child: It's a tough job to keep the kids happy and save the planet, but the following should help.**

**A**

An excellent way for children to learn about gardening. Inspire young gardeners to care for the plants growing before their eyes – you can use this kit again and again. Plant an onion, carrot, or a radish from seed in each of the glass tubes – the pack comes complete with soil, seeds and a journal to keep notes. The clever design allows the developing plants to be seen right from sprouting to full harvest. You may even persuade them to eat the fruits of their labours.

**B**

This new kids' club from the conservation charity comes with a generous welcome pack – five activity sheets to get children started, a year's supply of stickers and a wall chart. On top of that, children are sent a challenge every week by e-mail – anything from making a model, finding berries or doing a quiz. This is an effective way of keeping children engaged through the year and the whole aim is to get children outside looking at nature.

**C**

These beautiful watercolour paints are made entirely from natural plant extracts – flowers, fruits, leaves and roots including red cabbage and peppers – and yet provide brilliant colours. They are the result of several years of research and development work involving scientists and art historians. The paints come in an attractive metal tin, complete with a wooden brush. The set won product-of-the-year at the International Trade Fair for Natural Products.

**D**

Bug boxes have been around for a few years, but this hand-made butterfly habitat is a first – butterflies will use it for hibernating. Put it in a mature tree and you don't know what guests you might attract – you'll probably get some ladybirds and moths too. It comes with an inspection panel and sun terrace – essential as

butterflies warm themselves in the sun before taking off.

**E**

This beautifully carved and painted set of skittles is a new take on an old-fashioned toy. They come in various shapes plus three bright wooden balls to knock the skittles down with, all made to the same level of craftsmanship. Families who make these by hand in Sri Lanka receive a fair price and are expected to maintain good working conditions.

**F**

An extensive and endearing gallery of finely hand-sewn rag dolls, all washable and made from natural fabrics. 'My daughters spend hours playing with them,' says one mother. Dresses and tops are removable – you can extend the children's play value with an extra set of clothes. From ballerinas to boy dolls, there are more than a dozen designs available.

**G**

A construction toy and science lesson in one. This metal-crafted set is great for teaching basic building skills and encouraging creativity, for eight-year olds and upwards. Build a helicopter or a biplane and add a solar-powered propeller – a great gadget to demonstrate the power of the sun's energy – though best to warn children that these models won't actually fly. A great way to get your child interested in the world of engineering from a young age.

**H**

This is a species that is endangered. Spare a thought for the polar bear whose Arctic wonderland is melting away. A recent report predicted the loss of about two thirds of the world's polar bear population by 2050. Each adoption bag contains a soft toy, screen savers to download, a booklet and a picture of the adopted animal. You will receive newsletters throughout the year by post.

taken and adapted from *The Independent* (Saturday, 1 December 2007)



**Questions 1–10**

1. This gift helps your child learn about mechanics.

- A B C D E F G H**

2. This gift provides a shelter for insects.

- A B C D E F G H**

3. This gift provides a way of keeping a record of what has happened.

- A B C D E F G H**

4. This gift has taken a long time to produce.

- A B C D E F G H**

5. This is a game that children can play.

- A B C D E F G H**

6. This gift can be washed.

- A B C D E F G H**

7. This gift has a part that operates by using sunlight.

- A B C D E F G H**

8. This gift can help an animal which is threatened.

- A B C D E F G H**

9. This gift won a prize.

- A B C D E F G H**

10. This gift may encourage your children to eat more vegetables.

- A B C D E F G H**

**(Total 10 marks)**

Section A

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## SECTION B

**Read the information from a leaflet about Surrey University Library and answer questions 11–25.**

### Joining and Using the University Library

This leaflet gives all the information that you need to know in order to use the University Library's facilities, whether you are a current member of the university, from another university, or are a member of the wider community.

Please note that membership services, including issue of day passes for visitors and members of the public, are only available during hours when the Library is staffed. Please see the opening hours below for more information.

Opening hours for the membership desk are: 10.00 – 15.00 and 17.30 – 20.30 Monday to Friday in term time. Outside of these times please phone the information desk automated helpline on 01483 68332.

#### Opening hours

	Library building	Staffed services
Monday – Friday	08.30 – 01.30	09.00 – 20.45
Saturday	10.30 – 18.00	14.00 – 17.45
Sunday	10.30 – 22.30	14.00 – 17.45

The University Library is currently open for 95 hours per week during semester with the majority of our users visiting between 9am and 5pm, Monday to Friday. We ensure that our staffing resources are concentrated to meet demand during this period. As a result, we are unable to offer the same level of service during non-core hours.

#### Services when the University Library is closed

- Book return box located next to the entrance
- Library catalogue
- Telephone renewal 01483 64924
- IT facilities in the Austin Pearce Building 24 hours a day 7 days a week

#### Using the University Library

All registered students are members of the Library. Registration for new students takes place in special sessions at the beginning of the programme, when you first join the University. Full details of these sessions are sent to all students. When registration has been completed students may obtain a Campus Card from the Library which is also your library card. Proof of ID in the form of your registration form is required.

#### Visitors to the University Library

Visitors are welcome to use the Library for reference use of the printed material, limited access to online information resources, and for quiet study purposes. They should report to the Library Reception desk upon arrival with some form of personal identification, including home address. Access to the Library is now controlled via an entry system.

Visitors may use the PCs in the Surf Centre for Internet access and email. Please note there are no word processing, printing or downloading facilities linked to these PCs.



**Photocopying facilities**

There are 13 machines distributed over 6 floors, many have sorters and on the 4th floor, there is one with a sheet feeder. There is also a photocopier accessible to students and staff 24 hours a day in IT services.

- Instructions are available beside the machines
- Further advice can be obtained from the Print Shop

To use the copiers you need to add photocopy credits to your Campus Card using the revaluer machines near the entrance. We advise you that you only add a maximum of £5 at any one time as we are unable to give refunds. Visitors may purchase a rechargeable copy card from the Lending Services desk on the ground floor which costs £2 and gives 20 photocopying credits.

**Borrowing information**

You can borrow items using the Self-Issue machines on the ground floor. Use Lending Services for Inter-library loans and to pay fines. Heavily demanded stock can be borrowed from the Short Loan Collection.

Borrowers are responsible for all items borrowed on their card and for making sure items are returned or renewed on time. A valid Campus Card must be shown to borrow any item. Items may not be issued on someone else's card unless written authorisation is provided.

taken and adapted from University of Surrey webpages



**Questions 11–25**

**Look at the statements below. Decide whether they are TRUE, FALSE or NOT GIVEN according to the text.**

**Mark (X) for the correct answers. If you change your mind, put a line through the box (X) and then indicate your new answer with a (X).**

	True	False	Not Given
11. The information in the leaflet is for all users of the library.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. You can become a member of the library between 3 and 5 o'clock in the afternoon.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. The library does not open before half past eight in the morning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. The library staff are always available.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. If you want to renew a book, you can ring the library outside opening hours.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Students must register with the library at the beginning of each year of their course.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Visitors who live in the city can become half-price members of the Library.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Visitors to the library must go to the Reception Desk immediately when they arrive.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. You can print your work from any of the computers in the library.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Visitors must pay to use the Surf Centre.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Photocopiers are only available on the 4th and 6th floors.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. New students have to pay for their Campus Card.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. The Campus Card will give students access to all areas of the university.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Photocopiers take both coins and notes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. You need your Campus Card to use the Self-Issue machines to borrow books.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**(Total 15 marks)**

**Section B**

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## SECTION C

Read *How does the sun shine?* and answer questions 26–40.

**HOW DOES THE SUN SHINE?**

The big burning ball of gas that holds nine major planets in orbit is not unlike many stars in the universe. The Sun makes up 99.86% of the solar system's mass and provides the energy that both sustains and endangers us. Scientists have lately begun calling its tremendous outpouring of energy 'space weather'. The Sun radiates as much energy every second as 100 billion tons of exploding dynamite.

It might surprise you to know that scientists don't know exactly what makes sunshine. The Sun is divided into three main layers: a core, a radiative zone and a convective zone. It is thought that the Sun's energy comes from thermonuclear fusion, in which atoms are forced together in the Sun's core, new substances are formed and tremendous energy is released. This reaction occurs in the core of the Sun, where the temperature is around 20 million degrees Kelvin. The energy radiates through the middle layer, then bubbles and boils to the surface in a process called convection. Charged particles, called solar wind, stream out at a million miles an hour.

Based on measurements of elements at the surface of the Sun, theorists have long assumed that 98.5 percent of the fusion at the core involves the lightest elements, mostly hydrogen and helium. The remaining 1.5 percent of the fusion involves nitrogen and oxygen, according to theory. These assumptions have never been well tested by observations.

Interestingly, scientists estimate that it takes a few hundred thousand years for photons, the basic units of light, to escape the Sun's core and reach the surface. They arrive at Earth about 8.5 minutes later, where we can bask in the warm glow of light waves initiated long before sunscreen was invented.

***Sunspots***

Magnetic fields within the Sun slow down the radiation of heat in some areas, causing sunspots, which are cool areas and appear as dark patches. They act like temporary caps on upwelling matter, and they are the sites of occasional ferocious eruptions of light and electrified gas. More sunspots generally means increased solar activity.

Sunspots have been studied directly for about four centuries, and these direct observations provide the most reliable historic record of solar activity. Previous studies have suggested cooler periods on Earth were related to long stretches with low sunspot counts. From the 1400s to the 1700s, for example, a Little Ice Age was experienced in Europe and North America for a period of about 50 years. During that time, there were almost no sunspots. A firm connection between sunspots and climate remains elusive, many scientists say.

***A new study***

Sunspot activity is known to ebb and flow in two cycles lasting 11 and 88 years. Scientists in other fields have shown that during the past 11,000 years, Earth's climate has had many dramatic shifts. Scientists, industry leaders and environmentalists have argued for years about whether humans have contributed to global warming, and to what extent. The average surface temperature around the globe has risen by about 1 degree Fahrenheit since 1880.



N 3 3 9 9 5 A 0 7 1 6

Some scientists say the increase could be part of a natural climate cycle. Others argue that greenhouse gases produced by automobiles and industry are largely to blame.

A new study led by Sami Solanki of the Max Planck Institute in Germany employed a novel approach to pinning down sunspot activity going back 11,400 years.

Cosmic rays constantly bombard Earth's atmosphere. Chemical interactions create a substance called Carbon-14, which falls to Earth and is absorbed and retained by trees. While trees don't typically live more than a few hundred years or perhaps a couple of thousand, dead and buried trees, if preserved, carry a longer record, 'as long as tree rings can be identified', said Manfred Schussler, another Max Planck Institute researcher who worked on the study.

The study's findings: sunspot activity has been more intense and lasted longer during the past 60 to 70 years than anytime in more than eight millennia.

'Whether solar activity is a dominant influence in these climate changes is a subject of intense debate,' says Paula Reimer, a researcher at Queen's University, Belfast, who wrote an analysis of the new study. Why? Because 'the exact relationship of solar irradiance to sunspot number is still uncertain'. In general, studies indicate that changes which take place in solar output affect climate during periods lasting decades or centuries, 'but this interpretation is controversial because it is not based on any understanding of the physical processes,' another member of Schussler's team has said.

The study's methods seem solid and the research could eventually help scientists understand why the climate has changed in the past and allow for better predictions of future change. Whatever the result, change is likely to continue.

However, large-scale variations in our oceans and climate can also mask long-term trends and can make it difficult to sort out what is normal, what is unusual and which effects might or might not result from shifts in solar radiation. Finally, if you stood on the Sun, its gravity would make you feel 38 times more heavy than you do on Earth. But it's kind of hot, so please don't try it.

taken and adapted from [www.SPACE.com](http://www.SPACE.com)





**Questions 26–40**

**Complete the following sentences. Write no more than FOUR words and/or numbers taken from the text.**

- 26. Another term for the amount of energy produced by the Sun is .....
- 27. The core of the Sun is where ..... takes place.
- 28. Temperatures in the core are about .....
- 29. Hydrogen and helium are thought to be the two most likely ..... involved in the reactions in the core of the Sun.
- 30. It is estimated that light from the Sun reaches Earth after .....
- 31. Sunspots look like ..... on the surface of the Sun.
- 32. The number of sunspots indicates the amount of ..... taking place in the Sun.
- 33. Low numbers of sunspots have been linked to ..... on our planet.
- 34. The Little Ice Age lasted for about .....
- 35. Scientists disagree about the causes of ..... and climate change.
- 36. Carbon-14 is produced as a result of ..... created by cosmic rays reaching the Earth.
- 37. A study of tree ..... can show how much Carbon-14 has reached the Earth.
- 38. Studies have shown that sunspot activity has increased in the last .....
- 39. Scientists still don't understand the ..... which could explain the way sunspot activity may affect our climate.
- 40. Other factors which can affect our weather on Earth are natural long-term changes in our ..... and our climate.

**(Total 15 marks)**

Section C

**TOTAL FOR READING: 40 MARKS**











## SECTION F

Read the article on Coffee and Caffeine and write a summary for your class. In your summary you should include:

- TWO advantages of drinking coffee
- TWO disadvantages of drinking too much coffee
- Some advice you would give to your classmates.

Scientific evidence consistently shows that up to 400mg of caffeine a day is perfectly safe for the general population and may confer health benefits – this equates to four to five cups of coffee a day.

In the UK, we drink approximately 70 million cups of coffee a day. However, there are many modern myths surrounding coffee and whether it is ‘good’ or ‘bad’ for us.

### Caffeine content in food products

How much caffeine there is in a cup of coffee depends on many factors including: how big the cup is, how finely the coffee is ground, how dark the roast, the brewing method used, how much coffee is used to make the drink and the type of coffee bean used. The beans of Arabica coffee, grown at higher altitudes contain less caffeine than Robusta beans.

With tea, the amount used, how long it is allowed to brew and the type of tea – Indian (more caffeine) or China – also makes a difference. Tea actually contains more caffeine than coffee on a ‘dry weight’ basis but a smaller weight of tea is generally used to prepare a drink. Caffeine added to a food or drink must, by law, be included in the ingredients list. This does not apply to caffeine occurring naturally in foods (as in coffee). Although there is no statutory limit for caffeine in soft drinks, its use is subject to the general provisions of the Food Safety Act 1990.

Some products contain guarana, a natural plant product from Brazil that contains a substance – guaranine – that is identical to caffeine. It has exactly the same stimulant effect as caffeine from other sources, as does mateine, contained in Maté, a drink popular in South American countries, especially Argentina.

### Table of caffeine content

In October 2001 the Food Standards Agency published findings of the caffeine content of a range of beverages brewed by consumers.

Caffeine Content	
Average cup of instant coffee	75mg caffeine
Average mug of instant coffee	100mg caffeine
Average cup of brewed coffee	100mg caffeine
Average cup of tea	50mg caffeine
Regular cola drink	up to 40mg caffeine
Regular energy drink	up to 80mg caffeine
Plain chocolate bar	up to 50mg caffeine – milk chocolate has around 50% caffeine content of plain chocolate



**IS DRINKING COFFEE SAFE?**

*For most people, moderate consumption of coffee (up to four to five cups per day, or 400mg caffeine) is perfectly safe. At these levels, it doesn't have any health risks and as we can see below, it may have some benefits. It's also very enjoyable!*

**WHAT IF I'M PREGNANT?**

*If you're pregnant, you shouldn't have more than three to four cups of coffee a day – that's about 300mg of caffeine.*

**IS COFFEE DEHYDRATING, DO I NEED TO DRINK MORE WATER FOR EVERY CUP OF COFFEE?**

*No – in fact, coffee in moderate amounts can contribute to your daily intake of fluid. Getting enough fluid is important – the British Dietetic Association recommends a minimum of 1.5 – 2 litres of fluid a day (or 6–8 cups) for example water, milk, fruit juice, tea or coffee.*

**IS CAFFEINE ADDICTIVE?**

*In moderate amounts, there's no evidence that caffeine carries a serious risk of addiction.*

**WHAT ARE ANTIOXIDANTS AND WHY ARE THEY IMPORTANT FOR HEALTH?**

*Antioxidants 'mop up' free radicals and can prevent the damage they do. Free radicals are waste products which we get from being exposed to tobacco smoke, radiation and so on. They can damage the cells in our bodies, and in the long term may cause all sorts of medical problems, including heart disease and cancer. Coffee is one of the biggest sources of antioxidants in many people's diet.*

**SOME FACTS**

Coffee is the most popular drink in the world – two billion cups are drunk every day. Coffee grows in more than 50 countries and is the second largest export in the world after oil (in dollar value). It is thought that the coffee tree originated in the province of Kaffa, in the area known today as Ethiopia. Coffee was first known in Europe as Arabian Wine. The heavy tax on tea imposed in 1773 by Britain resulted in America switching from mainly drinking tea to coffee.

taken and adapted from [www.britishcoffeebeanassociation.org](http://www.britishcoffeebeanassociation.org)

You should write between **100 and 150 words**.

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