

# Unit 9

## Supporting ideas

### Lesson 1

## Selecting data for a specific purpose



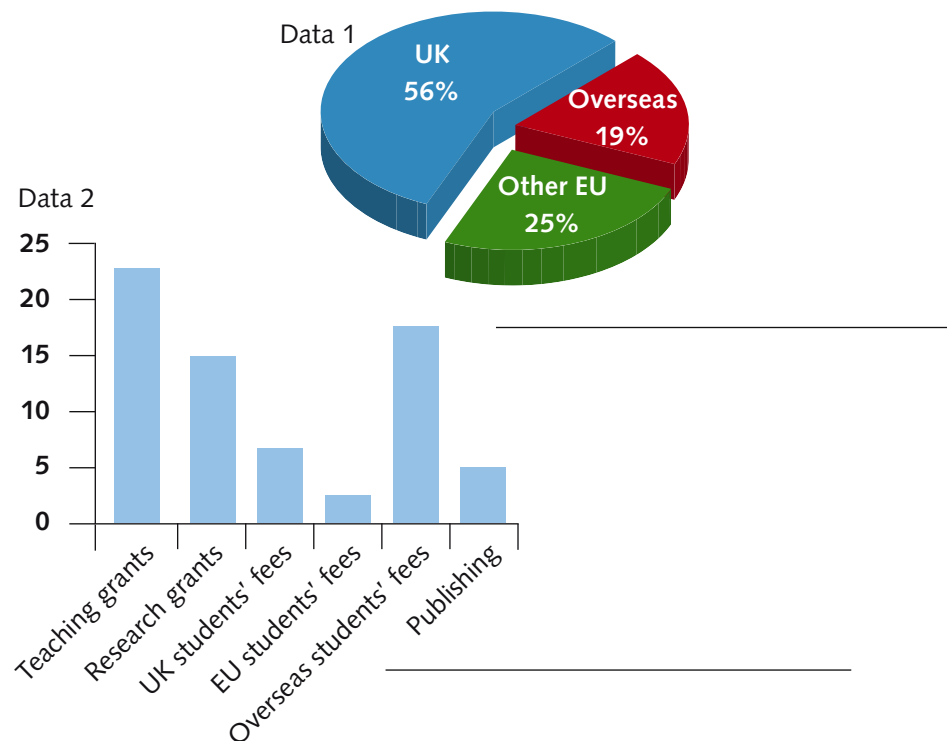
#### Aims

- to understand different ways to present data
- to understand how data supports a writer's purpose
- to understand persuasive organization when reporting data

Gateway University publishes an annual report to show trends in its performance over previous years. This information enables the university to set targets for the future. The International Office, which is responsible for recruiting overseas students, has selected some data to support its recruitment strategy.

#### Key words

an annual report  
trends  
performance  
to set targets  
international office  
responsible for  
recruiting  
some data  
to support  
recruitment  
strategy  
grants  
fees  
overseas  
publishing



Data 3

	2008	2009	2010
Computer Science	250	270	320
Physical Sciences	150	90	25
Management	200	220	210
Hospitality and Tourism	90	70	50
Life Sciences	10	25	50

## Task 1 Reading quickly for an overview

- 1.1 Match each figure/table on page 157 to the type of data presentation in the table below. Write 1, 2 and 3 in the correct order in the first column.
- 1.2 Label the two charts 'Figure 1' and 'Figure 2', in the order they appear. Label the table 'Table 1'. Write the labels on the lines provided on page 157.

data	type of data presentation	title	purpose	units of measurement
	bar chart			
	table			
	pie chart			

### Key words

a bar chart  
a table  
a pie chart  
income  
proportion  
discrete items  
units of measurement

- 1.3 Choose a title for each figure/table from the list below, and write it in the table.
- a Sources of income in 2010
  - b Courses applied for by overseas students
  - c Student applications by region in 2010
- 1.4 Choose a purpose below for each figure/table and write it in the correct place in the table.
- a to show trends over several years
  - b to see the proportion of a part to the whole
  - c to compare the amounts of discrete items
- 1.5 What are the units of measurement for each figure? Add these to the table in the correct order.
- a million pounds
  - b numbers
  - c percentages

## Task 2 Reading and thinking critically

Work in pairs. Study the figures on page 157 carefully in order to answer the questions below.

- a Which is the largest group of students on the campus?
- b Which three types of activities provide income for the university?
- c Which group of students provides the largest source of direct income through fees?
- d Which courses have become more popular since 2008? Can you think of any reasons for this?

### Task 3 Reading to verify your sources

Below is the introduction to a proposal for the Gateway University marketing strategy written by the head of the International Office, Roy Williams. It is based on a selection of the data from page 157.

Find answers to the questions from Task 2 in the text, then answer the questions below.

- a One question from Task 2 is not answered completely in the text. Which one is it?
- b Which information from the figures is *not* included in the text?

#### International student recruitment: the future

Roy Williams, International Office



GATEWAY  
UNIVERSITY

Gateway University, like most UK universities, is interested in increasing the number of applications from overseas students. They generate a large amount of income for the university, as well as helping the university to become truly internationalized. This report examines some of the trends in overseas student recruitment in recent years at Gateway University and proposes future targets. Figure 1 shows the percentages of students who applied to Gateway University from different regions in 2010. Almost one-half of Gateway University students come from outside the UK, with one-quarter from other European countries but less than one-fifth from regions outside Europe.

Figure 2 shows that overseas students provide the largest source of direct income from fees, which means that they contribute a great deal to the financial well-being of the university. In 2010, the university received over 17 million pounds from overseas student fees, compared with only 6.5 million from UK students and less than 3 million from other EU students. Increasing the number of overseas students would benefit the university financially.

Table 1 shows the trends in applications from overseas students for a range of courses. The most popular courses are in the fields of Management and Computer Science. In the past three years, the number of applications for Management courses has remained stable, at just over 200 applicants, and application numbers for Computer Science have risen significantly, to more than 300. The most likely reason for this is the great interest in Computer Science from Chinese applicants and the need for well-qualified workers in IT and project management in many developing countries. In addition, there has been a sharp increase in the number of applications for degrees in Life Sciences, with five times as many applications in 2010 as in 2008. Gateway University has a rapidly growing reputation in environmental management research, which could explain the increasing popularity of these degrees for overseas students.

In conclusion, based on these trends, Gateway University needs to explore potential markets in developing countries, as well as promoting its strengths, in order to attract more overseas students.

#### Key words

truly  
examines  
proposes  
future targets  
regions  
almost one-half of  
one-quarter  
less than one-fifth  
direct income  
financial well-being  
17 million pounds  
has remained stable  
have risen  
significantly  
well-qualified  
workers  
project management  
in addition  
a sharp increase  
five times as many  
a growing  
reputation  
the increasing  
popularity  
potential markets

### Task 4 Thinking critically about purposes

Why does the proposal not mention income from teaching or research grants and publishing?

## Task 5 Reading carefully

Read the text on page 159 again. Decide whether the statements below are true (T) or false (F). Write **T** or **F** in each box.

- a** Gateway University aims to become an international university.
- b** According to Roy Williams, Gateway University does not recruit enough overseas students.
- c** Income from European Union students (including UK students) is about the same as income from overseas students.
- d** The university does not need the money from fees that overseas students pay.
- e** Management courses are slightly more popular in 2010 than they were in 2008.
- f** The university attracts a large number of applicants for degrees in Life Sciences.
- g** The purpose of the report is to persuade the university managers to recruit more overseas students.

☐  
☐  
☐  
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☐

## Task 6 Thinking critically about data

How can small numbers of overseas students contribute such a large amount of student fees?

### Noticing language patterns

#### Persuasive organization

When he reports the data in his proposal, Roy Williams makes three different moves.

move	example
1. He makes claims, i.e., general statements about what he thinks the figures show.	<i>Overseas students provide the largest source of direct income from fees.</i>
2. He describes some of the data in the figures, in order to support his claims.	<i>In 2010, the university received over 17 million pounds from overseas student fees.</i>
3. He interprets the data, i.e., says what he thinks it means, by drawing conclusions or trying to explain reasons.	<i>Increasing the number of overseas students would benefit the university financially.</i>

Moves in a text are like moves in a game. They are intended to achieve the overall purpose of the text. These moves are usually made in the order shown above. They are designed to persuade a reader to accept Roy Williams' claims about the data. Sometimes the moves are in separate sentences, but sometimes one sentence contains more than one move.

#### Example:

*The number of applications for management courses has remained stable, [claim] at just over 200 applicants [support].*

## Task 7 Understanding persuasive organization

Look at paragraphs 2 and 4 of the text on page 159. Find and highlight more examples of the three moves from the box on page 160.

## Task 8 Thinking critically about sources of information

Look at the text on page 159 again. The information for the sentences which interpret the data is not given in the figures or the table. Where does this information come from?

## Task 9 Practising persuasive organization

Roy Williams' proposal only included data about student recruitment, but the annual report also contained a paragraph about income from teaching activities.

**9.1 Study the data on page 157 again, and put the sentences below in the correct order to make a logical paragraph.**

- a** Overseas students provided over 17 million pounds, compared with only 6.5 million pounds from UK students and less than 3 million pounds from other EU students.
- b** This means that a relatively small number of overseas students can contribute a large amount of income to the university.
- c** Gateway University receives teaching income from two different sources: government grants and student fees.
- d** Most of the fee income is from overseas students, who make up less than a fifth of the student population.
- e** In 2010, teaching grants provided 22 million pounds, whereas direct income from student fees amounted to 26.5 million pounds.

☐  
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**9.2 Which move does each sentence make: claim (C), support (S) or interpretation (I)? Write C, S or I in each box above.**

## Task 10 Thinking critically about data presentation

In the paragraph from Task 9, the data from Figure 2 is not reported exactly as shown in the figure.

Look again at Figure 2, on page 157, and at the paragraph above. Answer the questions below.

- a** How has the writer changed the data?
- b** Why has she made these changes?

### Self study

Look on the Internet or in textbooks to find other kinds of data presentation. Can you find a text which makes claims about the data and supports these claims by selecting data to describe? Try to identify the three moves in the text.

# Lesson 2

## Language study



### Aims

- to understand language patterns for reporting data
- to understand how writers can show their viewpoint
- to write a simple report for a table of data

The language of the proposal from Lesson 1, on page 159, is impersonal. Roy Williams does not give his opinions directly. He knows that his argument will be more persuasive if the proposal and the figures speak for themselves. His academic audience values arguments based on data, not arguments based on personal stories.



### Noticing grammar patterns

#### Labelling data and making claims

The first sentence of a proposal/report sometimes introduces the report or a figure, and says what it is about.

pattern	examples
<i>The report <u>examines</u> + noun phrase</i>	<i>This report examines some of the trends ... and proposes future targets.</i>
<i>The figure <u>shows</u> + noun phrase</i>	<i>Figure 1 shows student applications by region in 2010. Figure 1 shows the percentages of students who applied to Gateway University from different regions in 2010.</i>

The noun phrase that labels data in a report can be the short title of the figure or table. However, writers usually expand these titles in their report to be clear about what the figures show.

title	student	applications	by region in 2010
expansion	<i>the percentages of students</i>	<i>who applied to Gateway University</i>	<i>from different regions in 2010</i>

The first sentence of a report can also present claims.

pattern	example
<i>The figure <u>shows that</u> + claim</i>	<i>Figure 1 shows that almost one-half of Gateway University students come from outside the UK.</i>

## Task 1 Practising grammar patterns for data and claims

1.1 For each of the short titles below, make a sentence which explains exactly what the figure shows. Use the sentence starting points below each title. Make sure you write long noun phrases to label the data accurately.

**a** Figure 2: Sources of income in 2010

Figure 2 compares the amount of \_\_\_\_\_

**b** Table 1: Courses applied for by overseas students

Table 1 shows the trends in \_\_\_\_\_

1.2 Look back to the report on page 159. Rewrite each of the sentences you wrote in Exercise 1.1 to show Roy Williams' main claim.

**a** Figure 2 shows that \_\_\_\_\_

**b** Table 1 shows that \_\_\_\_\_

1.3 Study the data on page 157 again, and write another claim for each figure.

**a** Figure 2 shows that \_\_\_\_\_

**b** Table 1 shows that \_\_\_\_\_



### Noticing grammar patterns

#### Reporting trends

Trends look back over the past from the present. Table 1, on page 157, uses data for three different years to show how numbers of applications have changed. The change can be described using verbs or nouns.

patterns with verb	examples
no change    verb + adjective	<i>The number of applications has remained stable.</i>
increase    }    verb + adverb	<i>The number of applications has risen significantly.</i>
decrease    }	<i>The number of applications has fallen sharply.</i>

patterns with noun	examples
increase    }    adjective + noun	<i>There has been a significant rise in the number of applications.</i>
decrease    }	<i>There has been a sharp fall in the number of applications.</i>

For general trends with no specific time, the verb form is usually the present perfect. For trends which specify the beginning and end of a period in the past, the verb form is the simple past.

#### Example:

*The number of applications for management courses has remained stable.*  
*From 2008 to 2009, the number of applications for management courses remained stable.*

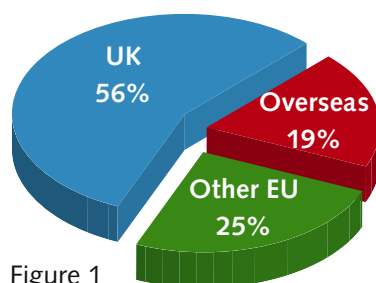


Figure 1

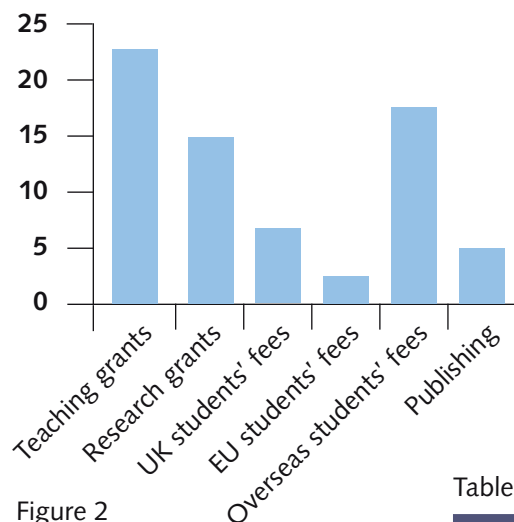


Figure 2

Table 1

	2008	2009	2010
Computer Science	250	270	320
Physical Sciences	150	90	25
Management	200	220	210
Hospitality and Tourism	90	70	50
Life Sciences	10	25	50

## Task 2 Practising language patterns for reporting trends

Above are the figures and table you saw in Lesson 1. Study Table 1.

**Complete the sentences below to describe trends in the data.**

- \_\_\_\_\_ for Computer Science \_\_\_\_\_ significantly.
- There has been \_\_\_\_\_ in \_\_\_\_\_ for degrees in Life Sciences.
- \_\_\_\_\_ for Hospitality and Tourism \_\_\_\_\_ sharply.
- There has been \_\_\_\_\_ in \_\_\_\_\_ for degrees in Physical Sciences.
- \_\_\_\_\_ for Management \_\_\_\_\_ stable.
- Gateway University has a \_\_\_\_\_ reputation in environmental management research.



## Noticing grammar patterns

### Supporting claims

Data from figures and tables can be used to support claims. This data can be described in two ways: as a separate sentence, or in a prepositional phrase added to the claim.

sentence	[claim] + prepositional phrase
<i>In 2010, the university received over 17 million pounds from overseas student fees.</i>	<i>[Application numbers have remained stable,] at just over 200 applicants.</i> <i>[Application numbers have risen significantly,] to more than 300.</i> <i>[There has been a sharp increase in the number of applications,] with five times as many applications in 2010 as in 2008.</i>



## Task 3 Practising grammar patterns for supporting claims

Study the figures and table on page 164, and add support to the claims below. Add another sentence, or add a prepositional phrase to the first sentence.

- a** The largest group of students at Gateway University comes from the UK \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.
- b** Research grants provide a significant source of income for Gateway University \_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.
- c** The number of students who apply for degrees in Physical Sciences has fallen \_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.
- d** Degrees in Hospitality and Tourism have become much less popular \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.
- e** Computer Science is the most popular degree subject \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.
- f** The number of applications for Hospitality and Tourism and Life Sciences were the same in 2010 \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

## Noticing language patterns

### Showing a viewpoint

You can show your viewpoint in the language you choose. For example, a glass can be *half full* (maximized) or *half empty* (minimized).

In his proposal on page 159, Roy Williams wanted to persuade the university to recruit more overseas students. He reported the data in a way that would show his viewpoint and help him to achieve this purpose. He maximized some numbers to make them look larger, and he minimized other numbers to make them look smaller.

pattern	example
maximized: <i>almost</i> + amount	<i>Almost one-half of Gateway University students come from outside the UK</i>
reported as shown	<i>with one-quarter from other European countries</i>
minimized: <i>less than</i> + amount	<i>but less than one-fifth from regions outside Europe.</i>



## Task 4 Analyzing language patterns

Below are some more sentences from Roy Williams' proposal.

**4.1 Decide whether he maximized the numbers, minimized them, or reported them exactly as they are in the figures. Underline the words which show that data has been maximised or minimized. Some sentences contain two types of reporting.**

- In 2010, the university received over 17 million pounds from overseas student fees, compared with only 6.5 million from UK students and less than 3 million from other EU students.
- The number of applications for Management courses has remained stable, at just over 200 applicants.
- Application numbers for Computer Science have risen significantly, to more than 300.
- There has been a sharp increase in the number of applications for degrees in Life Sciences, with five times as many applications in 2010 as in 2008.

*The Gatekeeper* is a leading newspaper in the UK. Each year, it publishes a league table to evaluate the performance of different universities and provide a ranking. Students can use this ranking to decide which is the best university for their purpose. The league table uses specific criteria to compare the universities and to give them an overall score of points out of 100. It also shows how rankings change each year.

### Key words

a leading newspaper  
a league table  
a ranking  
an overall score

university	Gatekeeper score, points /100	student satisfaction (%)	staff/ student ratio	career prospects (%)	change in ranking
Balmoral	100	92	12	79	+ 1
St Mungo's	78	85	15	74	- 3
Brasher	71	89	15	73	+ 2
Gateway	69	85	20	75	+ 9
Dodgson	65	72	19	68	- 5

## Task 5 Understanding key words

Match each heading from the table on page 166 to its description below. Write the correct number in each box.

- |                               |                          |  |
|-------------------------------|--------------------------|--|
| <b>a</b> student satisfaction | <input type="checkbox"/> | <b>1</b> the percentage of students who get a job at the end of their university studies |
| <b>b</b> staff/student ratio  | <input type="checkbox"/> | <b>2</b> the evaluation by students of the quality of the teaching they receive          |
| <b>c</b> career prospects     | <input type="checkbox"/> | <b>3</b> the movement up or down the ranking each year ( $\pm$ points / 100)             |
| <b>d</b> change in ranking    | <input type="checkbox"/> | <b>4</b> the average number of students that each member of staff teaches                |

## Task 6 Writing

Chen has a friend, Jian, who is planning to come to the UK to study next year. He would like to go to the top university, Balmoral, but his grades are not high enough. He asks Chen for advice about other universities. Chen would like Jian to come to study with him at Gateway University.

Complete Chen's e-mail to Jian, below. Try to persuade him that he should come to study at Gateway University. Use the data from *The Gatekeeper* league table on page 166 to support your argument.

Send Attach Address Fonts Colors Save As Draft

To: lijian121@hotmail.com

From: cz145@gwu.ac.uk

Subject: Which university?

Hi Jian,

I'm sorry that your grades aren't good enough for Balmoral. It's a really difficult university to go to. But that's good for me, because maybe you can decide to come to Gateway. You should study *The Gatekeeper* league tables on the web. They give a ranking for different universities, so you can compare them. The top university has a score of 100, and all the other universities have points out of 100.

See you, I hope.

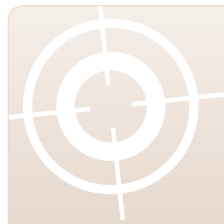
Chen

### Self study

Complete the e-mail to Jian to persuade him to choose Gateway University. If you have finished, exchange your e-mail with another student and prepare feedback for each other.

# Lesson 3

## Comparisons in data



### Aims

- to understand claims in spoken arguments
- to use data as evidence to decide which claims are true
- to participate in a discussion using data to support and interpret claims

Guy is interested in travelling when he finishes his degree, and plans to study Chinese next year. Guy and Chen meet regularly so Guy can learn about the Chinese language and Chen can get help with English. This week, they have started a friendly argument about which language is dominant on the Internet.

### Task 1 Preparing to listen

- 1.1 Which language do you usually use on the Internet? How many people use the Internet in your language?
- 1.2 Which language is dominant on the Internet now? Do you think this will change?

### Task 2 Listening

2.1 Match each claim and counterclaim below. Write the correct number in each box.

2.2 **CD2-21** Listen to Guy and Chen's conversation and answer the questions below.

- a Which is the dominant language on the Internet, according to Guy and Chen?
- b What claims does each student make about his own language?
- c Which student makes each claim? Write the correct name on each line.

- |   |   |
|---|---|
| a English is the global language.<br>_____  | <input type="checkbox"/> 1 Maybe Chinese people use English online.                                     |
| b The Internet started with English, so it's probably still the main language.<br>_____ | <input type="checkbox"/> 2 That doesn't mean it's the main language on the Internet.                    |
| c A lot more people in China can now access the Internet.<br>_____                      | <input type="checkbox"/> 3 Lots of people speak English too, as a first, official or foreign language.  |
| d There are lots of websites in Chinese now and lots of people in China.<br>_____       | <input type="checkbox"/> 4 Other languages, like Chinese, are becoming more common on the Internet now. |

**Task 3** Noticing language for certainty and caution

During their conversation, Chen and Guy show how certain they are about their claims.

- 3.1 Study the transcript of Chen and Guy’s conversation on pages 226 and 227. Find the words and phrases they use to show certainty and caution (uncertainty). Write this language in the table below.

strong language to show certainty	cautious language to show uncertainty

- 3.2 Underline the words that show probability. How do they affect the certainty of each claim?

**Task 4** Thinking critically about arguments

- 4.1 In Guy and Chen’s conversation, which student presents his arguments in a strong way, and which one is more cautious or uncertain? Which way do you think is more academic?
- 4.2 What do Chen and Guy decide to do? How will this help to decide who wins the argument?

Guy and Chen look on the Internet and study the data they find together in order to decide whose argument it supports best.

**Table 1 Main languages used on the Internet**

languages	Internet users by language millions (2008)	world population for language millions (2008)	Internet penetration* by language %
English	464	1,247	37
Chinese	321	1,365	24
Spanish	131	408	32
Japanese	94	127	74
French	74	414	18
Portuguese	73	244	30
German	65	96	68
Arabic	41	291	14
Russian	38	140	27
Korean	37	70	52
World Total	1,596	6,710	24

### Key words

world population  
Internet  
penetration  
world regions  
stands for  
gross domestic  
product (GDP)

\* Internet penetration is the ratio between the number of Internet users speaking a language and the total number of speakers of that language.

Source: Miniwatts Marketing Group. (2008). Retrieved August 30, 2009, from <http://www.internetworldstats.com/stats7.htm>

**Table 2 Internet users by region**

world regions	Internet users millions (2008)	population by region millions (2008)	penetration* % of population	GDP** by region US\$ millions (estimate)
Asia	657	3,781	17	16,774,002
Africa	54	975	6	1,518,911
Europe	393	804	49	18,394,115
South America	173	581	30	2,878,379
North America	251	338	74	17,080,000
Middle East	45	197	23	1,918,850
World Total	1,596	6,710	24	60,690,000

\* Penetration is the ratio between the number of Internet users in a region and the total number of people in that region.

\*\* GDP stands for gross domestic product. It is a measure of the wealth of a country.

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## Task 5 Preparing to listen

Work in pairs. Study the tables on page 170 and discuss what they show. Look carefully at the headings of the columns. Decide which data could be used to support Guy's or Chen's claims from Task 2. Use the questions below to help you.


Table 1

- a** Which language is dominant on the Internet now?
- b** Which languages might become dominant in future?
- c** Which languages already have a high percentage of their speakers with Internet access?

Table 2

- d** Which regions in the world have a large number of Internet users?
- e** Does the data suggest any reasons for these large numbers of Internet users?
- f** Which regions already have a high percentage of their population with Internet access?
- g** Which regions have the most potential to increase their Internet access?

## Task 6 Listening

- 6.1  **CD2-22** Listen to the next part of Chen and Guy's conversation. Find answers to the questions from Task 5.
- 6.2 Who wins the argument? What conclusions do the two students draw?

## Task 7 Thinking critically about data

- 7.1 Listen to the conversation again. Read the transcript on pages 227 and 228 if you wish. According to Chen and Guy, how reliable is the data they have found? Decide whether the following statements about the data are True (T) or False (F). Write **T** or **F** in each box.
- a** The website explains how the data was calculated. ☐
  - b** The figure for the number of English speakers includes first- and second-language speakers. ☐
  - c** The number of first-language speakers of English is reported exactly. ☐
  - d** The Asian region probably includes China, India and South-East Asia. ☐
  - e** The figures for GDP give a precise value for the wealth of each region. ☐
  - f** Chen and Guy think that the data is reliable. ☐
- 7.2 Is the data reliable enough to support the claims that Chen and Guy make in their argument?
- 7.3 How should Chen and Guy change their claims so that they could use this data as supporting evidence in an essay or project?

## Noticing language

### Persuasive organization

When Chen and Guy discuss the data, they can look at it and point to it, so they do not need to label the data exactly. They use the same moves that Roy Williams used in his proposal on page 159, but they use more simple language.

move	example
locating and labelling the data	<i>Look at Table 1.</i> <i>What about this figure: Internet penetration?</i>
claims about what the figures show	<i>A lot more Chinese go online now.</i> <i>We even got more speakers than English.</i>
descriptions of the data to support the claims	<i>We got 657 million Internet users in Asia, but that's only 17 per cent of the population.</i>
interpretation of the data: what it means, what conclusions can be drawn	<i>It shows which languages already have a high percentage of their speakers online.</i> <i>We got a lot of potential for increasing Internet access.</i>

## Task 8 Thinking critically about interpretation

In their conversation, Guy and Chen interpret the data by drawing conclusions.

**Where do they get the extra information which enables them to make these interpretations?**

## Task 9 Speaking

- 9.1 Study the tables on page 170 again. Find out what the data shows about your region of the world.
- 9.2 Prepare to give a short talk about Internet access in your country and its potential to increase. Use your knowledge of your local region, as well as data from the tables, to support your claims.
- 9.3 Work in a group with other students whose countries are in the same region as yours. Compare your country's Internet access with theirs. Prepare a report comparing all the countries in your region to present to the class.

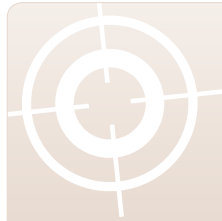
### Self study

Write a short report about the potential for Internet access to increase in your country and in your region. How does Internet access in your country compare with Internet access in your region? Use the data for Internet penetration and GDP on page 170 to predict how the use of the Internet might grow in your country. Bring your report to the next class.



# Lesson 4

## Language study



### Aims

- to use guided tasks to report complex data accurately
- to evaluate writing by comparing it with the answers to guided tasks
- to identify familiar and new information in a table and in a report

Guy thinks he might be able to use the data that he and Chen found on Internet use for a course he plans to take in semester 2. The course is about e-commerce, and one of the topics deals with new and emerging markets for selling goods and services on the Internet. Guy decides to write a report about the potential for increasing Internet access in developing regions.

Below are some tasks which Guy could use to write his report about the data. As you work on these tasks, compare your answers with the text you wrote for homework. This will help you to evaluate and improve your writing.

### Task 1 Practising grammar patterns for labelling data

Below are some noun phrases that Guy could use to label the data in Tables 1 and 2 from Lesson 3, but the order of words is not correct.

**Change the order of the words to make noun phrases that accurately label the data. Look at the headings for the rows and columns on page 170 to help you.**

**a** speak who users English Internet

---

**b** speakers number of the worldwide Chinese

---

**c** the English of Internet speakers with proportion access

---

**d** the Internet in number of Asia users

---

**e** the North the population in size America of

---

**f** the in the who African of people proportion have the Internet region access to

---



### Study smart

Check the noun phrases you wrote in your homework task for Lesson 3. Do they accurately label the data you chose to present? If not, make some corrections to your text.

## Noticing grammar patterns

### Comparing data and making claims

The data in Tables 1 and 2 is presented so that different groups of people – Internet users, language speakers, regional populations – can be compared.

Claims about the data can compare the relative size of the groups, or show which group is dominant.

pattern	claim
<b>relative size</b> larger than smaller than	<i>The number of Japanese speakers is larger than the number of Korean speakers.</i> <i>The GDP of the African region is smaller than the GDP of South America.</i>
<b>dominance</b> largest smallest	<i>The Asian region has the largest population.</i> <i>For the languages shown in the table, Korean has the smallest number of speakers.</i>

Descriptions of the data can be given to support the claims. These descriptions can also show relative size or dominance.

pattern	support for claims
<b>relative size</b> linking words signpost words	<i>127 million people speak Japanese, <u>but</u> only 70 million people speak Korean.</i> <i>The GDP of South America is about 2,878 billion US dollars. <u>However</u>, the African region has a GDP of <u>only</u> 1,519 billion US dollars.</i>
<b>dominance</b> maximizers minimizers	<i><u>Over</u> 56 per cent of the world's population lives in the Asian region.</i> <i><u>Only</u> about 1 per cent of the world's population speaks Korean.</i>

**Table 1 Main languages used on the Internet**

languages	Internet users by language millions (2008)	world population for language millions (2008)	Internet penetration* by language %
English	464	1,247	37
Chinese	321	1,365	24
Spanish	131	408	32
Japanese	94	127	74
French	74	414	18
Portuguese	73	244	30
German	65	96	68
Arabic	41	291	14
Russian	38	140	27
Korean	37	70	52
World Total	1,596	6,710	24

\* Internet penetration is the ratio between the number of Internet users speaking a language and the total number of speakers of that language.

Source: Miniwatts Marketing Group. (2008). Retrieved August 30, 2009, from <http://www.internetworldstats.com/stats7.htm>

**Table 2 Internet users by region**

world regions	Internet users millions (2008)	population by region millions (2008)	penetration* % of population	GDP** by region US\$ millions (estimate)
Asia	657	3,781	17	16,774,002
Africa	54	975	6	1,518,911
Europe	393	804	49	18,394,115
South America	173	581	30	2,878,379
North America	251	338	74	17,080,000
Middle East	45	197	23	1,918,850
World Total	1,596	6,710	24	60,690,000

\* Penetration is the ratio between the number of Internet users in a region and the total number of people in that region.

\*\* GDP stands for gross domestic product. It is a measure of the wealth of a country.

## Task 2 Practising grammar patterns for data and claims

Look again at Tables 1 and 2 from Lesson 3, above and on page 174. Answer the questions below by writing sentences that make claims about the data. Use noun phrases 1–6 to label the data in your claims.

**a** Who forms the largest group online?

---

**b** Which is larger worldwide, the number of Chinese speakers or the number of English speakers?

---

**c** Who has the larger proportion of Internet access, Chinese speakers or English speakers?

---

**d** Which region has the largest number of Internet users in the world?

---

**e** How large is the North American population compared with the European population?

---

**f** Which region has the least Internet access of all the world regions?

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**1** Internet users who speak English

**2** the number of Chinese speakers worldwide

**3** the proportion of English speakers with Internet access

**4** the number of Internet users in Asia

**5** the size of the population in North America

**6** the proportion of people in the African region who have access to the Internet



### Study smart

Look at the claims you wrote in your homework task from Lesson 3. Do they accurately show the comparisons in the tables? If not, make some corrections to your text.

## Task 3 Practising language patterns for supporting claims

Write some sentences to support the claims you made in Task 2. Make comparisons to show the relative size of the figures from Tables 1 and 2. To show the dominance of one language or one region over the others, you can calculate its proportion of the total. Use maximizers and minimizers to show your viewpoint.



### Study smart

Check some of the sentences you wrote to support the claims in your homework task. Do they show relative size or dominance of the languages or regions? If not, make corrections to your text.

### Identifying correlations in data

In Table 2, the figures for the number of Internet users in a country and the GDP of a country seem to vary in similar ways. For example, Asia, Europe and North America are wealthy regions with a high GDP, and they also have high numbers of Internet users. When two sets of figures show a similar pattern of variation, this is called a *correlation*. However, this similarity does not mean there is a cause–effect link. When researchers observe a correlation, they conduct further studies to find out if there is any direct cause–effect relationship in the data. They report the correlation cautiously.

## Task 4 Thinking critically about causes and effects

**4.1** Look carefully at Table 2, on page 175, again. Compare the columns for the number of Internet users and GDP. The two sentences below suggest a cause–effect link between these two sets of figures. In each sentence, underline the cause and circle the effect.

**a** The number of Internet users in a region determines the GDP of that region.

**b** The GDP of a region determines the number of Internet users in that region.

**4.2** Which sentence shows the more likely direction of a possible cause–effect relationship?

## Task 5 Thinking critically about cautious language

The sentences above suggest a strong cause–effect link, rather than a correlation, between the GDP of a region and the number of Internet users. The ideas should be expressed more cautiously.

5.1 Tick ☒ the best statement below to suggest a correlation.

- a There is a link between the GDP of a region and the number of Internet users in that region. ☐
- b When the GDP of a region increases, the number of Internet users also increases. ☐
- c Regions which have a large GDP are also likely to have a large number of Internet users. ☐
- d The GDP of a region is a factor in determining the number of Internet users in that region. ☐

5.2 Which sentence makes a claim that has no data in the table to justify it?

5.3 Change the other two sentences you did *not* tick so that they report the correlation more cautiously.



### Study smart

Did you suggest a correlation in your text? Do you think there is a possible link between GDP and Internet access? Could the wealth of your country or region possibly be a factor that enables more people to go online? Suggest this correlation in your text, but be careful to use the correct order for the items in your sentence. Use language which shows that the correlation is not certain.

### Noticing language patterns



#### Linking familiar and new ideas

Texts are easier for readers to understand if their sentences develop from familiar to new ideas. Sentence 1 below is easier for a reader to understand than sentence 2.

1. *The number of Arabic speakers worldwide is around 41 million.*
2. *Around 41 million is the number of Arabic speakers worldwide.*

For data in tables, the ideas that are familiar to a reader are in the titles and the headings of the rows and columns. When Guy and Chen searched for data on the Internet, they used key words. They then selected tables which included these familiar key words in their titles and headings. The new ideas are the numbers in the cells of the table.

Information can also be familiar to a reader if it has already been introduced earlier in the text.

#### Example:

*Internet penetration for this language is low. The reason for this low figure might be ...*

In the first sentence above, *Internet penetration* is familiar – because it is a column heading – whereas *low* is new – because it reports the data. In the next sentence, both these ideas are now familiar, so they are put at the beginning of the sentence to prepare for further new information – *the reason*. The noun phrase *this low figure* labels the ideas as being familiar and creates a link back to the previous ideas.

## Task 6 Identifying language patterns for familiar and new ideas

Below is a report on data selected from Tables 1 and 2 to show the potential for increasing Internet use in a particular language.

**6.1 Study the tables on pages 174 and 175 in order to decide which language data is being reported in the text below. Write the same word in each gap.**

(a)  has a much smaller population of speakers worldwide than English or Chinese. (b)  The number of people who access the Internet in  is also much smaller. (c)  speakers account for only 414 million of the world population, compared with 1.25 billion for English and about 1.37 billion for Chinese. Only around 74 million people use  online. (d)  However, Internet penetration for this language, at only 18 per cent, is much lower than expected. (e)  The reason for this low figure might be because many  speakers live in the African region, which has some of the poorest countries in the world. (f)  People in these countries probably cannot afford to buy computers, and their governments might not be able to maintain the expensive communications systems which are necessary to connect to the Internet. (g)  Most people who use the  language on the Internet probably live in Europe, where Internet penetration has already reached almost 50 per cent. Therefore, it seems unlikely that Internet use in  will increase significantly.

**6.2 Highlight familiar information at the beginning of each sentence above. Where has this information come from? Was it in a column heading (C), in a row heading (R), or in both column and row headings (C+R), or does it link (L) back to ideas that were introduced earlier in the text? In each box, write C, R, C+R or L.**

## Task 7 Thinking critically about familiar and new ideas

Look again at the text above. One sentence starts with new information. Which one is it? Why do you think it starts this way?



### Study smart

Look at the beginnings of the sentences in your homework text. Identify familiar and new information. Do your sentences develop from familiar to new in order to help a reader? If not, make some changes.

### Evaluating data reports

The tasks in this lesson can be used to form a checklist for evaluating reports on data.

- Content: Have you made general claims to highlight what the data shows?  
Have you supported these claims with evidence from the data?  
Have you interpreted the data based on correlations within it or your own knowledge?
- Organization: Have you helped your reader by developing your ideas from familiar to new?
- Language: Have you written noun phrases which accurately label the data?  
Have you used language to show your viewpoint and how certain you are?

### Self study

Revise and redraft your report on the potential for Internet access to increase in your country and region. Bring your draft to the next class to exchange with another student. Use the checklist to evaluate your partner's new draft.

# Lesson 5

## Interpreting data differently



### Aims

- to understand the claims in the debate about global warming
- to evaluate a website which assesses claims about global warming
- to assess specific claims about global warming using data

Maysoun has to prepare for a seminar on possible future changes to the climate caused by global warming. At postgraduate level, students are expected to research a topic so that they can discuss it in a seminar with their tutor and other students in order to reach a deeper understanding of the issues. Maysoun first consults an encyclopaedia to get a general overview before she considers the issues in more detail.



### Discussion

- What do you know about global warming? What is the link between global warming and climate change? Is this issue controversial, i.e., do people have different viewpoints about it?

### Key words

possible  
future  
a seminar  
a deeper  
understanding  
an encyclopaedia  
overview

### Task 1 Reading quickly for the main idea

Where in the text on page 180 can Maysoun find the types of information below? Write the correct paragraph number in each box.

- a the link between global warming and climate change
- b research methods to study global warming
- c views of scientists who say global warming is not a problem
- d a definition of global warming
- e reasons for recent increases in the earth's temperature
- f evidence that global warming is not a problem


### Task 2 Reading carefully

Which claims below represent the views of most scientists (MS), and which ones are the views of the global warming sceptics (GWS)? Write MS or GWS in each box.

- a 1 Recent global warming is mainly due to an increase in heat from the sun.
- 2 Recent global warming is mainly due to larger concentrations of carbon dioxide (CO<sub>2</sub>) in the atmosphere.
- b 1 Climate models are accurate, as they are tested against past measurements.
- 2 Climate models are inaccurate, as they do not consider all heat sources.
- c 1 Increased concentrations of CO<sub>2</sub> are the result of increased temperatures.
- 2 Increased temperatures are the result of increased concentrations of CO<sub>2</sub>.



## Global warming

1. Global warming is an increase in the temperature of the land, seas and atmosphere of the earth. The sun provides most of the heat for the earth, but gases such as carbon dioxide and methane in the atmosphere absorb some reflected heat from the sun and stop it escaping back into space. This is known as the *greenhouse effect*. Carbon dioxide and methane are produced by animals when they breathe and by plants when they decompose, so there is a natural greenhouse effect which traps enough heat to warm the earth sufficiently for humans to live there. However, global temperatures have risen steadily over the past 150 years, with an increase in average surface temperature of about 0.74°C between 1905 and 2005. During this period, humans have burned much larger quantities of coal and oil, which released large amounts of carbon dioxide into the atmosphere. They have also cut down many forests, destroying plants which could absorb carbon dioxide as they grow. Thus, the main increase in greenhouse gas concentrations, which is thought to be responsible for the increase in temperature, is due to human activities.
2. Global warming disturbs the interaction between the oceans and the atmosphere, which regulates the climate and weather of the earth. It gives rise to long-term changes in climate. Scientists have studied this phenomenon with computer models of the climate. These models have to be simplified because of limitations in computer power and the complexity of the climate system. The models predict that the earth could be between 1.1 and 6.4°C hotter by the end of the 21<sup>st</sup> century, compared with 2000. Researchers test the accuracy of these models by running them from points in the past and comparing their predictions to actual past measurements of surface temperature. The models represent the past climate reasonably accurately. This gives confidence in their ability to predict the future climate.
3. A small group of scientists deny that global warming is a problem. These global warming sceptics claim that the main reason for global warming is not increased carbon dioxide in the atmosphere due to human activities, but increased heat from the sun. In addition, they suggest that computer models of the climate are inaccurate because they do not take into account the raised temperatures in urban areas due to human activity (known as the Urban Heat Island effect), which would increase the overall amount of warming that is observed. They also point to measurements of carbon dioxide and temperature from Antarctic ice cores which seem to show that, in the past, increases in carbon dioxide concentrations followed increases in temperature and were thus a result of warming and not the cause of it. The majority of scientists do not agree with these claims. However, many ordinary people find them attractive because if global warming is not a problem, they do not have to change their lifestyles.

*Roadhouse encyclopaedia of environmental science.* (2007) London: Roadhouse Publishers.

### Key words

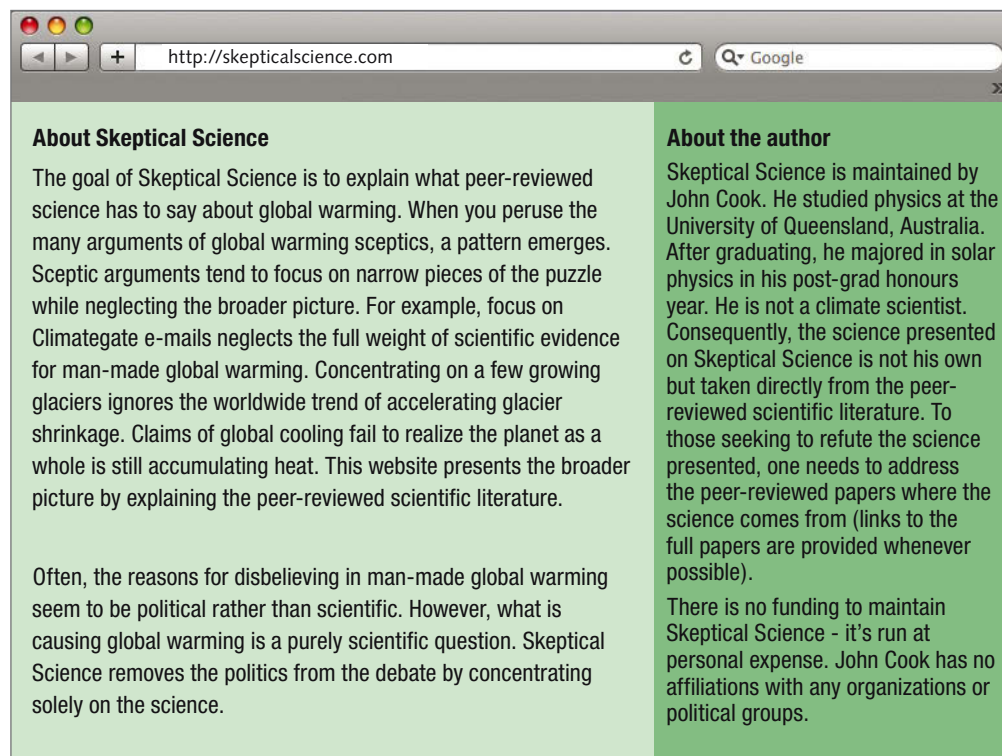
controversial  
methane  
absorb  
reflected  
escaping  
space  
decompose  
steadily  
average  
released  
have cut down  
forests  
destroying  
concentrations  
thought to be  
disturbs  
interaction  
regulates  
gives rise to  
long term  
phenomenon  
computer models  
simplified  
limitations  
computer power  
complexity  
predict  
could  
reasonably  
confidence  
deny  
sceptics  
take into account  
raised  
urban  
point to  
Antarctic  
ice cores  
to change their  
lifestyles



## Task 3 Thinking critically about claims

How can Maysoun decide which of the claims from Task 2 are more likely to be true?

Maysoun finds a website, [www.skepticalscience.com](http://www.skepticalscience.com), which presents the sceptics' claims about global warming and attempts to challenge them. It uses data from scientific papers published in academic journals in order to examine the evidence for the claims of the sceptics. Before she refers to this website in her seminar, Maysoun needs to decide if it is a reliable source of information.



The screenshot shows a web browser window with the address bar displaying <http://skepticalscience.com>. The page has a green background and is divided into two columns. The left column is titled 'About Skeptical Science' and contains two paragraphs. The right column is titled 'About the author' and contains two paragraphs.

**About Skeptical Science**

The goal of Skeptical Science is to explain what peer-reviewed science has to say about global warming. When you peruse the many arguments of global warming sceptics, a pattern emerges. Sceptic arguments tend to focus on narrow pieces of the puzzle while neglecting the broader picture. For example, focus on Climategate e-mails neglects the full weight of scientific evidence for man-made global warming. Concentrating on a few growing glaciers ignores the worldwide trend of accelerating glacier shrinkage. Claims of global cooling fail to realize the planet as a whole is still accumulating heat. This website presents the broader picture by explaining the peer-reviewed scientific literature.

Often, the reasons for disbelieving in man-made global warming seem to be political rather than scientific. However, what is causing global warming is a purely scientific question. Skeptical Science removes the politics from the debate by concentrating solely on the science.

**About the author**

Skeptical Science is maintained by John Cook. He studied physics at the University of Queensland, Australia. After graduating, he majored in solar physics in his post-grad honours year. He is not a climate scientist. Consequently, the science presented on Skeptical Science is not his own but taken directly from the peer-reviewed scientific literature. To those seeking to refute the science presented, one needs to address the peer-reviewed papers where the science comes from (links to the full papers are provided whenever possible).

There is no funding to maintain Skeptical Science - it's run at personal expense. John Cook has no affiliations with any organizations or political groups.

## Task 4 Thinking critically about sources

**4.1 Find the website on the Internet or look at the text above. Use the checklist below, from Unit 4 Lesson 2, to evaluate the website. Find answers to the questions in the checklist.**

- Purpose: Why has the information been published?
- Viewpoint: Does it show many different views?
- Author: Is the author an expert in her/his subject?
- Quality: Has the information been checked by other experts?

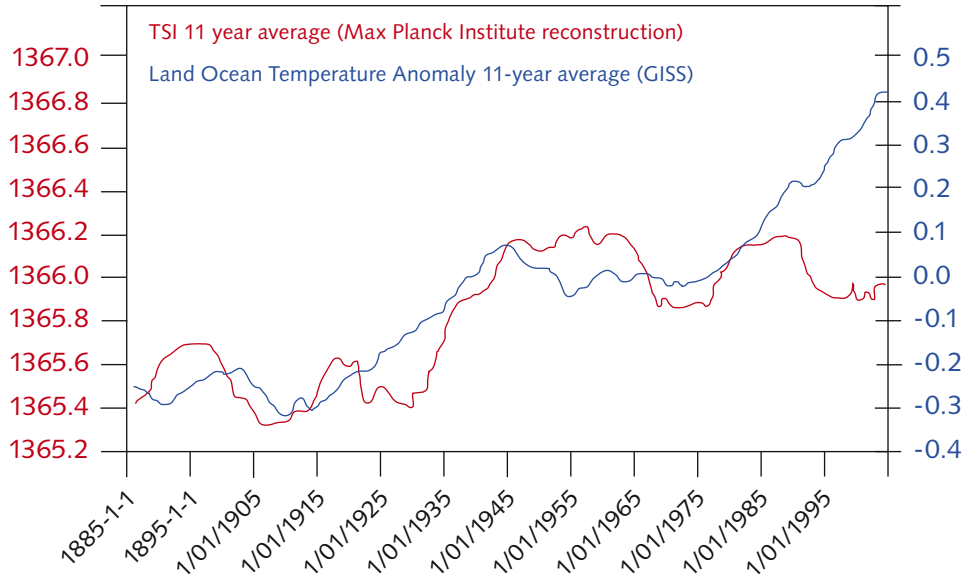
**4.2 Is this website reliable? Should Maysoun refer to it in her seminar discussion?**

Maysoun decides to examine some of the sceptics' claims using data from the website. The first graph on page 182 shows trends in the heat radiated from the sun (red line) and the average global temperature (blue line). The second graph shows trends in temperature at five locations in and around London. The brown line and the two blue lines show the trends at urban sites, while the two green lines show rural sites.

## Task 5 Thinking critically about data

Study the graph below. Pay attention to what happens to the trends after 1975. Decide whether the graph supports or challenges the following claim made by global warming sceptics: *Recent global warming is mainly due to an increase in heat from the sun.*

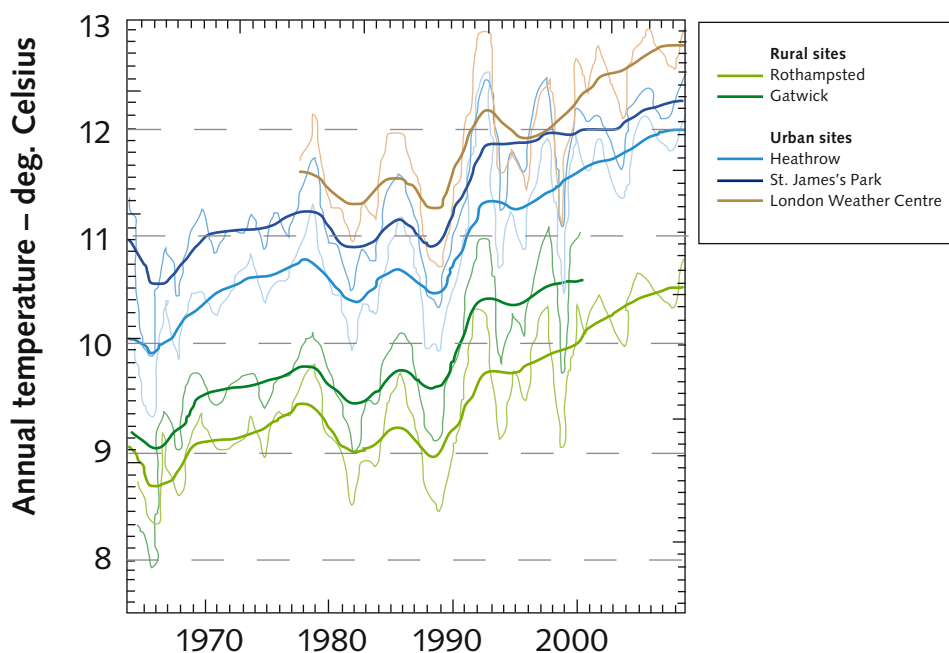
Total solar radiance and global temperature 1885–2000



## Task 6 Thinking critically

Study the graph below and decide whether it supports or challenges the following claim made by global warming sceptics: *The raised temperatures in urban areas affect the overall temperature trend.*

Temperature trends for five sites in and around London



Jones, P. D., D. H. Lister, and Q. Li (2008), Urbanization effects in large-scale temperature records, with an emphasis on China, *Journal of Geophysical Research*, 113, D16122, 30 August 2008. Copyright 2010 American Geophysical Union.

### Self study

Visit the web page <http://www.skepticalscience.com/co2-lags-temperature.htm>, and decide whether you accept the explanations given to challenge the following claim made by global warming sceptics: *Increased temperatures are not the result of increased concentrations of carbon dioxide.*

Try to find websites dedicated to scepticism about global warming, e.g., <http://www.heartland.org/>, and evaluate their claims. In particular, assess the evidence they provide to support their claims. Do they refer to data published in academic journals? Do they publish the data which supports their ideas so readers can assess it for themselves? Do you think their arguments are convincing?