

Write your name here	
Surname	Other names
<b>Edexcel</b> <b>Principal Learning</b>	Centre Number
	Candidate Number
<b>Environmental and Land-based Studies</b>	
<b>Level 1</b>	
<b>Unit 1: The Natural Environment</b>	
Monday 7 June 2010 – Afternoon <b>Time: 1 hour</b>	Paper Reference <b>ES101/01</b>
<b>You do not need any other materials.</b>	Total Marks

### Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided  
– *there may be more space than you need.*

### Information

- The total mark for this paper is 40.
- The marks for **each** question are shown in brackets  
– *use this as a guide as to how much time to spend on each question.*

### Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

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1 Study Figure 1(a), a photograph which shows a woodland area in Wales.



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**Figure 1(a)**

(a) Name **two** types of plant that you might find in a woodland habitat such as that shown in Figure 1(a).

(2)

1 .....

2 .....

One of the features of soil in this woodland that affects plant growth is its **structure**.

(b) List **four** other features of soil that may affect the plants that grow in the soil.

(4)

1 .....

2 .....

3 .....

4 .....



Study Figure 1(b) which shows a food web for the woodland area shown in Figure 1(a).

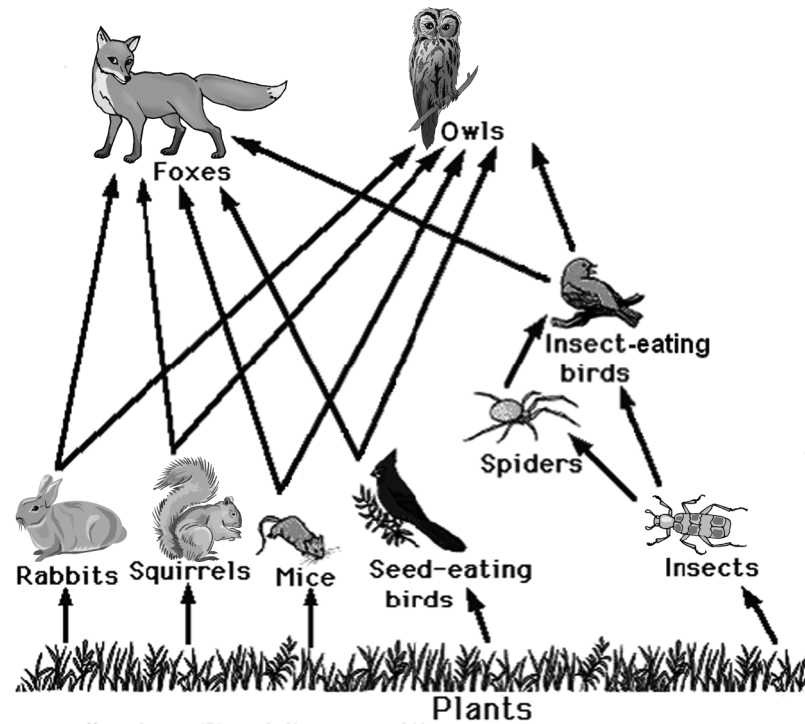


Figure 1(b) – A Food Web

(c) (i) State **one** change to this food web that would affect any of the animals, birds or insects in this woodland area.

(1)

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(ii) Describe the effect this change will have on the life of **one** of the animals in the food web.

(3)

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(Total for Question 1 = 10 marks)



2 Study Figure 2(a) which shows four weather measuring instruments or pieces of equipment.

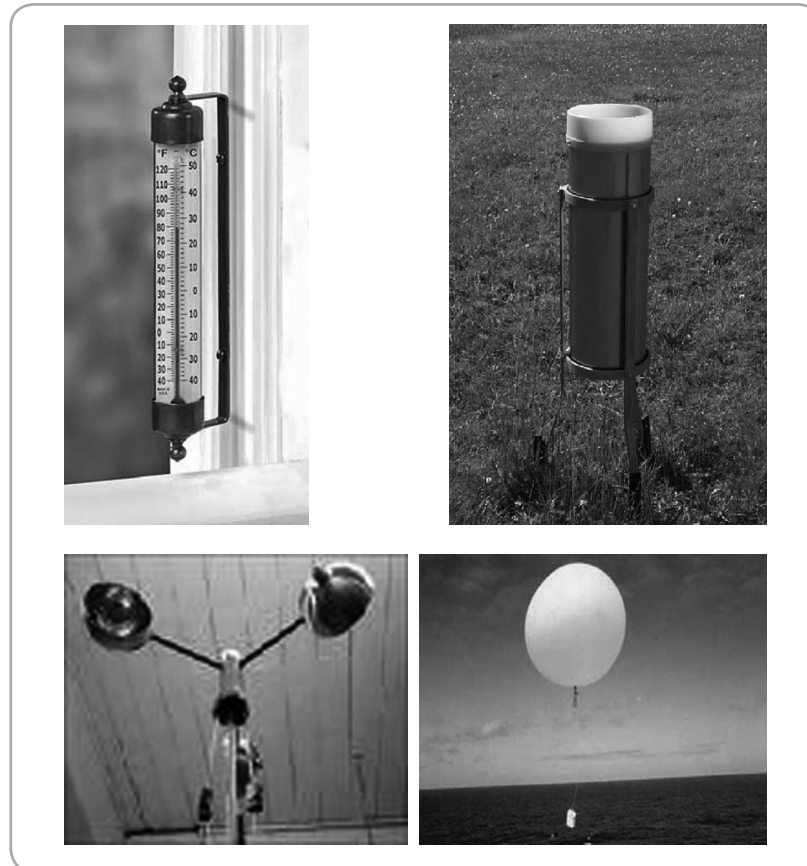


Figure 2(a)

(a) Name any **two** instruments, or pieces of equipment, you could use to measure the weather (you **do not** have to use the ones shown in **Figure 2(a)**).

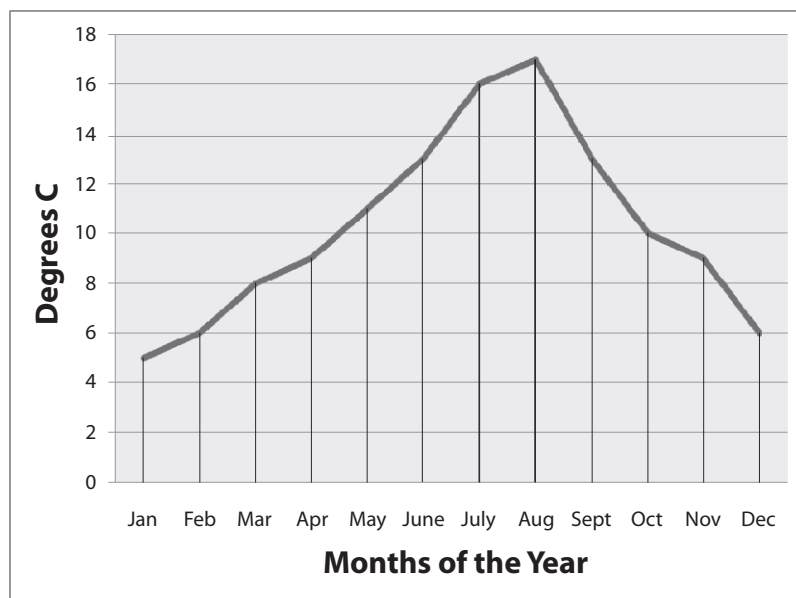
(2)

1 .....

2 .....



Study Figure 2(b), a graph showing the temperature for each month for the woodland area in Wales shown in Figure 1(a).



**Figure 2(b) – The temperature for each month for the woodland area in Wales**

(b) (i) What is the temperature in the month of July?

(1)

.....°C

**Temperature range** is the difference between the highest and lowest temperature during the whole year.

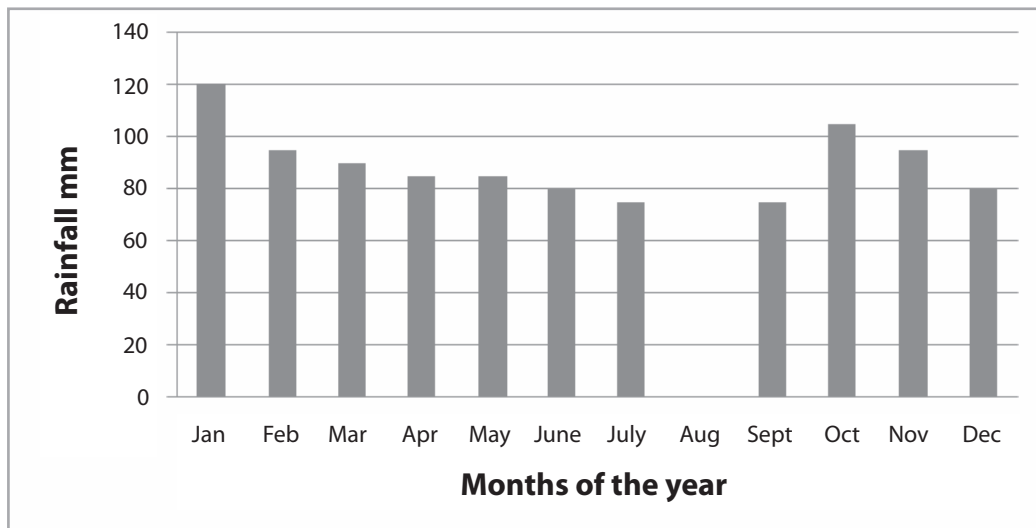
(ii) What is the **temperature range** for this woodland area?

(2)

.....°C



Study Figure 2(c), a bar graph showing the rainfall for each month for the woodland area in Wales.



**Figure 2(c) – The rainfall for each month for the woodland area in Wales**

In August the rainfall was 70mm.

(iii) Complete Figure 2(c) by drawing a bar to show the amount of rainfall for the month of August. (1)

(c) Describe how the temperature and rainfall of this woodland area in Wales affects:

(i) the plants in summer (2)

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(ii) the wild animals in winter. (2)

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**(Total for Question 2 = 10 marks)**



**3** A secondary school has used the woodland area for their studies, including the Diploma for Environmental and Land-based Studies, for 5 years.

(a) State **one** way the students could conduct an environmental survey on the plants in the woodland area.

(2)

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(b) (i) Describe how you would use a simple plant or animal identification key.

(2)

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Once the students have collected their information and data, they need to organise and present it to their teacher or to the rest of their class.

(ii) Describe **two** ways in which the students could use Information Technology (IT) to organise or present their information.

(4)

1 .....

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2 .....

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**(Total for Question 3 = 8 marks)**



- 4 Over the last five years, in the middle of summer, students from the school have conducted a detailed survey of the woodland area.

Figure 3 shows data on the number of **different species of** plants, birds and animals in this area over a period of five years.

	Number of plants	Number of birds	Number of animals
2004	65	33	26
2005	57	28	24
2006	61	31	25
2007	58	26	22
2008	57	24	18
2009	55	21	16

**Figure 3**

- (a) (i) Which year has the highest number of plants?

(1)

- (ii) What has happened to the number of birds between 2004 and 2009?

(3)





(b) Explain possible reasons why the number of plants, birds and animals has changed as a result of the activities of people.

(4)

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(c) Explain how an environmental survey you have taken part in, or studied, has helped you understand why we need to look after the natural environment.

(4)

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**(Total for Question 4 = 12 marks)**

**TOTAL FOR PAPER = 40 MARKS**



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