

Write your name here

Surname

Other names

**Edexcel
Principal Learning**

Centre Number

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Candidate Number

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Environmental and Land-based Studies

Level 1

Unit 1: The Natural Environment

Friday 7 June 2013 – Morning

Time: 1 hour

Paper Reference

ES101/01

You do not need any other materials.

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.

Turn over ►

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PEARSON

Answer ALL questions. Write your answers in the space provided.

1 Figure 1 shows part of a deciduous woodland in England.



Figure 1

(a) (i) Name **one** species of tree that could be found in this woodland.

(1)

(ii) Name **one** species of plant, other than a tree, that could be found in this woodland.

(1)



(b) Invertebrates are animals without a backbone. Invertebrates are important for the ecosystem of a deciduous woodland as shown in Figure 1.

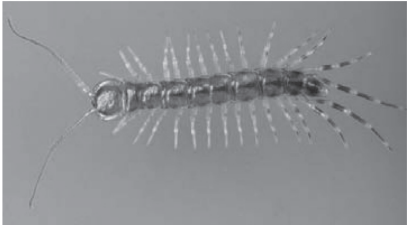


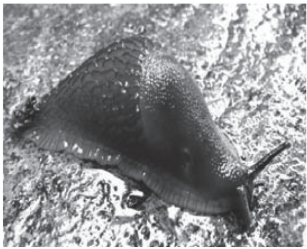
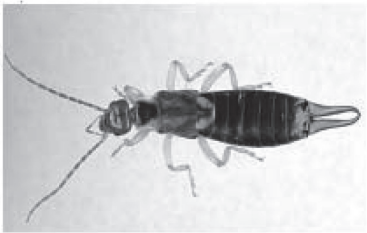
Photographs 1 to 5 are all invertebrates.

Name the invertebrates shown in photographs 1 to 5 using the words in the box.

Photograph 1 has been completed for you.

centipede earwig beetle spider slug

(4)

 <p>Photograph 1</p>	 <p>Photograph 2</p>
<p>Centipede</p>	<p>.....</p>
 <p>Photograph 3</p>	 <p>Photograph 4</p>
<p>.....</p>	<p>.....</p>
 <p>Photograph 5</p>	
<p>.....</p>	



(c) Seasonal weather changes affect plants and animals.

Describe what happens to plants and animals in each of the following seasons.

(i) Summer

(2)

Plants

Animals

(ii) Autumn

(2)

Plants

Animals

(iii) Winter

(2)

Plants

Animals

(Total for Question 1 = 12 marks)



2 Study Figure 2(a) which shows a typical soil in deciduous woodland.

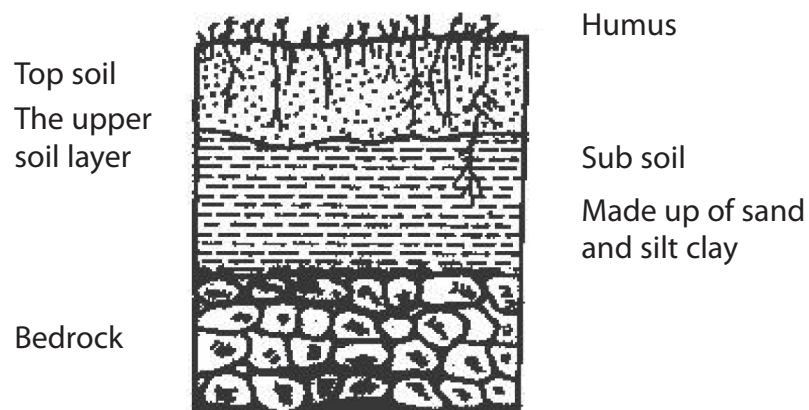


Figure 2(a)

(a) (i) What is meant by the word **humus**?

(2)

.....

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.....

(ii) State **two** components of a soil **other** than humus.

(2)

1

2



(b) Study Figure 2(b) which is a graph to show the percentage content of both humus and clay at different depths in a soil.

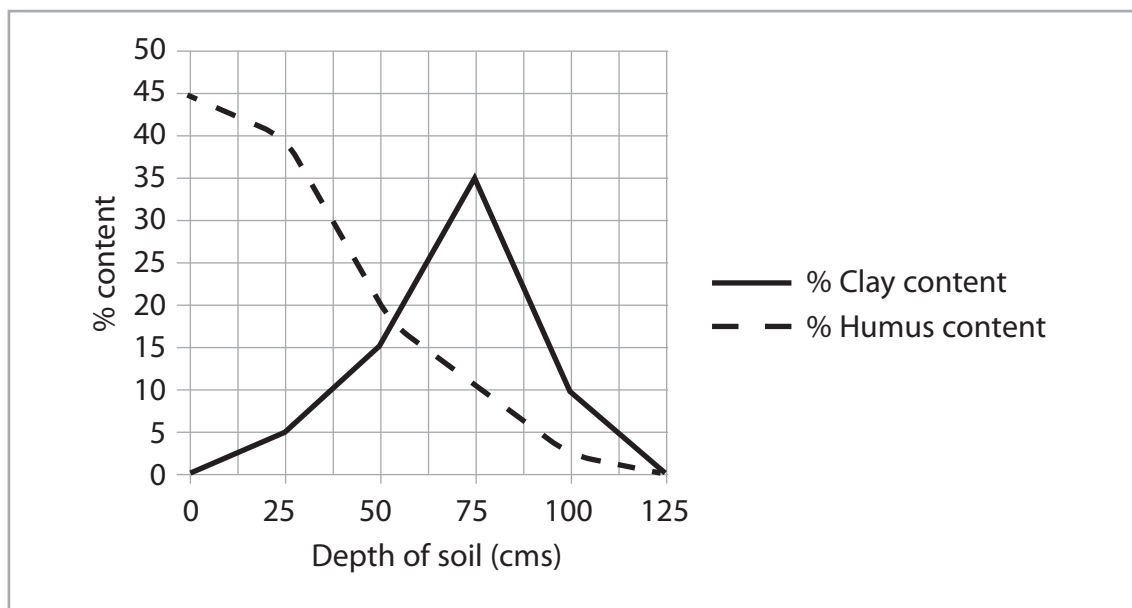


Figure 2(b)

(i) Using the graph, describe what happens to the percentage (%) humus and the percentage (%) clay content as the soil gets deeper.

(2)

Percentage humus

.....

Percentage clay

.....

(ii) Why does this happen to the percentage humus content?

(2)

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(Total for Question 2 = 8 marks)



3 Figure 3(a) shows a fish that could be found in a freshwater pond or lake.

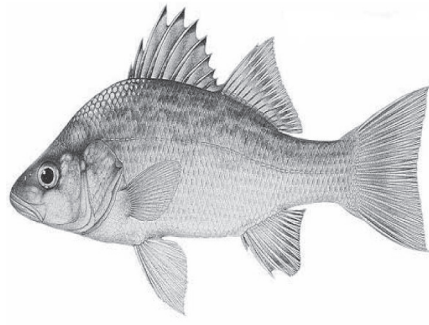


Figure 3(a)

(a) State **two** characteristics of this fish that could help you to identify the species.

(2)

1

2



(b) Complete Figure 3(b) by matching the animal to the correct description.

The first one has been done for you.

(4)

Crab



This animal has two large claws and can have many different colours. It has two long feelers coming out of its forehead.

Lobster



These animals are shaped like a star, are colourful and have spines covering their top and wiggling feet underneath.

Mussel



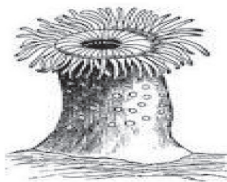
This animal has a soft, tube-shaped stalk with a round foot. At the top of the stalk is a mouth with lots of feelers around it.

Sea star (starfish)



This animal often moves sideways and has five pairs of legs; the first pair with pincers. It also has eyes on short, movable stalks.

Sea anemone



This animal has a soft body protected by two shells. It has no head and only one foot.

Figure 3(b)



(c) Describe, in detail, how you have used an identification key during your ELBS studies.

(4)

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(Total for Question 3 = 10 marks)



- 4 The ELBS Diploma group at a local school asked the headteacher if they could develop the environment of the school grounds.

After conducting a number of environmental surveys the students recommended adding a small deciduous wood and a pond.

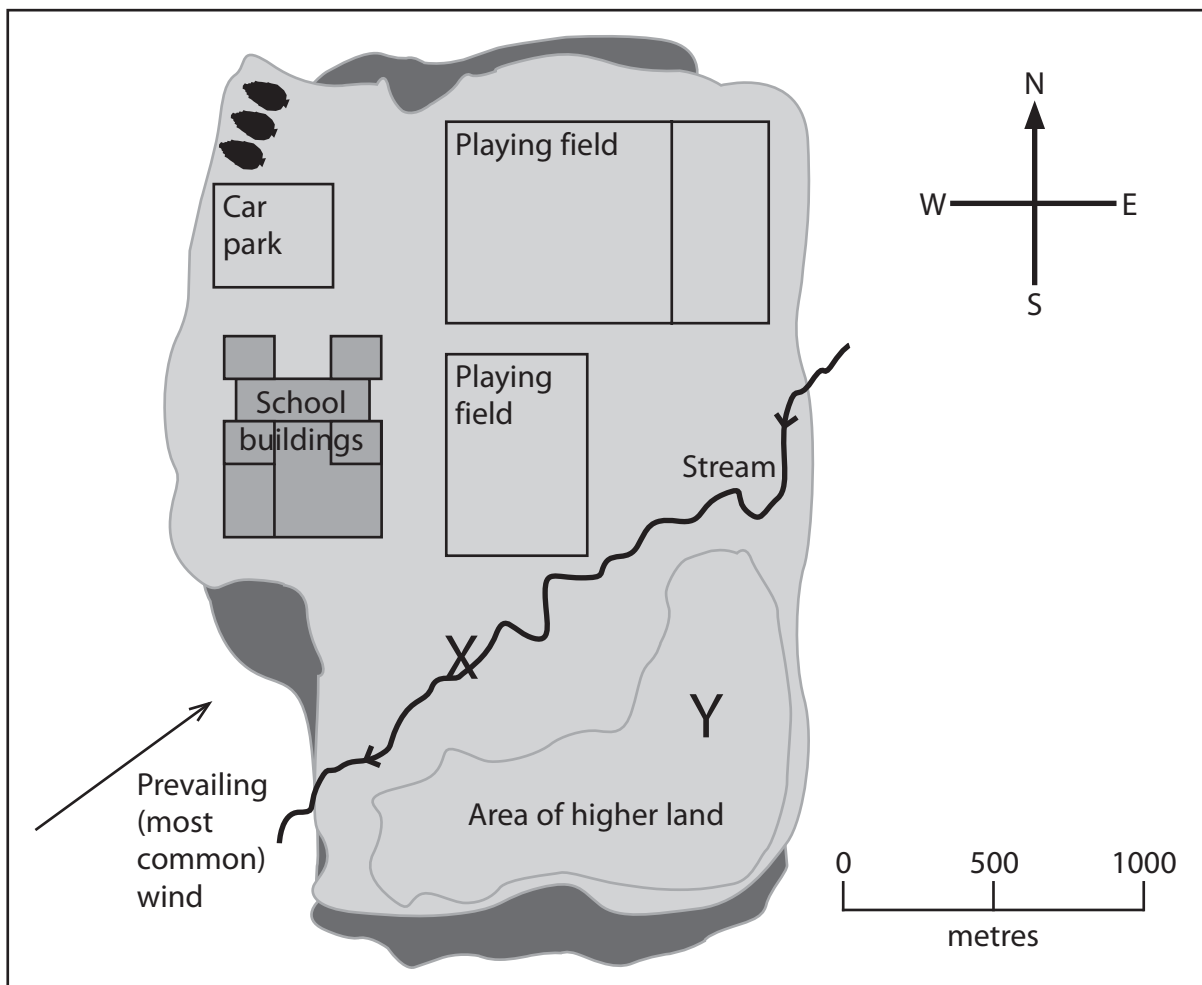


Figure 4 – Sketch map of school grounds

- (a) Suggest the survey techniques the students might have used to decide on the position of the pond at X and the wood at Y.

(2)

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(b) Explain the environmental benefits of these two habitats.

(i) A small deciduous wood

(4)

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(ii) The pond

(4)

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(Total for Question 4 = 10 marks)

TOTAL FOR PAPER = 40 MARKS



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