

# Mark Scheme (Results)

January 2012

**ELBS Environmental and Land-Based  
Studies ES101/01**  
THE NATURAL ENVIRONMENT

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Question Number	Answer	Mark
<b>1(a)</b>	Name two types of plants that you might find living in, or around, a freshwater habitat such as that shown in Figure 1. Eg. Grass, dandelion, thistle  Any two appropriate plants generic or specific.	(2)

Question Number	Answer	Mark
<b>1(b)(i)</b>	One mark for any correct bird, eg duck	(1)

Question Number	Answer	Mark
<b>1(b)(ii)</b>	One mark for any correct mammal, eg water shrew	(1)

Question Number	Answer	Mark
<b>1(b)(iii)</b>	One mark for any correct insect, eg dragonfly	(1)

Question Number	Answer	Mark
<b>1(b)(iv)</b>	One mark for any correct fish, eg stickleback	(1)

Question Number	Answer	Mark
<b>1(c)(i)</b>	a deer herbivore	(1)

Question Number	Answer	Mark
<b>1(c)(ii)</b>	fox a carnivore	(1)

Question Number	Answer	Mark
<b>1(c)(iii)</b>	hedgehog an omnivore	(1)

Question Number	Answer	Mark
<b>2(a)</b>	Stevenson Screen	(1)

Question Number	Answer	Mark
<b>2(b)</b>	One mark each for the correct name: Rain gauge Thermometer Campbell Stokes Sun Recorder or sun recorder will do Wind gauge anemometer  Two marks for the correct description e.g. What it looks like or what it is made of or how it works.	(6)

Question Number	Answer	Mark
2(c)(i)	Any two of: <ul style="list-style-type: none"> <li>• Plants flourish (1)</li> <li>• Grow rapidly (1)</li> <li>• Flower (1)</li> <li>• Produce fruit (1)</li> <li>• Spread their seeds or pollen (1)</li> <li>• Attract insects (1)</li> <li>• Die at end of summer (1)</li> <li>• Reproduce (1)</li> </ul>	(2)

Question Number	Answer	Mark
2(c)(ii)	Any two of: <ul style="list-style-type: none"> <li>• Hibernate (1)</li> <li>• Die of the cold (1)</li> <li>• Die of hunger (1)</li> <li>• Migrate (1)</li> <li>• Can't find food (1)</li> </ul>	(2)

Question Number	Answer	Mark
3(a)	It is a good ecological niche because it has; <b>ALLOW SIMPLE STATED DESCRIPTIONS SUCH AS ;</b> Clean fresh water (1) Lots of edible plants (1) Edible insects (1) Attracts many other of the same species for reproduction (1) Lots of sunshine to help growth of plants(1) Lots of food whichever animal they are(1) Living in safety (1) Maintains the food chain (1) Diverse ecology (1)  <b>EACH OF THE POINTS COULD BE EXTENDED TO EARN ANOTHER MARK.</b> eg part of the food chain (1) by providing food at different trophic levels (1)	(3)

Question Number	Answer	Mark
<b>3(b)(i) and (b)(ii)</b>	<p>Award 1 mark for each correct aspect of the method of a implementing or conducting a survey for soil and animals Only two marks for each so achievable</p> <p>Create it in the classroom. (1) Decide on: a sampling method (1) the method of recording (1) a scoring system e.g. 0-to 20 (1) Health and safety issues as appropriate each worth (1) Maybe gathering samples (1) Trapping animals in humane traps (1) Using camera equipment (1) Recording bird songs (1) Tracking faeces etc (1) Plaster casts of footprints (1) Fixed cameras (1)</p>	<b>(5)</b>

Question Number	Answer	Mark
<b>3 (c)(i)</b>	<p>1 mark for naming a relevant presentation example An extra mark for extending the information about how it would be worth an extra mark. e.g. geographical information systems could include anything which stores, analyzes, manages and presents data with reference to geographic location data.</p>	<b>(2)</b>

Question Number	Answer	Mark
<b>3 (c)(ii)</b>	<p>1 mark for naming a relevant presentation example An extra mark for extending the information about how it would be worth an extra mark. e.g. A spread sheet (1) rank the data (1) to produce various graphs (1) e.g. bar graphs (1) pie graphs (1) scatter graphs (1) A power point (1) to show information about the data (1). A video of the pupils (1) collecting the data to use for reflection in the classroom (1). Movie Maker (1) to use as part of an assessment (1). Geographical Information System (1) with overlapping maps Digital mapping (1) to show location of surveys. Use of Internet or interactive board (1) , e-mailing accepted (1) and if specific sites e.g. Google Earth, (1) or creation of website. (1)</p>	<b>(2)</b>

Question Number	Answer	Mark
4(a)	<p>Detailed description of the graph and specific statements about <b>changes</b>.            Use of figures would be credited well,            General trend is down until 2007 (1)            then a dramatic rise (1)            up to a high at 2010 (1)            Specific figures deserve credit (1)            Water quality suffers the most (1)            Animals suffer the least (1)            Plants steady middle route (1)            Each aspect follows a similar pattern (1)            Clearly shows something went wrong during specific years (1)            Watch for repetition of the same patterns (max 2).            Not expected <b>but</b> they might criticise the graph eg use of 10 measure not good enough,</p>	(4)

Question Number	Answer	Mark
4(b)	<p>The question is hoping to elicit strategies that will protect the freshwater habitat such as:</p> <p>Regular testing of the water (1)            Regular testing of the soils (1)            Detailed surveys like those of Ms Thompson (1)            Cameras to watch for vandals.(1)            Cleaning away of plants if they overgrow.(1)            Ensuring insecticides do not impact on the pond (1)            Also fertilisers must be checked for (1)            The farmer must recognise it is a natural pond (1)            Make sure the pond doesn't get filled in to create extra land. (1)            Take photographs through the seasons to check for problems. (1)            Culling of predators (1)            Fishermen leaving line or litter (1)            Be aware of Fly tipping (1)            Sustainability would be good but unexpected (1).</p>	(4)

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