

# Mark Scheme (Results)

Summer 2012

ELBS Environmental and Land-Based  
Studies  
The Natural Environment  
ES101 01

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Question Number	Answer	Mark
<b>1(a)</b>	B hedgerow C wood D farm E track	<b>(4)</b>

Question Number	Answer	Mark
<b>1(b)</b>	One mark for each valid comment such as: NOT COW Any farm animal: sheep, chicken turkey geese rabbit pigeon, duck, pig, horse, quail etc.	<b>(2)</b>

Question Number	Answer	Mark
<b>1(c)</b>	B Badger C Fox D Owl	<b>(3)</b>

Question Number 1	Answer	Mark
<b>1(d)</b>	Each answer is acceptable if it offers a change to the food web, such as: Hawks (or weasels) will attack alternative animals (1) Increased invasion of other animals may further upset the balance of the food web (1) Less grass will be eaten (1)	<b>(3)</b>

Question Number	Answer	Mark
<b>2(a)(i)</b>	5 °C	<b>(1)</b>

Question Number	Answer	Mark
<b>2(a)(ii)</b>	16C -2C=14C	<b>(1)</b>

Question Number	Answer	Mark
<b>2(b)(i)</b>	40mm	<b>(1)</b>

Question Number	Answer	Mark
<b>2(b)(ii)</b>	August	<b>(1)</b>

Question Number	Answer	Mark
2(c)	The farmer must know about the weather because: He has to make sure his crops (hay, silage, pasture) grow properly (1) He needs to protect his animals in winter (1) And when they are producing their young (1) He must avoid the flooding on his land (1) He needs to make sure he has access to water in case of drought in the summer (1) He needs to know if it going to snow in order to protect his animals from the cold (1) In winter he still needs to get his animals to market or to deliver his milk or have his milk collected (1)	(2)

Question Number	Answer	Mark
2(d)	nitrogen (1) phosphorus (1) potassium (1) calcium (1) magnesium (1) sulphur (1) perhaps these: iron, boron, copper, manganese, molybdenum, zinc, and chlorine	(2)

Question Number	Answer	Mark
3(a)	One mark each for two aspects of an identification key/process. eg taking the leaves and checking them in order to identify which tree it is. Checking it against key in a text book. They may name a particular identification key.	(2)

Question Number	Answer	Mark
3(b)	EITHER two distinct reasons for up to 2 marks each OR one reason fully developed for 4 marks. A quadrat survey (1) where the students would record the percentage natural vegetation in each quadrat (1) over a chosen area (1) A line transect (1) across a pre-chosen line on a map (1) or a footpath (1) Random collection of samples (1) taking practical evidence of different species (1) Photographic evidence of species (1) from chosen pre-study spots in the area (1)	(4)

Question Number	Answer	Mark
3(c)	<p>1 mark for naming a relevant presentation method, up to 3 marks for description</p> <p>e.g.</p> <p>A spread sheet (1)</p> <p>to rank the data (1)</p> <p>to produce various graphs (1)</p> <p>e.g. bar graphs (1)</p> <p>pie graphs (1)</p> <p>scatter graphs (1)</p> <p>PowerPoint (1) to show information about the data (1).</p> <p>A video of the pupils (1) collecting the data to use for reflection in the classroom (1).</p> <p>Movie Maker (1) to use as part of an assessment (1).</p> <p>Geographical Information System (1) with overlapping maps</p> <p>Digital mapping (1) to show location of surveys.</p> <p>Use of Internet or interactive board, e-mailing accepted and if specific sites e.g. Google Earth, or creation of website. (1)</p>	(4)

Question Number	Answer	Mark
4(a)(i)	<p>Main answer should include:</p> <p>trampling</p> <p>widening</p> <p>visually polluting</p> <p>stopping plants growing</p> <p>causing soil water logging</p> <p>causes gulying</p> <p>People will pick plants</p> <p>Walk away from footpaths and trample them</p> <p>Could damage trees near the footpaths</p> <p>Especially on newly planted plants</p>	(2)

Question Number	Answer	Mark
4(a)(ii)	<p>Frighten them away</p> <p>Stop them breeding</p> <p>Steal eggs from nests</p> <p>Throw stones branches at the animals</p> <p>Get chased</p> <p>Leave gates open</p> <p>Feed the domestic animals the wrong food e.g. picnic sandwiches</p>	(2)

Question Number	Answer	Mark
4(b)	<p>Students should be suggesting methods of policing the nature trail.</p> <p>A comment plus an extension would deserve 2 marks.</p> <p>a warden would check that people didn't cause damage (2)</p> <p>there should be signs in pertinent places (2)</p> <p>the pathways should be planned in such a way as if one is being overused it can be temporarily blocked to give it chance to recover (2)</p> <p>An information hut at the beginning of the nature trail will give out pamphlets (2)</p> <p>School groups must be on a ratio of 1 teacher per 10 (children (2)</p> <p>Fencing in appropriate place will guide people in a particular direction (2)</p> <p>CCTV in specific places (2)</p>	(6)

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