

Mark Scheme (Results) January 2010

Principal Learning

Environmental and Land-Based Studies ES101 The Natural Environment

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Level 1 Unit ES101
The Natural Environment

Question Number	Answer	Mark
1(a)	<p>Award 1 mark for each name of a possible species: Water lily Marsh marigold Reeds Accept moss Etc</p> <p>NB generic grass is not acceptable but appropriate named species are</p>	(3)

Question Number	Answer	Mark
1(b)	<p>Accept any two realistic/possible physical features of lowland grass/meadow areas even if not actually visible. For example: Appropriate described or named soils Relatively flat/gently undulating terrain</p>	(2)

Question Number	Answer	Mark
1(c)	<p>Accept any 3 possible features:</p> <p>Leaf shape Flower size Colour Type Leaf pairings Stem length Accept trees Etc</p>	(3)

Question Number	Answer	Mark						
1(d)	<p>Award 2 marks for all 4 correct. Award 1 mark for 2. correct</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Terrestrial habitat</th> <th>Aquatic habitat</th> </tr> </thead> <tbody> <tr> <td>Rabbit</td> <td>Newt</td> </tr> <tr> <td>Mouse</td> <td>Frog</td> </tr> </tbody> </table>	Terrestrial habitat	Aquatic habitat	Rabbit	Newt	Mouse	Frog	(2)
Terrestrial habitat	Aquatic habitat							
Rabbit	Newt							
Mouse	Frog							

Question Number	Answer	Mark
2(a)(i)	Area 2	(1)

Question Number	Answer	Mark
2(a)(ii)	<p>Award 1 mark for each correct reason based either on the variety of habitats in the vicinity or needs of some land species for the pond. For example: Some of the species in the pond may spend some time on land (1) so they are included as well as the land only species (1) Credit reference to insects. More terrestrial species may be found there as they come there to drink(1) Zoning from pond to land fringes (1) If only plants go to max 2.</p>	(3)

Question Number	Answer	Mark
2(b)	<p>Award 1 mark for concept of short/long migration of birds and the other for development. For example: Birds feeding here in the summer may fly elsewhere for the winter (1) as they need a warmer climate to feed (1) Also award other suggestions. For example: Harsh winters Excessive predation. Shooting is also acceptable.</p>	(2)

Question Number	Answer	Mark
2(c)	<p>Award up to 3 marks for each reason (2+2 or 1+3 is acceptable). For example: Barley replaces a number of different species (1) so there is less diverse habitat (1) Change of habitat (1) Loss of grassland will mean fewer insects/seeds (1) so there will be less food for birds (1)</p>	(4)

Question Number	Answer	Mark
2(d)	<p>Award 1 mark for a response that identifies the difficulties of growing in these conditions or that suggest the generic 'specialised niche' idea (probably optimistic!). For example: The soil would be trampled (1) and compacted (1) Plants would find it more difficult to root in this soil (1) It is more difficult to grow here so there would be less plant species that could do so (1) Reduced water infiltration (1) A specific example. Any other suitable responses</p>	(3)

Question Number	Answer	Mark
3(a)(i)	<p>Award 1 mark for each correct feature of an IT survey method even if the actual name is missing/incorrect. For example: Geographical Information System (1) Digital mapping (1) Internet accepted if specified e.g. Google Earth, Multimaps (1) Accept "a database"</p>	(1)

Question Number	Answer	Mark
3(a)(ii)	<p>Award 1 mark for each correctly identified use for the system, or 2 marks for a developed response. For example: She could record the species found in each place (1) and then produce a digital map of their distribution (1)</p>	(2)

Question Number	Answer	Mark
3(b)	<p>Award 1 mark for the basic description of a method and a further mark for describing how it is carried out in the field or the information that it would help to give. For example: She could take soil samples (1) from a number of different places in the meadow area (1) Don't accept "a table" Any other appropriate response.</p>	(2)

Question Number	Answer	Mark
3(c)	Award 1 mark for an indication that this is a method of assessing soil texture. For example: To measure soil texture (1)	(1)

Question Number	Answer	Mark
3(d)(i)	Anemometer or a suitable description (accept any recognisable spelling!)	(1)

Question Number	Answer	Mark
3(d)(ii)	Award 1 mark for each descriptive point. For example: The small cups on the anemometer are blown round by the wind (1) and it is connected to a counter that records the number of turns it makes (1) Accept "blocking" of the wind (1)	(2)

Question Number	Answer	Mark
3(e)	Award 1 mark for identification of a fault either being concerned with the presence of the hedge affecting wind or the wind vane not being high enough to get the uninterrupted wind. For example: The hedge would slow the air down before it gets to the wind vane (1) It is not high enough - it needs to be above the hedge (1)	(2)

Question Number	Answer	Mark
4(a)	Award 1 mark for description of a soil characteristic and a further mark for specific reference to how it might inform the farmer's actions. For example: The pH of the soil would determine how acid/alkaline the soil is (1). This might mean that he would have to add something to the soil to make it better for the crop he wants to grow (1)	(2)

Question Number	Answer	Mark
4(b)	Award 1 mark for each explanatory idea. Ideas can be individual or developed. Lots of rain might cause crops to rot (1) He would need to know how much sunlight/warmth there is in summer (1) so that he would be able to tell whether crops would ripen (1). He would need to know whether the area had a lot of strong winds (1) as this might damage the crops and reduce his income (1)	(4)

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