

## Unit 3 Life on Earth Revision Questions

### Key Area 2 Mark Scheme

1. C
2. A
3. C
4. C
5. A
6. D
7. B
8. B
9. B
10. D
11. A
12. C
13. B
14. B
- 15.

(a)	(i)	Pitfall trap		1	
	(ii)	1. Springtail 2. Woodlice	(1) (1)	2	
	(iii)	Set several traps. Check traps more often. Repeat the investigation/experiment.		1	Not acceptable: - repeat in different areas.
(b)	(i)	E		1	
	(ii)	15		1	

16.

(a)	(As you move from sample site 1 to sample site 5,) the abundance of Yellow Iris increases/it increases	1
(b)	Soil moisture	1
(c)	Wipe / dry the probe between samples OR Probe at the same depth each time	1

17.

(a)	Long and thin Egg wrack Bladder wrack	1 1 1	3	
(b)	Egg wrack has bladders present along its length whereas Bladder wrack's (bladders) are in pairs		1	Comparison needed
(c)	Brown or no bladders		1	

18.

(a)	(i)	2	1	
	(ii)	Increased competition from Meadow grass or appropriate description of the increased competition; eg less space for Ragwort to grow	1	Not acceptable: <ul style="list-style-type: none"> <li>Meadow grass is increasing/overgrown/dominant (with no mention or description of competition)</li> <li>NO space for Ragwort to grow</li> </ul>

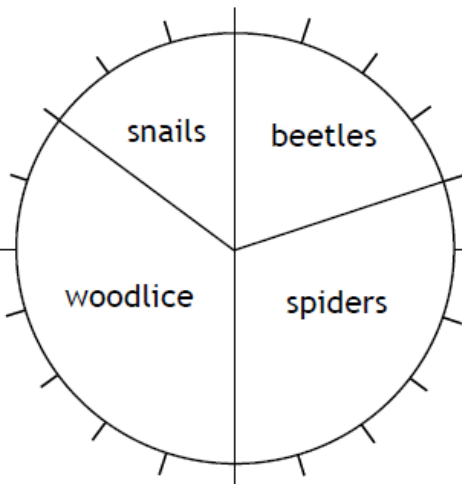
(b)	<p>Sampling Technique: Pitfall trap (1)</p> <p>Source of error: (1)</p> <p>Traps left too long/not checked regularly</p> <p>Too high above soil surface/too low below soil surface/not level with soil surface</p> <p>Not camouflaged</p> <p>Too shallow</p> <p>No drainage holes</p>	2	<p>Not acceptable:</p> <ul style="list-style-type: none"> <li>• use of the term 'lid' as it implies it seals the container</li> <li>• description of how to minimise an error</li> </ul> <p>If additional explanation given it must match the error.</p> <p>If wrong technique given eg quadrat, the second mark could be awarded for correct source of error for quadrat.</p> <p>If technique left blank or incorrectly named eg trap then the correct error can still be awarded mark.</p>
(c)	<p>Go to 3 (1)</p> <p>Buttercup (1)</p> <p>Pink Campion (1)</p>	3	

19.

(a)	(i)	<p>As the (number of) bacteria increases, the oxygen (level in the water) decreases</p> <p>OR</p> <p>As the (number of) bacteria decreases, the oxygen (level in the water) increases</p>	1	<p>Do not accept 'as the oxygen (level) decreases, the (number of) bacteria increases'.</p>
	(ii)	2	1	

(b)	(i)	Mayfly nymphs/stonefly nymphs/caddis fly larvae	1	Only one of these organisms necessary to gain mark. Additional wrong answers negate.
	(ii)	(The pollution/sewage results in) fewer/less types (of organism/animals) OR (Pollution) decreases biodiversity OR 'They would decrease' (as this refers to the types of organisms)	1	Results in fewer/less organisms/animals is not acceptable.
(c)		Organisms which, by their presence/absence, show level of pollution/environmental quality	1	

20.

(a)		Named abiotic factor, eg moisture, pH, light intensity 1  Description of method, including instrument name eg 'Stick the probe of the pH meter in the soil' 1	2	If candidate chooses temperature, they forfeit the marks.  Answer must relate to a woodland. Name of instrument alone not sufficient for mark.
(b)	(i)	Left traps too long/ Traps too high above soil/ Traps not camouflaged/ Traps too shallow	1	Must identify error the students made, not just reason why empty  Not Acceptable - the use of the term 'lid' as it implies that it seals the container
	(ii)		2	1 mark for appropriate sized sections (Segments do not need to be in order shown here)  1 mark for labels (Mark for labels can be given if sections are incorrect but proportions correct)  If pie chart is complete but 'slugs' are labelled on it, do not award labelling mark
(c)		Able to fly/flew away	1	Not Acceptable - They have wings