Investigation 2: The effect of sunlight on biomass Moderator comments

Personal engagement	Exploration	Analysis	Evaluation	Communication	Total
x/2	x/6	x/6	x/6	x/4	x/24
1	2	3	2	2	10

Analysis	-						
Mark	Descriptor						
1–2	 The report includes insufficient relevant raw data to support a valid conclusion to the research question. 2 The processed data is incorrectly or insufficiently interpreted so that the conclusion is invalid or very incomplete. 2 						
3-4	 Appropriate and sufficient data processing is carried out that could lead to a broadly valid conclusion but there are significant inaccuracies and inconsistencies in the processing. 3 The report shows evidence of some consideration of the impact of measurement uncertainty on the analysis. 3 						
Moderator's award 3	ator's Moderator's comment There is barely sufficient data to support a valid conclusion. Appropriate processing is carried out but it is hard to follow thus it is difficult to accept the interpretation. For example, it is not clear where the standard deviations used as error bars in the graph come from. The precision of the masses is hard to believe. The graphical analysis is appropriate.						

Results

1 m t e r

1 meter									
1	2	3	4	<mark>5</mark>	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
<mark>21</mark>	22	23	24	25	26	27	28	29	30
31	32	33	<mark>34</mark>	35	36	37	38	39	40
<mark>41</mark>	42	43	44	45	46	47	48	49	50
51	<mark>52</mark>	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	<mark>74</mark>	75	76	77	78	79	<mark>80</mark>
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	<mark>96</mark>	97	98	99	100

Figure 1: Diagram of 1 meter squared quadrat divided into 100 ten meter squared quadrats. Yellow highlighted quadrats represent location of sun samples and the blue highlighted quadrats represent the location of shade samples

Additional Observations

- Grass in the shade was more patchy
- More dead grass in the sun exposed area
- Grass in the sun exposed area was wetter than the grass in the shade

.

Table 3: Observations

	An: Insufficient data to support the conclusion fully.				
	An: Difficult to believe a precision of $\pm 0.mg!$				
Sun Expo	An: Annronriate analysis	(averages))		
Sample & Quadrat M number		Comm Layout could be improved			
Sample 1 Quadrat 52	8.1	Comm Notation OK	-		
Sample 2 Quadrat 41	9.6	Comm Conventions OK	ang mada		
Sample 3 Quadrat 74	11.	but what about the influence?	nce of the		
Sample 4 Quadrat 5	7.7	687			
Sample 5 Quadrat 34	10.	2805			
Average Mass	9.5	628			

Table 1: Biomass of grass in the sun

Shade Area				
Sample & Quadrat number	Mass/g ± 0.0001			
Sample 1 Quadrat 100	8.6943			
Sample 2 Quadrat 21	3.2373			
Sample 3 Quadrat 80	5.9215			
Sample 4 Quadrat 96	9.3583			
Sample 5 Quadrat 2	5.7696			
Average Mass	6.5962			

Table 2: Biomass of grass in the shade



