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Evolution Lab Report Sheet

Exercise 1 – Natural Selection

- Write your hypothesis for the natural selection experiments

- Table 1 – Number of beads found in each generation. The number left is the number of beans left in the cup with the holes in it after you have shaken the bowl. The doubled number is the number that will exist in the next generation (calculated by multiplying the number surviving by 2).

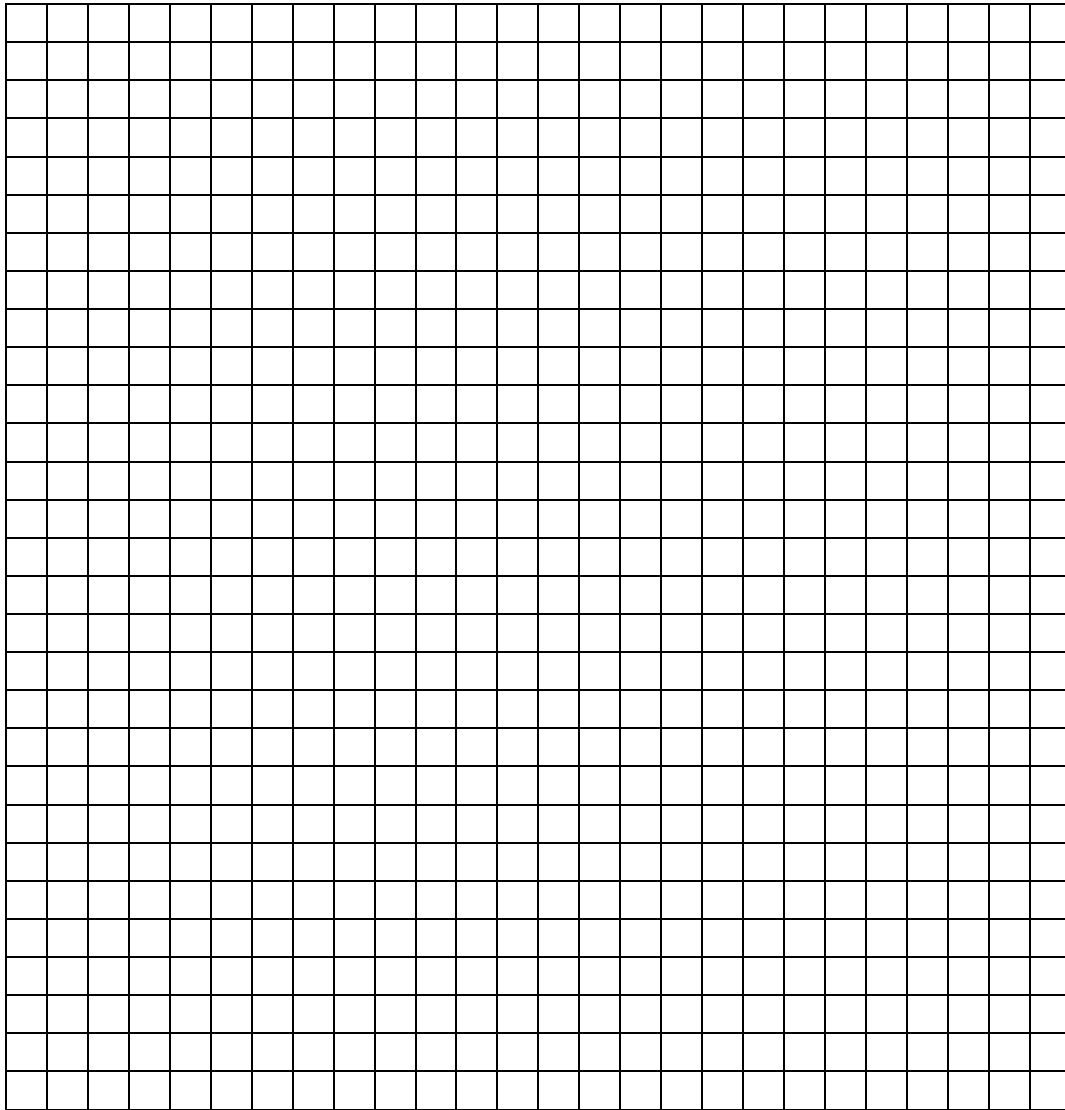
Generation →		1	1	2	2	3	3	4	4	5	5
Bean type	Starting number	Number surviving	Doubled number	Number surviving	Doubled number	Number surviving	Doubled number	Number surviving	Doubled number	Number surviving	Doubled number
	5										
	5										
	5										
	5										
	5										

- Which bean type (if any) had lower numbers of individuals survive in this environment?

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4. Figure 1 – Plot a bar graph using the data from table 1. Graph the starting number of beans for each generation, using a separate bar for each bean type.



5. What type of selection was illustrated by this experiment?
6. Did the results support or reject your hypothesis? Why do you come to this conclusion?

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Exercise 2 – Darwinian Snails

Part I

7. How do you predict that the shell thickness distribution will change over the course of the first experiment?
8. Did the results match your prediction? Why or why not?

Part II

9. How do you predict that the shell thickness distribution will change in the experiments where the requirements of natural selection are not met? Why do you think this?
10. Did the results match your predictions? Why or why not?

Part IV

11. How do you predict that the shell thickness distribution will change over the course of this experiment?
12. Did the results match your predictions? Why or why not?
13. You probably observed that it was possible to get thicker shells in this experiment than in earlier experiments. Explain how this might be able to happen even though there are just as many mutations toward thinner shells.

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Exercise 3 – Web Exercise

14. Write in the first question you were told to address by your instructor here.

15. Is it possible to answer this question with the information provided on the web site?

16. If it is not possible, what further information would you need?

17. If it is possible, what do you hypothesize is the correct answer to that question and why do you think so (be sure you can clearly justify your hypothesis)? What further evidence might you seek to test your hypothesis?

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18. Write in the second question you were told to address by your instructor here.

19. Is it possible to answer this question with the information provided on the web site?

20. If it is not possible, what further information would you need?

21. If it is possible, what do you hypothesize is the correct answer to that question and why do you think so (be sure you can clearly justify your hypothesis)? What further evidence might you seek to test your hypothesis?