Essay titles for 2008

Write a short essay of about 1000 words on one of the following five topics. Hand your completed essay in to the Biology office by 3 p.m. Wednesday 19th March. Make sure that your name is clearly written on the front page. If possible, word-process it and print it DOUBLE-SPACED. Including diagrams, it should be around three or four sides of A4 paper.

1. Describe the breeding and screening protocols involved in a) F1 and b) F2 screens for recessive lethal mutations with specific effects on zebrafish development. Give examples of mutants that have been isolated with each types of screen and discuss the advantages and disadvantages of both protocols.

2. Identify the special features of the mouse make it a useful model for genetic studies. Give examples illustrating the use of the features you describe.

3. *Chlamydomonas reinhardtii* is an excellent model system for photosynthesis research. Discuss.

4. Write an essay on epistasis analysis.

5. Describe how P-elements are used to facilitate transgenesis and insertional mutagenesis in *Drosophila*.

Additional reading material for each topic


   [http://engels.genetics.wisc.edu/Pelements/]