

ACT Preparation- Fruit Flies



Fruit Flies Experiment

Study 1

1. What does *SY* stand for?
2. Identify the contents of each test tube :
 - a. Tube 1
 - b. Tube 2
 - c. Tube 3
3. Which test tube was the control? _____ How do you know?
4. What were the variables in Study 1?
5. Why were virgin fruit flies used in this experiment? What could be the consequences of using fruit flies that had mated?
6. Study the key for Study 1. Draw the symbol used to each tube:
 - a. Tube 1
 - b. Tube 2
 - c. Tube 3
7. How many fruit flies were present in each test tube at the beginning of Study 1?
8. What percent of the fruit flies were alive in tube 3 after 35 days?_____ How many of original 200 were alive after 35 days?_____
9. Which medium has the most detrimental effect on the life span of fruit flies?
10. Were the fruit flies in Study 1 able to detect odors?_____ How do you know?

Study 2

11. How is Study 2 similar to Study 1?
12. How is Study 2 different from Study 1?
13. Which medium had the most detrimental effect on the life span of fruit flies?
14. Which medium seemed to have the most beneficial effect on the life span of fruit flies?
15. Compare Study 1 & Study 2 for the results of SY medium and additional odors. What percent of fruit flies are alive after 40 days for 15% SY with additional odors?_____. What percent of fruit flies are alive after 40 days for 5% SY with additional odors?_____. Make a prediction concerning the percent of fruit alive after 40 days if a test were conducted for a 10% SY medium._____

Study 3

16. How are the fruit flies in Study 3 different from the fruit flies used in Study 1 and Study 2?
17. Compare the life span of Strain N to Strain X. Which strain seems to live longer?_____
18. Does the sense of smell seem to be harmful or detrimental to the life span of a fruit fly?_____ Explain your answer.
19. Suppose an additional trial were to be done with 12% SY medium. What would be the average life span of the strain N fruit flies?

Compare the studies:

Answer the multiple choice questions on page 41.