

Name \_\_\_\_\_

Date: \_\_\_\_\_

Block/Period \_\_\_\_\_

### **E.T. Study Guide**

1. What is a habitable world?
2. What is essential for all life as we know it? Why is it essential?
3. What roles do an atmosphere provide/do for the possibility of life on a planet?
4. Compare and contrast Venus and Mars for temperature, size, right distance from the sun, atmosphere, and possibility of life.
5. What makes a planet habitable?
6. If you counted all the galaxies in the universe at five galaxies per second, how long would it take you to count all the galaxies?
7. What is coronagraphy?

8. What is the definition of life? (Characteristics)
  
9. What did the Urey-Miller experiment do and show?
  
10. What did NASA scientist find in the modification of Urey-Miller experiment?
  
11. What does SETI stand for?
  
12. How does SETI look for life?
  
13. What is a Dyson Sphere and how could we detect them?
  
14. What is a circumstellar habitable zone (goldilocks zone)? And GHZ
  
15. What are the distances for the CHZ and the extended CHZ in our solar system?

16. What classes of stars are best in looking for life?

17. What role does the age of star play in looking for life on a planet around a star?  
(Young, middle and old)

18. Why does life need carbon?

19. What would the chances of first contact with an alien be like, describe the different options discussed in class.

20. What are at least 3 ways to heat a planet?

21. What is exotic life?

22. Describe features, characteristics and the possibility of life on Europa, Enceladus, and Titan.

23. Decode this message.


Signal: C, C, B, C, C; C, B, C, B,  
C; B, C, C, C, B; C, B, C, B, C; C,  
C, B, C, C

24. What is an astrobiologist?

25. What characteristics does an exoplanet need to harbor life? List at least 5

26. Show on a graph of star size vs distance how a CHZ would change.

27. Describe all of variables in Drakes Equation.

$$N = R^* \times f_p \times n_e \times f_l \times f_i \times f_c \times L$$

28. What are 7 good reasons why there could be life in the Universe?