

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_ BIN: \_\_\_\_\_

## How Scientists Work: Redi's Experiment

*When providing the best possible answer to the following questions please apply all learned scientific techniques and procedures, do not use abbreviations, use proper scientific terminology, show work for all mathematical calculations, use all significant figure and scientific notation rules, apply appropriate writing strategies, and note that at all times spelling counts. Your ability to meet these and all established classroom expectations, including labeling of BINs, providing heading information, and your ability to follow directions may be included in computation of grade.*

1. What is spontaneous generation?
2. Who was Francesco Redi?
3. What was Redi's hypothesis? (Make sure this is written in the If...then.... format)
4. What prediction did Redi make?
5. What was the independent variable in Redi's experiment?
6. What were two constants in Redi's experiment?
7. What was the dependent variable in Redi's experiment?
8. In a \_\_\_\_\_ experiment, only one \_\_\_\_\_ is tested at a time.
9. How do scientists today know that Redi recorded his data?

10. What did Redi's data show?

11. Did Redi's results support his hypothesis? Explain.

12. What did Redi conclude?

13. Did Redi's conclusion support the hypothesis of spontaneous generation? Explain.

14. A key assumption in science is that experimental results can be reproduced because nature behaves in an \_\_\_\_\_ manner.

15. Who was John Needham and how did he contribute to the development of the theory of biogenesis?

16. Who was Lazzaro Spallanzani and how did he contribute to the theory of biogenesis?

17. What did Spallanzani think Needham had done wrong which led Needham to attack Redi's conclusion?

18. How did Spallanzani improve upon Needham's investigation?

## Redi's and the Scientific Practices

1. What **question** did Redi want to answer?
2. What **research** had Redi completed prior to starting his experiment? (what observation had he made?)
3. What was his **hypothesis**?
4. Describe how Redi **tested his hypothesis**.
5. What **data** did he record and analyze?
6. What was his **conclusion**?

7. Was this experiment **repeated to validate** the results?

8. How was it possible for this experiment to be repeated and improved upon?