**Nature of Science and Scientific Method Guided Reading (1.2 and 1.3) Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ HR \_\_\_\_\_**

1. What is science?
2. What is the nature, or essential characteristic, of science?
3. What do scientific explanations combine?
4. What is a theory?
5. What are the two most highly regarded theories in biology?
6. What is Phrenology? What was wrong with Darwin?
7. What is pseudoscience?
8. How do you tell the difference between pseudoscience and real science?
9. How does science advance?
10. What evidence confirmed the relationship between bats and birds?
11. How are scientific claims based?
12. What is peer review?
13. Use the blue headings in section 3 to decipher the steps of the scientific Method:
14. What is an observation?
15. What is an inference?
16. What inferences did Wiley make?
17. What is serendipity?
18. What happens to a hypothesis if it is considered NOT valid?
19. What is an experiment?
20. What was the hypothesis of the scientists about the kittiwakes?
21. What was their control group?
22. What was their experimental group?
23. What was the independent variable in their experiment?
24. What was the dependent variable in their experiment?
25. What are the two types of data?
26. Give two examples of quantitative data?
27. What are three ways scientists conduct investigations?
28. What are 3 questions scientists ask after analyzing the data from an experiment?
29. What is a simple way to display data?
30. Where do scientists report their findings?
31. Use figure 1.18 to identify 3 questions you need to ask yourself in a conclusion.