1. What is the ***Key Concept*** of section 1-3? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Main Idea: Like all science, biology is a process of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Use the following words or phrases to fill in the blanks in the flow chart.

 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Scientists make observations and
examine prior research.

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
Scientists ask questions and try to explain observations.

3.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
Scientists collect data that they use to support or reject a hypothesis.

 4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Scientists analyze their data to draw conclusions about their research.

 5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Scientists evaluate data and conclusions presented by other scientists.

|  |  |  |
| --- | --- | --- |
| forming hypotheses | observing | testing hypotheses |
| evaluating results | analyzing data |  |

Circle the word or phrase that best completes the sentence.

 6. A scientist begins his or her research by making observations / forming theories.

 7. Scientists make observations and do experiments as a way to gather variables / evidence.

**Using the Picture of the jackals on page 14, give three examples of each type of data based on the picture.**

|  |  |
| --- | --- |
| Qualitative data (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) | Quantitative data (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) |
|  8. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 9. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 10. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |  11. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 12. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 13. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

Main Idea: Biologists use experiments to test \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Circle the dependent variable in each sentence. Draw a box around the independent variable.

 14. A scientist is testing the effects of medication on the blood pressure of patients.

 15. A scientist wants to find out how cellular respiration is affected by temperature.

 16. A scientist is measuring the effect of precipitation on seed germination.

Main Idea: A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ explains a wide range of observations.

Choose whether each statement is true or false.

 19. *true* / *false* A theory is a scientific idea that has been proven to be true.

 20. *true* / *false* Theories can change over time as new evidence is discovered.

Vocabulary Check

a. independent variable b. dependent variable c. theory d. constant

 \_\_\_\_\_21. conclusion

 \_\_\_\_\_22. condition that is changed by a scientist

\_\_\_\_\_23. data

 \_\_\_\_\_24. condition that does not change

25. Compare and contrast hypotheses and theories. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

26. What are four sources that might include scientific information? See pg 20.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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27. Go to your online student edition of the text and go to “interactive review” and then on “self-checks”. Take the 1-3 Self-Check Quiz and record your score below. Write out missed questions or if you did not miss any, write out the most difficult one.

\_\_\_\_\_\_\_\_\_\_ / \_\_\_\_\_\_