

Directed Reading B *continued*

FORM A HYPOTHESIS

8. A possible explanation or answer to a question is a(n)

hypothesis

9. What is a hypothesis based on?

It is based on an educated guess of what the answer might be

10. A hypothesis must be able to be _____ tested _____ in order to be useful.

11. What were three hypotheses that scientists formed about what caused deformation in frogs?

1. Maybe there was chemical pollution that caused the deformities
2. Maybe parasites in the water caused the deformities
3. Maybe ultra violet light cased the deformities

12. A statement of cause and effect that can be used to set up a test for a hypothesis is called a(n) _____ prediction _____.

13. In what format is a scientist's statement of cause and effect usually stated?

with an "If - then" statement

TEST THE HYPOTHESIS

14. What is a controlled experiment?

An experiment with all the variables kept constant. like constant temperature or air pressure.

15. What is a variable?

a changeable measurement or capacity in the experiment
the factor that is changed

16. Designing an experiment requires _____ fixed variable controls to the trial test variables _____

17. What kind of guidelines must scientists use in designing and conducting an experiment?

Ethical guidelines, so not to harm the specimens

18. How should scientists care for animals, such as the frogs in experiments with UV light?

Let the specimens go back into the wild.