

Name _____

Date _____

Class _____

The Origin of Life

In your textbook, read about origins: the early ideas.

Use each of the terms below just once to complete the passage.

microorganisms	vital force	Louis Pasteur	biogenesis
nonliving matter	S-shaped	disproved	Francesco Redi
organisms	broth	microscope	spontaneous generation
spontaneously	air		

Early scientists believed that life arose from (1) _____ through a process they called (2) _____. In 1668, the Italian physician (3) _____ conducted an experiment with flies that (4) _____ this idea. At about the same time, biologists began to use an important new research tool, the (5) _____. They soon discovered the vast world of (6) _____. The number and diversity of these organisms was so great that scientists were led to believe once again that these organisms must have arisen (7) _____. By the mid-1800s, however, (8) _____ was able to disprove this hypothesis once and for all. He set up an experiment, using flasks with unique (9) _____ necks. These flasks allowed (10) _____, but no organisms, to come into contact with a broth containing nutrients. If some (11) _____ existed, as had been suggested, it would be able to get into the (12) _____ through the open neck of the flask. His experiment proved that organisms arise only from other (13) _____. This idea, called (14) _____, is one of the cornerstones of biology today.

Determine if the statement is true. If it is not, rewrite the italicized part to make it true.

15. Biogenesis *explains* how life began on Earth.

16. For life to begin, simple *inorganic* molecules had to be formed and then organized into complex molecules.

17. Several billion years ago, Earth's atmosphere had no free *methane*.
