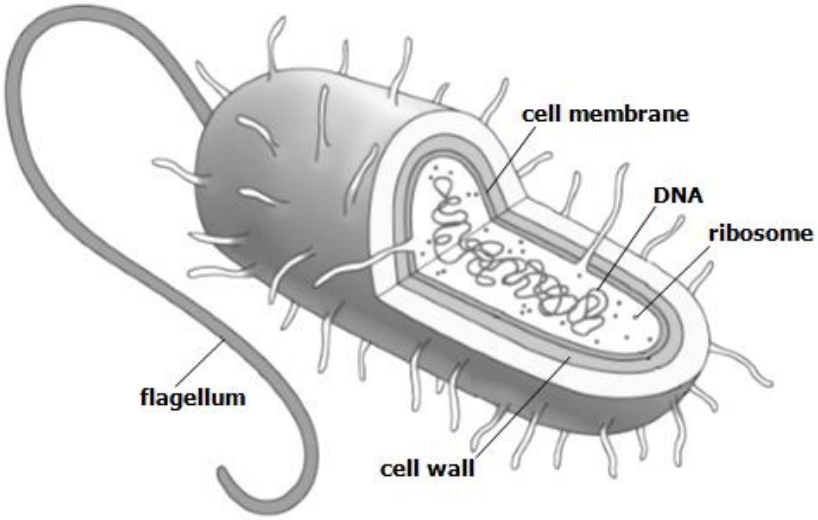
1. A student examines the structures labeled in the model shown.



The student claims the model represents a virus. Which structural evidence provides enough information to support or refute the student's claim?

A The flagellum that assists a virus in movement is present, supporting the student's claim that it is a virus.

B The organelles necessary for the reproduction of a virus are present, refuting the student's claim that it is a virus.

C The ribosomes necessary for the production of proteins are present, supporting the student's claim that it is a virus.

D The DNA that contains the hereditary information is present, refuting the student's claim that it is a virus.

2. Extracts taken from plant stem cells protect human skin stem cells from ultraviolet radiation, enhance healthy cell reproduction, and also help in reversing the effects of aging. Which statement supports the use of plant stem cells in manufacturing cosmetic products for the human skin?

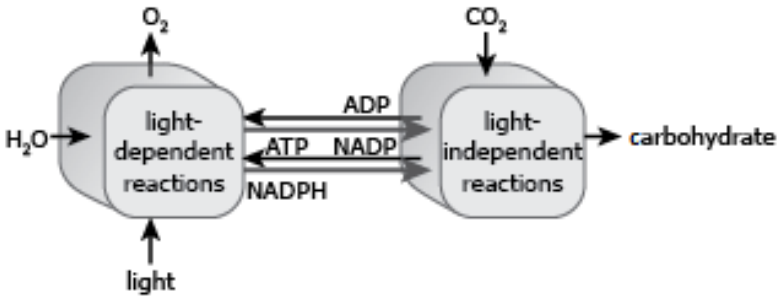
A It does not raise as many ethical concerns as processes that require animal cells.

B It does not require an approval from the government for sale of the products.

C The plant stem cells are easy to culture as compared to human stem cells.

D The plant stem cells are capable of generating a completely new plant.

3. The 2-D model represents an important biological process.



Which statement *best* summarizes the process represented by the model?

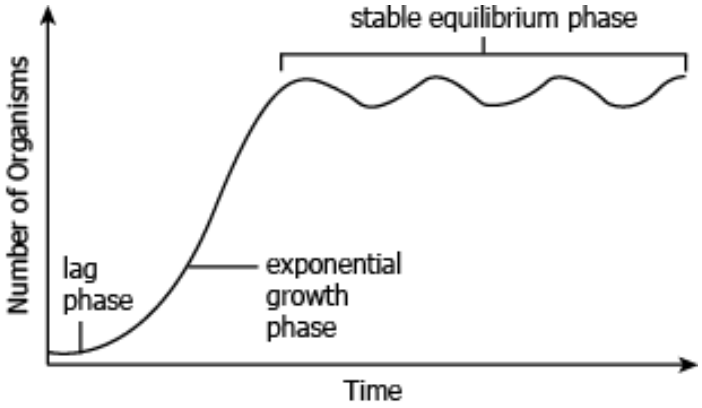
A The process converts light energy into chemical energy that is stored in carbohydrates.

B The process produces inorganic molecules by combining organic compounds and energy-rich molecules.

C The process involves the exchange of chemical energy between living cells and the environment.

D The process converts complex organic molecules to simpler molecules using light energy.

4. The graph shows the trend in population growth of carp in a pond over a period of time.



What explains the trend observed in the stable equilibrium phase?

A The carp population that inhabits the pond survives longer.

B The carp population fluctuates around its carrying capacity.

C The ability of the carp population to obtain resources continuously improves.

D The reproductive potential of the carp population is negatively impacted by outside factors.