

The Lives of Staph Analysis Questions Key

Respond to the following questions using the knowledge gained from the game.

1. What happened to your population when you had enough resources and a stable environment?

The population had a net growth of zero. It did not increase or decrease in number.

2. What events caused bacterial populations within your group to increase?

An increase in food or space and a decrease in competition.

3. What events caused bacterial populations within your group to decrease?

A decrease in food or space and an increase in competition.

4. Could you predict when a mutation would happen or what kind it would be?

No, the appearance of a mutation was random.

5. Predict what would happen if you continued to play the game for another 1–2 hours.

More patterns would appear (i.e., more adaptations would lead to increased fitness or reproductive success. Less fit populations would die out due to a lack of adaptations).

6. How would you define evolution? Consider what happened in the game in your answer.

Evolution is the change in a population over time.

7. Do individuals evolve independently or do they evolve as a population? Use evidence from the game to support your claim.

They evolve in populations, an individual will not evolve independently; evolutionary changes are accumulated and observed in populations.

8. Based on your experience during the game, how would you define the term “antibiotic”?

A medication that assists the body in destroying bacteria.

Appendix G: The Lives of Staph Analysis Questions Key

9. Based on your experience during the game, how would you define “antibiotic resistance” for bacteria?

The ability of bacteria to resist the effects of antibiotics.

10. Why is bacteria’s antibiotic resistance a problem for human beings?

We have a limited amount of antibiotics on Earth, and as time goes on and as antibiotics are misused, we will have fewer defenses against superbugs or highly resistant bacteria.

11. Predict what would happen to human beings if this resistance continues.

We will run out of medications to treat bacterial infections and there will be more fatalities related to such infections.