Evidence for Evolution

RM 1

Cell Phone Models

Evidence for Evolution

RM 3

The Story of MRSA

MRSA is an acronym that stands for **m**ethicillin-**r**esistant ***S**taphylococcus **a**ureus*. *Staphylococcus aureus* is a widespread bacterium found in the nose and on the skin of about 30% of the human population. If *Staphylococcus aureus* enters an open wound, it can cause a minor to severe infection of the skin. If the infection is not stopped, it can become life threatening or even fatal.

Cut out the story cards below and arrange them along the timeline in a logical sequence.

In 1961, Patricia Jevons, an English bacteriologist, discovers a methicillin-resistant strain of *Staphylococcus aureus* (MRSA) in English hospitals.

50% of hospital *Staphylococcus aureus* infections in the US are identified as MRSA.

British scientist Alexander Fleming discovers and isolates penicillin, the first-known antibiotic substance.

Penicillin is used in England and the US to fight *Staphylococcus aureus* infections.

2% of hospital *Staphylococcus aureus* infections in the US are identified as methicillin resistant (MRSA).

Hospitals report that 25% of *Staphylococcus aureus* infections are penicillin resistant.

The antibiotic methicillin, among others, is introduced to fight penicillin-resistant *Staphylococcus aureus* infections.

In the late 1880s, Alexander Ogston, a Scottish surgeon, identifies the bacterium *Staphylococcus aureus*.

Today, over 95% of *Staphylococcus aureus* is penicillin resistant and 60% is methicillin resistant worldwide.

Evidence for Evolution

RM 5

Evolution Questions

1. What pattern did you observe in your cell phone timeline? _____

_____

2. What pattern did you observe in your *Staphylococcus aureus* timeline? _____

_____

3. How is the pattern of change for the cell phone similar to the pattern of change for the bacterium? How is it different? Provide at least one similarity and one difference in the T-chart below.

Similarities	Differences

4. If you look up the word *evolution* in the dictionary you will see several definitions: one definition is "change over time" and a second definition is "descent with modification." Which definition is more appropriate for the cell phone example? Why? _____

_____

5. Which definition is more appropriate for the *Staphylococcus aureus* example? Why? ____

_____

6. How would you define *biological evolution*? _____

_____