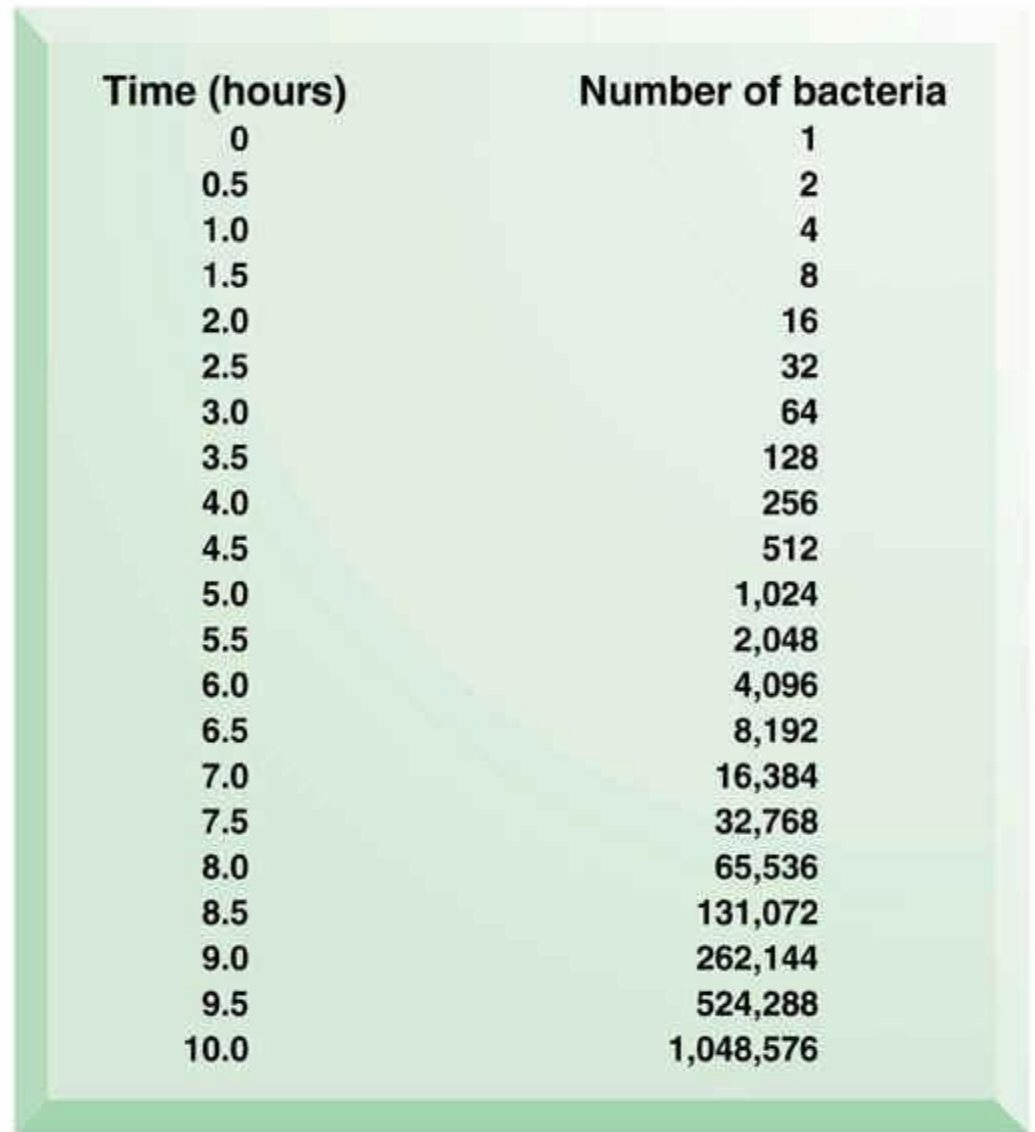


Bacteria
populations
have the
ability to
increase
exponentially



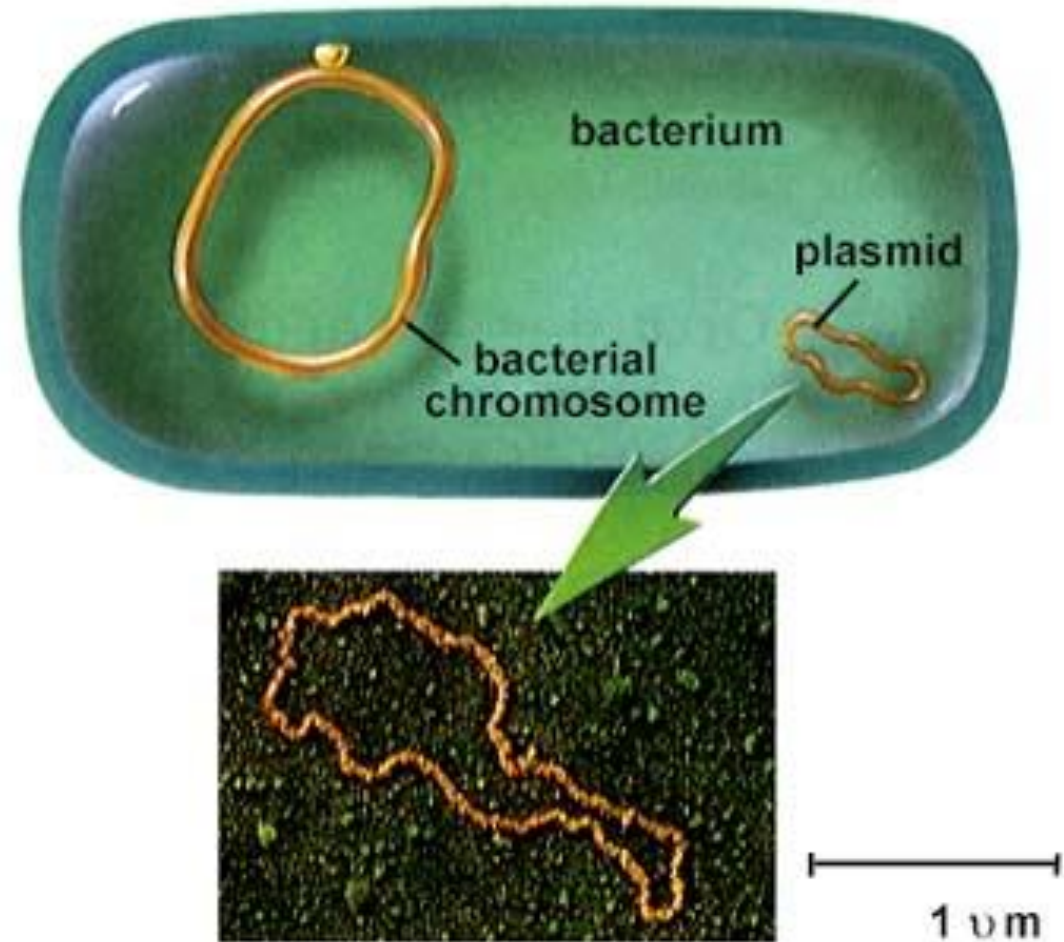
(a)

There is a “selective pressure” that causes a struggle for existence.



There is variation
in the
population.

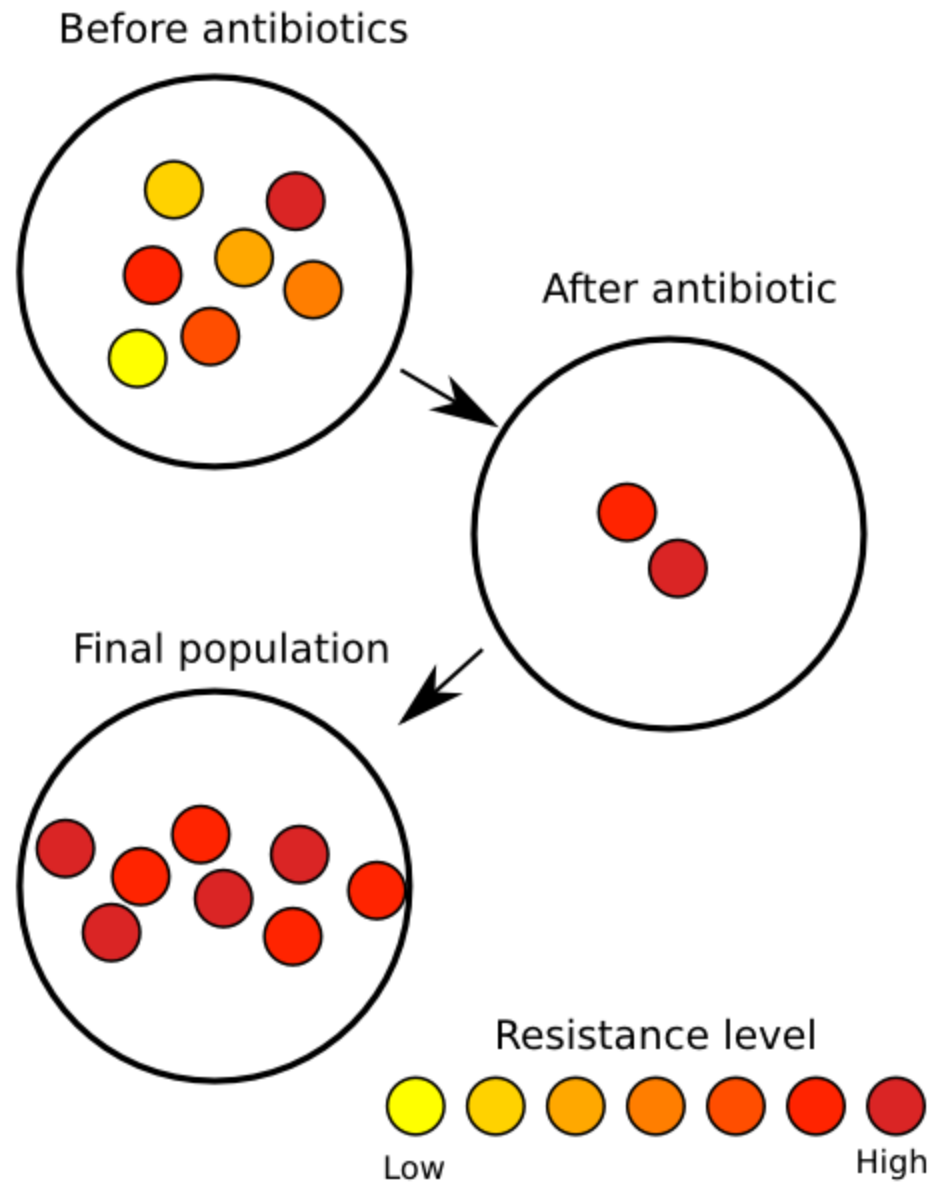
For example, *some*
of the bacteria
will have a
plasmid that
carries genes for
antibiotic
resistance.



Individuals with plasmids are better adapted to the selective pressure and leave behind more offspring.



Over generations, the gene frequency in the population changes to favor the better fit variations.

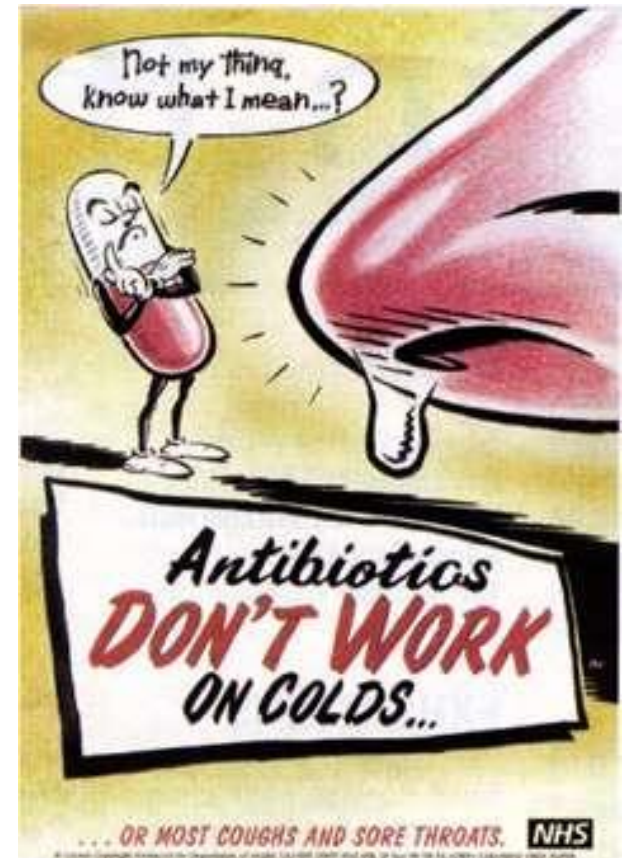


Adapted from Wikipedia (<http://en.wikipedia.org/wiki/User:Wykis>)

Pssst! Hey kid! Wanna be a Superbug...?
Stick some of this into your genome...
Even penicillin won't be able to harm you...!



It was on a short-cut through the hospital kitchens that Albert was first approached by a member of the Antibiotic Resistance.



M

Methicillin

A type of antibiotic doctors often use to treat infections.



R

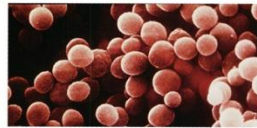
Resistant

The bacteria are resistant to methicillin. Most antibiotics are useless for treating an infection.

S

Staphylococcus aureus

The scientific name for this type of bacteria.



A

