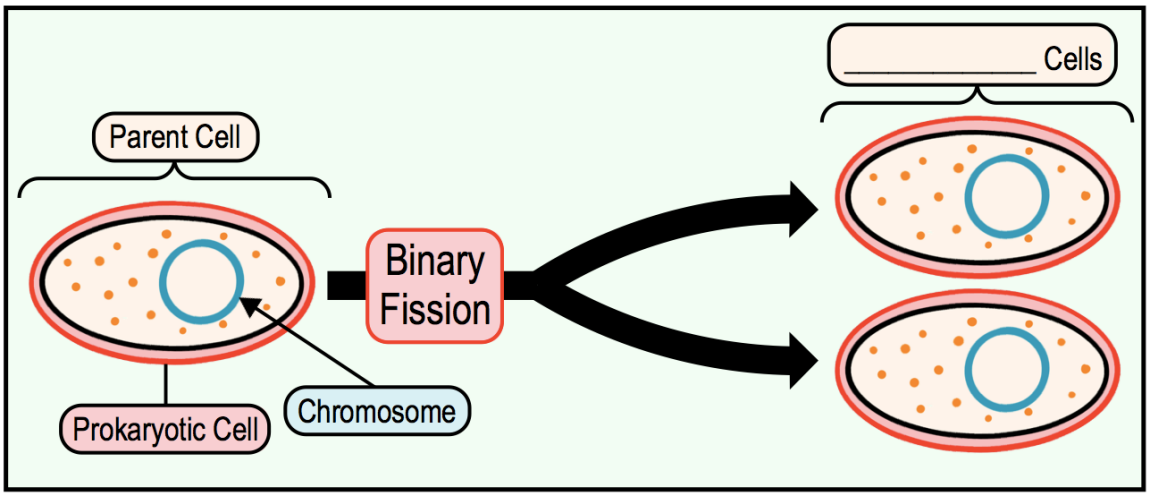
CONCEPT: BINARY FISSION

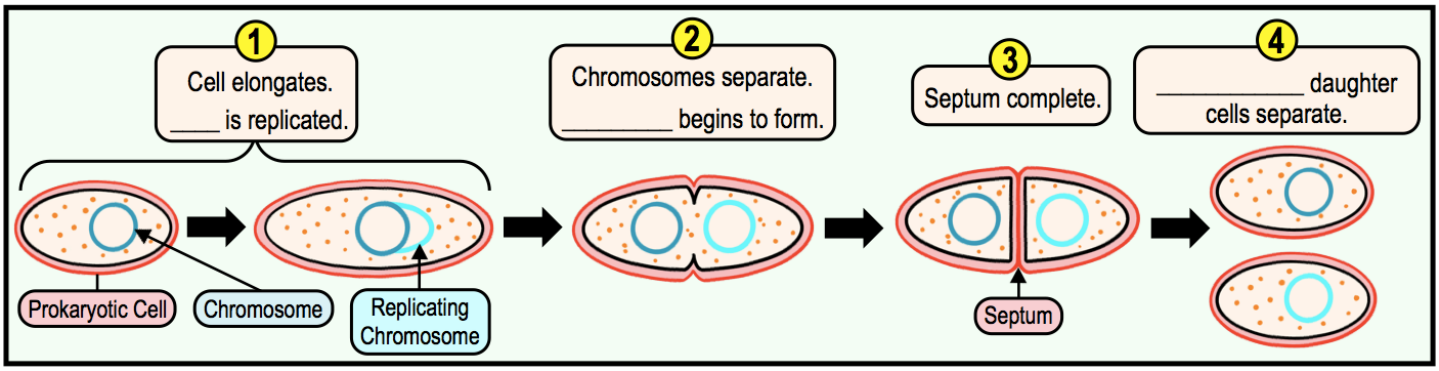
- *Recall:* Prokaryotes replicate by the process of *binary fission* BUT Eukaryotes do _____.
- _____ **Fission:** prokaryotic asexual reproduction; one cell *divides* to form _____ new *daughter cells.*
  - □ **Daughter cells:** either of the two _____ cells that form after a cell *divides*.



Steps of Binary Fission

- *Binary fission* occurs in a series of ____ steps:
  1. Cell elongates its cell envelope & _____ in overall size as the DNA is _____.
  2. Replicated DNA moves towards opposite ends of cell as the _____ forms.
     - □ **Septum:** partition that forms in the center of a *dividing cell*.
  3. *Septum* completely forms creating ____ separate cells still connected.
  4. Cells completely _____ into 2 identical *daughter cells*.

EXAMPLE: The steps of binary fission.



- The _____ that it takes a cell to undergo *binary fission* is called the *generation time.*

CONCEPT: BINARY FISSION

PRACTICE: The cellular process by which two cells arise from one is known as:

a) Conjugation.
b) Meiosis.
c) Binary fission.
d) Mitosis.

PRACTICE: The partition between daughter cells that is a result of the inward growth of the bacterial cell wall from opposite directions is known as the:

a) Z-ring.
b) Septum.
c) Fission wall.
d) Dividing factor.

PRACTICE: The time required for a cell to undergo binary fission is called the:

a) Growth phase.
b) Duplication time.
c) Fission time.
d) Generation time.