

# Reproduction in Protists

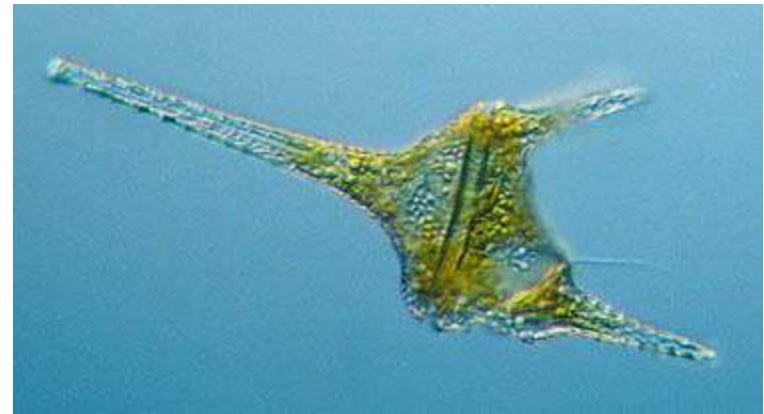
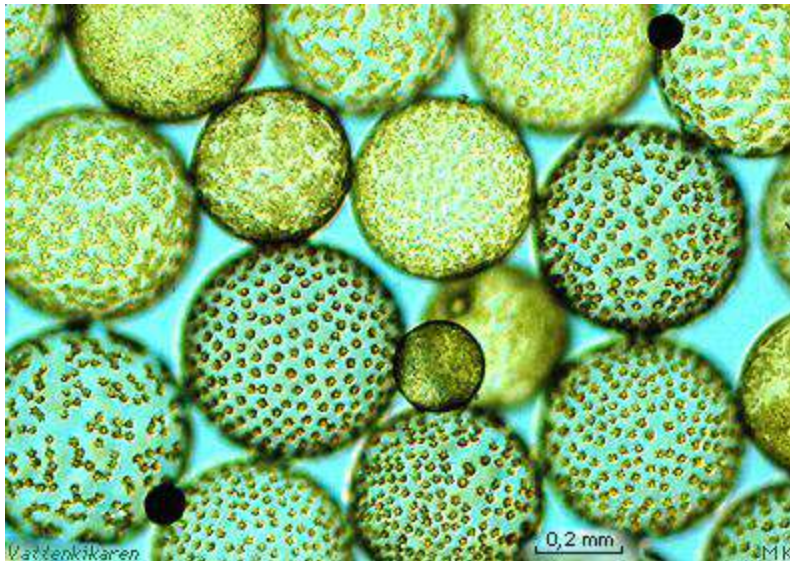


# GPS and EQ

- GPS.07.SC.C.S7L3.b. - Compare and contrast that organisms reproduce asexually and sexually (bacteria, protists, fungi, plants & animals).
- E.Q.: How do protists reproduce?

# Characteristics of Protista

- Eukaryotic (have a nucleus)
- Usually Single Celled
- Live in moist environments
- Reproduce asexually or sexually



# Three Groups of Protists



- Plant-like: Algae

- Fungus-Like: Water Molds,  
Slime Molds

Animal-Like: Protozoa

# Protist Reproduction

## Asexual



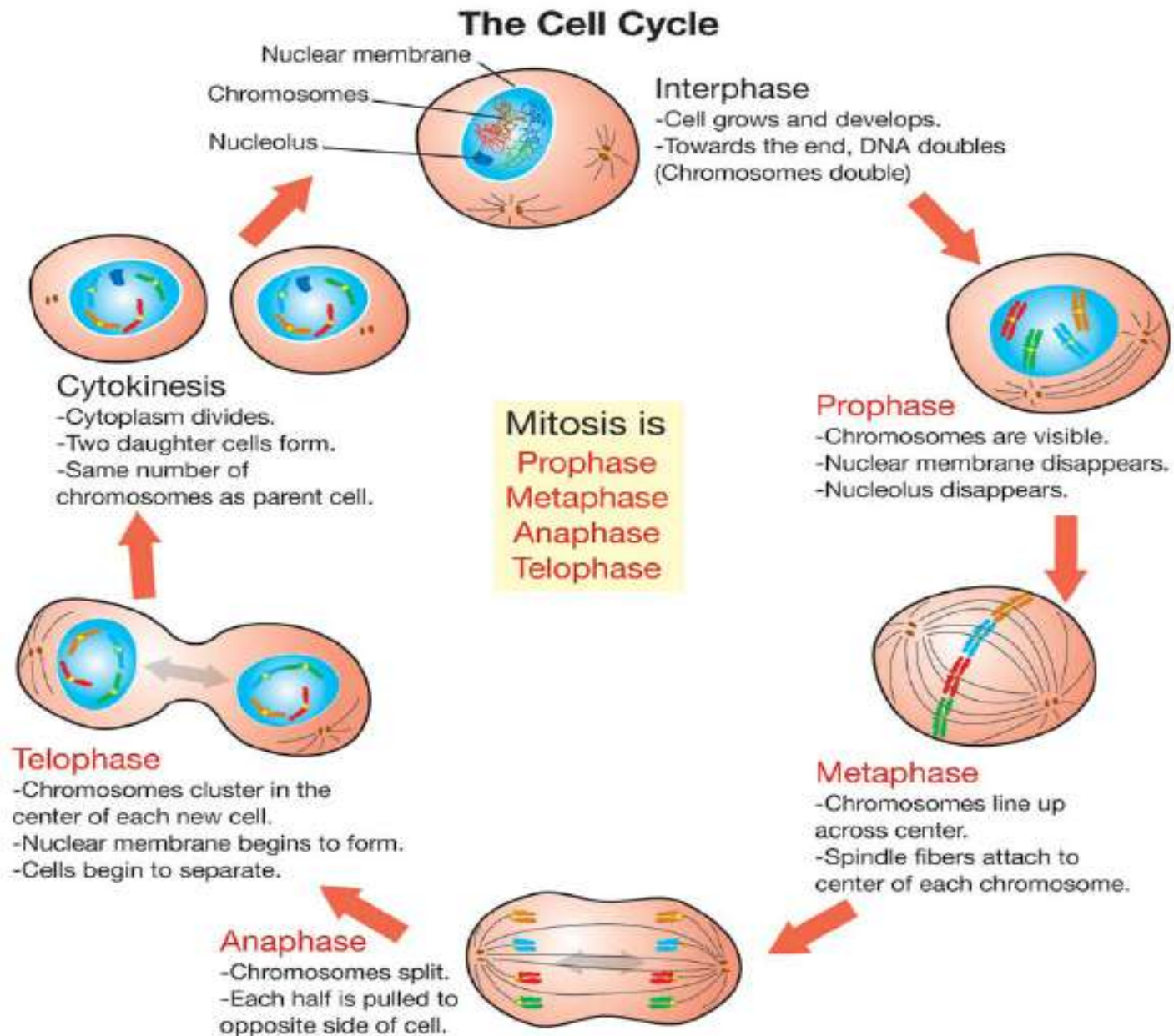
**Asexual reproduction occurs by mitosis.**

**Sexual reproduction involves the exchange of genetic material across a cytoplasmic bridge.**

## Sexual



# Mitosis: Asexual Reproduction



# Conjugation

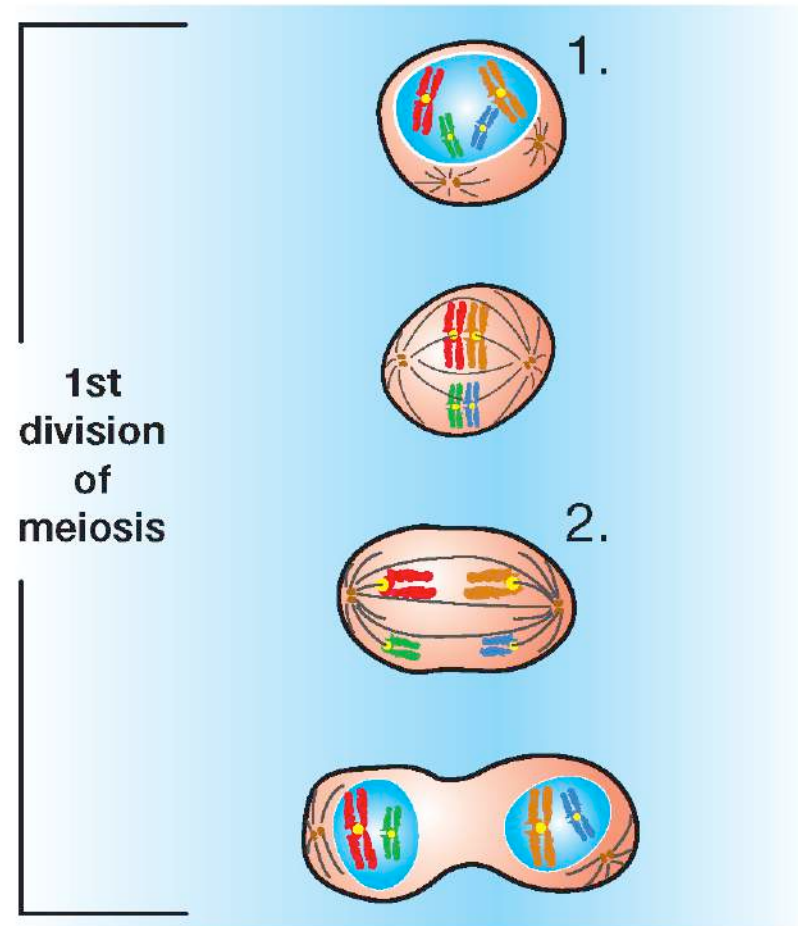
- Protists can also transfer DNA BETWEEN 2 protist cells (called conjugation).



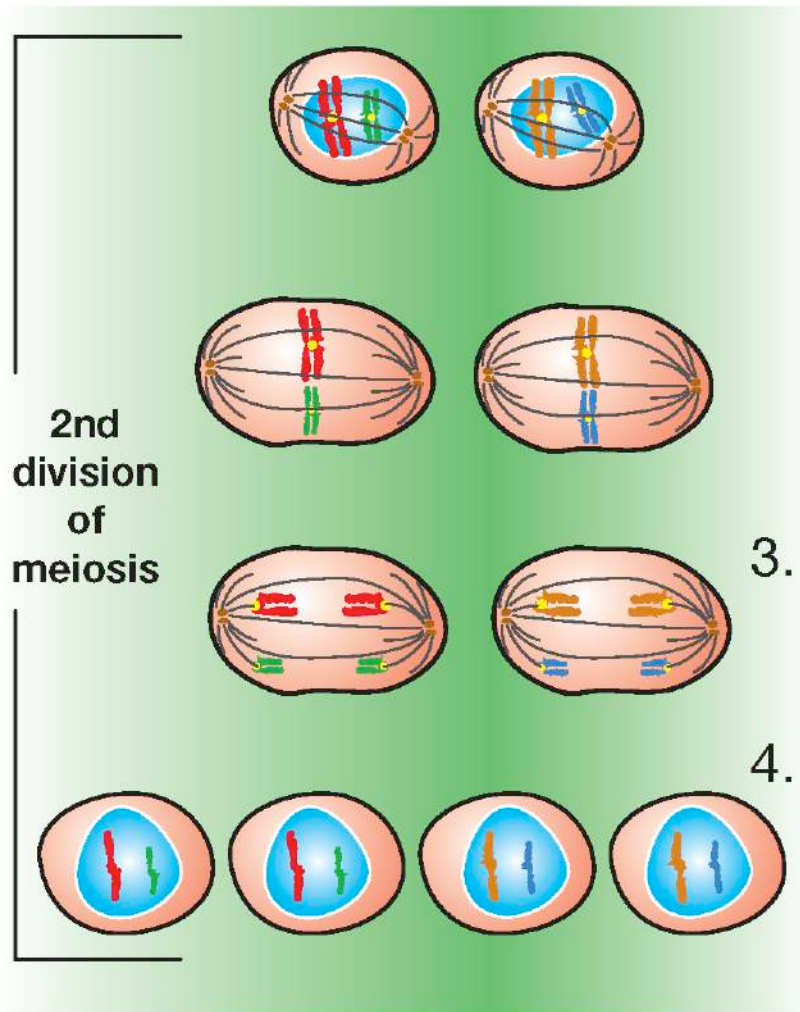
# Meiosis: Sexual Reproduction

## What happens in meiosis?

- The events in meiosis are smooth and continuous:
  - Chromosomes double and thicken.
  - Nuclear membrane disappears.
  - Homologous chromosomes line up at the cell's center.
  - Spindle fibers attach.
  - The nuclear membrane reforms.
  - Two cells form that are identical and diploid.



# What happens in meiosis?



**In the second division, the chromosomes do not double.**

- Chromosomes thicken and line up at cell's center.
- Spindle fibers attach.
- Chromosomes are pulled to opposite side of cell by spindle fibers.
- Four new cells form when the nuclear membranes reform and cells separate.
- The four new cells are unique and haploid so they have half the number of chromosomes compared to starting cells.

# Summary: Compare and Contrast Reproduction in Bacteria and Protists

