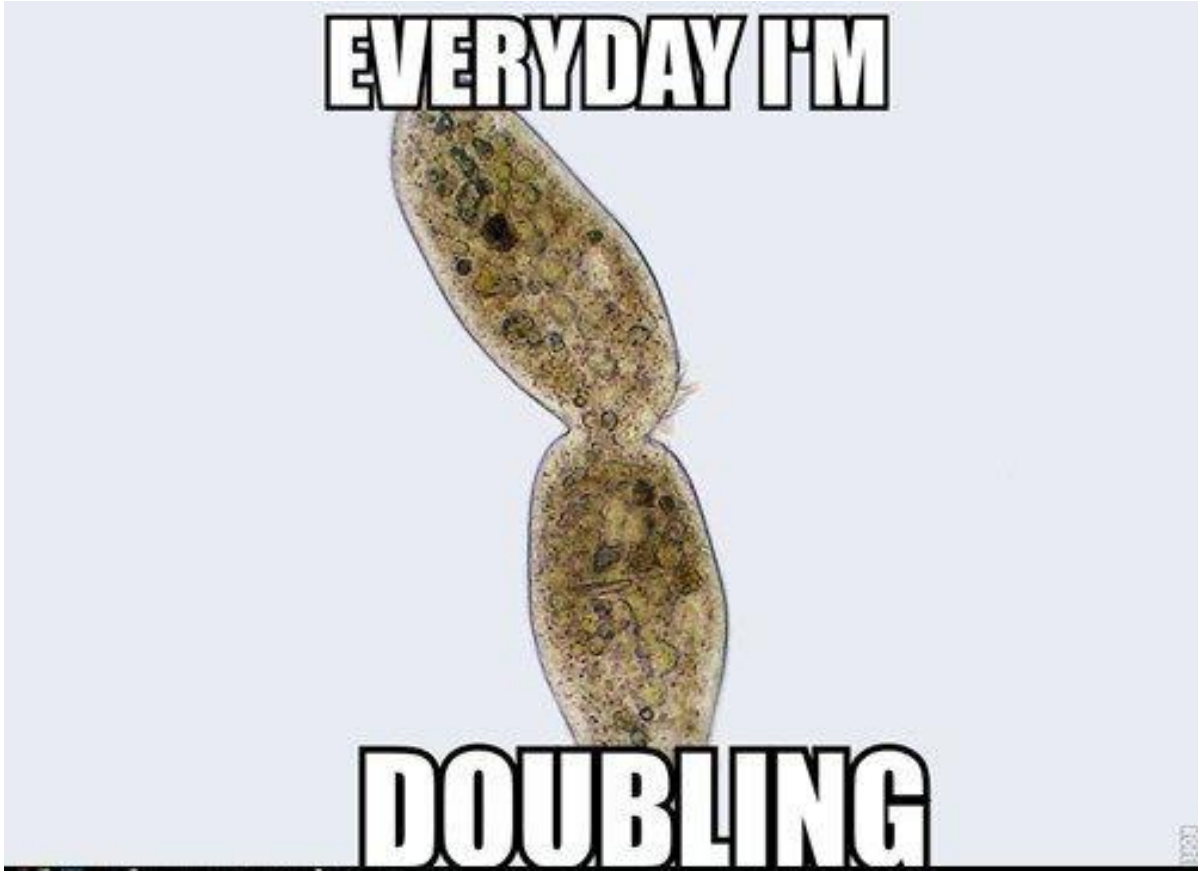
Asexual Reproduction

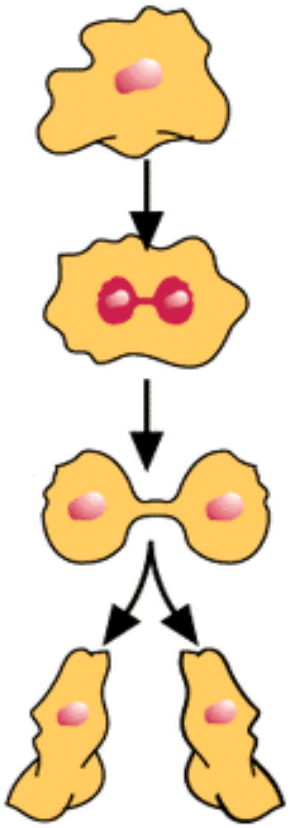


Asexual Reproduction

- Produces offspring that are genetically identical to a single parent

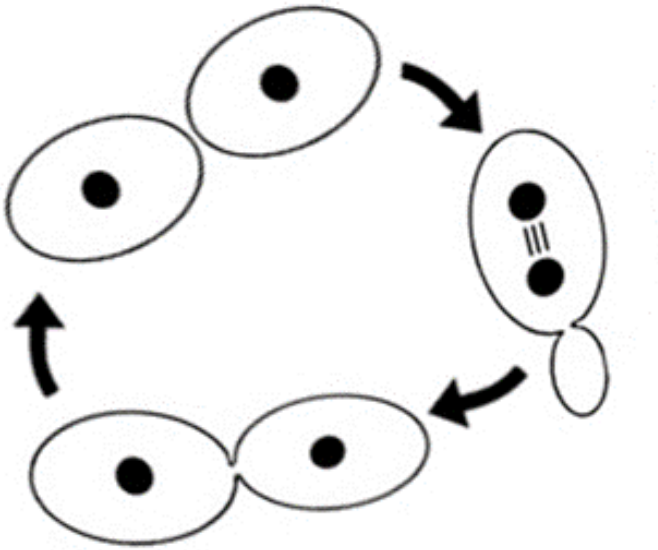
Binary Fission

- A Unicellular organism divides by mitosis to form two daughter cells of equal size.
  - Both the nucleus and the cytoplasm divide equally.
  - The chromosomes of the offspring are identical to that of the parent.
- E.g. Protists, Ameobas, paramecia, and bacteria reproduce by binary fission



Budding

- A type of asexual reproduction in which a new organism develops as an outgrowth of the parent is called budding
- E.g. yeast



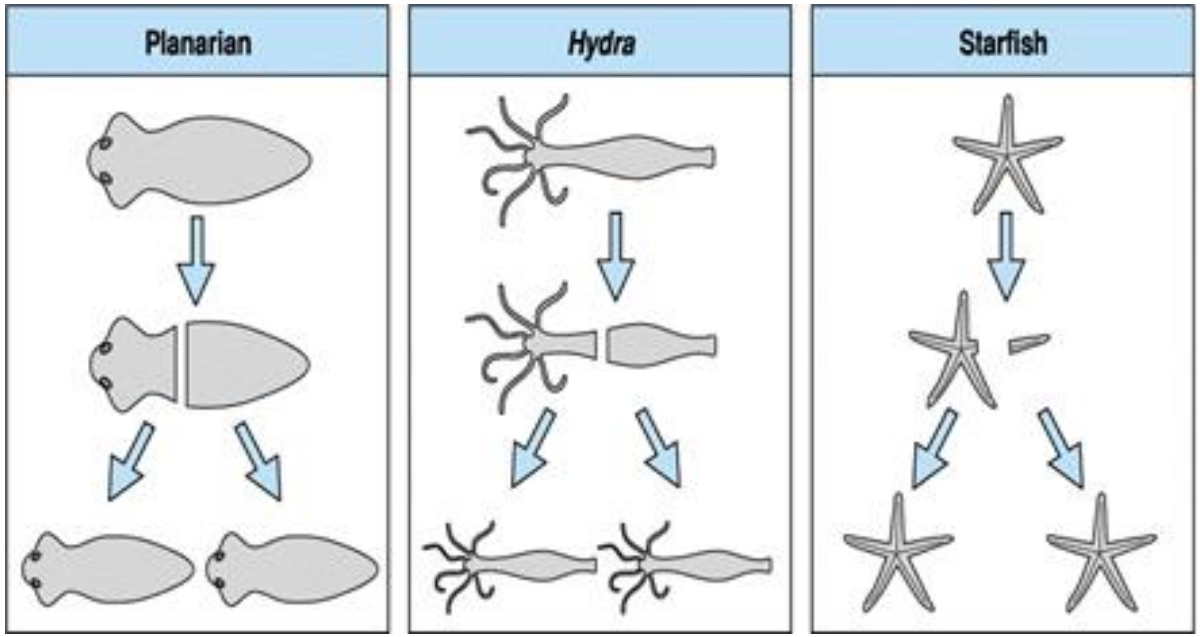
Sporulation

- Spores are specialized asexual reproductive cells that contain a nucleus and a small amount of cytoplasm

- E.g. mold

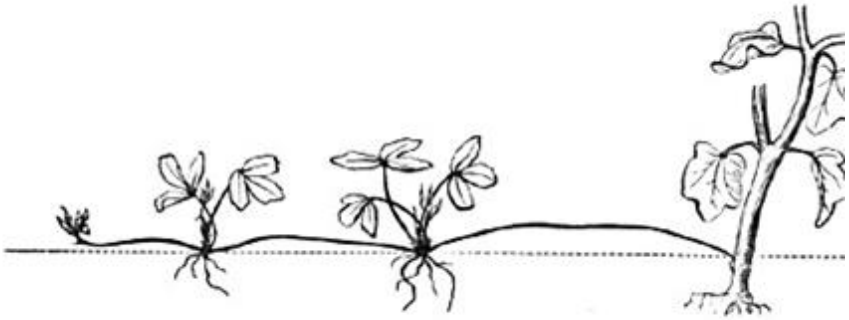
Regeneration

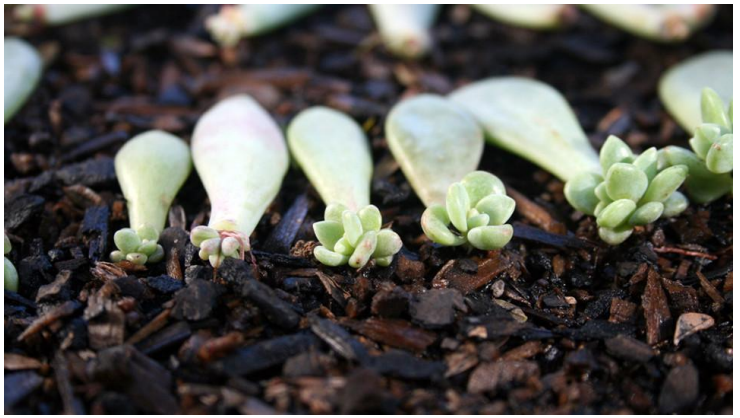
- Regeneration is the development of a new organism from a part of the parent organism.
- E.g. Starfish - a single arm can develop into a new starfish
- E.g. Planaria



Vegetative Propagation

- a part of a plant--a root, stem, or leaf, grows into a new plant.
- The new plant is exactly the same as the parent plant.





Asexual Reproduction

Advantages

- Allows animals to increase their numbers rapidly
- Energy is not required to find a mate.
- Large numbers of organisms mean that species may survive when conditions or the number of predators change.

Disadvantages

- Offspring are genetic clones. A negative mutation can make asexually produced organisms susceptible to disease and can destroy large numbers of offspring.
- Unfavorable conditions such as extreme temperatures can wipe out entire colonies.

Asexual vs. Sexual Reproduction

- Sexual – more genetic variation
  - Useful during times of stress
  - Genetic variation = better chance of survival