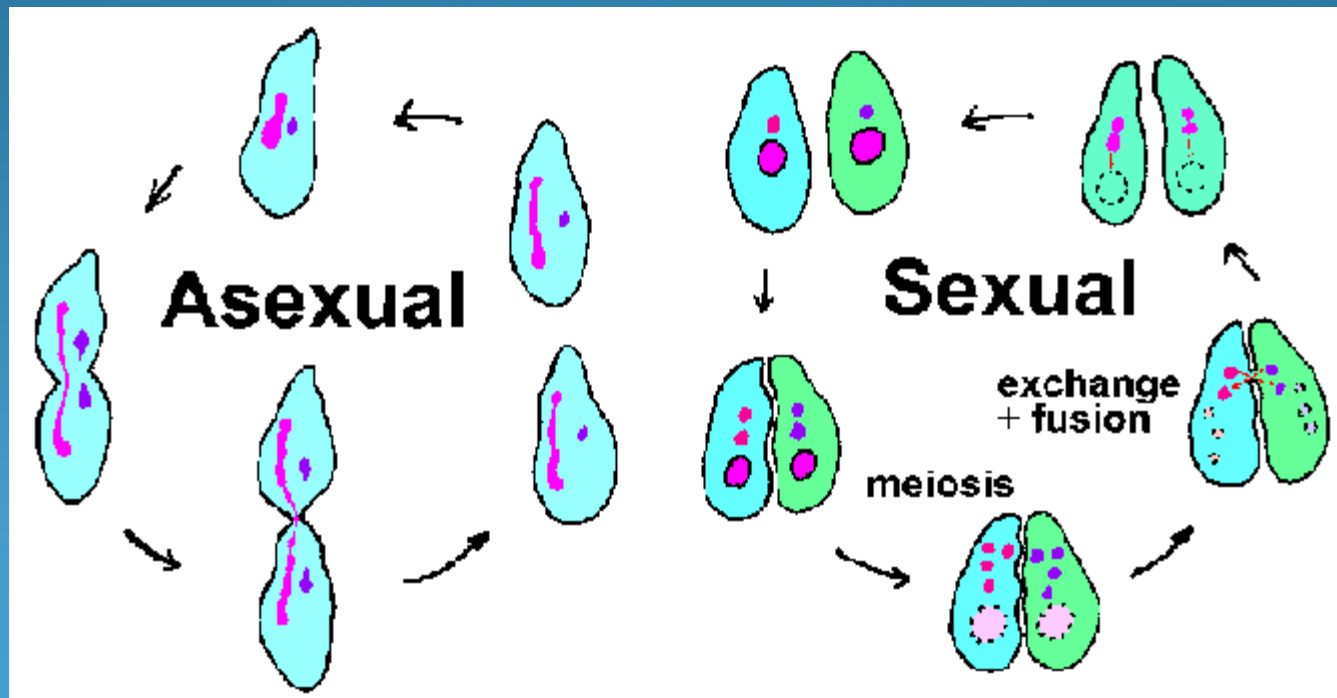
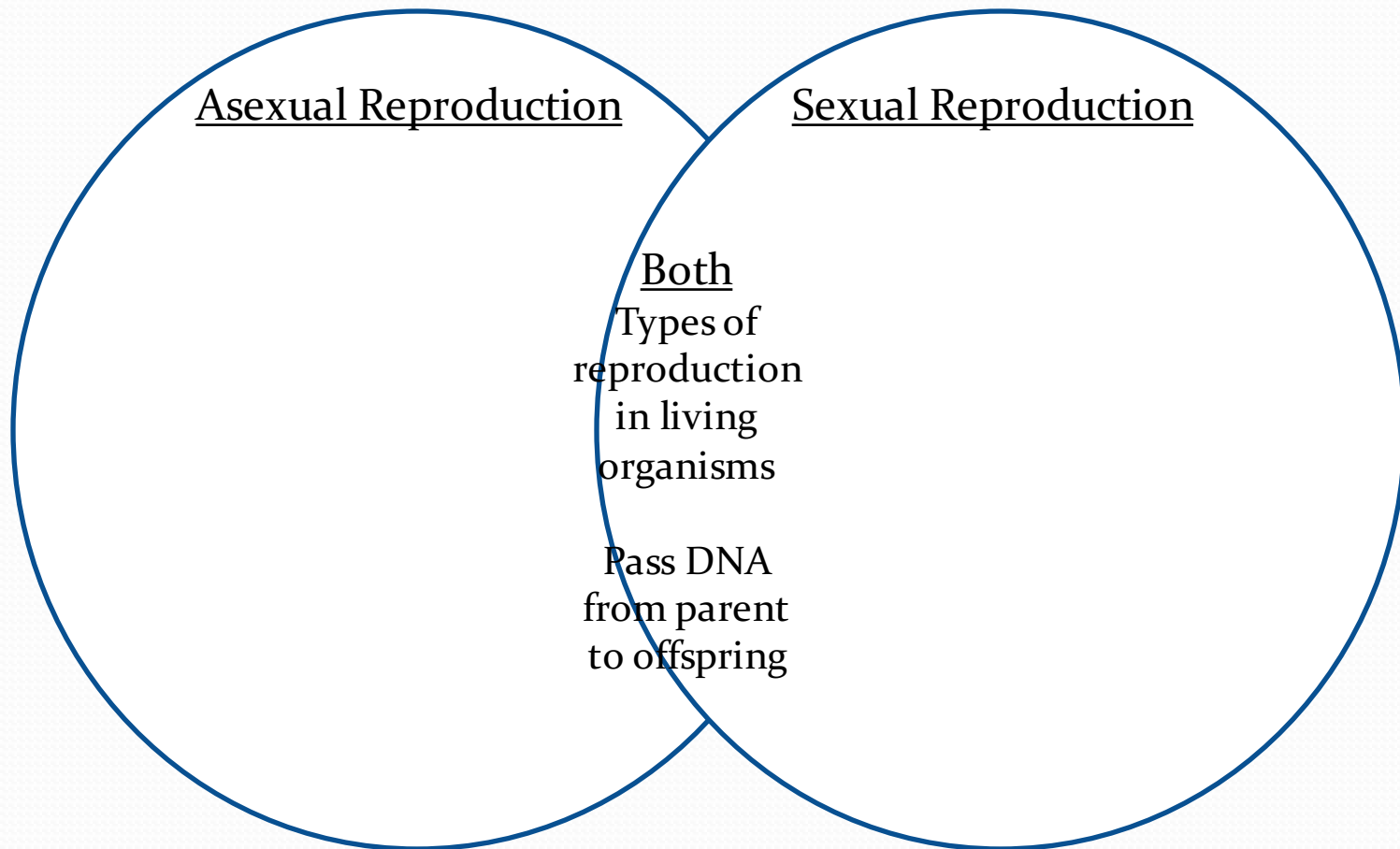


Asexual vs. Sexual Reproduction

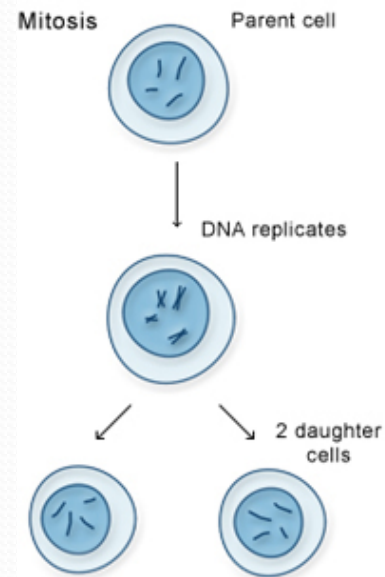


Make a Venn Diagram



Asexual Reproduction

- Requires only one parent
- Offspring have 100% the same chromosomes as the parent.
 - In other words, the offspring are exact “clones” of the parent.
- Most unicellular organisms reproduce this way.
- Mitosis
- [Movie](#)



Asexual Reproduction

- Binary Fission
 - Bacteria
 - Protists

Binary fission is a form of asexual reproduction where every organelle is copied and the organism divides in two.



Asexual Reproduction

- Plant cuttings

Vegetative reproduction is a type of asexual reproduction in plants that relies on multicellular structures formed by the parent plant. It has long been exploited in horticulture and agriculture, with various methods employed to multiply stocks of plants.



Asexual Reproduction

- Budding
 - Hydra
 - [Movie](#)

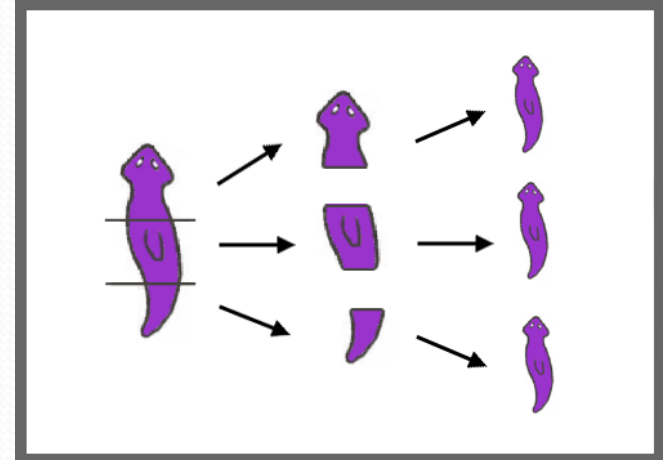
Budding is a means of asexual reproduction whereby a new individual develops from an outgrowth of a parent, splits off, and lives independently.



Asexual Reproduction

- Fragmentation

Fragmentation is a means of asexual reproduction whereby a single parent breaks into parts that regenerate into whole new individuals.



Asexual Reproduction

- Regeneration

Regeneration occurs when a body part has broken off and the organism grows a new one.



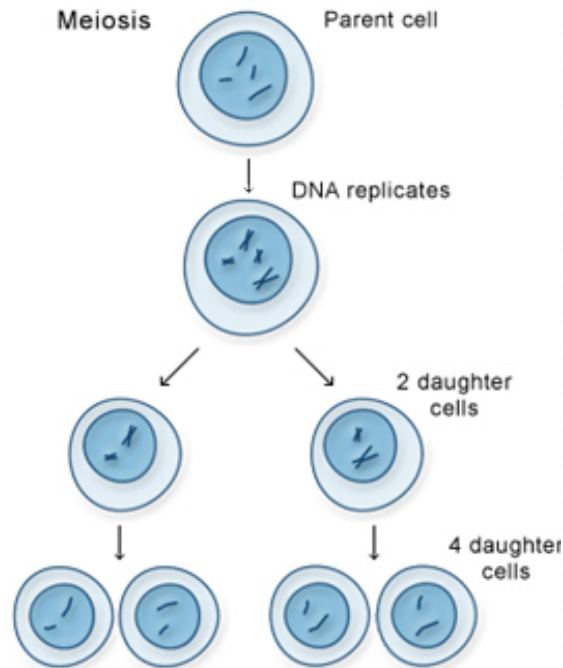
Asexual Reproduction

- Examples of organisms that reproduce asexually
 - Hydra
 - Sea Star
 - Strawberry
 - Archaeobacteria
 - Eubacteria
 - Euglena
 - Paramecium
 - Yeast



Sexual Reproduction

- Requires two parents that each share $\frac{1}{2}$ of the genetic information.
 - Offspring share the characteristics of each parent.
 - Meiosis



Sexual Reproduction

- All the members of the Animal Kingdom
 - Fish
 - Mammals
 - Amphibians
 - Birds
 - Reptiles
 - Insects
 - Crustaceans



Sexual Reproduction



- Plant Kingdom
 - Flowers are the reproductive organs of plants.

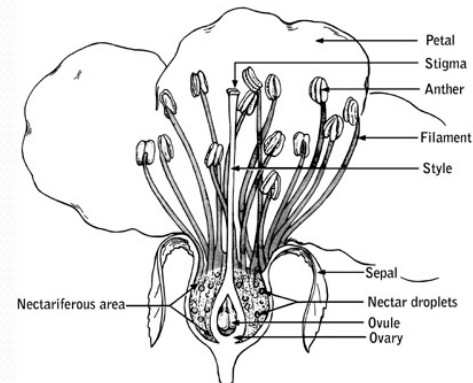


Male flower



Female flower

- Some flowers have both male and female reproductive organs on the same flower.



Sexual Reproduction

- Examples of organisms that reproduce sexually

- Chickens

- Iguanas

- Lobsters

- Sharks

- Humans

- Butterflies

- Sunflowers

- Roses



Sexual Reproduction

- Happens 2 ways
 - Internally (inside)
 - The egg is fertilized by sperm inside the female
 - Mammals, birds, reptiles, insects, spiders
 - Externally (outside)
 - The egg is fertilized by sperm outside the female
 - The female lays the eggs and then the male fertilizes them.
 - Fish and some amphibians
 - Plants and fungi (pollen and spores)

