

Tying it all Together

(Asexual vs. Sexual Reproduction & Mitosis vs. Meiosis)

creates 2 identical daughter cells -- 1 organism needed -- offspring get $\frac{1}{2}$ of DNA from each parent --
 cell doubles DNA and splits twice -- sex cells not needed -- only occurs in sex cells -- sex cells needed (sperm & egg) -
 cells are diploid (2n) -- makes somatic (body) cells -- 2 organisms of the same species needed -- cells are haploid (n)-
 parent contributes 100% of DNA -- produces sex cells (sperm & egg) -- results in genetically different offspring --
 cells double DNA then splits -- purpose to repair cells/replace cells -- creates 4 genetically different daughter cells --
 happens all over the body (except sex cells) -- ways to reproduce are binary fission, budding, fragmentation) --
 produces cells with $\frac{1}{2}$ of DNA -- offspring identical to parent --

HOW an organism reproduces

Asexual (A) 5

- 1 organism needed
- sex cells not needed
- parent gives 100% of DNA
- way to reproduce are binary fission, budding, fragmentation
- offspring identical to parent

Sexual (S) 4

- offspring get $\frac{1}{2}$ of DNA from each parent
- sex cells needed (sperm) (egg)
- 2 organisms of same species needed
- results in genetically different offspring

What goes on INSIDE the body

(in the cells of an organism)

Mitosis (mi) 6

- Creates 2 identical daughter cells
- cells are diploid (2n)
- makes body cells
- cells double DNA then splits
- purpose to repair/replace cells
- happens all over the body (except sex cells)

Meiosis (me) 6

- cells double DNA and splits twice
- only occurs in sex cells
- cells are haploid (n)
- produces sex cells (sperm) (egg)
- creates 4 genetically different daughter cells
- produces cells w/ $\frac{1}{2}$ of DNA