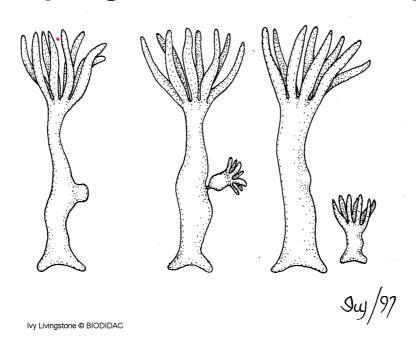


Asexual Reproduction

- <u>usually</u> the method of choice for simple organisms (not always)
- the simplest form, the mother cell duplicates and becomes 2 daughter cells
- the offspring are identical to the parent



Sexual Reproduction

- common in multicellular organisms
- genetic info comes from 2 sources

- offspring not exactly like parents



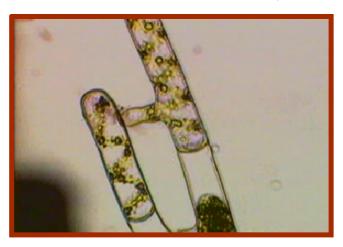




Conjugation

- form of sexual reproductioncan occur in bacteria
- two bacteria cells come in contact with one another and share plasmids

Ly genetic Material



Hermaphrodites

- an organism that creates both male and female sex cells
- it is not common for them to self-fertilize
- Figure 4, p 203 in textbook

http://www.youtube.com/watch?v=MpblUehi9Dk&feature=fvsr

http://www.cbc.ca/sports/amateur/story/2009/09/10/sp-iaaf-athletics-semenya.html

http://www.youtube.com/watch?v=OTbnhMNviuA

External Fertilization

- the sex cells unite outside the female's body
 - i.e. Fish

Internal Fertilization

- sex cells unite inside the female's body
 - i.e. Human's natural conception

Case Study p. 202 a-p

Case Study p 202 Answers

A) Mother Cell = the cell marked "a"

Daughter Cell = the cells marked "d"

Left-mother Right deaghter

B) Through asexual reproduction, the new cells would be identical to the old ones in both genetic and physical comparisons.

C) Through sexual reproduction the new cells would have half the genetic material from any one parent.

D) Sexual Reproduction

- usually occurs in multicellular organisms
- offspring are not identical to parent cells
- requires genetic material from 2 cells

Asexual Reproduction

- usually occurs in simple organisms
- offspring exactly like parent cell
- genetic material comes from 1 cell

- E) Organisms that reproduce sexually may adapt better because they are getting genetic info from 2 sources rather then 1. This gives the offspring more options in terms of what it can do.
- F) Through conjugation bacteria can quickly pick up new genes that allow them to do new things. (they are upgrading)

G) Conjugation

- only pieces of genetic info are shared
- it occurs quickly

Sexual Reproduction (humans)

- half of any one parent's genetic info is share
- slow process, approximately 9 months

H) Fertilizing other eggs varies the gene pool and provides more possibilities for each organism.

DanePaul is amazing, I love him .. Write this down, class.

i) Worms are slow, do not see well and live in the ground. Being hermaphroditic allows them to vary their gene pool. K) Internal occurs inside the female's body External occurs outside their body

L) 23 Chromosomes can be found in both the sperm and the egg.

M) Summertime brings more food and resources for reproduction, therefore being female in the summer makes use of these benefits.

- N) No, asexual reproduction means they are exact copies of the original which in this case are females.
- O) Reproducing sexually varies the gene pool.
-) Asexually is
 - quick
 - you don't have to find a mate
 - It also guarantees what the offspring will be.

Sexually provides variability for the next year's generation.



Homologous Chromosomes carry genes that code for the same trait on the same part of the chromosome. One comes from mom and the other from dad. They are similar in shape and size.

Meiosis

Cells that divide by mitosis are known as somatic cells.

muscle, brain cells

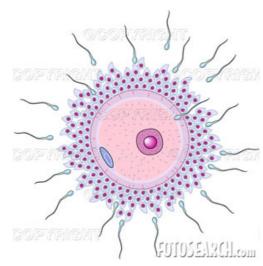


They are diploid, which means that they have the full amount of chromosomes. Also called 2n..

Hu mans

→ 46 chromosomes

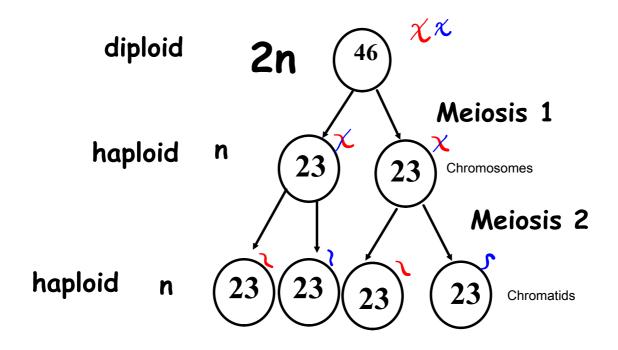
Reproductive cells produce sex cells that contain only half the number of chromosomes through a process called meiosis.

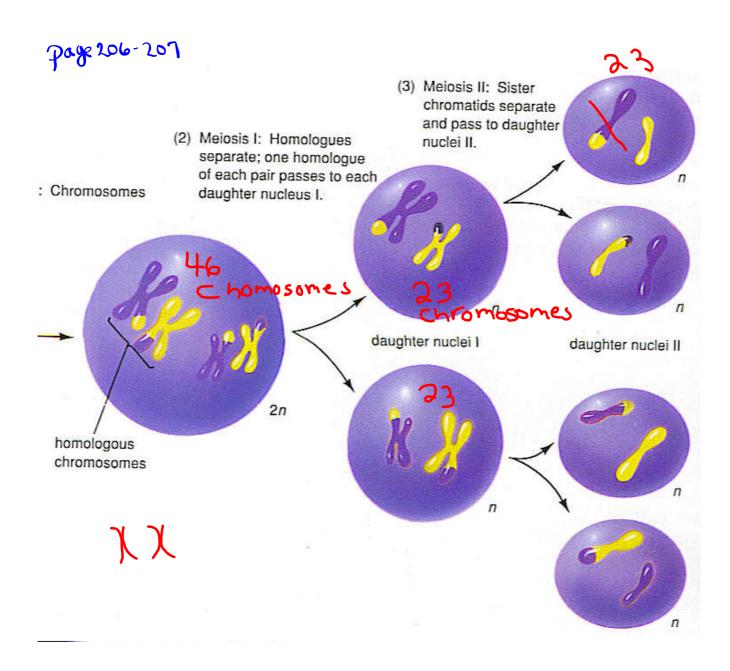


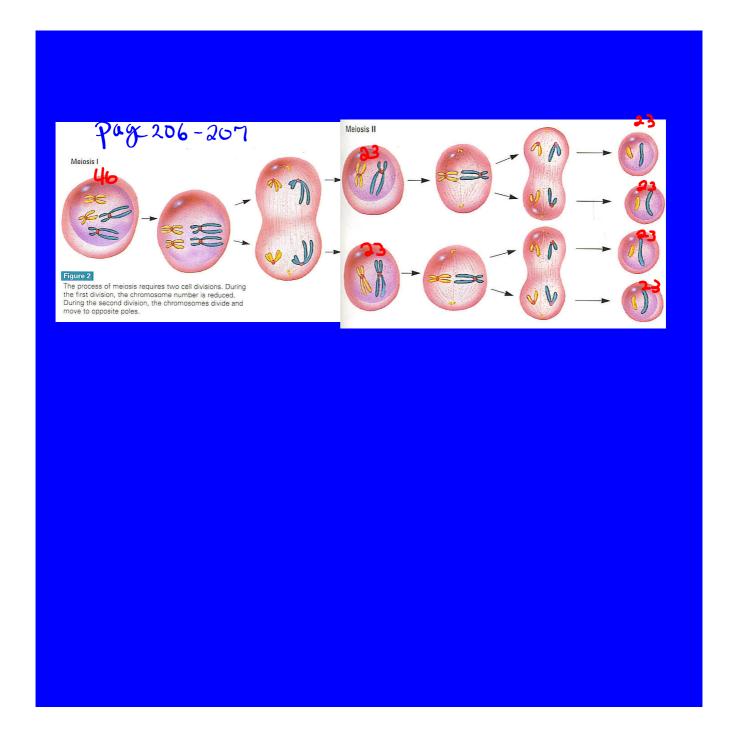
They are haploid, which means they only have half the chromosome number.
Also called n

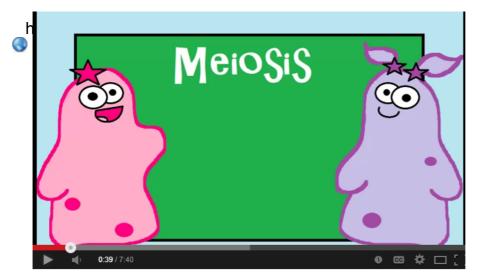
All important

Meiosis has two stages. In the first stage, you go from 46 chromosomes to 23 chromosomes (the homologous chromosomes go to opposite poles). In the second part, the chromosomes divide (just like mitosis). The end result is 4 daughter cells.









Meiosis: The Great Divide

