1 | Cell Reproduction

How Cells Make New Cells

=> Cell division is used as a process for asexual production, and growth & development + tissue renewal.

At some point, stuff ends up in different positions and that causes the specialization of cells. (Outside cells become skin cells, etc.)

Most cell division results in genetically identical daughter cell. Importantly, *most*: meaning that there is a critical difference between KBhBIO101Meiosis and KBhBIO101Mitosis.

1.1 | Mitosis

What you think of as ”cell division”. It takes somatic cells — ”normal” cells (not sperm/egg cells) — and makes two somatic cells with the same DNA; essentially cloning the somatic cell. Basically, all cells divide this way *except* for reproductive cells. For more, see KBhBIO101Mitosis.

1.2 | Meiosis

Meiosis is the process by which gametes (”sperm and egg cells”) becomes *created*. NOTE! Not the word ”divided”, because gametes comes from the division of germline cells. Unlike mitosis, the 23 **pairs** of chromosome in the germline cells gets randomly mixed (see link for details) and result in two somatic cells with 23 chromosomes each. Why? When the sperm and egg connect together, they pair up and result back into 23 chromosome pairs for the child’s gamete cells. See KBhBIO101Meiosis.

<!– Also, know what…

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is doing.

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To form a pair of sister chromatids: genetic material is duplicated as part of KBhBIO101DNAReplication.

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You get a set of chromatids for each chromosome. If the chromosome gets over-duplicated, you don’t have a lot of fun: 18 repeat => down’s syndrome.

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