

**Source:** [KBhBIO101CellCycle](#)

# 1 | Meiosis

Meiosis is the process by which sex cells (gametes cells) are produced. These cells have only 23 chromosomes (compared to somatic cell's 23 *pairs*), and they contain a variety of mechanisms for genetic variation.

Meiosis happens in two phases, which happens each in 4 phases:

## 1.1 | Meiosis 1

The purpose of meiosis 1 is to take the 23 *pairs* of 2-chromatid chromosomes in germline cells (2n diploid, contains two sets of homologous chromosomes) and mix them to separate into two cells containing 23 singular 2-chromatid chromosomes (1n haploid, contains only one set of genes).

- **Prophase 1:** the starting cell, a diploid, dissolves its nucleus and genetic information flows out. Also, b
- **Metaphase 1:** homologous PAIRS of chromosomes (**note!** pairs!!! not the chromosomes) line up along the metaphase plate, forming a double-filed lines
- **Anaphase 1:** separate the homologous pairs to the opposite ends of the cell
- **Telophase 1:** the sister chromatids

## 1.2 | Meiosis 2

The 23 2-chromatid Chromosomes becomes separated into two more cells each with 23 1-chromatids.