*This is the **Foundation Separate** version — Higher Tier content has been removed.*

Meiosis is the cell division that produces gametes (sex cells). It generates genetic variation essential for evolution.

- Meiosis produces FOUR genetically DIFFERENT haploid cells from one diploid parent cell.
- Haploid: containing only one set of chromosomes (23 in humans — one from each pair).
- During fertilisation, two haploid gametes fuse → diploid zygote (46 chromosomes).
- Meiosis involves TWO divisions: Meiosis I separates homologous chromosome pairs; Meiosis II separates sister chromatids.

Key Terms

Meiosis	Cell division producing 4 genetically DIFFERENT haploid cells — for sexual reproduction
Haploid	Containing one set of chromosomes — 23 in human gametes
Diploid	Containing two sets of chromosomes — 46 in human body cells

■ **Exam Tip:** Meiosis vs mitosis: MITOSIS = 2 identical DIPLOID cells. MEIOSIS = 4 DIFFERENT HAPLOID cells. In an exam: if asked what type of cell division produces gametes, ALWAYS say meiosis.