



Chromosomal theory of inheritance

- 1** What does the Chromosome Theory of Inheritance state?
 - a) Traits are inherited through RNA molecules.
 - b) Genes are located on chromosomes, which segregate during meiosis.
 - c) All traits are passed through mitochondrial DNA.
 - d) Genes are always inherited in pairs.
- 2** Which scientist used fruit flies to study inheritance patterns?
 - a) Gregor Mendel
 - b) Walter Sutton
 - c) Theodor Boveri
 - d) Thomas Hunt Morgan
- 3** What is 'crossing over'?
 - a) The exchange of entire chromosomes between cells.
 - b) The division of chromosomes into chromatids.
 - c) The exchange of segments between homologous chromosomes.
 - d) The splitting of centromeres during mitosis.
- 4** Why are some genes called 'linked genes'?
 - a) They are located on different chromosomes.
 - b) They always cross over during meiosis.
 - c) They are located close together on the same chromosome and inherited together.
 - d) They only appear in fruit flies.
- 5** Why it is crucial that crossing over happens between homologous chromosomes?

