

Source: [KBhBIO101Meiosis](#)

1 | Genetic Variation

There are two main ways by which genetic variation is introduced to a cell cycle. Namely, **crossing over** and **independent assortment**.

1.1 | Crossing over

=> The process by which genetic information between **homologous** (similar) chromosomes are exchanged.

During [KBhBIO101Meiosis](#)'s (critically, ONLY meiosis') metaphase 1, homologous chromosomes pair with each other and exchange like segments of their genetic material.

In this fashion,go