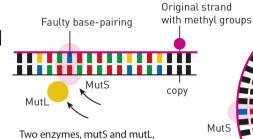
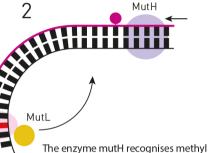
## Mismatch repair

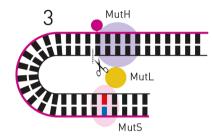
When DNA is copied during cell division, mismatching nucleotides are sometimes incorporated into the new strand. Out of a thousand such mistakes, mismatch repair fixes all but one.



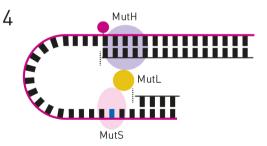
Two enzymes, mutS and mutL, detect the mismatch in DNA.



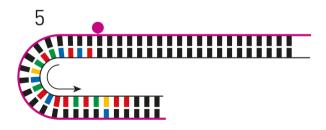
groups on DNA. Only the original strand, which acted as a template during the copying process, will have methyl groups attached to it.



The faulty copy is cut.



The mismatch is removed.



DNA polymerase fills in the gap and DNA ligase seals the DNA strand.