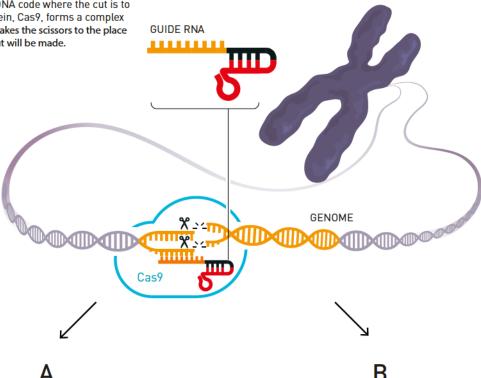
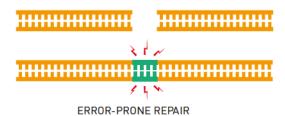
The CRISPR/Cas9 genetic scissors

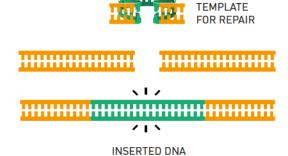
When researchers are going to edit a genome using the genetic scissors, they artificially construct a guide RNA, which matches the DNA code where the cut is to be made. The scissor protein, Cas9, forms a complex with the guide RNA, which takes the scissors to the place in the genome where the cut will be made.



Researchers can allow the cell itself to repair the cut in the DNA. In most cases, this leads to the gene's function being turned off.



If the researchers want to insert, repair or edit a gene, they can specially design a small DNA template for this. The cell will use the template when it repairs the cut in the genome, so the code in the genome is changed.



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