

*Nucleic Acid Structure and General Features: I am not sure about definitions among DNA, gene, chromosome, and genome. I think the genome is made of lot of DNA, and DNA is made of genes. However, I have no idea about a chromosome. What is it?*

A chromosome is an individual molecule of DNA that carries essential information on it for the synthesis of biological molecules. That chromosome has regions of information in it that can be interpreted as unique instructions -- those are genes. All organisms have at least one chromosome, and it can be a linear molecule or a circular one. The chromosome(s) that an organism possesses represent its genome, or the collection of all its hereditary information (DNA). So for a single-celled organism like *E. coli*, its genome consists of a single circular chromosome, which is in turn made of DNA and carries several thousand genes. But for humans, our genomes are spread out over 46 different linear chromosomes (23 that we got from our mother and 23 that we got from our father). And like *E. coli*, each one of our chromosomes is made of DNA and carries thousands and thousands of genes.

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