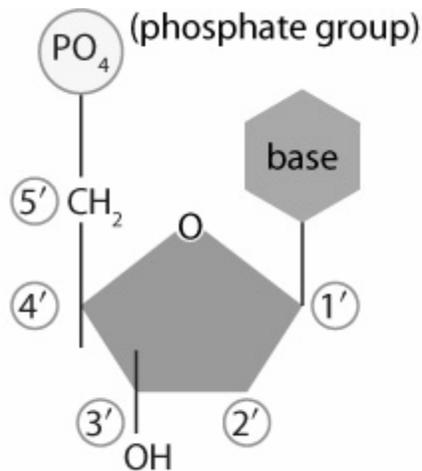
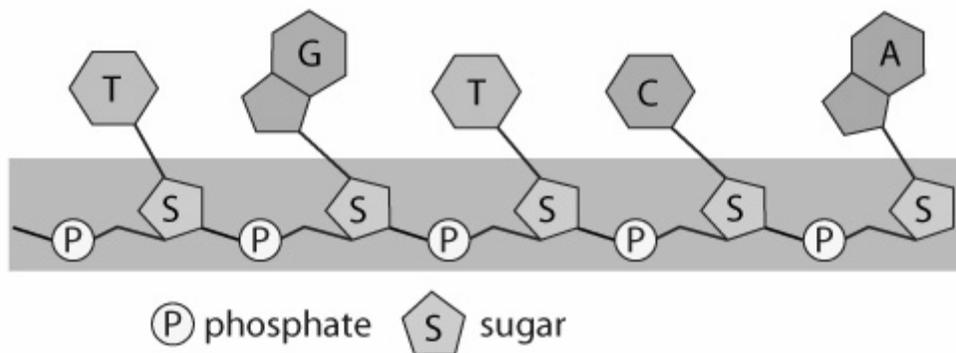


DNA Nucleotide and Sugar-Phosphate Backbone



The general structure of a DNA nucleotide. An RNA nucleotide has an additional oxygen molecule in the five-carbon sugar ring. Notice the numbering of the carbon atoms on the sugar molecule. The five carbon atoms of the sugar of the nucleotide are numbered 1' to 5', and they proceed clockwise from the oxygen atom. The prime symbol (') indicates that the carbon belongs to the sugar rather than to the base.



Nucleotides are joined together in a long chain. The “backbone” of the chain is made up of alternating sugar and phosphate groups that are joined by chemical bonds. The nitrogenous bases project out from the sugar-phosphate backbone.