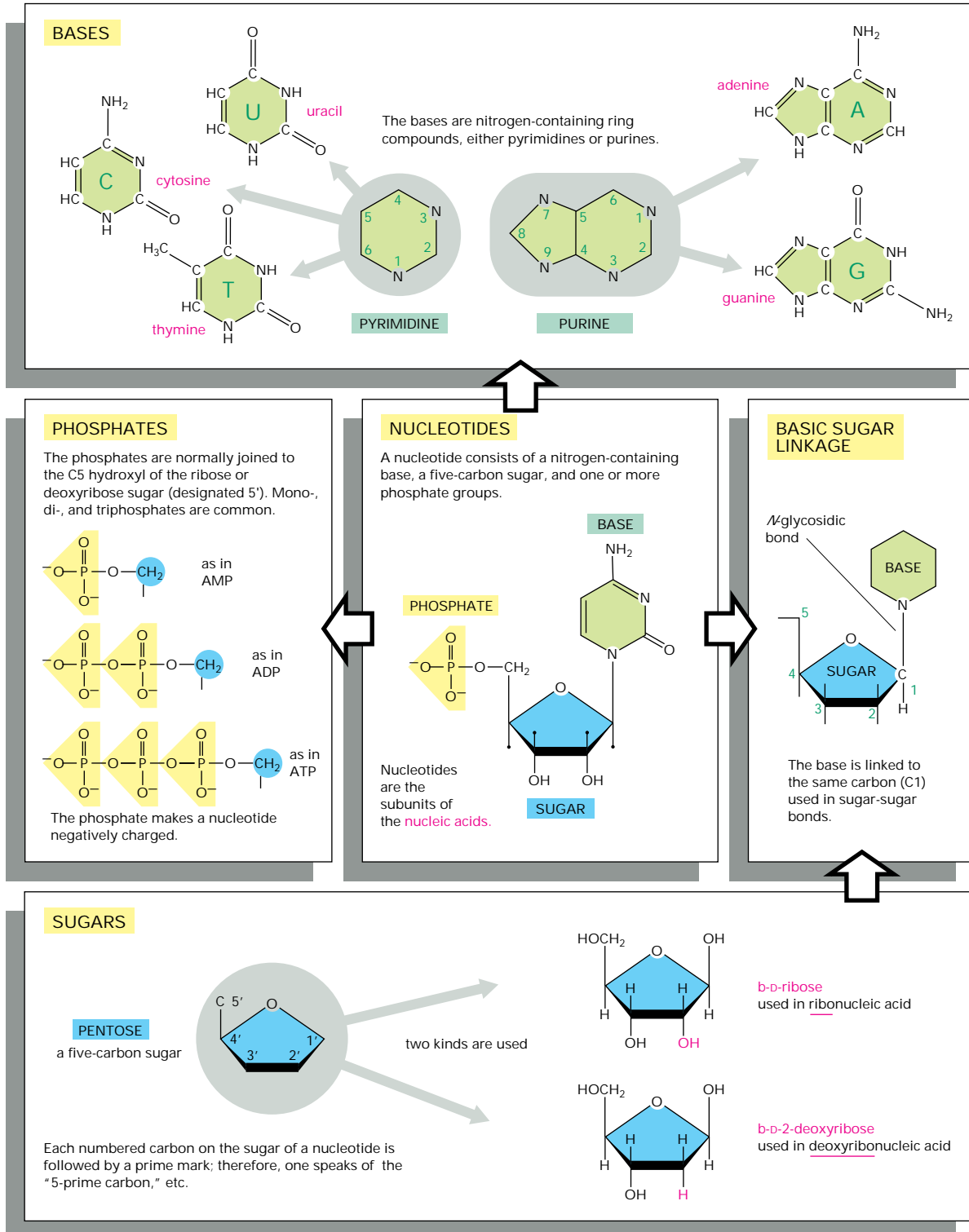


Survey of Nucleotides - Part 1

©1998 by Alberts, Bray, Johnson, Lewis, Raff, Roberts, Walter <http://www.essentialcellbiology.com>
Published by Garland Publishing, a member of the Taylor & Francis Group.



Survey of Nucleotides - Part 2

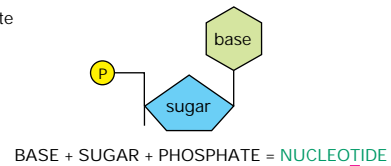
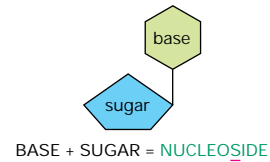
©1998 by Alberts, Bray, Johnson, Lewis, Raff, Roberts, Walter <http://www.essentialcellbiology.com>
Published by Garland Publishing, a member of the Taylor & Francis Group.

NOMENCLATURE The names can be confusing, but the abbreviations are clear.

BASE	NUCLEOSIDE	ABBR.
adenine	adenosine	A
guanine	guanosine	G
cytosine	cytidine	C
uracil	uridine	U
thymine	thymidine	T

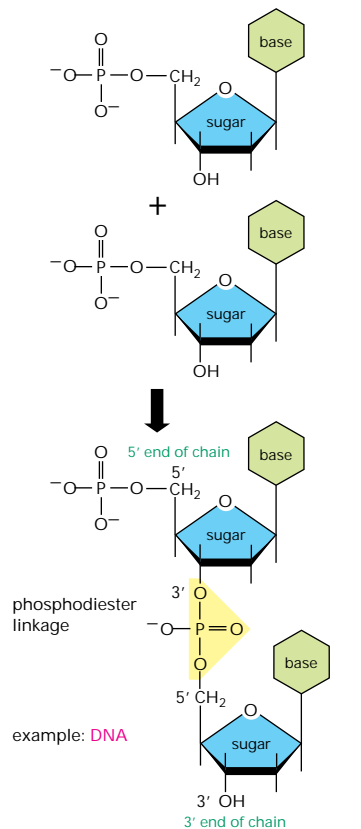
Nucleotides are abbreviated by three capital letters. Some examples follow:

AMP = adenosine monophosphate
dAMP = deoxyadenosine monophosphate
UDP = uridine diphosphate
ATP = adenosine triphosphate



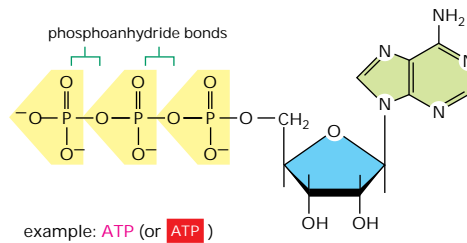
NUCLEIC ACIDS

Nucleotides are joined together by a **phosphodiester linkage** between 5' and 3' carbon atoms to form nucleic acids. The linear sequence of nucleotides in a nucleic acid chain is commonly abbreviated by a one-letter code, A—G—C—T—T—A—C—A, with the 5' end of the chain at the left.

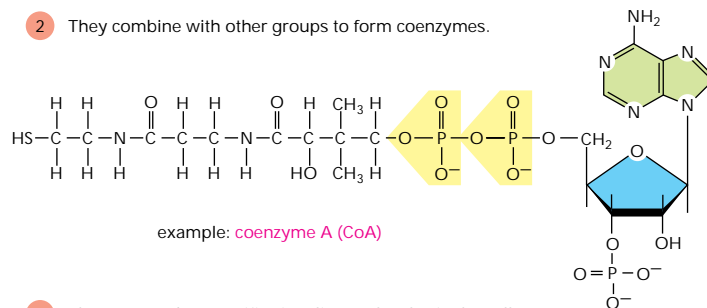


NUCLEOTIDES HAVE MANY OTHER FUNCTIONS

- 1 They carry chemical energy in their easily hydrolyzed phosphoanhydride bonds.



- 2 They combine with other groups to form coenzymes.



- 3 They are used as specific signaling molecules in the cell.

example: **cyclic AMP (cAMP)**

