Phosphodiester - links ribose sugars in RNA or deoxyribose sugars in DNA. R can be alkyl or aryl.

Ribose - the sugar used in RNA with numbering.

Deoxyribose - the sugar used in DNA with numbering.

Both RNA (X = OH) and DNA (X = H) have a group, B, on the 1' position of the ribose (or deoxyribose). B stands for "base".

B =

- NH2
- NH
- NH2
- NH
- NH2
- NH
- NH2
- NH
- NH2
- O

R = H
- adenine
- guanine
- cytosine
- uracil
- thymine

R = ribose
- adenosine
- guanosine
- cytidine
- uridine

R = deoxyribose
- deoxyadenosine
- deoxyguanosine
- deoxycytidine
- deoxyuridine (not in DNA)
- deoxythymidine

Numbering in nucleoside bases:
Single strand of DNA with two nucleotides shown:

Double strand of DNA with two nucleotides shown:

Duplex represented using symbols: