

Weaver Figures: 2.5, 2.6, 2.7, 2.10, 2.13, 2.14, 2.17, 2.18, 2.20

Eukaryotic vs. prokaryotic cells

DNA → RNA → Protein

DNA structure

DNA vs. RNA

Purine vs. Pyrimidine

RNA---ATP, UTP, CTP, GTP

DNA---dATP, dTTP, dCTP, dGTP

A::T(U) G::C Pairing

5'-3' directionality

Physical properties of the DNA

Double Helix
Polarity
Complimentarity
Linear, circular, supercoiled forms.

T_m—melting temperature at which a double stranded DNA melts into single strands.

What does the T_m tell us?

RNA/DNA Denaturation

High temperature
High pH

Dependent on GC content
Favored by low salt

RNA/DNA Renaturation

Low temperature
Neutral pH

Dependent on complexity
Favored by hi salt

Measurement of the complexity

Cot