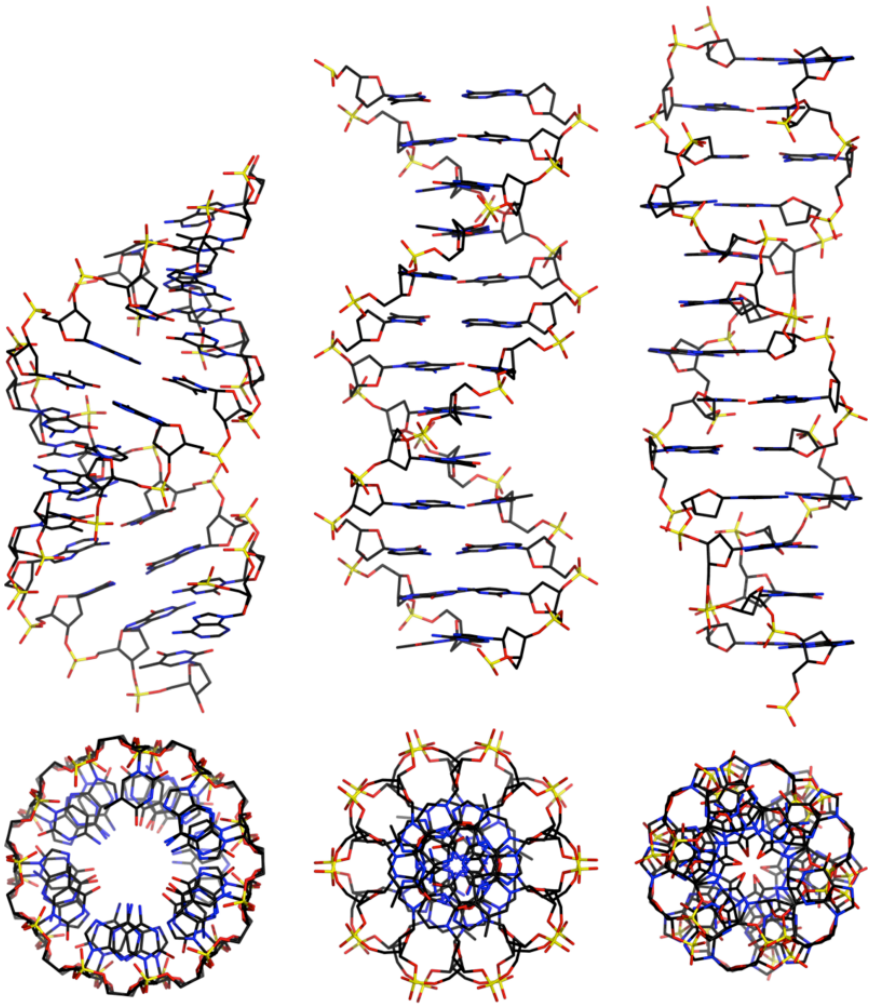
CONCEPT: NUCLEIC ACIDS

- The double helix of nucleic acids can appear in three forms: A, B, and Z form
    - □ A and B forms are both right-handed helices, but A is more squished that B
        - Double stranded RNA takes the A form
        - Most DNA is found in the B form
    - □ Z form is a left-handed helix
        - Z form is found near regulatory sequences
    - □ There is a hole through the A form, but B and Z are filled in
- B-Z junctions – areas where the helix switched between the B and Z forms
    - □ The nucleotides flip out from the strands, switching helix direction
        - This shape makes regulatory sequences easy for the cell to identify



- Single strands of DNA are held together as double-stranded DNA(dsDNA) by H-bonds and hydrophobic stacking forces

□ The stacking forces result from the fact that the relatively hydrophobic bases are stacked within the B form helix