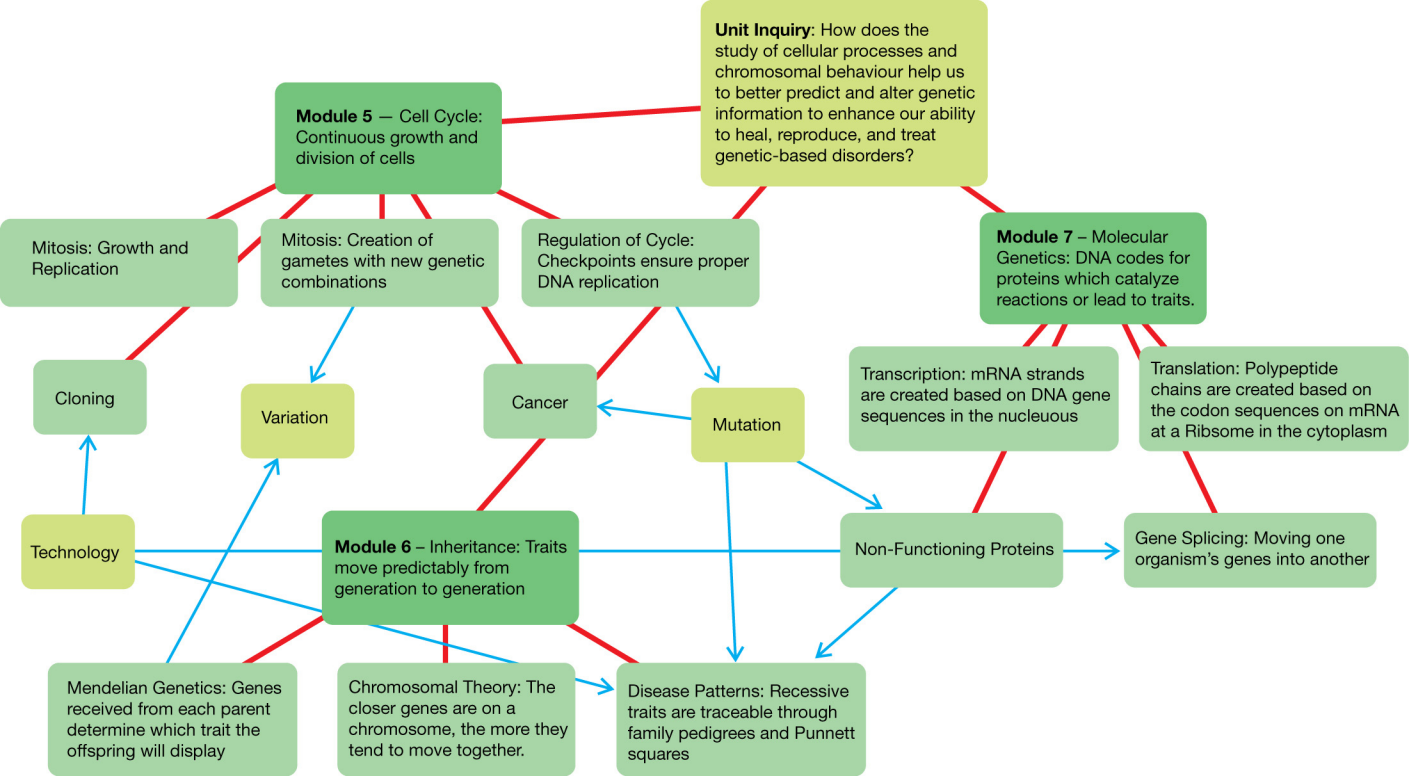
**Unit Inquiry**: How does the study of cellular processes and chromosomal behaviour help us to better predict and alter genetic information to enhance our ability to heal, reproduce, and treat genetic-based disorders?
**Module 5** — Cell Cycle: Continuous growth and division of cells
Mitosis: Growth and Replication
Mitosis: Creation of gametes with new genetic combinations
Regulation of Cycle: Checkpoints ensure proper DNA replication
**Module 7** – Molecular Genetics: DNA codes for proteins which catalyze reactions or lead to traits.
Cloning
Variation
Cancer
Mutation
Transcription: mRNA strands are created based on DNA gene sequences in the nucleuous
Translation: Polypeptide chains are created based on the codon sequences on mRNA at a Ribsome in the cytoplasm
Technology
**Module 6** – Inheritance: Traits move predictably from generation to generation
Non-Functioning Proteins
Gene Splicing: Moving one organism's genes into another
Mendelian Genetics: Genes received from each parent determine which trait the offspring will display
Chromosomal Theory: The closer genes are on a chromosome, the more they tend to move together.
Disease Patterns: Recessive traits are traceable through family pedigrees and Punnett squares