Unit: Cell Growth and Reproduction (Ch. 10-11)

"I can…"

- ✓ *discuss* surface area to volume ratios as the stimulus for cell division and, ultimately, multicellular organisms.
- ✓ *construct* a visual representation (i.e., mobile, multimedia presentation, flipbook) that traces the stages of eukaryotic cell division.
- ✓ *identify* and *describe* the functions of cellular organelles involved in cell division.
- ✓ *classify* events by the stages in which they occur in cell division.
- ✓ *compare* and *contrast* cell division in plant and animal cells.
- ✓ *differentiate* between cell division and mitosis.
- ✓ *trace* the stages of meiosis in eukaryotic cells.
- ✓ *compare* and *contrast* characteristics of mitosis and meiosis (stages, *number* and *type* of cells produced, types of cells utilizing the process, number of divisions, reduction of chromosome number, presence of variation, functions, etc.).
- ✓ *explain* how meiosis is a source for genetic variation (crossing over, Law of Independent Assortment).

Essential Vocabulary/Concepts:

anaphase
cell cycle
cell division
cell plate
centriole
centromere
chromatid
chromosome
cleavage furrow
crossing over
cytokinesis
diploid
egg
fertilization
gamete
G1 phase
G2 phase
haploid
interphase
Law of Independent Assortment
meiosis
metaphase
homologous chromosomes
multicellular
prophase
S phase
sister chromatid
sperm
spindle fibers
telophase
unicellular
zygot
tetrad