I. Chapter 2: The Science of Biology
   - Describe the parts of the scientific method.
   - Describe a hypothesis and its purpose in an experiment.
   - Compare quantitative and qualitative data.
   - Distinguish between observations and inferences.
   - Describe a variable in an experiment.
   - Discuss the purpose of a control group in an experiment.

II. Chapter 4: Chemical Basis of Life
   - List the most common elements in living things.
   - Be able to compare and contrast elements and compounds.
   - Describe the structure of an atom.
   - What is an isotope and how can it be used to study biological processes.
   - Describe the electron arrangements of atoms and how this affects its chemical reactivity.
   - Describe an ionic bond. Give examples.
   - Describe a covalent bond. Give examples.

III. Chapter 5: The Molecules of Life
   - Describe monomer, polymer and be able to relate them to biology and macromolecules.
   - Describe the processes of building and breaking polymers.
   - Know what a disaccharide is and how disaccharides are formed.
   - Name the polysaccharides starch, glycogen and cellulose and describe their functions.
   - Identify a general characteristic of lipids.
   - Describe and relate the term hydrophobic.
   - Describe and relate the term hydrophilic.
   - Describe why some lipids are saturated.
   - Describe why some lipids are unsaturated.
   - List functions of proteins.
   - Describe the structure of amino acids and proteins.
   - Describe what a polypeptide is and what its smaller unit is.
   - Know what an enzyme is and how it functions.
   - Know what activation energy is and what may affect it.

IV. Chapter 6: Tour of the Cell
   - List and know the parts of a microscope.
   - Know how to use the microscope.
   - Describe how microscopes aid the study of cells.
   - List the differences of animal and plant cells.
   - Distinguish between prokaryotic and eukaryotic cells.
   - Know the function of a plasma membrane.
   - Identify the functions of proteins in cellular membranes.
   - Know the structure of a plasma membrane and how this aids in its function.
   - Describe diffusion.
   - Relate diffusion with equilibrium.
   - Describe how passive transport occurs.
   - Describe osmosis.
   - Relate osmosis to solute concentration.
   - Explain how active transport differs from passive transport.
   - Describe how large molecules move across a membrane (endocytosis, exocytosis) include the word vesicle in your description.
   - Know the following cell organelles and their responsibility in the cell:
     o Nucleus
     o Cytoplasm
     o Cell wall
     o Endoplasmic reticulum
     o Golgi apparatus
     o Vacuoles
     o Lysosomes
     o Chloroplasts
     o Mitochondria
     o Cytoskeleton

V. Chapter 7: The Working Cell: Energy from Food
   - Compare and contrast how autotroph and heterotrophs obtain food.
   - Describe kinetic, potential and chemical energy.
   - Describe the structure of ATP and how it stores energy. Be sure to include all the parts of an ATP molecule.
   - Describe the ATP cycle (include ATP, ADP and AMP).
   - Know what organelle cellular respiration occurs.
   - Summarize the three stages of cellular respiration.
   - Know where each stage of cellular respiration occurs.
   - Know the overall equation for cellular respiration.
   - Know the reactants of cellular respiration.
   - Know the products of cellular respiration.
   - Know how many ATP molecules are produced during cellular respiration.
   - Know how many ATP molecules are produced during each turn of the Krebs cycle.
   - Know how many ATP molecules are needed in order for the Krebs cycle to begin.
   - Know what enters the Krebs cycle.
   - Describe ATP synthase where it is located and its function.
   - Know in which part of cellular respiration the most molecules of ATP are produced.
   - Describe fermentation as it relates to cellular respiration.
   - Explain lactic acid as it relates to fermentation.

VI. Chapter 8: The Working Cell: Energy from Sunlight
   - Know the overall equation for photosynthesis.
   - Know the reactants and the products of photosynthesis.
   - Know the relationship between photosynthesis and cellular respiration.
   - Know the structure of a chloroplast.
   - Know the structure of a leaf.
   - Know the two steps of photosynthesis.
   - Explain the light dependent stage.
   - What is needed and what is produced in the light dependent stage.
   - Describe where in the leaf the light dependent stage occurs.
   - Explain why the light dependent stage is called water splitting.
   - Explain the Calvin cycle of photosynthesis.
   - Know the relationship between light dependent stage and the Calvin cycle.
   - Know what is needed and what is produced during the Calvin cycle.
   - Describe and explain the role of pigments in plants.
   - Explain how light interacts with pigments.
   - Be able to discuss the electromagnetic spectrum

VII. Chapter 9 – The Nervous System
   - Describe the basic structure and functions of the nervous system.
   - Describe and explain the Central Nervous System (CNS).
   - Describe and explain the Peripheral Nervous System (PNS).
   - Describe the basic structure of a neuron.
   - Explain how a neuron at rest stores potential energy.
   - Describe how a nerve signal begins, travels and crosses synapses.
   - Describe the function of the spinal cord.
   - Identify the main parts of the brain and their functions.

VIII. Chapter 9 – Nutrition and Digestion
   - Know the four stages of food processing.
   - Know the six type of nutrients found in food.
   - Be able to label the digestive tube (tract) and trace the path of food through the organs.
   - Know each of the organs and its function.
# GROSSE POINTE SOUTH/NORTH

## 2014-2015 Mid-Year Assessment Schedule

*(Monday, January 19, 2015 is MLK Day – Schools Closed)*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Schools Closed</strong></td>
<td>Period 1 Assessment 8:00 – 9:30 a.m. (9:30-9:35 Announcements)</td>
<td>Period 4 Assessment 8:00 – 9:30 a.m. (9:30-9:35 Announcements)</td>
<td>Period 6 Assessment 8:00 – 9:30 a.m. (9:30-9:35 Announcements)</td>
<td>Period 3 Assessment 8:00 – 9:30 a.m. (9:30-9:35 Announcements)</td>
</tr>
<tr>
<td></td>
<td>Period 2 Assessment 9:45 – 11:15 a.m.</td>
<td>Period 5 Assessment 9:45 – 11:15 a.m.</td>
<td>Period 7 Assessment 9:45 – 11:15 a.m.</td>
<td>Assessment Make-Ups 9:45 – 11:15 a.m.</td>
</tr>
</tbody>
</table>

**ASSESSMENT MAKE-UPS And Extended Time**
- Teacher Assessment Corrections
- Teacher Assessment Corrections
- Teacher Assessment Corrections
- Teacher Assessment Corrections