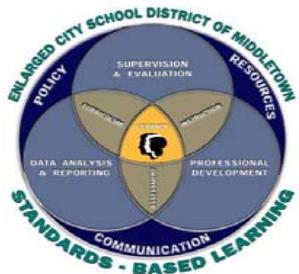


## Grade 9 Extended Biology - Marking Period 4

### Living Environment

STANDARD	PERFORMANCE INDICATORS	PACING DAYS	RESOURCES (Print, Visual, Technology, Manipulatives)	ASSESSMENT (Evidence & Scoring Guides)
L.E. 4.1	<ul style="list-style-type: none"> <li>Living things are both similar to and different from each other and from nonliving things.</li> </ul>	16-18	Textbook	Heart Dissection
L.E. 4.1B	<ul style="list-style-type: none"> <li>Students describe and explain the structures and functions of the human body at different organizational levels (e.g., systems, tissues, cells, organelles).</li> </ul>		Sheep Hearts	Blood Cells Lab
L.E. 4.1B10	<ul style="list-style-type: none"> <li>Receptor molecules play an important role in the interactions between cells. Two primary agents of cellular communication are hormones and chemicals produced by nerve cells. If nerve or hormone signals are blocked, cellular communication is disrupted and the organism's stability is affected.</li> </ul>		Microscope Blood Slides	Kidney Dissection Lab
			<a href="http://www.bbc.co.uk/science/humanbody/">http://www.bbc.co.uk/science/humanbody/</a>	Blood Mixing Lab
			Sheep Kidney	Infectious Disease Lab
			Cups of Fluids and Indicators	Frog Dissection
			Frogs Dissection Dissection Instruments	Fetal Pig Dissection
			Microscopes	
L.E. 4.5	<ul style="list-style-type: none"> <li>Organisms maintain a dynamic equilibrium that sustains life.</li> </ul>			
L.E. 4.5B	<ul style="list-style-type: none"> <li>Students explain disease as a failure of homeostasis.</li> </ul>			
L.E. 4.5B1	<ul style="list-style-type: none"> <li>Homeostasis in an organism is constantly threatened. Failure to respond effectively can result in disease or death.</li> </ul>		Pigs	
L.E. 4.5B2	<ul style="list-style-type: none"> <li>Viruses, bacteria, fungi, and other parasites may infect plants and animals and interfere with normal life functions.</li> </ul>		Dissection Instruments Microscopes	



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L.E. 4.5B3	<ul style="list-style-type: none"> <li>The immune system protects against antigens associated with pathogenic organisms or foreign substances and some cancer cells.</li> </ul>			
L.E. 4.5B4	<ul style="list-style-type: none"> <li>Some white blood cells engulf invaders. Others produce antibodies that attack them or mark them for killing. Some specialized white blood cells will remain, able to fight off subsequent invaders of the same kind.</li> </ul>			
L.E. 4.5B5	<ul style="list-style-type: none"> <li>Vaccinations use weakened microbes (or parts of them) to stimulate the immune system to react. This reaction prepares the body to fight subsequent invasions by the same microbes.</li> </ul>			
L.E. 4.5B6	<ul style="list-style-type: none"> <li>Some viral diseases, such as AIDS, damage the immune system, leaving the body unable to deal with multiple infectious agents and cancerous cells.</li> </ul>			
L.E. 4.5B7	<ul style="list-style-type: none"> <li>Some allergic reactions are caused by the body's immune responses to usually harmless environmental substances. Sometime the immune system may attack some of the body's own cells or transplanted organs.</li> </ul>			
L.E. 4.5B8	<ul style="list-style-type: none"> <li>Disease may also be caused by inheritance, toxic substances, poor nutrition, organ malfunction, and some personal behavior. Some effects show up right away; other may not show up for many years.</li> </ul>			
L.E. 4.5B9	<ul style="list-style-type: none"> <li>Gene mutations in a cell can result in uncontrolled</li> </ul>			



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	cell division, called cancer. Exposure of cells to certain chemicals and radiation increases mutations and thus increases the chance of cancer.			
L.E. 4.5B10	<ul style="list-style-type: none"> <li>Biological research generates knowledge used to design ways of diagnosing, preventing, treating, controlling, or curing diseases of plants and animals.</li> </ul>			
L.E. 4.5C	<ul style="list-style-type: none"> <li>Students relate processes at the system level to the cellular level in order to explain dynamic equilibrium in multi-celled organisms.</li> </ul>	10-12	Calculator Meter Stick Stop Watch  Optical Illusion  Videos Web Sites  <a href="http://regentsprep.org/regents/biology/units/hoemostasis/feedback.cfm">http://regentsprep.org/regents/biology/units/hoemostasis/feedback.cfm</a>	Reflexes and Reactions Times  Senses Lab  Homework Quizzes Exams
L.E. 4.5C1	<ul style="list-style-type: none"> <li>Dynamic equilibrium results from detection of and response to stimuli. Organisms detect and respond to change in a variety of ways both at the cellular level and at the organismal level.</li> </ul>			
L.E. 4.5C2	<ul style="list-style-type: none"> <li>Feedback mechanisms have evolved that maintain homeostasis. Examples include the changes in heart rate or respiratory rate in response to increased activity in muscle cells, the maintenance of blood sugar levels by insulin from the pancreas, and the changes in openings in the leaves of plants by guard cells to regulate water loss and gas exchange.</li> </ul>			



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#### Curriculum Guidelines for Fourth Quarter

- Chemical and Nervous Regulation
- Excretion
- Transport
  - Passive
  - Active
  - Cellular
  - Human