

**Inquiry Investigations™**  
**Human Biology and Health Issues MODULE - 1287211**  
**Grades: 7-10**

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**Missouri Grade Level Expectations**  
**Science**  
**Grade 7**

<b>STRAND: BIG IDEA / STANDARD</b>	<b>MO.2.</b>	<b>Properties and Principals of Force and Motion</b>
<b>CONCEPT: GLE / BENCHMARK</b>	<b>2.1.</b>	The motion of an object is described by its change in position relative to another object or point
<b>GLE / PROFICIENCY</b>	<b>2.1.A.</b>	The motion of an object is described as a change in position, direction, and speed relative to another object (frame of reference)
<b>COMPONENT / INDICATOR</b>	<b>2.1.A.b.</b>	Scope and Sequence - Force, Motion, and Work: Classify different types of motion (e.g., straight line, projectile, circular, vibrational) <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> </ul>
<b>STRAND: BIG IDEA / STANDARD</b>	<b>MO.7.</b>	<b>Scientific Inquiry</b>
<b>CONCEPT: GLE / BENCHMARK</b>	<b>7.1.</b>	Science understanding is developed through the use of science process skills, scientific knowledge, scientific investigation, reasoning, and critical thinking
<b>GLE / PROFICIENCY</b>	<b>7.1.A.</b>	Scientific inquiry includes the ability of students to formulate a testable question and explanation, and to select appropriate investigative methods in order to obtain evidence relevant to the explanation
<b>COMPONENT / INDICATOR</b>	<b>7.1.A.b.</b>	Scope and Sequence - All Units: Identify and describe the importance of the independent variable, dependent variables, control of constants, and multiple trials to the design of a valid experiment <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> </ul>
<b>COMPONENT / INDICATOR</b>	<b>7.1.A.c.</b>	Scope and Sequence - All Units: Design and conduct a valid experiment <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> </ul>

		<ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
<p>COMPONENT / INDICATOR</p>	<p>7.1.A.d.</p>	<p>Scope and Sequence - All Units: Evaluate the design of an experiment and make suggestions for reasonable improvements or extensions of an experiment</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> </ul>

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<p>COMPONENT / INDICATOR</p>	<p>7.1.A.e.</p>	<p>Scope and Sequence - All Units: Recognize that different kinds of questions suggest different kinds of scientific investigations (e.g., some involve observing and describing objects organisms, or events; some involve collecting specimens; some involve experiments; some involve making observations in nature; some involve discovery of new objects and phenomena; some involve making models)</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4:</li> </ul>

		<p>Responding to Sound</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
<p>COMPONENT / INDICATOR</p>	<p>7.1.A.f.</p>	<p>Scope and Sequence - All Units: Acknowledge there is no fixed procedure called "the scientific method", but some investigations involve systematic observations, carefully collected and relevant evidence, logical reasoning, and imagination in developing hypotheses and other explanations</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1:</li> </ul>

		<p>Determining ABO-Rh Blood Type</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>Virtual Laboratory: Identifying Human Tissues</li> </ul>
<b>STRAND: BIG IDEA / STANDARD</b>	<b>MO.7.</b>	<b>Scientific Inquiry</b>
<b>CONCEPT: GLE / BENCHMARK</b>	<b>7.1.</b>	Science understanding is developed through the use of science process skills, scientific knowledge, scientific investigation, reasoning, and critical thinking
<b>GLE / PROFICIENCY</b>	<b>7.1.B.</b>	Scientific inquiry relies upon gathering evidence from qualitative and quantitative observations
<b>COMPONENT / INDICATOR</b>	<b>7.1.B.b.</b>	<p>Scope and Sequence - All Units: Determine the appropriate tools and techniques to collect data</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> </ul>

		<ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
COMPONENT / INDICATOR	7.1.B.c.	<p>Scope and Sequence - All Units: Use a variety of tools and equipment to gather data (e.g., microscopes, thermometers, analog and digital meters, computers, spring scales, balances, metric rulers, graduated cylinders, stopwatches)</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3:</li> </ul>

		<p>Is There a Hole in Your Hand?</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
COMPONENT / INDICATOR	7.1.B.g.	<p>Scope and Sequence - All Units: Calculate the range and average/mean of a set of data</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> </ul>
STRAND: BIG IDEA / STANDARD	MO.7.	Scientific Inquiry
CONCEPT: GLE / BENCHMARK	7.1.	Science understanding is developed through the use of science process skills, scientific knowledge, scientific investigation, reasoning, and critical thinking
GLE / PROFICIENCY	7.1.C.	Scientific inquiry includes evaluation of explanations (laws/principles, theories/models) in light of evidence (data) and scientific principles (understandings)
COMPONENT / INDICATOR	7.1.C.a.	Scope and Sequence - All Units: Use quantitative and qualitative data as

		<p>support for reasonable explanations (conclusions)</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
COMPONENT / INDICATOR	7.1.C.b.	Scope and Sequence - All Units: Use data as support for observed

		<p>patterns and relationships, and to make predictions to be tested</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
STRAND: BIG IDEA /	MO.7.	Scientific Inquiry

STANDARD		
CONCEPT: GLE / BENCHMARK	7.1.	Science understanding is developed through the use of science process skills, scientific knowledge, scientific investigation, reasoning, and critical thinking
GLE / PROFICIENCY	7.1.D.	The nature of science relies upon communication of results and justification of explanations
COMPONENT / INDICATOR	7.1.D.a.	<p>Scope and Sequence - All Units: Communicate the procedures and results of investigations and explanations through: oral presentations, drawings and maps, data tables (allowing for the recording and analysis of data relevant to the experiment, such as independent and dependent variables, multiple trials, beginning and ending times or temperatures, derived quantities) graphs (bar, single line, pictograph), equations and writings</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1:</li> </ul>

		<p>Learning How Pollutants Accumulate in the Lungs</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
<b>STRAND: BIG IDEA / STANDARD</b>	<b>MO.8.</b>	<b>Impact of Science, Technology and Human Activity</b>
<b>CONCEPT: GLE / BENCHMARK</b>	<b>8.1.</b>	The nature of technology can advance, and is advanced by, science as it seeks to apply scientific knowledge in ways that meet human needs
<b>GLE / PROFICIENCY</b>	<b>8.1.A.</b>	Designed objects are used to do things better or more easily and to do some things that could not otherwise be done at all
<b>COMPONENT / INDICATOR</b>	<b>8.1.A.a.</b>	<p>Scope and Sequence - All Units: Explain how technological improvements, such as those developed for use in space exploration, the military, or medicine, have led to the invention of new products that may improve lives here on Earth (e.g., new materials, freeze-dried foods, infrared goggles, Velcro, satellite imagery, robotics, lasers))</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: Human Health Issues and Disease</li> </ul>
<b>STRAND: BIG IDEA / STANDARD</b>	<b>MO.8.</b>	<b>Impact of Science, Technology and Human Activity</b>
<b>CONCEPT: GLE / BENCHMARK</b>	<b>8.1.</b>	The nature of technology can advance, and is advanced by, science as it seeks to apply scientific knowledge in ways that meet human needs
<b>GLE / PROFICIENCY</b>	<b>8.1.B.</b>	Advances in technology often result in improved data collection and an increase in scientific information
<b>COMPONENT / INDICATOR</b>	<b>8.1.B.a.</b>	<p>Scope and Sequence - All Units: Identify the link between technological developments and the scientific discoveries made possible through their development (e.g., Hubble telescope and stellar evolution, composition and structure of the universe; the electron microscope and cell organelles; sonar and the composition of the Earth; manned and unmanned space missions and space exploration; Doppler radar and weather conditions; MRI and CAT-scans and brain activity))</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>

**Missouri Grade Level Expectations  
Science  
Grade 8**

<b>STRAND: BIG IDEA / STANDARD</b>	<b>MO.1.</b>	<b>Properties and Principals of Matter and Energy</b>
<b>CONCEPT: GLE</b>	<b>1.1.</b>	Changes in properties and states of matter provide evidence of the

/ BENCHMARK		atomic theory of matter
GLE / PROFICIENCY	1.1.A.	Objects, and the materials are made of, have properties that can be used to describe and classify them
COMPONENT / INDICATOR	1.1.A.a.	Scope and Sequence - Physical and Chemical Properties and Changes of Matter: Identify elements (unique atoms) and compounds (molecules or crystals) are pure substances that have characteristic properties <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> </ul>
STRAND: BIG IDEA / STANDARD	MO.1.	Properties and Principals of Matter and Energy
CONCEPT: GLE / BENCHMARK	1.1.	Changes in properties and states of matter provide evidence of the atomic theory of matter
GLE / PROFICIENCY	1.1.F.	The periodic table organizes the elements according to their atomic structure and chemical reactivity
COMPONENT / INDICATOR	1.1.F.a.	Scope and Sequence - Physical and Chemical Properties and Changes of Matter: Identify more than 100 known elements (unique atoms) exist that may be combined in nature or by man to produce compounds that make up the living and nonliving substances in the environment (Do NOT assess memorization of the Periodic Table) <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> </ul>
STRAND: BIG IDEA / STANDARD	MO.3.	Characteristics and Interactions of Living Organisms
CONCEPT: GLE / BENCHMARK	3.1.	There is a fundamental unity underlying the diversity of all living organisms
GLE / PROFICIENCY	3.1.A.	Organisms have basic needs for survival
COMPONENT / INDICATOR	3.1.A.a.	Scope and Sequence - Cells and Body Systems: Recognize that most plants and animals require food and oxygen (needed to release the energy from that food) <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>Teacher Resource CD: Human Physiology</li> </ul>
STRAND: BIG IDEA / STANDARD	MO.3.	Characteristics and Interactions of Living Organisms
CONCEPT: GLE / BENCHMARK	3.1.	There is a fundamental unity underlying the diversity of all living organisms
GLE / PROFICIENCY	3.1.D.	Plants and animals have different structures that serve similar functions necessary for the survival of the organism
COMPONENT / INDICATOR	3.1.D.a.	Scope and Sequence - Cells and Body Systems: Identify and contrast the structures of plants and animals that serve similar functions (e.g., taking in water and oxygen, support, response to stimuli, obtaining energy, circulation, digestion, excretion, reproduction) <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 1:</li> </ul>

		<p>Testing Taste Receptors in the Tongue</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Teacher Resource CD: Human Health Issues and Disease</li> <li>• Teacher Resource CD: Human Physiology</li> <li>• Teacher Resource CD: The Human Machine</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
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STRAND: BIG IDEA / STANDARD	MO.3.	Characteristics and Interactions of Living Organisms
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CONCEPT: GLE	3.2.	Living organisms carry out life processes in order to survive
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/ BENCHMARK		
GLE / PROFICIENCY	3.2.A.	The cell contains a set of structures called organelles that interact to carry out life processes through physical and chemical means
COMPONENT / INDICATOR	3.2.A.a.	<p>Scope and Sequence - Cells and Body Systems: Describe how the cell membrane helps regulate the transfer of materials in and out of the cell</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>Teacher Resource CD: Human Physiology</li> </ul>
STRAND: BIG IDEA / STANDARD	MO.3.	Characteristics and Interactions of Living Organisms
CONCEPT: GLE / BENCHMARK	3.2.	Living organisms carry out life processes in order to survive
GLE / PROFICIENCY	3.2.C.	Chromosomes are components of cells that occur in pairs and carry hereditary information from one cell to daughter cells and from parent to offspring during reproduction
COMPONENT / INDICATOR	3.2.C.a.	<p>Identify and give examples of each level of organization (cell, tissue, organ, organ system) in multicellular organisms (plants, animals)</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>Teacher Resource CD: Human Physiology</li> <li>Teacher Resource CD: The Human Machine</li> <li>Virtual Laboratory: Identifying Human Tissues</li> </ul>
COMPONENT / INDICATOR	3.2.C.c.	<p>Explain the interactions between the circulatory and digestive systems as nutrients are processed by the digestive system, passed into the blood stream, and transported in and out of the cell</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>Teacher Resource CD: The Human Machine</li> <li>Virtual Laboratory: Identifying Human Tissues</li> </ul>
COMPONENT / INDICATOR	3.2.C.d.	Compare and contrast the processes of mechanical and chemical digestion, and their role in providing materials necessary for survival of

		<p>the cell and organism</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>Teacher Resource CD: The Human Machine</li> </ul>
COMPONENT / INDICATOR	3.2.C.e.	<p>Identify the importance of the transport and exchange of nutrient and waste molecules to the survival of the cell and organism</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>Teacher Resource CD: The Human Machine</li> <li>Virtual Laboratory: Identifying Human Tissues</li> </ul>
COMPONENT / INDICATOR	3.2.C.f.	<p>Explain the interactions between the circulatory and respiratory systems in exchanging oxygen and carbon dioxide between cells and the atmosphere (when oxygen enters the body, passes into the blood stream, and is transported into the cell; carbon dioxide is transported out of the cell, passes into the blood stream, and exits the body))</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>Teacher Resource CD: The Human Machine</li> <li>Virtual Laboratory: Identifying Human Tissues</li> </ul>
COMPONENT / INDICATOR	3.2.C.g.	<p>Explain the interactions between the nervous and muscular systems when an organism responds to a stimulus</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> </ul>

		<ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>Teacher Resource CD: Human Physiology</li> </ul>
<b>STRAND: BIG IDEA / STANDARD</b>	<b>MO.3.</b>	<b>Characteristics and Interactions of Living Organisms</b>
<b>CONCEPT: GLE / BENCHMARK</b>	<b>3.2.</b>	<b>Living organisms carry out life processes in order to survive</b>
<b>GLE / PROFICIENCY</b>	<b>3.2.F.</b>	<b>Cellular activities and responses can maintain stability internally while external conditions are changing (homeostasis)</b>
<b>COMPONENT / INDICATOR</b>	<b>3.2.F.a.</b>	<p>Scope and Sequence - Cells and Body Systems: Predict the response the body may take to maintain internal balance during an environmental change (e.g., shivering when cold, slowing metabolism when food supply decreases or when dehydrated, adrenaline rush when frightened)</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>Teacher Resource CD: Human Health Issues and Disease</li> <li>Teacher Resource CD: Human Physiology</li> <li>Teacher Resource CD: The Human Machine</li> </ul>
<b>STRAND: BIG IDEA / STANDARD</b>	<b>MO.3.</b>	<b>Characteristics and Interactions of Living Organisms</b>
<b>CONCEPT: GLE / BENCHMARK</b>	<b>3.2.</b>	<b>Living organisms carry out life processes in order to survive</b>

GLE / PROFICIENCY	3.2.G.	Life processes can be disrupted by disease (intrinsic failures of the organ systems or by infection due to other organisms)
COMPONENT / INDICATOR	3.2.G.a.	Scope and Sequence - Disease: Explain the cause and effect of diseases (e.g., AIDS, cancer, diabetes, hypertension) on the human body (locally assessed) <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>Teacher Resource CD: Human Health Issues and Disease</li> </ul>
COMPONENT / INDICATOR	3.2.G.b.	Scope and Sequence - Disease: Relate some common diseases (i.e., cold, influenza, strep throat, dysentery, fungal infections) to the organisms that cause them (bacteria, viruses, protists, fungi) <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>Teacher Resource CD: Human Health Issues and Disease</li> </ul>
COMPONENT / INDICATOR	3.2.G.c.	Scope and Sequence - Disease: Differentiate between infectious and noninfectious diseases <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>Teacher Resource CD: Human Health Issues and Disease</li> </ul>
COMPONENT / INDICATOR	3.2.G.d.	Scope and Sequence - Disease: Explain the role of antibiotics and vaccines in the treatment and prevention of diseases <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>Teacher Resource CD: Human Health Issues and Disease</li> <li>Teacher Resource CD: Human Physiology</li> </ul>
STRAND: BIG IDEA / STANDARD	MO.4.	Changes in Ecosystems and Interactions of Organisms with Their Environments
CONCEPT: GLE / BENCHMARK	4.1.	Organisms are interdependent with one another with their environment
GLE / PROFICIENCY	4.1.D.	The diversity of species within an ecosystem is affected by changes in the environment, which can be caused by other organisms or outside processes
COMPONENT / INDICATOR	4.1.D.a.	Scope and Sequence - Disease: Explain the beneficial or detrimental impact that some organisms (i.e., viruses, bacteria, protists, fungi) may have on other organisms (e.g., diseases, antibiotics, breakdown of waste, fermentation) <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>Teacher Resource CD: Human Health Issues and Disease</li> </ul>
STRAND: BIG IDEA / STANDARD	MO.7.	Scientific Inquiry

CONCEPT: GLE / BENCHMARK	7.1.	Science understanding is developed through the use of science process skills, scientific knowledge, scientific investigation, reasoning, and critical thinking
GLE / PROFICIENCY	7.1.A.	Scientific inquiry includes the ability of students to formulate a testable question and explanation, and to select appropriate investigative methods in order to obtain evidence relevant to the explanation
COMPONENT / INDICATOR	7.1.A.b.	<p>Scope and Sequence - All Units: Identify and describe the importance of the independent variable, dependent variables, control of constants, and multiple trials to the design of a valid experiment</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> </ul>
COMPONENT / INDICATOR	7.1.A.c.	<p>Scope and Sequence - All Units: Design and conduct a valid experiment</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 4:</li> </ul>

		<p>Glucose Test of Simulated Urine Samples</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
<p>COMPONENT / INDICATOR</p>	<p>7.1.A.d.</p>	<p>Scope and Sequence - All Units: Evaluate the design of an experiment and make suggestions for reasonable improvements or extensions of an experiment</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4:</li> </ul>

		<p>Glucose Test of Simulated Urine Samples</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
<p>COMPONENT / INDICATOR</p>	<p>7.1.A.e.</p>	<p>Scope and Sequence - All Units: Recognize that different kinds of questions suggest different kinds of scientific investigations (e.g., some involve observing and describing objects organisms, or events; some involve collecting specimens; some involve experiments; some involve making observations in nature; some involve discovery of new objects and phenomena; some involve making models)</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
<p>COMPONENT / INDICATOR</p>	<p>7.1.A.f.</p>	<p>Scope and Sequence - All Units: Acknowledge there is no fixed procedure called "the scientific method", but some investigations involve systematic</p>

observations, carefully collected and relevant evidence, logical reasoning, and imagination in developing hypotheses and other explanations

- Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions
- Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue
- Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold
- Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors
- Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound
- Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection
- Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision
- Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?
- Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities
- Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions
- Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions
- Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type
- Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood
- Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content
- Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells
- Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery
- Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function
- Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine
- Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples
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- Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs
- Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus
- Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time
- Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision
- Virtual Laboratory: Identifying Human Tissues

<b>STRAND: BIG IDEA / STANDARD</b>	<b>MO.7.</b>	<b>Scientific Inquiry</b>
<b>CONCEPT: GLE / BENCHMARK</b>	<b>7.1.</b>	Science understanding is developed through the use of science process skills, scientific knowledge, scientific investigation, reasoning, and critical thinking
<b>GLE / PROFICIENCY</b>	<b>7.1.B.</b>	Scientific inquiry relies upon gathering evidence from qualitative and quantitative observations
<b>COMPONENT / INDICATOR</b>	<b>7.1.B.b.</b>	<p>Scope and Sequence - All Units: Determine the appropriate tools and techniques to collect data</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> </ul>

		<ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
<p>COMPONENT / INDICATOR</p>	<p>7.1.B.c.</p>	<p>Scope and Sequence - All Units: Use a variety of tools and equipment to gather data (e.g., microscopes, thermometers, analog and digital meters, computers, spring scales, balances, metric rulers, graduated cylinders, stopwatches)</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1:</li> </ul>

		<p>Simulating the Transmission of the Ebola Virus</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>Virtual Laboratory: Identifying Human Tissues</li> </ul>
COMPONENT / INDICATOR	7.1.B.g.	<p>Scope and Sequence - All Units: Calculate the range and average/mean of a set of data</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> </ul>
STRAND: BIG IDEA / STANDARD	MO.7.	Scientific Inquiry
CONCEPT: GLE / BENCHMARK	7.1.	Science understanding is developed through the use of science process skills, scientific knowledge, scientific investigation, reasoning, and critical thinking
GLE / PROFICIENCY	7.1.C.	Scientific inquiry includes evaluation of explanations (laws/principles, theories/models) in light of evidence (data) and scientific principles (understandings)
COMPONENT / INDICATOR	7.1.C.a.	<p>Scope and Sequence - All Units: Use quantitative and qualitative data as support for reasonable explanations (conclusions)</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> </ul>

		<ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
COMPONENT / INDICATOR	7.1.C.b.	<p>Scope and Sequence - All Units: Use data as support for observed patterns and relationships, and to make predictions to be tested</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1:</li> </ul>

		<p>Demonstrating Selective Permeability in Simulated Skin Cells</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
<b>STRAND: BIG IDEA / STANDARD</b>	<b>MO.7.</b>	<b>Scientific Inquiry</b>
<b>CONCEPT: GLE / BENCHMARK</b>	<b>7.1.</b>	Science understanding is developed through the use of science process skills, scientific knowledge, scientific investigation, reasoning, and critical thinking
<b>GLE / PROFICIENCY</b>	<b>7.1.D.</b>	The nature of science relies upon communication of results and justification of explanations
<b>COMPONENT / INDICATOR</b>	<b>7.1.D.a.</b>	<p>Scope and Sequence - All Units: Communicate the procedures and results of investigations and explanations through: oral presentations, drawings and maps, data tables (allowing for the recording and analysis of data relevant to the experiment, such as independent and dependent variables, multiple trials, beginning and ending times or temperatures, derived quantities) graphs (bar, single line, pictograph), equations and writings</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> </ul>

		<ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>Virtual Laboratory: Identifying Human Tissues</li> </ul>
<b>STRAND: BIG IDEA / STANDARD</b>	<b>MO.8.</b>	<b>Impact of Science, Technology and Human Activity</b>
<b>CONCEPT: GLE / BENCHMARK</b>	<b>8.1.</b>	The nature of technology can advance, and is advanced by, science as it seeks to apply scientific knowledge in ways that meet human needs
<b>GLE / PROFICIENCY</b>	<b>8.1.A.</b>	Designed objects are used to do things better or more easily and to do some things that could not otherwise be done at all
<b>COMPONENT / INDICATOR</b>	<b>8.1.A.a.</b>	Scope and Sequence - All Units: Explain how technological improvements, such as those developed for use in space exploration, the military, or medicine, have led to the invention of new products that may improve lives here on Earth (e.g., new materials, freeze-dried foods, infrared goggles, Velcro, satellite imagery, robotics, lasers) <ul style="list-style-type: none"> <li>Teacher Resource CD: Human Health Issues and Disease</li> </ul>
<b>STRAND: BIG IDEA / STANDARD</b>	<b>MO.8.</b>	<b>Impact of Science, Technology and Human Activity</b>
<b>CONCEPT: GLE / BENCHMARK</b>	<b>8.1.</b>	The nature of technology can advance, and is advanced by, science as it seeks to apply scientific knowledge in ways that meet human needs
<b>GLE / PROFICIENCY</b>	<b>8.1.B.</b>	Advances in technology often result in improved data collection and an increase in scientific information
<b>COMPONENT /</b>	<b>8.1.B.a.</b>	Scope and Sequence - All Units: Identify the link between technological

INDICATOR		<p>developments and the scientific discoveries made possible through their development (e.g., Hubble telescope and stellar evolution, composition and structure of the universe; the electron microscope and cell organelles; sonar and the composition of the Earth; manned and unmanned space missions and space exploration; Doppler radar and weather conditions; MRI and CAT-scans and brain activity))</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
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**Missouri Grade Level Expectations  
Science  
Grade 9**

<b>STRAND: BIG IDEA / STANDARD</b>	<b>MO.ME.1.1.</b>	<b>Properties and Principles of Matter and Energy: Changes in properties and states of matter provide evidence of the atomic theory of matter</b>
<b>CONCEPT: GLE / BENCHMARK</b>	<b>ME.1.1.A.9-12.c.</b>	<p>Objects, and the materials they are made of, have properties that can be used to describe and classify them: Classify a substance as being made up of one kind of atom (element) or a compound when given the molecular formula or structural formula (or electron dot diagram) for the substance</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> </ul>
<b>CONCEPT: GLE / BENCHMARK</b>	<b>ME.1.1.B.9-12.a.</b>	<p>Properties of mixtures depend upon the concentrations, properties, and interactions of particles: Classify solutions as dilute, concentrated, or saturated</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> </ul>
<b>CONCEPT: GLE / BENCHMARK</b>	<b>ME.1.1.B.9-12.b.</b>	<p>Properties of mixtures depend upon the concentrations, properties, and interactions of particles: Compare and contrast the properties of acidic, basic, and neutral solutions</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> </ul>
<b>CONCEPT: GLE / BENCHMARK</b>	<b>ME.1.1.B.9-12.c.</b>	<p>Properties of mixtures depend upon the concentrations, properties, and interactions of particles: Predict the effect of the properties of the solvent or solute (e.g., polarity, temperature, surface area/particle size, concentration, agitation) on the solubility of a</p>

		<p>substance</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> </ul>
<b>STRAND: BIG IDEA / STANDARD</b>	<b>MO.LO.3.1.</b>	<b>Characteristic and Interactions of Living Organisms: There is a fundamental unity underlying the diversity of all living organisms</b>
<b>CONCEPT: GLE / BENCHMARK</b>	<b>LO.3.1.B.9-12.a.</b>	<p>Organisms progress through life cycles unique to different types of organisms: Recognize cells both increase in number and differentiate, becoming specialized in structure and function, during and after embryonic development</p> <ul style="list-style-type: none"> <li>Teacher Resource CD: The Human Machine</li> <li>Virtual Laboratory: Identifying Human Tissues</li> </ul>
<b>CONCEPT: GLE / BENCHMARK</b>	<b>LO.3.1.C.9-12.a.</b>	<p>Cells are the fundamental units of structure and function of all living things: Recognize all organisms are composed of cells, the fundamental units of structure and function</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>Teacher Resource CD: Human Physiology</li> <li>Virtual Laboratory: Identifying Human Tissues</li> </ul>
<b>CONCEPT: GLE / BENCHMARK</b>	<b>LO.3.1.C.9-12.b.</b>	<p>Cells are the fundamental units of structure and function of all living things: Describe the structure of cell parts (e.g., cell wall, cell membrane, cytoplasm, nucleus, chloroplast, mitochondrion, ribosomes, vacuole) found in different types of cells (e.g., bacterial, plant, skin, nerve, blood, muscle) and the functions they perform (e.g., structural support, transport of materials, storage of genetic information, photosynthesis and respiration, synthesis of new molecules, waste disposal) that are necessary to the survival of the cell and organism</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>Teacher Resource CD: Human Physiology</li> <li>Virtual Laboratory: Identifying Human Tissues</li> </ul>
<b>STRAND: BIG IDEA / STANDARD</b>	<b>MO.LO.3.2.</b>	<b>Characteristic and Interactions of Living Organisms: Living organisms carry out life processes in order to survive</b>

<p>CONCEPT: GLE / BENCHMARK</p>	<p>LO.3.2.A.9-12.a.</p>	<p>The cell contains a set of structures called organelles that interact to carry out life processes through physical and chemical means: Compare and contrast the structure and function of mitochondria and chloroplasts</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Teacher Resource CD: Human Physiology</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
<p>CONCEPT: GLE / BENCHMARK</p>	<p>LO.3.2.A.9-12.b.</p>	<p>The cell contains a set of structures called organelles that interact to carry out life processes through physical and chemical means: Compare and contrast the structure and function of cell wall and cell membranes</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Teacher Resource CD: Human Physiology</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
<p>CONCEPT: GLE / BENCHMARK</p>	<p>LO.3.2.A.9-12.c.</p>	<p>The cell contains a set of structures called organelles that interact to carry out life processes through physical and chemical means: Explain physical and chemical interactions that occur between organelles as they carry out life processes</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Teacher Resource CD: Human Physiology</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
<p>CONCEPT: GLE / BENCHMARK</p>	<p>LO.3.2.D.9-12.b.</p>	<p>Cells carry out chemical transformations that use energy for the synthesis or breakdown of organic compounds: Distinguish among organic compounds (e.g., proteins, nucleic acids, lipids, carbohydrates) in relation to their role in living systems</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity</li> </ul>

		<p>4: Glucose Test of Simulated Urine Samples</p> <ul style="list-style-type: none"> <li>Teacher Resource CD: Human Physiology</li> </ul>
CONCEPT: GLE / BENCHMARK	LO.3.2.D.9-12.c.	<p>Cells carry out chemical transformations that use energy for the synthesis or breakdown of organic compounds: Recognize energy is absorbed or released in the breakdown and/or synthesis of organic compounds</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> </ul>
CONCEPT: GLE / BENCHMARK	LO.3.2.E.9-12.b.	<p>Protein structure and function are coded by the DNA (Deoxyribonucleic acid) molecule: Recognize the function of protein in cell structure and function (i.e., enzyme action, growth and repair of body parts, regulation of cell division and differentiation)</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>Teacher Resource CD: Human Physiology</li> </ul>
CONCEPT: GLE / BENCHMARK	LO.3.2.F.9-12.a.	<p>Cellular activities and responses can maintain stability internally while external conditions are changing (homeostasis): Explain the significance of semi-permeability to the transport of molecules across cellular membranes</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>Teacher Resource CD: Human Physiology</li> </ul>
CONCEPT: GLE / BENCHMARK	LO.3.2.F.9-12.b.	<p>Cellular activities and responses can maintain stability internally while external conditions are changing (homeostasis): Predict the movement of molecules needed for a cell to maintain homeostasis, given concentration gradients of different sizes of molecules</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>Teacher Resource CD: Human Physiology</li> </ul>
CONCEPT: GLE / BENCHMARK	LO.3.2.F.9-12.c.	<p>Cellular activities and responses can maintain stability internally while external conditions are changing (homeostasis): Relate the role of diffusion, osmosis, and active transport to the movement of molecules across semi-permeable membranes</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> </ul>

		<ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>Teacher Resource CD: Human Physiology</li> </ul>
CONCEPT: GLE / BENCHMARK	LO.3.2.F.9-12.d.	<p>Cellular activities and responses can maintain stability internally while external conditions are changing (homeostasis): Explain how water is important to cells (e.g., is a buffer for body temperature, provides soluble environment for chemical reactions, serves as a reactant in chemical reactions, provides hydration that maintains cell turgidity, maintains protein shape)</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>Teacher Resource CD: Human Physiology</li> <li>Virtual Laboratory: Identifying Human Tissues</li> </ul>
STRAND: BIG IDEA / STANDARD	MO.LO.3.3.	Characteristic and Interactions of Living Organisms: There is a genetic basis for the transfer of biological characteristics from one generation to the next through reproductive processes
CONCEPT: GLE / BENCHMARK	LO.3.3.E.9-12.c.	<p>The pattern of inheritance for many traits can be predicted by using the principles of Mendelian genetics: Explain how sex-linked traits may or may not result in the expression of a genetic disorder (e.g., hemophilia, muscular dystrophy, color blindness) depending on gender</p> <ul style="list-style-type: none"> <li>Teacher Resource CD: Human Health Issues and Disease</li> </ul>
STRAND: BIG IDEA / STANDARD	MO.SI.7.1.	Scientific Inquiry: Science understanding is developed through the use of science process skills, scientific knowledge, scientific investigation, reasoning, and critical thinking
CONCEPT: GLE / BENCHMARK	SI.7.1.A.9-12.a.	<p>Scientific inquiry includes the ability of students to formulate a testable question and explanation, and to select appropriate investigative methods in order to obtain evidence relevant to the explanation: Formulate testable questions and hypotheses</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity</li> </ul>

		<p>2: Measuring Vision</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>Virtual Laboratory: Identifying Human Tissues</li> </ul>
<p>CONCEPT: GLE / BENCHMARK</p>	<p>SI.7.1.A.9-12.b.</p>	<p>Scientific inquiry includes the ability of students to formulate a testable question and explanation, and to select appropriate investigative methods in order to obtain evidence relevant to the explanation: Analyzing an experiment, identify the components (i.e., independent variable, dependent variables, control of constants, multiple trials) and explain their importance to the design of a valid experiment</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> </ul>
<p>CONCEPT: GLE / BENCHMARK</p>	<p>SI.7.1.A.9-12.c.</p>	<p>Scientific inquiry includes the ability of students to formulate a testable question and explanation, and to select appropriate investigative methods in order to obtain evidence relevant to the explanation: Design and conduct a valid experiment</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 1 Lab 1 Activity</li> </ul>

		<p>1: Learning How Our Body is Organized and Functions</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
<p>CONCEPT: GLE / BENCHMARK</p>	<p>SI.7.1.A.9-12.f.</p>	<p>Scientific inquiry includes the ability of students to formulate a testable question and explanation, and to select appropriate investigative methods in order to obtain evidence relevant to the explanation: Acknowledge there is no fixed procedure called 'the scientific method', but that some investigations involve systematic observations, carefully collected and relevant evidence, logical</p>

		<p>reasoning, and some imagination in developing hypotheses and other explanations</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
<b>CONCEPT:</b>	SI.7.1.A.9-	Scientific inquiry includes the ability of students to formulate a

GLE / BENCHMARK	12.g.	<p>testable question and explanation, and to select appropriate investigative methods in order to obtain evidence relevant to the explanation: Evaluate the design of an experiment and make suggestions for reasonable improvements</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> </ul>
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		<ul style="list-style-type: none"> <li>Virtual Laboratory: Identifying Human Tissues</li> </ul>
<p><b>CONCEPT: GLE / BENCHMARK</b></p>	<p>SI.7.1.B.9-12.a.</p>	<p>Scientific inquiry relies upon gathering evidence from qualitative and quantitative observations: Make qualitative and quantitative observations using the appropriate senses, tools and equipment to gather data (e.g., microscopes, thermometers, analog and digital meters, computers, spring scales, balances, metric rulers, graduated cylinders)</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>Human Biology and Health Issues: Unit 4 Lab 10</li> </ul>

		<p>Activity 1: Measuring Reaction Time</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 4 Lab 10</li> </ul> <p>Activity 2: Measuring Range of Vision</p> <ul style="list-style-type: none"> <li>Virtual Laboratory: Identifying Human Tissues</li> </ul>
<p>CONCEPT: GLE / BENCHMARK</p>	<p>SI.7.1.B.9-12.c.</p>	<p>Scientific inquiry relies upon gathering evidence from qualitative and quantitative observations: Determine the appropriate tools and techniques to collect, analyze, and interpret data</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>Human Biology and Health Issues: Unit 4 Lab 10</li> </ul>

		<p>Activity 1: Measuring Reaction Time</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>Virtual Laboratory: Identifying Human Tissues</li> </ul>
CONCEPT: GLE / BENCHMARK	SI.7.1.B.9-12.e.	<p>Scientific inquiry relies upon gathering evidence from qualitative and quantitative observations: Calculate the range, average/mean, percent, and ratios for sets of data</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> </ul>
CONCEPT: GLE / BENCHMARK	SI.7.1.C.9-12.a.	<p>Evidence is used to formulate explanations: Use quantitative and qualitative data as support for reasonable explanations (conclusions)</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity</li> </ul>

		<p>2: Physical and Microscopic Characteristics of Urine</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
<p><b>CONCEPT: GLE / BENCHMARK</b></p>	<p><b>SI.7.1.C.9-12.b.</b></p>	<p>Evidence is used to formulate explanations: Analyze experimental data to determine patterns, relationship, perspectives, and credibility of explanations (e.g., predict/extrapolate data, explain the relationship between the independent and dependent variable)</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> </ul>

		<ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
<p>CONCEPT: GLE / BENCHMARK</p>	<p>SI.7.1.D.9-12.a.</p>	<p>Scientific inquiry includes evaluation of explanations (hypotheses, laws, theories) in light of scientific principles (understandings): Analyze whether evidence (data) and scientific principles support proposed explanations (hypotheses, laws, theories)</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity</li> </ul>

		<p>1: Modeling Kidney Function</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
<p><b>CONCEPT: GLE / BENCHMARK</b></p>	<p>SI.7.1.E.9-12.a.</p>	<p>The nature of science relies upon communication of results and justification of explanations: Communicate the procedures and results of investigations and explanations through: oral presentations; drawings and maps; data tables (allowing for the recording and analysis of data relevant to the experiment such as independent and dependent variables, multiple trials, beginning and ending times or temperatures, derived quantities); graphs (bar, single, and multiple line); equations and writings</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity</li> </ul>

		<p>2: Exploring Transdermal Drug Delivery</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> </ul>
<p><b>CONCEPT: GLE / BENCHMARK</b></p>	<p>SI.7.1.E.9-12.b.</p>	<p>The nature of science relies upon communication of results and justification of explanations: Communicate and defend a scientific argument</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> </ul>

		<ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
<p>CONCEPT: GLE / BENCHMARK</p>	<p>SI.7.1.E.9-12.c.</p>	<p>The nature of science relies upon communication of results and justification of explanations: Explain the importance of the public presentation of scientific work and supporting evidence to the scientific community (e.g., work and evidence must be critiqued, reviewed, and validated by peers; needed for subsequent investigations by peers; results can influence the decisions regarding future scientific work)</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity</li> </ul>

		<p>1: Demonstrating Selective Permeability in Simulated Skin Cells</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
<b>STRAND: BIG IDEA / STANDARD</b>	<b>MO.ST.8.3.</b>	<b>Impact of Science, Technology and Human Activity: Science and technology affect, and are affected by, society</b>
<b>CONCEPT: GLE / BENCHMARK</b>	<b>ST.8.3.C.9-12.c.</b>	<p>Scientific ethics require that scientists must not knowingly subject people or the community to health or property risks without their knowledge and consent: Identify and evaluate the role of models as an ethical alternative to direct experimentation (e.g., using a model for a stream rather than pouring oil in an existing stream when studying the effects of oil pollution)</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> </ul>

Science  
Grade 10

STRAND: BIG IDEA / STANDARD	MO.ME.1.1.	Properties and Principles of Matter and Energy: Changes in properties and states of matter provide evidence of the atomic theory of matter
CONCEPT: GLE / BENCHMARK	ME.1.1.A.9-12.c.	<p>Objects, and the materials they are made of, have properties that can be used to describe and classify them: Classify a substance as being made up of one kind of atom (element) or a compound when given the molecular formula or structural formula (or electron dot diagram) for the substance</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> </ul>
CONCEPT: GLE / BENCHMARK	ME.1.1.B.9-12.a.	<p>Properties of mixtures depend upon the concentrations, properties, and interactions of particles: Classify solutions as dilute, concentrated, or saturated</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> </ul>
CONCEPT: GLE / BENCHMARK	ME.1.1.B.9-12.b.	<p>Properties of mixtures depend upon the concentrations, properties, and interactions of particles: Compare and contrast the properties of acidic, basic, and neutral solutions</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> </ul>
CONCEPT: GLE / BENCHMARK	ME.1.1.B.9-12.c.	<p>Properties of mixtures depend upon the concentrations, properties, and interactions of particles: Predict the effect of the properties of the solvent or solute (e.g., polarity, temperature, surface area/particle size, concentration, agitation) on the solubility of a substance</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> </ul>
STRAND: BIG IDEA / STANDARD	MO.LO.3.1.	Characteristic and Interactions of Living Organisms: There is a fundamental unity underlying the diversity of all living organisms
CONCEPT: GLE / BENCHMARK	LO.3.1.B.9-12.a.	<p>Organisms progress through life cycles unique to different types of organisms: Recognize cells both increase in number and differentiate, becoming specialized in structure and function, during and after embryonic development</p> <ul style="list-style-type: none"> <li>• Teacher Resource CD: The Human Machine</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
CONCEPT: GLE /	LO.3.1.C.9-12.a.	Cells are the fundamental units of structure and function of all living things: Recognize all organisms are composed of cells, the

BENCHMARK		<p>fundamental units of structure and function</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Teacher Resource CD: Human Physiology</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
CONCEPT: GLE / BENCHMARK	LO.3.1.C.9-12.b.	<p>Cells are the fundamental units of structure and function of all living things: Describe the structure of cell parts (e.g., cell wall, cell membrane, cytoplasm, nucleus, chloroplast, mitochondrion, ribosomes, vacuole) found in different types of cells (e.g., bacterial, plant, skin, nerve, blood, muscle) and the functions they perform (e.g., structural support, transport of materials, storage of genetic information, photosynthesis and respiration, synthesis of new molecules, waste disposal) that are necessary to the survival of the cell and organism</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Teacher Resource CD: Human Physiology</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
STRAND: BIG IDEA / STANDARD	MO.LO.3.2.	Characteristic and Interactions of Living Organisms: Living organisms carry out life processes in order to survive
CONCEPT: GLE / BENCHMARK	LO.3.2.A.9-12.a.	<p>The cell contains a set of structures called organelles that interact to carry out life processes through physical and chemical means: Compare and contrast the structure and function of mitochondria and chloroplasts</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Teacher Resource CD: Human Physiology</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
CONCEPT: GLE / BENCHMARK	LO.3.2.A.9-12.b.	<p>The cell contains a set of structures called organelles that interact to carry out life processes through physical and chemical means: Compare and contrast the structure and function of cell wall and cell</p>

		<p>membranes</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Teacher Resource CD: Human Physiology</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
CONCEPT: GLE / BENCHMARK	LO.3.2.A.9-12.c.	<p>The cell contains a set of structures called organelles that interact to carry out life processes through physical and chemical means: Explain physical and chemical interactions that occur between organelles as they carry out life processes</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Teacher Resource CD: Human Physiology</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
CONCEPT: GLE / BENCHMARK	LO.3.2.D.9-12.b.	<p>Cells carry out chemical transformations that use energy for the synthesis or breakdown of organic compounds: Distinguish among organic compounds (e.g., proteins, nucleic acids, lipids, carbohydrates) in relation to their role in living systems</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Teacher Resource CD: Human Physiology</li> </ul>
CONCEPT: GLE / BENCHMARK	LO.3.2.D.9-12.c.	<p>Cells carry out chemical transformations that use energy for the synthesis or breakdown of organic compounds: Recognize energy is absorbed or released in the breakdown and/or synthesis of organic compounds</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> </ul>
CONCEPT: GLE / BENCHMARK	LO.3.2.E.9-12.b.	<p>Protein structure and function are coded by the DNA (Deoxyribonucleic acid) molecule: Recognize the function of protein in cell structure and function (i.e., enzyme action, growth and repair of body parts, regulation of cell division and differentiation)</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> </ul>

		<ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>Teacher Resource CD: Human Physiology</li> </ul>
CONCEPT: GLE / BENCHMARK	LO.3.2.F.9-12.a.	<p>Cellular activities and responses can maintain stability internally while external conditions are changing (homeostasis): Explain the significance of semi-permeability to the transport of molecules across cellular membranes</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>Teacher Resource CD: Human Physiology</li> </ul>
CONCEPT: GLE / BENCHMARK	LO.3.2.F.9-12.b.	<p>Cellular activities and responses can maintain stability internally while external conditions are changing (homeostasis): Predict the movement of molecules needed for a cell to maintain homeostasis, given concentration gradients of different sizes of molecules</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>Teacher Resource CD: Human Physiology</li> </ul>
CONCEPT: GLE / BENCHMARK	LO.3.2.F.9-12.c.	<p>Cellular activities and responses can maintain stability internally while external conditions are changing (homeostasis): Relate the role of diffusion, osmosis, and active transport to the movement of molecules across semi-permeable membranes</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>Teacher Resource CD: Human Physiology</li> </ul>
CONCEPT: GLE / BENCHMARK	LO.3.2.F.9-12.d.	<p>Cellular activities and responses can maintain stability internally while external conditions are changing (homeostasis): Explain how water is important to cells (e.g., is a buffer for body temperature, provides soluble environment for chemical reactions, serves as a reactant in chemical reactions, provides hydration that maintains cell turgidity, maintains protein shape)</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> </ul>

		<ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>Teacher Resource CD: Human Physiology</li> <li>Virtual Laboratory: Identifying Human Tissues</li> </ul>
<b>STRAND: BIG IDEA / STANDARD</b>	<b>MO.LO.3.3.</b>	<b>Characteristic and Interactions of Living Organisms: There is a genetic basis for the transfer of biological characteristics from one generation to the next through reproductive processes</b>
<b>CONCEPT: GLE / BENCHMARK</b>	<b>LO.3.3.E.9-12.c.</b>	<p>The pattern of inheritance for many traits can be predicted by using the principles of Mendelian genetics: Explain how sex-linked traits may or may not result in the expression of a genetic disorder (e.g., hemophilia, muscular dystrophy, color blindness) depending on gender</p> <ul style="list-style-type: none"> <li>Teacher Resource CD: Human Health Issues and Disease</li> </ul>
<b>STRAND: BIG IDEA / STANDARD</b>	<b>MO.EC.4.3.</b>	<b>Changes in Ecosystems and Interactions of Organisms with their Environments: Genetic variation sorted by the natural selection process explains evidence of biological evolution</b>
<b>CONCEPT: GLE / BENCHMARK</b>	<b>EC.4.3.C.9-12.c.</b>	<p>Natural selection is the process of sorting individuals based on their ability to survive and reproduce within their ecosystem: Explain how genetic homogeneity may cause a population to be more susceptible to extinction (e.g., succumbing to a disease for which there is no natural resistance)</p> <ul style="list-style-type: none"> <li>Teacher Resource CD: Human Health Issues and Disease</li> </ul>
<b>STRAND: BIG IDEA / STANDARD</b>	<b>MO.SI.7.1.</b>	<b>Scientific Inquiry: Science understanding is developed through the use of science process skills, scientific knowledge, scientific investigation, reasoning, and critical thinking</b>
<b>CONCEPT: GLE / BENCHMARK</b>	<b>SI.7.1.A.9-12.a.</b>	<p>Scientific inquiry includes the ability of students to formulate a testable question and explanation, and to select appropriate investigative methods in order to obtain evidence relevant to the explanation: Formulate testable questions and hypotheses</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity</li> </ul>

		<p>5: Typographic Illusions</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
<p>CONCEPT: GLE / BENCHMARK</p>	<p>SI.7.1.A.9-12.b.</p>	<p>Scientific inquiry includes the ability of students to formulate a testable question and explanation, and to select appropriate investigative methods in order to obtain evidence relevant to the explanation: Analyzing an experiment, identify the components (i.e., independent variable, dependent variables, control of constants, multiple trials) and explain their importance to the design of a valid experiment</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> </ul>
<p>CONCEPT: GLE / BENCHMARK</p>	<p>SI.7.1.A.9-12.c.</p>	<p>Scientific inquiry includes the ability of students to formulate a testable question and explanation, and to select appropriate investigative methods in order to obtain evidence relevant to the explanation: Design and conduct a valid experiment</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity</li> </ul>

		<p>3: Distribution and Sensitivity of Touch Receptors</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
<p><b>CONCEPT: GLE / BENCHMARK</b></p>	<p>SI.7.1.A.9-12.f.</p>	<p>Scientific inquiry includes the ability of students to formulate a testable question and explanation, and to select appropriate investigative methods in order to obtain evidence relevant to the explanation: Acknowledge there is no fixed procedure called 'the scientific method', but that some investigations involve systematic observations, carefully collected and relevant evidence, logical reasoning, and some imagination in developing hypotheses and other explanations</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity</li> </ul>

		<p>1: Testing Taste Receptors in the Tongue</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
<p>CONCEPT: GLE / BENCHMARK</p>	<p>SI.7.1.A.9-12.g.</p>	<p>Scientific inquiry includes the ability of students to formulate a testable question and explanation, and to select appropriate investigative methods in order to obtain evidence relevant to the explanation: Evaluate the design of an experiment and make suggestions for reasonable improvements</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity</li> </ul>

		<p>1: Learning How Our Body is Organized and Functions</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
<p><b>CONCEPT: GLE / BENCHMARK</b></p>	<p><b>SI.7.1.B.9-12.a.</b></p>	<p>Scientific inquiry relies upon gathering evidence from qualitative and quantitative observations: Make qualitative and quantitative observations using the appropriate senses, tools and equipment to gather data (e.g., microscopes, thermometers, analog and digital meters, computers, spring scales, balances, metric rulers, graduated</p>

		<p>cylinders)</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
<p>CONCEPT: GLE /</p>	<p>SI.7.1.B.9-12.c.</p>	<p>Scientific inquiry relies upon gathering evidence from qualitative and quantitative observations: Determine the appropriate tools and</p>

BENCHMARK		<p>techniques to collect, analyze, and interpret data</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
CONCEPT: GLE /	SI.7.1.B.9-12.e.	Scientific inquiry relies upon gathering evidence from qualitative and quantitative observations: Calculate the range, average/mean,

BENCHMARK		<p>percent, and ratios for sets of data</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> </ul>
CONCEPT: GLE / BENCHMARK	SI.7.1.C.9-12.a.	<p>Evidence is used to formulate explanations: Use quantitative and qualitative data as support for reasonable explanations (conclusions)</p> <ul style="list-style-type: none"> <li>Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> </ul>

		<ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
<p><b>CONCEPT: GLE / BENCHMARK</b></p>	<p>SI.7.1.C.9-12.b.</p>	<p>Evidence is used to formulate explanations: Analyze experimental data to determine patterns, relationship, perspectives, and credibility of explanations (e.g., predict/extrapolate data, explain the relationship between the independent and dependent variable)</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity</li> </ul>

		<p>1: Learning How Pollutants Accumulate in the Lungs</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
<p><b>CONCEPT: GLE / BENCHMARK</b></p>	<p><b>SI.7.1.D.9-12.a.</b></p>	<p>Scientific inquiry includes evaluation of explanations (hypotheses, laws, theories) in light of scientific principles (understandings): Analyze whether evidence (data) and scientific principles support proposed explanations (hypotheses, laws, theories)</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> </ul>

		<ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
<p>CONCEPT: GLE / BENCHMARK</p>	<p>SI.7.1.E.9-12.a.</p>	<p>The nature of science relies upon communication of results and justification of explanations: Communicate the procedures and results of investigations and explanations through: oral presentations; drawings and maps; data tables (allowing for the recording and analysis of data relevant to the experiment such as independent and dependent variables, multiple trials, beginning and ending times or temperatures, derived quantities); graphs (bar, single, and multiple line); equations and writings</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> </ul>

		<ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> </ul>
<p>CONCEPT: GLE / BENCHMARK</p>	<p>SI.7.1.E.9-12.b.</p>	<p>The nature of science relies upon communication of results and justification of explanations: Communicate and defend a scientific argument</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity</li> </ul>

		<p>4: Glucose Test of Simulated Urine Samples</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
<p>CONCEPT: GLE / BENCHMARK</p>	<p>SI.7.1.E.9-12.c.</p>	<p>The nature of science relies upon communication of results and justification of explanations: Explain the importance of the public presentation of scientific work and supporting evidence to the scientific community (e.g., work and evidence must be critiqued, reviewed, and validated by peers; needed for subsequent investigations by peers; results can influence the decisions regarding future scientific work)</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 1: Testing Taste Receptors in the Tongue</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 2: Thermoreceptors - Responding to Heat and Cold</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 3: Distribution and Sensitivity of Touch Receptors</li> <li>• Human Biology and Health Issues: Unit 1 Lab 2 Activity 4: Responding to Sound</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 1: Exploring the Eye-Brain Connection</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 2: Measuring Vision</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 3: Is There a Hole in Your Hand?</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 4: Photographic Ambiguities</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 5: Typographic Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 3 Activity 6: Contrast and Color Illusions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 5 Activity 1: Testing for Food Nutrient Content</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> </ul>

		<ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> <li>• Human Biology and Health Issues: Unit 3 Lab 9 Activity 1: Simulating the Transmission of the Ebola Virus</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 1: Measuring Reaction Time</li> <li>• Human Biology and Health Issues: Unit 4 Lab 10 Activity 2: Measuring Range of Vision</li> <li>• Virtual Laboratory: Identifying Human Tissues</li> </ul>
<b>STRAND: BIG IDEA / STANDARD</b>	<b>MO.ST.8.3.</b>	<b>Impact of Science, Technology and Human Activity: Science and technology affect, and are affected by, society</b>
<b>CONCEPT: GLE / BENCHMARK</b>	<b>ST.8.3.C.9-12.c.</b>	<p>Scientific ethics require that scientists must not knowingly subject people or the community to health or property risks without their knowledge and consent: Identify and evaluate the role of models as an ethical alternative to direct experimentation (e.g., using a model for a stream rather than pouring oil in an existing stream when studying the effects of oil pollution)</p> <ul style="list-style-type: none"> <li>• Human Biology and Health Issues: Unit 1 Lab 1 Activity 1: Learning How Our Body is Organized and Functions</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 1: Determining ABO-Rh Blood Type</li> <li>• Human Biology and Health Issues: Unit 1 Lab 4 Activity 2: A Closer Look at Blood</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 1: Demonstrating Selective Permeability in Simulated Skin Cells</li> <li>• Human Biology and Health Issues: Unit 2 Lab 6 Activity 2: Exploring Transdermal Drug Delivery</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 1: Modeling Kidney Function</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 2: Physical and Microscopic Characteristics of Urine</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 3: Protein Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 2 Lab 7 Activity 4: Glucose Test of Simulated Urine Samples</li> <li>• Human Biology and Health Issues: Unit 3 Lab 8 Activity 1: Learning How Pollutants Accumulate in the Lungs</li> </ul>