



Gasconade R-2
Objective Course Curriculum Report for:
Anatomy/Physiology - Twelfth Grade

Generated on 11/23/2015

Name

Anatomy/Physiology Objective 1

Unit Objective

Students will relate the major organs as being part of organ systems in the body. Students will use directional and regional terms to locate body features. Students will compare the operation of negative and positive feed-back systems used to maintain homeostasis.

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Sequence

1

Assessment Methods

Essential Questions

Course

Anatomy/Physiology

Unit

01 Body Organization

Objective used to assess students

Formative Assessment Activities

Students will identify the major organs and which organ system they belong to. Students will identify regions of the body and describe their locations using directional terms. Students will differentiate the life processes an organism undergoes to maintain homeostasis.

Depth of Knowledge

80%

Learning Activity

Students will identify major organs and systems on a diagram. Students will identify regions of the body by playing Simon says.

Research-based Instructional Strategies

The teacher will identify the major organs in specific organ systems on a model. The teacher will identify regional and directional terms on a student model. The teacher will model feedback mechanisms employed in maintaining homeostasis.

Supporting Resources

Smartboard Lessons: JRAccess to X folder with developed smart board and powerpoint lessons. Introduction to the Human Body: The essentials of Anatomy and Physiology; 6th Ed., Tortora and Grabowski; 2004; and online resources. Anatomy Coloring Book; Kapit and Elson; 1993. The Physiology Coloring Book; Kapit, Macey, and Meisami; 1999.

Correction Exercise

Students will complete worksheets created from the resources listed.

Enrichment Exercise for Accelerated Learners

Students will create a large scale human outline and label the organs and/or regions.

Remediation for Struggling Learners

English Language Learner

District Defined

Objective is A+

Missouri School Improvement Program

Code	Subject	Grade	G
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Show-Me Standards

Code	Subject	Grade	Standard	Goal
3	Science	Grades: K-12	characteristics and interactions of living organisms	
3.5	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to recognize and solve problems.	Reason inductively from a set of specific facts and deductively from general premises
4.1	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to make decisions and act as responsible members of society.	Explain reasoning and identify information used to support decisions

Grade and Course Level Standards

Common Core Standards

Version

1

Files

Date Range

Other Standards

Other Diverse Learners

Students Self-Reflection About Personal Goals

Use of Technology

Guiding Questions

Guiding Questions Depth of Knowledge

Summative Assessment Activities

Summative Correction Exercise

Family and Community Involvement

Name

Anatomy/Physiology Objective 2

Unit Objective

Students will classify compounds as to their role in chemical reactions that maintain life.

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Sequence

2

Assessment Methods

Essential Questions

Course

Anatomy/Physiology

Unit

02 Basic Biochemistry

Objective used to assess students

Formative Assessment Activities

Students will be evaluated on their ability to identify organic molecules from illustrations.

Students will take a test to determine their knowledge of basic chemistry.

Depth of Knowledge

75%

Learning Activity

Video Clips United Streaming
Chemical Reactions
Your Personal Water

Lab Activity on Organic Compounds
Computer Lab Online resources for practice and review.

Research-based Instructional Strategies

Power Point Lessons Wiley/JR
Smart Board Lessons JR

Supporting Resources

Access to X folder with developed smart board and powerpoint lessons. Introduction to the Human Body: The essentials of Anatomy and Physiology; 6th Ed., Tortora and Grabowski; 2004; and online resources. Anatomy Coloring Book; Kapit and Elson; 1993. The Physiology Coloring Book; Kapit, Macey, and Meisami; 1999.

Correction Exercise

Enrichment Exercise for Accelerated Learners

Remediation for Struggling Learners

English Language Learner

District Defined

Objective is A+

Missouri School Improvement Program

Show-Me Standards

Code	Subject	Grade	Standard	Goal
3	Science	Grades: K-12	characteristics and interactions of living organisms	
1.6	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Discover and evaluate patterns and relationships in information, ideas and structures
1.8	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Organize data, information and ideas into useful forms (including charts, graphs, outlines) for analysis or presentation

Grade and Course Level Standards

Common Core Standards

Version

1

Files

Date Range

Other Standards

Other Diverse Learners

Students Self-Reflection About Personal Goals

Use of Technology

Guiding Questions

Guiding Questions Depth of Knowledge

Summative Assessment Activities

Summative Correction Exercise

Family and Community Involvement

Name

Anatomy/Physiology Objective 3

Unit Objective

Students will differentiate the variety of cells located in the body and relate cells to their general purpose. Students will recognize and classify tissue from micrographs.

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Sequence

3

Assessment Methods

Essential Questions

Course

Anatomy/Physiology

Unit

03 Cells & Tissues

Objective used to assess students

Formative Assessment Activities

Students will identify various cells in the body in a laboratory exam.
Students will differentiate cells in the body and relate its structure to its function.
Students will classify cells into one of the four major groups.

Depth of Knowledge

80%

Learning Activity

Students will identify cells under the microscope or from micrographs.
Students will describe key characteristics of the different types of cells.
Students will differentiate the cells observed and analyze how the structure relates to its function.
Students will dissect chicken wing to identify types of tissues.

Research-based Instructional Strategies

Teacher will identify the four major types of tissues and classify the cells located in each. The teacher will discuss the relationship between structure and function of cells.

Supporting Resources

Introduction to the Human Body: The essentials of Anatomy and Physiology; 6th Ed., Tortora and Grabowski; 2004; and online resources. The A & P Workbook A Complete Study Guide to Anatomy and Physiology; Marieb; 1985. Anatomy Coloring Book; Kapit and Elson; 1993. The Physiology Coloring Book; Kapit, Macey, and Meisami; 1999.
Access to the X drive for presentations in SmartBoard and PowerPoint.

Correction Exercise

Students will complete worksheets created from the resources listed.

Enrichment Exercise for Accelerated Learners

Students will create a slide show presentation as a review of identification, type, and function.

Remediation for Struggling Learners

English Language Learner

District Defined

Objective is A+

Missouri School Improvement Program

Code	Subject	Grade	RI
MSIP Equity Concepts	Equity Concepts	Research information seeking skills	W

Show-Me Standards

Code	Subject	Grade	Standard	Goal
3	Science	Grades: K-12	characteristics and interactions of living organisms	
1.10	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Apply acquired information, ideas and skills to different contexts as students, workers, citizens and consumers
3.5	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to recognize and solve problems.	Reason inductively from a set of specific facts and deductively from general premises
4.1	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to make decisions and act as responsible members of society.	Explain reasoning and identify information used to support decisions

Grade and Course Level Standards

Common Core Standards

Version

1

Files

Date Range

Other Standards

Other Diverse Learners

Students Self-Reflection About Personal Goals

Use of Technology

Guiding Questions

Guiding Questions Depth of Knowledge

Summative Assessment Activities

Summative Correction Exercise

Family and Community Involvement

Name

Anatomy/Physiology Objective 4

Unit Objective

Students will analyze the role of the skin in terms of its make up, accessory organs, and contributions to maintaining homeostasis. Students will identify the types of cells, tissues, various structures, and the order they can be found.

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Sequence

4

Assessment Methods

Essential Questions

Course

Anatomy/Physiology

Unit

04 Integumentary System

Objective used to assess students

Formative Assessment Activities

Students will analyze the role of skin with reference to its make-up, accessory organs, and maintaining homeostasis. Students will identify layers of cells, tissues, and location of accessory organs.

Depth of Knowledge

80%

Learning Activity

Students will identify the cell layers of the epidermis on a diagram. Students will use resources of WileyPlus to reinforce information on structure and functions of skin and accessory structures

Research-based Instructional Strategies

The teacher will show the layers of the skin with the accessory organs. The teacher will illustrate the role the integumentary system plays in maintaining homeostasis.

Supporting Resources

Access to Moodle for Smartboard lessons, videos and assignments.
WileyPlus aligned with textbook providing practice and assignments. Principles of Anatomy and Physiology 12th edition; Tortora and Derrickson; copyright 2009
The A & P Workbook A Complete Study Guide to Anatomy and Physiology; Marieb; 1985.
Anatomy Coloring Book; Kapit and Elson; 1993.
The Physiology Coloring Book; Kapit, Macey, and Meisami; 1999.

Correction Exercise

Students will complete worksheets created from the resources listed.

Enrichment Exercise for Accelerated Learners

Remediation for Struggling Learners

English Language Learner

District Defined

Objective is A+

Missouri School Improvement Program

Code	Subject	Grade	RI
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Show-Me Standards

Code	Subject	Grade	Standard	Goal
3	Science	Grades: K-12	characteristics and interactions of living organisms	
1.1	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Develop questions and ideas to initiate and refine research
1.4	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Use technological tools and other resources to locate, select and organize information
1.10	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Apply acquired information, ideas and skills to different contexts as students, workers, citizens and consumers
4.1	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to make decisions and act as responsible members of society.	Explain reasoning and identify information used to support decisions

Grade and Course Level Standards

Common Core Standards

Version

1

Files

Date Range

Other Standards

Other Diverse Learners

Students Self-Reflection About Personal Goals

Use of Technology

Guiding Questions

Guiding Questions Depth of Knowledge

Summative Assessment Activities

Summative Correction Exercise

Family and Community Involvement

Name

Anatomy/Physiology Objective 5

Unit Objective

Students will identify bones of the skeleton. Students will analyze the gross and microscopic anatomy structure of bone and its role in maintaining homeostasis. Students will identify the location, type of movement, and classification of joints.

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Sequence

5

Assessment Methods

Essential Questions

Course

Unit

05 Skeletal System

Objective used to assess students

Formative Assessment Activities

Students will identify bones and processes on a laboratory practical. Students will analyze the gross anatomy different types of bones and relate it to its function. Students will analyze the microscopic anatomy of a bone and its role in maintaining homeostasis. Students will identify the location, type of movement, and classification of joints.

Depth of Knowledge

80%

Learning Activity

1. Students will identify the bones and processes using a skeleton model and disjointed bones as well as on diagrams.
2. Students will analyze the gross anatomy of bones on a model. Students will analyze the microscopic anatomy of a bone.
3. Students will analyze the relationship between bones and maintaining homeostasis by completing a flow chart if calcium levels are increased or decreased.
4. Students will identify the location, type of movement, and classification of joints on a diagrams.
5. Students will use tutorials from textbook website as practice in identifying bones.

Research-based Instructional Strategies

The teacher will identify the bones and processes of the skeletal system. The teacher will discuss the gross anatomy and microscopic structure of bone. The teacher will explain the role of the skeletal system in maintaining homeostasis. The teacher will illustrate the different types of joints and their movements.

Supporting Resources

Access to X drive on school server for SmartBoard and PowerPoint lessons under Rademacher and McPherson Principles of Anatomy & Physiology 11th ed; Tortora & Derrickson; 2009 The A & P Workbook A Complete Study Guide to Anatomy and Physiology; Marieb; 1985. Anatomy Coloring Book; Kapit and Elson; 1993. The Physiology Coloring Book; Kapit, Macey, and Meisami; 1999.

Correction Exercise

Students will complete worksheets created from the resources listed.

Enrichment Exercise for Accelerated Learners

Students will complete a case study on the skeletal system.

Remediation for Struggling Learners

English Language Learner

District Defined

Objective is A+

Missouri School Improvement Program

Code	Subject	Grade	G
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Show-Me Standards

Code	Subject	Grade	Standard	Goal
3	Science	Grades: K-12	characteristics and interactions of living organisms	
1.10	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Apply acquired information, ideas and skills to different contexts as students, workers, citizens and consumers
3.5	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to recognize and solve problems.	Reason inductively from a set of specific facts and deductively from general premises
4.1	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to make decisions and act as responsible members of society.	Explain reasoning and identify information used to support decisions

Grade and Course Level Standards

Common Core Standards

Version

1

Files

Date Range

Other Standards

Other Diverse Learners

Students Self-Reflection About Personal Goals

Use of Technology

Guiding Questions

Guiding Questions Depth of Knowledge

Summative Assessment Activities

Summative Correction Exercise

Family and Community Involvement

Name

Anatomy/Physiology Objective 6

Unit Objective

Students will identify the major muscles of the body. Students will relate the location of the muscle to its ability to move the body. Students will analyze the microscopic structure and physiology of the muscle. Students will evaluate the role of muscles in maintaining homeostasis.

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Sequence

6

Assessment Methods

Essential Questions

Course

Anatomy/Physiology

Unit

06 Muscular System

Objective used to assess students

Formative Assessment Activities

Students will identify the major muscles of the body in a lab practical exam. Students will relate the location of a muscle to its ability to move certain body parts. Students will analyze the physiology of the muscle that results in its ability to contract and cause movement. Students will evaluate the role of muscles in maintaining homeostasis.

Depth of Knowledge

75%

Learning Activity

Students will identify the major muscles of the body on a diagram. Students will identify muscles of the body by cutting out individual muscles and placing them in the proper place on a life size diagram. Students will apply the location of the muscle to the ability to move certain body parts certain directions. Students will analyze the physiology of muscle by explaining the steps of contraction. Students will evaluate the role muscles have in maintaining homeostasis through a few short labs.

Research-based Instructional Strategies

Teacher will identify the major muscles on a model and diagram. The teacher will discuss the microscopic anatomy of muscle and its relationship to the physiology of contraction.

Supporting Resources

Access to X drive on school server for SmartBoard and PowerPoint lessons under Rademacher and McPherson. United Streaming Videos: The essentials of Anatomy and Physiology; 6th Ed., Tortora and Grabowski; 2004; and online resources. The A & P Workbook A Complete Study Guide to Anatomy and Physiology; Marieb; 1985. Anatomy Coloring Book; Kapit and Elson; 1993. The Physiology Coloring Book; Kapit, Macey, and Meisami; 1999.

Correction Exercise

Students will complete worksheets created from the resources listed.

Enrichment Exercise for Accelerated Learners

Students will complete a case study on the muscular system.

Remediation for Struggling Learners

English Language Learner

District Defined

Objective is A+

Missouri School Improvement Program

Code	Subject	Grade	D
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Show-Me Standards

Code	Subject	Grade	Standard	Goal
3	Science	Grades: K-12	characteristics and interactions of living organisms	
1.6	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Discover and evaluate patterns and relationships in information, ideas and structures
1.7	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Evaluate the accuracy of information and the reliability of its sources
1.8	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Organize data, information and ideas into useful forms (including charts, graphs, outlines) for analysis or presentation
1.10	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Apply acquired information, ideas and skills to different contexts as students, workers, citizens and consumers
3.5	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to recognize and solve problems.	Reason inductively from a set of specific facts and deductively from general premises

Grade and Course Level Standards

Common Core Standards

Version

1

Files

Date Range

Other Standards

Other Diverse Learners

Students Self-Reflection About Personal Goals

Use of Technology

Guiding Questions

Guiding Questions Depth of Knowledge

Summative Assessment Activities

Summative Correction Exercise

Family and Community Involvement

Name

Anatomy/Physiology Objective 7

Unit Objective

Students will identify the parts of the brain and their functions. Students will identify the parts of a neuron. Students will differentiate the types of nerve cells and their functions. Students will explain the process that neuron undergoes in order to send electrochemical impulses to and from the brain. Students will evaluate the role of the nervous system to maintain homeostasis.

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Sequence

7

Assessment Methods

Essential Questions

Course

Unit

07 Nervous System

Objective used to assess students

Formative Assessment Activities

Students will identify parts of the brain on a lab practical. Students will identify the parts of a neuron on a diagram. Students will differentiate the types of nerve cells and how they function. Students will explain the process of a nerve impulse transmission. Students will evaluate the function the nervous system has on maintaining homeostasis.

Depth of Knowledge

75%

Learning Activity

1. Students will identify parts of the brain by dissecting a sheep brain.
2. Students will identify the parts of a neuron on a diagram.
3. Students will differentiate the types of nerve cells and how they function in a table and through a series of laboratory activities.
4. Students will explain the process of a nerve impulse transmission by drawing the electrochemical changes that occur on a diagram.
5. Students will evaluate the function the nervous system has on maintaining homeostasis by completing a flow chart.

Research-based Instructional Strategies

The teacher will identify the parts of the brain and its function on a model and during dissection. The teacher will identify the parts of a neuron and the different types on a diagram. The teacher will explain the process of transmitting an electrochemical impulse. The teacher will analyze the nervous system's role in maintaining homeostasis.

Supporting Resources

Access to X drive on school server for SmartBoard and PowerPoint lessons under Rademacher and McPherson. Introduction to the Human Body: The essentials of Anatomy and Physiology; 6th Ed., Tortora and Grabowski; 2004; and online resources. The A & P Workbook A Complete Study Guide to Anatomy and Physiology; Marieb; 1985. Anatomy Coloring Book; Kapit and Elson; 1993. The Physiology Coloring Book; Kapit, Macey, and Meisami; 1999.

Correction Exercise

Students will complete worksheet created from the resources listed.

Enrichment Exercise for Accelerated Learners

Students will research a nervous system disorder and how it effects the rest of the body.

Remediation for Struggling Learners

English Language Learner

District Defined

Objective is A+

Missouri School Improvement Program

Code	Subject	Grade	D
MSIP Equity Concepts	Equity Concepts	Disability awareness and equity	RI

Show-Me Standards

Code	Subject	Grade	Standard	Goal
3	Science	Grades: K-12	characteristics and interactions of living organisms	
1.1	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Develop questions and ideas to initiate and refine research
1.2	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Conduct research to answer questions and evaluate information and ideas
1.3	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Design and conduct field and laboratory investigations to study nature and society
1.4	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Use technological tools and other resources to locate, select and organize information
1.6	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Discover and evaluate patterns and relationships in information, ideas and structures

1.8	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Organize data, information and ideas into useful forms (including charts, graphs, outlines) for analysis or presentation
1.10	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Apply acquired information, ideas and skills to different contexts as students, workers, citizens and consumers
4.1	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to make decisions and act as responsible members of society.	Explain reasoning and identify information used to support decisions

Grade and Course Level Standards

Common Core Standards

Version

1

Files

Date Range

Other Standards

Other Diverse Learners

Students Self-Reflection About Personal Goals

Use of Technology

Guiding Questions

Guiding Questions Depth of Knowledge

Summative Assessment Activities

Summative Correction Exercise

Family and Community Involvement

Name

Anatomy/Physiology Objective 8

Unit Objective

Students will identify blood cells, and their functions. Students will identify the parts of the heart and arteries and veins. Students will explain the flow of blood through the heart and categorize the functions of the heart. Students will differentiate between arteries, veins, and capillaries in structure and function. Students will evaluate the heart's role in maintaining homeostasis.

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Sequence

8

Assessment Methods

Essential Questions

Course

Anatomy/Physiology

Unit

08 Cardiovascular System

Objective used to assess students

Formative Assessment Activities

Students will identify different types of blood types, cells, and their functions. Students will identify the parts of the heart on a laboratory practical. Students will explain the flow of blood through the heart and body. Students will differentiate between arteries, veins, and capillaries based on structure and function.

Depth of Knowledge

80%

Learning Activity

1. Students will identify blood types and blood cells in a laboratory setting.
2. Students will identify parts of the heart, arteries, and veins through a dissection of a sheep heart. Using illustrations, students will identify major blood vessels.
3. Students will evaluate the heart's role in maintaining homeostasis through short lab experiments

Research-based Instructional Strategies

The teacher will identify the different types of blood cells, parts of the heart, and arteries and veins. The teacher will describe the flow of blood through the heart and body. The teacher will analyze the differences in function and structure of arteries, veins, and capillaries. The teacher will combine the function of the heart and maintaining homeostasis.

Supporting Resources

Access to X drive on school server for SmartBoard and PowerPoint lessons under Rademacher and McPherson.

United Streaming Videos Introduction to the Human Body: The essentials of Anatomy and Physiology; 6th Ed., Tortora and Grabowski; 2004; and online resources. The A & P Workbook A Complete Study Guide to Anatomy and Physiology; Marieb; 1985. Anatomy Coloring Book; Kapit and Elson; 1993. The Physiology Coloring Book; Kapit, Macey, and Meisami; 1999.

Correction Exercise

Students will complete worksheets created from the resources listed.

Enrichment Exercise for Accelerated Learners

Students will complete a case study on the cardiovascular system.

Remediation for Struggling Learners

District Defined

Objective is A+

Missouri School Improvement Program

Code	Subject	Grade	RE
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Show-Me Standards

Code	Subject	Grade	Standard	Goal
3	Science	Grades: K-12	characteristics and interactions of living organisms	
1.8	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Organize data, information and ideas into useful forms (including charts, graphs, outlines) for analysis or presentation
1.10	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Apply acquired information, ideas and skills to different contexts as students, workers, citizens and consumers
3.5	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to recognize and solve problems.	Reason inductively from a set of specific facts and deductively from general premises

Grade and Course Level Standards

Common Core Standards

Version

1

Files

Date Range

Other Standards

Other Diverse Learners

Students Self-Reflection About Personal Goals

Use of Technology

Guiding Questions

Guiding Questions Depth of Knowledge

Summative Assessment Activities

Summative Correction Exercise

Family and Community Involvement

Name

Anatomy/Physiology Objective 9

Unit Objective

Students will identify major types of structures composing the lymphatic system and explain how the lymphatic system is functionally related to the cardiovascular and immune systems. Students will also analyze the functions of the body defenses and types immune response.

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Sequence

9

Assessment Methods

Essential Questions

Course

Unit

09 Lymphatic System

Objective used to assess students

Formative Assessment Activities

Students will identify major structures of the lymphatic system and compare it to the cardiovascular system. Students will also analyze the function of body defenses and immunity.

Depth of Knowledge

80

Learning Activity

Students will identify the major structures on a diagram. Students will simulate pathogen transmission in a laboratory setting and discuss the steps the body takes to prevent infection. Students will construct a project on a disease or infection and explain in a presentation the functions of the immune system.

Research-based Instructional Strategies

The teacher will identify the major lymphatic structures and compare them to the cardiovascular system. The teacher will analyze the function of various body defenses and how it aids in immunity.

Supporting Resources

Introduction to the Human Body: The essentials of Anatomy and Physiology; 6th Ed., Tortora and Grabowski; 2004; and online resources. The A & P Workbook A Complete Study Guide to Anatomy and Physiology; Marieb; 1985. Anatomy Coloring Book; Kapit and Elson; 1993. The Physiology Coloring Book; Kapit, Macey, and Meisami; 1999.

Correction Exercise

Students will complete worksheets created from the resources listed.

Enrichment Exercise for Accelerated Learners

Students will create a case study on the disease that they presented.

Remediation for Struggling Learners

English Language Learner

District Defined

Objective is A+

Missouri School Improvement Program

Show-Me Standards

Code	Subject	Grade	Standard	Goal
8	Science	Grades: K-12	impact of science, technology and human activity on resources and the environment	
3	Science	Grades: K-12	characteristics and interactions of living organisms	
1.3	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Design and conduct field and laboratory investigations to study nature and society
1.4	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Use technological tools and other resources to locate, select and organize information
4.1	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to make decisions and act as responsible members of society.	Explain reasoning and identify information used to support decisions

Grade and Course Level Standards

Common Core Standards

Version

Files

Date Range

Other Standards

Other Diverse Learners

Students Self-Reflection About Personal Goals

Use of Technology

Guiding Questions

Guiding Questions Depth of Knowledge

Summative Assessment Activities

Summative Correction Exercise

Family and Community Involvement

Name

Anatomy/Physiology Objective 10

Unit Objective

The student will identify the structures and functions of the respiratory system. Students will evaluate the role of pressure to the ability to breathe. Students will visualize oxygen transport. Students will compare lung volume to its capacity.

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Sequence

10

Assessment Methods

Essential Questions

Course

Anatomy/Physiology

Unit

10 Respiratory System

Objective used to assess students

Formative Assessment Activities

Students will identify structures of the respiratory system on a diagram. Students will evaluate the role of pressure and breathing. Students will visualize the path oxygen takes from inspiration to the cell of the body. Students will compare lung volume to its capacity.

Depth of Knowledge

80%

Learning Activity

Students will identify structures of the respiratory system on a diagram. Students will evaluate the role of pressure and breathing by comparing the two. Students will specify the path oxygen takes from inspiration to the cell of the body. Students will compare lung volume to its capacity in a laboratory setting.

Research-based Instructional Strategies

The teacher will identify the structures of the respiratory system on a model and a diagram. The teacher will illustrate the role of pressure in relation to breathing.

Supporting Resources

Powerpoint Presentation by JR:United Streaming VideosIntroduction to the Human Body: The essentials of Anatomy and Physiology; 6th Ed., Tortora and Grabowski; 2004; and online resources.Learning Guide; Introduction to the Human Body;6th ed, Tortora and Grabowski; 2004.

Anatomy Coloring Book, 3rd Ed; McCann and Wise; 2008.

Anatomy Coloring Book; Kapit and Elson; 2002.The Physiology Coloring Book; Kapit, Macey, and Meisami; 2000

Correction Exercise

Students will complete worksheets created from the resources listed.

Enrichment Exercise for Accelerated Learners

Students will research Cystic Fibrosis and explain what is occurring at the cellular level.

Remediation for Struggling Learners

English Language Learner

District Defined

Objective is A+

Missouri School Improvement Program

Code	Subject	Grade	D
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Show-Me Standards

Code	Subject	Grade	Standard	Goal
3	Science	Grades: K-12	characteristics and interactions of living organisms	
1.3	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Design and conduct field and laboratory investigations to study nature and society
1.4	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Use technological tools and other resources to locate, select and organize information
1.8	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Organize data, information and ideas into useful forms (including charts, graphs, outlines) for analysis or presentation
1.10	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Apply acquired information, ideas and skills to different contexts as students, workers, citizens and consumers
3.5	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to recognize and solve problems.	Reason inductively from a set of specific facts and deductively from general premises

4.1	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to make decisions and act as responsible members of society.	Explain reasoning and identify information used to support decisions
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Grade and Course Level Standards

Common Core Standards

Version

1

Files

Date Range

Other Standards

Other Diverse Learners

Students Self-Reflection About Personal Goals

Use of Technology

Guiding Questions

Guiding Questions Depth of Knowledge

Summative Assessment Activities

Summative Correction Exercise

Family and Community Involvement

Name

Anatomy/Physiology Objective 11

Unit Objective

The student will identify the organs of the alimentary canal and accessory organs. The student will compare and contrast the digestion and absorption process of various molecules by different organs. The student will compare mechanical and chemical digestion.

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Creation Date

5/19/2013 7:18:16 PM +00:00

Modified By

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Modification Date

11/19/2013 5:59:06 PM +00:00

Sequence

Assessment Methods

Essential Questions

Course

Anatomy/Physiology

Unit

11 Digestive System

Objective used to assess students

Formative Assessment Activities

The student will identify organs on a diagram. The student will compare and contrast the processes of digestion and absorption by different organs. The student will compare and locate mechanical and chemical digestion.

Depth of Knowledge

80%

Learning Activity

Students will identify organs on a diagram and during dissection. Students will compare the digestion process of various molecules through a series of labs. Students will compare the absorption process of various organs. The student will compare mechanical and chemical digestion and locate where they occur in the system. Students will analyze various factors that effect the enzyme amylase and relate that to the functions of the digestive system.

Research-based Instructional Strategies

The teacher will identify the organs on a model and classify them as belonging to the alimentary canal or accessory organs. The teacher will discuss mechanical and chemical digestion. The teacher will discuss the digestion process of various organs and which molecules are absorbed in those locations.

Supporting Resources

Powerpoint Presentation by AM:United Streaming VideosIntroduction to the Human Body: The essentials of Anatomy and Physiology; 6th Ed., Tortora and Grabowski; 2004; and online resources.The A & P Workbook A Complete Study Guide to Anatomy and Physiology; Marieb; 1985.Anatomy Coloring Book; Kapit and Elson; 1993.The Physiology Coloring Book; Kapit, Macey, and Meisami; 1999.

Correction Exercise

Students will complete worksheets created from the resources listed.

Enrichment Exercise for Accelerated Learners

Students will keep a food diary and analyze the amount, type, and nutritional value.

Remediation for Struggling Learners

English Language Learner

District Defined

Objective is A+

Missouri School Improvement Program

Code	Subject	Grade	RI
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Show-Me Standards

Code	Subject	Grade	Standard
3	Science	Grades: K-12	characteristics and interactions of living organisms

Grade and Course Level Standards

Common Core Standards

Version

1

Files

Date Range

Other Standards

Other Diverse Learners

Students Self-Reflection About Personal Goals

Use of Technology

Guiding Questions

Guiding Questions Depth of Knowledge

Summative Assessment Activities

Summative Correction Exercise

Family and Community Involvement

Name

Anatomy/Physiology Objective 12

Unit Objective

Students will identify the organs of the urinary system. Students will analyze the filtration process in order to produce urine. Students will outline the flow of blood through the kidneys and the flow of urine as it is produced. Students will analyze the impact the excretory system has on maintaining homeostasis.

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Sequence

12

Assessment Methods

Essential Questions

Course

Anatomy/Physiology

Unit

12 Excretory System

Objective used to assess students

Formative Assessment Activities

Students will identify organs of the urinary system. Students will analyze the filtration process in order to produce urine. Students will outline the flow of blood through the kidneys and the flow of urine as it is produced. Students will analyze the impact the excretory system has on maintaining homeostasis.

Depth of Knowledge

80%

Learning Activity

Students will identify the organs of the urinary system on a diagram. Students will analyze a urine sample and conduct a urinalysis in the laboratory setting. Students will outline the flow of blood through the kidneys and the flow of urine as it is produced. Students will analyze the impact the excretory system has on maintaining homeostasis by completing a flow chart.

Research-based Instructional Strategies

The teacher will identify the organs of the urinary system on a model. The teacher will discuss the filtration process in order to produce urine. The teacher will discuss the flow of blood through the kidneys and the flow of urine as it is produced. Teacher will explain the impact the excretory system has on maintaining homeostasis.

Supporting Resources

Powerpoint Presentation by AM:United Streaming Videos:Introduction to the Human Body: The essentials of Anatomy and Physiology; 6th Ed., Tortora and Grabowski; 2004; and online resources.The A & P Workbook A Complete Study Guide to Anatomy and Physiology; Marieb; 1985.Anatomy Coloring Book; Kapit and Elson; 1993.The Physiology Coloring Book; Kapit, Macey, and Meisami; 1999.

Correction Exercise

Students will complete worksheets created from the resources listed.

Enrichment Exercise for Accelerated Learners

Students will research the advances in technology for individuals coping with kidney failure.

Remediation for Struggling Learners

English Language Learner

District Defined

Objective is A+

Missouri School Improvement Program

Code	Subject	Grade	T
MSIP Equity Concepts	Equity Concepts	Technology	D

Show-Me Standards

Code	Subject	Grade	Standard	Goal
3	Science	Grades: K-12	characteristics and interactions of living organisms	
1.10	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Apply acquired information, ideas and skills to different contexts as students, workers, citizens and consumers
3.5	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to recognize and solve problems.	Reason inductively from a set of specific facts and deductively from general premises
4.1	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to make decisions and act as responsible members of society.	Explain reasoning and identify information used to support decisions

Grade and Course Level Standards

Common Core Standards

Version

1

Files

Date Range

Other Standards

Other Diverse Learners

Students Self-Reflection About Personal Goals

Use of Technology

Guiding Questions

Guiding Questions Depth of Knowledge

Summative Assessment Activities

Summative Correction Exercise

Family and Community Involvement

Name

Anatomy/Physiology Objective 13

Unit Objective

Students will identify the structure and function of the primary and secondary sex organs of the male and female. Students will analyze the production of hormones and their role on the system. Students will describe the stages of maturation of the ova. Students will compare the ovarian and uterine cycles. Students will conclude the optimum time for fertilization and implantation to occur.

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Sequence

13

Assessment Methods

Essential Questions

Course

Anatomy/Physiology

Unit

13 Reproductive System

Objective used to assess students

Formative Assessment Activities

Students will identify the structure and function of the primary and secondary sex organs of the male and female. Students will analyze the production of hormones and their role on the system. Students will describe the stages of maturation of the ova. Students will compare the ovarian and uterine cycles. Students will conclude the optimum time for fertilization and implantation to occur.

Depth of Knowledge

80%

Learning Activity

Students will identify the structure and function of the primary and secondary sex organs of the male and female on a diagram and chart. Students will analyze the production of hormones and their role on the system. Students will describe the stages of maturation of the ova. Students will compare the ovarian and uterine cycles by creating a timeline of the events. Students will conclude the optimum time for fertilization and implantation to occur on a time line.

Research-based Instructional Strategies

The teacher will identify the structure and function of the primary and secondary sex organs of the male and female on a diagram. The teacher will explain the production of hormones and their role on the system. The teacher will discuss the stages of maturation of the ova over the cycle. The teacher will compare the ovarian and uterine cycles over a given time frame.

Supporting Resources

Powerpoint Presentations by AM:United Streaming Videos:Introduction to the Human Body: The essentials of Anatomy and Physiology; 6th Ed., Tortora and Grabowski; 2004; and online resources.The A & P Workbook A Complete Study Guide to Anatomy and Physiology; Marieb; 1985.Anatomy Coloring Book; Kapit and Elson; 1993.The Physiology Coloring Book; Kapit, Macey, and Meisami; 1999.

Correction Exercise

Students will complete worksheets created from the resources listed.

Enrichment Exercise for Accelerated Learners

Students will conduct a survey on the knowledge their peers have on the reproductive system and identify misconceptions their peer groups have.

Remediation for Struggling Learners

English Language Learner

District Defined

Objective is A+

Missouri School Improvement Program

Code	Subject	Grade	G
MSIP Equity Concepts	Equity Concepts	Gender	RI

Show-Me Standards

Code	Subject	Grade	Standard	Goal
3	Science	Grades: K-12	characteristics and interactions of living organisms	
1.1	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Develop questions and ideas to initiate and refine research
1.2	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Conduct research to answer questions and evaluate information and ideas
1.3	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Design and conduct field and laboratory investigations to study nature and society
3.1	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to recognize and solve problems.	Identify problems and define their scope and elements
1.6	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Discover and evaluate patterns and relationships in information, ideas and structures

1.8	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Organize data, information and ideas into useful forms (including charts, graphs, outlines) for analysis or presentation
1.10	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to gather, analyze and apply information and ideas.	Apply acquired information, ideas and skills to different contexts as students, workers, citizens and consumers
2.4	Knowledge Standards	Grades: K-12	Students in Missouri public schools will acquire the knowledge and skills to communicate effectively within and beyond the classroom.	Present perceptions and ideas regarding works of the arts, humanities and sciences

Grade and Course Level Standards

Common Core Standards

Version

1

Files

Date Range

Other Standards

Other Diverse Learners

Students Self-Reflection About Personal Goals

Use of Technology

Guiding Questions

Guiding Questions Depth of Knowledge

Summative Assessment Activities

Summative Correction Exercise

Family and Community Involvement

Name

Anatomy/Physiology Objective 14

Unit Objective

Created By

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System

Modification Date

11/19/2013 6:19:55 PM +00:00

Sequence

14

Assessment Methods

Essential Questions

Course

Anatomy/Physiology

Unit

Objective used to assess students

Formative Assessment Activities

Depth of Knowledge

Learning Activity

Research-based Instructional Strategies

Supporting Resources

Correction Exercise

Enrichment Exercise for Accelerated Learners

Remediation for Struggling Learners

English Language Learner

District Defined

Objective is A+

Missouri School Improvement Program

Show-Me Standards

Grade and Course Level Standards

Common Core Standards

Version

1

Files

Date Range

Other Standards

Other Diverse Learners

Students Self-Reflection About Personal Goals

Use of Technology

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