

Anatomy_Copy

Science

Grade(s) 12th, Duration 1 Year, 1 Credit
Required Course

Course Overview

Study of the each human body system parts and how they function.

Timeframe	Unit	Scope And Sequence	
		Instructional Topics	
Ongoing	Introduction to Human Anatomy and Physiology	1. (Temporary Topic)	
3 Week(s)	Tissue	1. (Temporary Topic)	
3 Week(s)	Integumentary System	1. (Temporary Topic)	
4 Week(s)	Skeletal System	1. (Temporary Topic)	
6 Week(s)	Muscular System	1. (Temporary Topic)	
5 Week(s)	Nervous System	1. (Temporary Topic)	
3 Week(s)	Blood and Cardiovascular System	1. (Temporary Topic)	
2 Week(s)	Digestive System	1. (Temporary Topic)	
1 Week(s)	Respiratory System	1. (Temporary Topic)	
1 Week(s)	Urinary System	1. (Temporary Topic)	
3 Week(s)	Reproductive System	1. (Temporary Topic)	
1 Week(s)	Endocrine System	1. (Temporary Topic)	

Materials and Resources

Zoology

Course Details

Unit: Introduction to Human Anatomy and Physiology

Duration: Ongoing

Unit Description

An understanding of the structure (anatomy) and function (physiology) of the human body is important in the life of every individual. This unit is an introduction to the sciences of anatomy and physiology as well as anatomical organization and terminology

Enduring Understandings (Knowledge & Skills)

When observing the human body, what are the major cavities, their membranes, what types of views and can be used to observe this anatomy and terms used to describe directions.

Academic Vocabulary

body systems, regional terms, directional terms, planes, cavities, regions

Materials and Resources (optional)

unit test

Topic: (Temporary Topic)

Duration: Ongoing

Learning Targets

01. Develop skills needed to be successful in Human Anatomy and Physiology.


01.01 Define the sciences of anatomy and physiology.

01.02 List and describe biological levels of organization.

01.03 Describe relative body positions and regions using proper terms.

01.04 Name and describe the general organs, locations and functions of the organ systems of the human body.

Assessment: Level of Expectation:
Mastery -- 80% or above

Learning Targets linked to Priority Standard = 

Unit: Tissue

Duration: 3 Week(s)

Unit Description

There are 4 types of tissues that combine in a variety of ways to produce all the organs of the human body.

Enduring Understandings (Knowledge & Skills)

How do tissues combine to produce membranes and organs.

Academic Vocabulary

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Science

Grade(s) 12th, Duration 1 Year, 1 Credit
Required Course

classification of 24 tissue types

Materials and Resources (optional)

unit test, lab practical

Topic: (Temporary Topic)

Duration: Ongoing

Learning Targets

02. Develop an understanding of the various types of tissues, their functions and locations.

02.01 Describe the types, functions and locations of the four main types of tissues.


Epithelial

Connective

Muscle

Nervous

02.02 Apply knowledge about the four types of tissues through a microscopic lab.

Learning Targets linked to Priority Standard = 

Unit: Integumentary System

Duration: 3 Week(s)

Unit Description

Integumentary system has many functions important for general health.

Enduring Understandings (Knowledge & Skills)

What are the functions of the integumentary system and how are these functions performed? What are common disorders of the integument?

Academic Vocabulary

Integumentary system anatomy

Materials and Resources (optional)

unit test

Topic: (Temporary Topic)

Duration: Ongoing

Learning Targets

03. Develop an understanding of the integumentary system

03.01 Describe the four major types of membranes.

Epidermis

Dermis

Hypodermis

Subcutaneous

03.02 Describe the structure of the skin and its functions.

03.03 Describe the accessory organs of skin.

Sebaceous glands

Sudoriferous glands

Hair follicles

Eccrine glands

Apocrine glands

Nails

03.04 Explain how the skin aids in regulation of body temperature.


03.05 Apply knowledge about the integumentary system and evaluate disorders and their causes.

Acne

Skin cancer

Burns

Aging

Learning Targets linked to Priority Standard = 

Unit: Skeletal System

Duration: 4 Week(s)

Unit Description

Skeletal system has many functions important for general health.

Enduring Understandings (Knowledge & Skills)

What are the functions of the skeletal system and how are these functions performed? What are common disorders of the skeletal system?

Academic Vocabulary

skeletal system anatomy

Materials and Resources (optional)

unit test, bone ID quiz

Anatomy_Copy

Science

Grade(s) 12th, Duration 1 Year, 1 Credit

Required Course

Topic: (Temporary Topic)

Duration: Ongoing

Learning Targets

04. Demonstrate an understanding of the skeletal system.

04.01 Describe the general structure of a bone.


04.02 Distinguish between intramembranous and endochondral ossification.

04.03 Discuss the major functions of bones.

04.04 Distinguish between axial and appendicular skeletons.

04.05 Locate and identify the bones.

04.06 List and describe the 3 classes of joints and give examples of each.

Learning Targets linked to Priority Standard = 

Unit: Muscular System

Duration: 6 Week(s)

Unit Description

muscular system has many functions important for general health.

Enduring Understandings (Knowledge & Skills)

What are the functions of the muscular system and how are these functions performed? What are common disorders of the muscular system?

Academic Vocabulary

muscular system anatomy

Materials and Resources (optional)

unit test, muscle ID

Topic: (Temporary Topic)

Duration: Ongoing

Learning Targets

05. Develop an understanding of the muscular system.

05.01 Describe the structure of a skeletal muscle fiber.

05.02 Explain how a muscle fiber contraction occurs.


05.03 Distinguish between a twitch and a sustained contraction.

05.04 Distinguish between the structures and functions of smooth muscle.

05.05 Compare the contraction mechanism of skeletal and cardiac muscle fibers.

05.06 Describe the locations and actions of the major skeletal muscles.

05.07 Apply knowledge about the muscular system through lab.

Learning Targets linked to Priority Standard = 

Unit: Nervous System

Duration: 5 Week(s)

Unit Description

Nervous system has many functions important for general health.

Enduring Understandings (Knowledge & Skills)

What are the functions of the nervous system and how are these functions performed? What are common disorders of the nervous system?

Academic Vocabulary

nervous system anatomy

Materials and Resources (optional)

unit test, brain/eye/ear anatomy dissection

Topic: (Temporary Topic)

Duration: Ongoing

Learning Targets

Anatomy_Copy

Science

Grade(s) 12th, Duration 1 Year, 1 Credit
Required Course

06. Demonstrate an understanding of the nervous system.

06.01 Explain the general functions of the nervous system.

06.02 Describe the general structure of a neuron.

06.03 Explain how information passes from one neuron to another.

06.04 compare and contrast the major functions and parts of the nervous system.

Central

Peripheral

Autonomic

06.05 Differentiate between the five kinds of receptors and their functions.

06.06 Investigate the somatic senses

Smell

Taste

Hearing

Sight

Touch

06.07 Apply knowledge of the nervous system through selected labs.

Learning Targets linked to Priority Standard = +

Unit: Blood and Cardiovascular System

Duration: 3 Week(s)

Unit Description

Blood and Cardiovascular system has many functions important for general health.

Enduring Understandings (Knowledge & Skills)

What are the functions of the cardiovascular system and how are these functions performed? What are common disorders of the cardiovascular system?

Academic Vocabulary

cardiovascular system anatomy

Materials and Resources (optional)

unit test, heart anatomy dissection

Topic: (Temporary Topic)

Duration: Ongoing

Learning Targets

08. Demonstrate an understanding of blood and the cardiovascular system.

08.01 Describe the general characteristics of blood and discuss its major functions.

08.02 Distinguish among the types of blood cells and their functions.

08.03 Define hemostasis and explain the mechanisms that help achieve it.

08.04 Explain blood typing.

Adverse reactions and transfusions

08.05 Describe the structure and function of the heart.

08.06 Discuss the cardiac cycle.

ECG pattern and how it is controlled

08.07 Compare and contrast the three major types of blood vessels.

08.08 Describe the flow of blood through the heart and the body.

08.09 Explain how blood pressure is produced, controlled and measured.

08.10 Apply knowledge about blood and the cardiovascular system.

Learning Targets linked to Priority Standard = +

Unit: Digestive System

Duration: 2 Week(s)

Unit Description

Digestive system has many functions important for general health.

Enduring Understandings (Knowledge & Skills)

What are the functions of the digestive system and how are these functions performed? What are common disorders of the digestive system?

Academic Vocabulary

Digestive system anatomy

Materials and Resources (optional)

unit test, cat digestive system anatomy

Topic: (Temporary Topic)

Duration: Ongoing

Learning Targets

Anatomy_Copy

Science

Grade(s) 12th, Duration 1 Year, 1 Credit
Required Course

- 09. Demonstrate an understanding of the digestive system**
09.01 Describe the general functions of the digestive system.
09.02 Describe the locations and major parts of the digestive organs.
09.03 Examine chemical digestion and nutrients related to it.

Carbohydrates

Lipids

Proteins

Vitamins

Minerals

Learning Targets linked to Priority Standard = +

Unit: Respiratory System

Duration: 1 Week(s)

Unit Description

Respiratory system has many functions important for general health.

Enduring Understandings (Knowledge & Skills)

What are the functions of the respiratory system and how are these functions performed? What are common disorders of the respiratory system?

Academic Vocabulary

respiratory system anatomy

Materials and Resources (optional)

unit test

Topic: (Temporary Topic)

Duration: Ongoing

Learning Targets

- 10. Demonstrate an understanding of the respiratory system.**
10.01 Describe the general functions of the respiratory system and the organs.
10.02 Explain the mechanisms of inspiration and expiration.
10.03 Investigate the disorders of the respiratory system.

COPD

Asthma

Emphysema

Lung cancer

Learning Targets linked to Priority Standard = +

Unit: Urinary System

Duration: 1 Week(s)

Unit Description

Urinary system has many functions important for general health.

Enduring Understandings (Knowledge & Skills)

What are the functions of the urinary system and how are these functions performed? What are common disorders of the urinary system?

Academic Vocabulary

urinary system anatomy

Materials and Resources (optional)

unit test, urinary system anatomy dissection

Topic: (Temporary Topic)

Duration: Ongoing

Learning Targets

- 11. Demonstrate an understanding of the urinary system.**
11.01 Describe the functions of the organs of the urinary system.
11.02 Describe a nephron and explain the functions of its major parts.
11.03 Explain the process of urine formation.
11.04 Apply knowledge about the urinary system through selected labs.

Learning Targets linked to Priority Standard = +

Unit: Reproductive System

Duration: 3 Week(s)

Unit Description

Reproductive system has many functions important for general health.

Enduring Understandings (Knowledge & Skills)

What are the functions of the reproductive system and how are these functions performed? What are common disorders of the reproductive

Anatomy_Copy

Science

Grade(s) 12th, Duration 1 Year, 1 Credit
Required Course

system?

Academic Vocabulary

reproductive system anatomy

Materials and Resources (optional)

unit test, reproductive system anatomy dissection

Topic: (Temporary Topic)

Duration: Ongoing

Learning Targets

12. Demonstrate an understanding of the reproductive system.


12.01 Differentiate between the male and female anatomy.

Female cycle

Oogenesis and spermatogenesis

12.02 Examine how drugs affect egg and sperm development.

12.03 Investigate the differences in males and females through cat dissection.

Learning Targets linked to Priority Standard = 

Unit: Endocrine System

Duration: 1 Week(s)

Unit Description

Endocrine system has many functions important for general health.

Enduring Understandings (Knowledge & Skills)

What are the functions of the endocrine system and how are these functions performed? What are common disorders of the endocrine system?

Academic Vocabulary

endocrine system anatomy

Materials and Resources (optional)

unit test

Topic: (Temporary Topic)

Duration: Ongoing

Learning Targets

07. Demonstrate an understanding of the endocrine system.

07.01 Differentiate between the two types of glands.

07.02 Explain hormones and their functions in the body.

07.03 Investigate a specific hormone through research.

Learning Targets linked to Priority Standard = 