

Unit 12: Anatomy and Physiology Urinary

Content Area: **Science**
Course(s): **Generic Course**
Time Period: **Marking Period 4**
Length: **2 weeks**
Status: **Published**

Standards

[LS1.A: Structure and Function](#) (pp. 143-145, NRC, 2012)

- [Systems of specialized cells within organisms help them perform the essential functions of life. \(HS-LS1-1\)](#)
- [Multicellular organisms have a hierarchical structural organization, in which any one system is made up of numerous parts and is itself a component of the next level. \(HS-LS1-2\)](#)
- [Feedback mechanisms maintain a living system's internal conditions within certain limits and mediate behaviors, allowing it to remain alive and functional even as external conditions change within some range. Feedback mechanisms can encourage \(through positive feedback\) or discourage \(negative feedback\) what is going on inside the living system. \(HS-LS1-3\)](#)

SCI.9-12.HS-LS1-1	Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins, which carry out the essential functions of life through systems of specialized cells.
SCI.9-12.HS-LS1-3	Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.
SCI.9-12.HS-LS1-2	Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.

Essential Questions

How does the body rid itself of wastes to maintain homeostasis?

Why are the kidneys an essential part of the urinary system?

Content / Skills

- Describe the anatomy and physiology of a nephron
- Describe the location and structure of the kidneys
- Describe the properties of urine
- Urinalysis lab with synthetic urine
- List the functions of the kidneys
- Name the organs of the urinary system and their functions
- Trace the blood supply through the kidney

