Nebraska Science

Plus Standards: Anatomy and Physiology

Structure and Function: Anatomy & Physiology SC.HSP.6

2 Gather, analyze, and communicate evidence of the relationship between the structures and physiological processes of the integumentary system. SC.HSP.6.2

- a Plan and conduct and investigation to identify patterns of organization in the integumentary system. SC.HSP.6.2.A
- b Ask questions to clarify the role of various structures in integumentary system function. SC.HSP.6.2.B
- c Develop and use a model to identify and describe the relationship between the structures and physiological processes of the integumentary system. SC.HSP.6.2.C
- d Plan and conduct an investigation to gather evidence that feedback mechanisms in the integumentary system help maintain homeostasis. SC.HSP.6.2.D
- e Engage in arguments from evidence for the role of cell division in integumentary system dysfunction. SC.HSP.6.2.E

3 Gather, analyze, and communicate evidence of the relationship between the structures and physiological processes of the skeletal system. SC.HSP.6.3

- a Plan and conduct an investigation to identify patterns of organization in the skeletal system. SC.HSP.6.3.A
- b Develop and use a model to identify and describe the relationship between the structures and physiological processes of the skeletal system. SC.HSP.6.3.B
- c Obtain, evaluate, and communicate information that feedback mechanisms in the skeletal system help maintain homeostasis. SC.HSP.6.3.C
- d Develop and use a model to explain the order of events necessary for bone formation. SC.HSP.6.3.D
- e Engage in arguments from evidence to support claims about the causes of dysfunction in the skeletal system. SC.HSP.6.3.E

4 Gather, analyze, and communicate evidence of the relationship between the structures and physiological processes of the muscular system. SC.HSP.6.4

- a Plan and conduct an investigation to identify patterns of organization in the muscular system. SC.HSP.6.4.A
- ь Develop and use a model to identify and describe the relationship between the structures and physiological processes of the muscular system. SC.HSP.6.4.B

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c Engage in arguments from evidence that muscle contraction is the result of biochemical reactions. SC.HSP.6.4.C

d Obtain, evaluate, and communicate that feedback mechanisms in the muscular system help maintain homeostasis. SC.HSP.6.4.D

e Engage in arguments from evidence to support claims about the causes of dysfunction in the muscular system. SC.HSP.6.4.E

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5 **Gather, analyze, and communicate evidence of the relationship between the structures and physiological processes of the nervous system.** SC.HSP.6.5

a Plan and conduct an investigation to identify patterns of organization in the nervous system. SC.HSP.6.5.A

b Develop and use a model to identify and describe the relationship between the structures and physiological processes of the nervous system. SC.HSP.6.5.B

c Engage in arguments from evidence that production of a nerve impulse is the result of biochemical reactions. SC.HSP.6.5.C

d Obtain, evaluate, and communicate evidence that feedback mechanisms in the nervous system help maintain homeostasis. SC.HSP.6.5.D

e Engage in arguments from evidence to support claims about the causes of dysfunction in the nervous system. SC.HSP.6.5.E

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6 **Gather, analyze, and communicate evidence of the relationship between the structures and physiological processes of the cardiovascular/respiratory systems.** SC.HSP.6.6

a Plan and conduct an investigation to identify patterns of organization in the cardiovascular/respiratory systems. SC.HSP.6.6.A

b Develop and use a model to identify and describe the relationship between the structures and physiological processes of the cardiovascular/respiratory systems. SC.HSP.6.6.B

c Obtain, evaluate and communicate evidence that feedback mechanisms in the cardiovascular/respiratory systems help maintain homeostasis. SC.HSP.6.6.C

d Engage in arguments from evidence to support claims about the causes of dysfunction in the cardiovascular/ respiratory systems. SC.HSP.6.6.D

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7 **Gather, analyze, and communicate evidence of the relationship between the structures and physiological processes of the digestive system.** SC.HSP.6.7

a Plan and conduct an investigation to identify patterns of organization in the digestive system. SC.HSP.6.7.A

b Develop and use a model to identify and describe the relationship between the structures and physiological processes of the digestive system. SC.HSP.6.7.B

c Obtain, evaluate and communicate evidence that feedback mechanisms in the digestive system help maintain homeostasis. SC.HSP.6.7.C

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d Engage in arguments from evidence to support claims about the causes of dysfunction in the digestive system. SC.HSP.6.7.D

8 **Gather, analyze, and communicate evidence of the relationship between the structures and physiological processes of the urinary system.** SC.HSP.6.8

- a Plan and conduct an investigation to identify patterns of organization in the urinary system. SC.HSP.6.8.A
- b Develop and use a model to identify and describe the relationship between the structures and physiological processes of the urinary system. SC.HSP.6.8.B
- c Obtain, evaluate and communicate evidence that feedback mechanisms in the urinary system help maintain homeostasis. SC.HSP.6.8.C
- d Engage in arguments from evidence to support claims about the causes of dysfunction in the urinary system. SC.HSP.6.8.D

9 **Gather, analyze, and communicate evidence of the relationship between the structures and physiological processes of the reproductive system.** SC.HSP.6.9

- a Plan and conduct an investigation to identify patterns of organization in the reproductive system. SC.HSP.6.9.A
- b Develop and use a model to identify and describe the relationship between the structures and physiological processes of the reproductive system. SC.HSP.6.9.B
- c Obtain, evaluate and communicate evidence that feedback mechanisms in the reproductive system help maintain homeostasis. SC.HSP.6.9.C
- d Engage in arguments from evidence to support claims about the causes of dysfunction in the reproductive system. SC.HSP.6.9.D

Engineering in Health Sciences SC.HSP.17

1 **Gather, analyze, and communicate evidence of the connection between health science careers and engineering.** SC.HSP.17.1

- a Obtain, evaluate, and communicate information related to health science careers and the various roles they fulfill within the health care system. SC.HSP.17.1.A
- b Design a solution to a complex, real-world problem affecting body systems that can be solved through engineering. SC.HSP.17.1.B
- c Evaluate a solution to a complex, real-world human health problem based on prioritized criteria constraints that account for interactions within and between systems. SC.HSP.17.1.C

Body Systems SC.HSP.18

1 **Gather, analyze, and communicate evidence of the connections between body systems.** SC.HSP.18.1

- a Construct and revise an explanation based on evidence for the cycling of matter and flow of energy within and between body systems. SC.HSP.18.1.A
- b Develop and use models to explain the interactions between body systems. SC.HSP.18.1.B