Iowa Science

Human Anatomy and Physiology

Develop and use models to demonstrate the orientation of anatomical structures and regions of the human body. HS-A&P1-1	**1 Develop and use models to demonstrate the orientation of anatomical structures and regions of the human body.** HS-A&P1-1
Obtain, evaluate, and communicate information about how the scale, proportion, and quantity of different body structures affect their functions within the human body. HS-A&P1-2	**2 Obtain, evaluate, and communicate information about how the scale, proportion, and quantity of different body structures affect their functions within the human body.** HS-A&P1-2
Construct an explanation about the relationship between the structures and functions of the integumentary system HS-A&P2-1	**3 Construct an explanation about the relationship between the structures and functions of the integumentary system** HS-A&P2-1
Develop and use models to relate the structure and functions of the skeletal system. HS-A&P2-2	**4 Develop and use models to relate the structure and functions of the skeletal system.** HS-A&P2-2
Develop and use a model to investigate the cause and effect relationship between structure and functions of the muscular system and their role in	**5 Develop and use a model to investigate the cause and effect relationship between structure and functions of the muscular system and their role in movement and support.** HS-A&P2-3

movement and support. HS-A&P2-3

Engage in argument from evidence about how the integumentary, skeletal, and muscular systems make support, protection, and movement possible. HS-A&P2-4	6 Engage in argument from evidence about how the integumentary, skeletal, and muscular systems make support, protection, and movement possible. HS-A&P2-4
Plan and carry out an investigation to determine how the structures of the nervous system support the function of information processing (detection, interpretation, and response) within the body. HS-A&P3-1	7 Plan and carry out an investigation to determine how the structures of the nervous system support the function of information processing (detection, interpretation, and response) within the body. HS-A&P3-1
Develop and use a model to investigate the cause and effect relationship between the hormones of the endocrine system and the homeostatic processes they regulate to maintain a stable internal environment, support health, and promote growth and development. HS-A&P3-2	8 Develop and use a model to investigate the cause and effect relationship between the hormones of the endocrine system and the homeostatic processes they regulate to maintain a stable internal environment, support health, and promote growth and development. HS-A&P3-2
Construct an explanation about how the cause and effect relationship of the endocrine and nervous systems makes information processing (detection, interpretation and response) possible. HS-A&P3-3	9 Construct an explanation about how the cause and effect relationship of the endocrine and nervous systems makes information processing (detection, interpretation and response) possible. HS-A&P3-3

Develop and use a model to investigate the cause and effect relationship that explains how the cardiovascular and respiratory systems obtain oxygen, transport nutrients, and remove waste. HS-A&P4-1	**10** **Develop and use a model to investigate the cause and effect relationship that explains how the cardiovascular and respiratory systems obtain oxygen, transport nutrients, and remove waste.** HS-A&P4-1
Obtain, evaluate, and communicate information about the relationship between the structure and function of the digestive and urinary systems as they utilize matter to derive energy and eliminate waste. HS-A&P4-2	**11** **Obtain, evaluate, and communicate information about the relationship between the structure and function of the digestive and urinary systems as they utilize matter to derive energy and eliminate waste.** HS-A&P4-2
Ask questions to construct an explanation about the interdependence of the cardiovascular, respiratory, immunity, lymphatic urinary, and digestive systems. HS-A&P4-3	**12** **Ask questions to construct an explanation about the interdependence of the cardiovascular, respiratory, immunity, lymphatic urinary, and digestive systems.** HS-A&P4-3
Use mathematics and computational thinking to design a device which measures the exchange of matter and energy used by the cardiovascular, respiratory, immunity, lymphatic, digestive, and urinary systems to determine health of those systems and to prevent potential health issues. HS-A&P4-4	**13** **Use mathematics and computational thinking to design a device which measures the exchange of matter and energy used by the cardiovascular, respiratory, immunity, lymphatic, digestive, and urinary systems to determine health of those systems and to prevent potential health issues.** HS-A&P4-4

Develop and use a model to investigate the cause and effect relationship between the structures of the male and female reproductive system environments allowing for the production of egg and sperm, fertilization, implantation, and the development of the human fetus. HS-A&P5-1	**14** **Develop and use a model to investigate the cause and effect relationship between the structures of the male and female reproductive system environments allowing for the production of egg and sperm, fertilization, implantation, and the development of the human fetus.** HS-A&P5-1
Ask questions about how the reproductive system uses matter and energy to make growth and development possible. HS-A&P5-2	**15** **Ask questions about how the reproductive system uses matter and energy to make growth and development possible.** HS-A&P5-2