2.1

* The respiratory system gets oxygen and removes carbon dioxide
	+ Your body needs oxygen to survive
		- **Respiratory system** – functions to get oxygen from the environment and remove carbon dioxide and other waste products from your body.
			* Interacts with the environment and other body systems
			* gas exchange happens on a cellular level as well
				+ **cellular respiration** – uses oxygen in chemical reactions that release energy.
		- Structures in the respiratory system function together
			* Nose, throat, and trachea
				+ Cilia filter dirt and other particles
				+ Mucus traps particles
				+ Nasal cavity warms the air
				+ **Trachea** – windpipe
				+ **Epiglottis** – keeps air from entering the stomach
			* Lungs
				+ **Bronchial tubes** – structures that branch throughout the lungs into smaller and smaller tubes
				+ **Alveoli** – small sacs at the end of the bronchial tubes
				+ Oxygen passes through the thin walls of the alveoli and is dissolved into the blood
			* Ribs and Diaphragm
				+ Slight flexibility allows expansion of rib cage when you breathe to make room for lungs
				+ **Diaphragm** – large muscle stretches across bottom of the thoracic cavity
		- The respiratory system is also involved in other activities
			* Speech and respiratory movements
			* Water removal

2.2

* The digestive system breaks down food
	+ The body needs energy and materials
		- **Nutrients** – important substances that enable the body to move, grow, and maintain homeostasis
		- **Digestion** – the process of breaking down food into usable materials
	+ The digestive system moves and breaks down food
		- Performs complex jobs
		- **Peristalsis** – wavelike contractions of the smooth muscles to move material through the digestive system
		- Chemical and mechanical digestion is involved in breaking down food
			* **Chemical digestion** – use of chemicals and enzymes to break down food
			* **Mechanical digestion** – the mixing and churning to break food down into smaller pieces
	+ Materials are broken down as they move through the digestive tract
		- Mouth and esophagus
		- Stomach
		- Small intestine
		- Large intestine
	+ Other organs aid digestion and absorption
		- Liver
		- Gallbladder
		- Pancreas

2.3

* The urinary system removes waste materials
	+ Life processes produce wastes
		- Disposes of liquid wastes removed from the blood
		- Respiratory system disposes of water vapor and waste gases from the blood
		- Digestive system disposes of solid waste products from food
		- Skin releases wastes through
	+ The urinary system removes waste from the blood
		- **Urinary system** – contains several structures – kidneys, bladder, ureters, urethra
		- **Urine** – liquid waste
	+ The kidneys act as filters
		- **Nephron** – regulates the makeup of the blood
			* Liquid is filtered out of the blood through the glomerulus
			* This liquid travels through the nephron and nutrients are returned to the blood, urine travels through the collecting duct and into the ureter
		- Kidneys remove waste from the blood and regulate the amount of water in the body