

#### **Interaction Cards**

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These three organ systems work together to digest fats with special enzymes and transport the digested fats to the bloodstream.	Both of these two organ systems work together to regulate the body temperature.	These two organ systems interact to protect the body from infection by producing lymphocytes.	
Without the interactions between these five systems, running would be difficult due to the need for coordination between breathing, pumping enough oxygen in blood to cells, and moving muscles and bones.	These three organ systems work together to break down food molecules that contain protein biomolecules.	These two organ systems both contain white blood cells which help fight infections.	
7 These two organ systems interact to produce hormones and transport them to their targeted areas.	Both of these two organ systems work together to allow clean air into the upper respiratory tract by removing particles with nasal hairs.	These two organ systems interact to protect the body from infection, filtering bacteria out of the infected site.	



## System/Parts Cards

	Immune System		Digestive System	
	Functions	Parts	Functions	Parts
•	Protects the body from infection Produce mucus antibodies, lymphocytes, and other defender cells	<ul> <li>Lymph nodes</li> <li>Spleen</li> <li>Bone marrow</li> <li>Thymus gland</li> <li>Tonsils</li> <li>White blood cells</li> <li>T-cells</li> <li>Antibodies</li> <li>Interferon</li> </ul>	Breaks down food into biomolecules for nourishment and to provide energy     Absorbs nutrients and vitamins into the circulatory and lymph systems     Absorbs water in large intestine	Mouth     Esophagus     Stomach     Small intestine     Large intestine     Rectum     Anus     Pancreas     Liver     Salivary glands
Lymphatic System		Integumentary System		
	Functions	Parts	Functions	Parts
	Filters bacteria and toxins Produces lymphocytes to fight infection Transports digested fats from small intestine to bloodstream Return lymph fluid to bloodstream Collects and transports tissue fluids to veins	<ul> <li>Lymph nodes</li> <li>Lymph fluid</li> <li>Lymph vessels</li> <li>Bone marrow</li> <li>Thymus gland</li> <li>Adenoids</li> <li>Tonsils</li> <li>Spleen</li> <li>Appendix</li> </ul>	<ul> <li>Protects internal parts of the body from infection, foreign materials, and dehydration</li> <li>Eliminates waste products through sweating</li> <li>Regulates body temperature through skin covering and sweating</li> <li>Produces vitamin D</li> <li>Holds and grasps objects</li> </ul>	Skin     Hair     Nails     Glands





## **System/Parts Cards**

Circulatory System		Nervous System	
Functions	Parts	Functions	Parts
<ul> <li>Transports oxygen and carbon dioxide, wastes, nutrients, hormones</li> <li>Fights infection</li> <li>Stabilizes pH and concentrations of the body fluids</li> <li>Maintain body temperature</li> </ul>	<ul> <li>Red blood cells</li> <li>White blood cells</li> <li>Spleen</li> <li>Bone marrow</li> <li>Heart</li> <li>Blood vessels</li> <li>Platelets</li> </ul>	Body communication system     Automatically controls digestion, respiration, body temperature, and heart rate     Controls activities of the body, such as walking, running, and talking, as voluntary actions	Spinal cord     Nerve cells
Endocrine System		Respiratory System	
Functions	Parts	Functions	Parts
<ul> <li>Produces         hormones that         control the body's         functions</li> <li>Controls rate of         digestion         (breakdown of         nutrients), mood,         physiological         development, and         reproductive         system's         development</li> </ul>	<ul> <li>Pituitary</li> <li>Pancreas</li> <li>Hypothalamus</li> <li>Parathyroid</li> <li>Thyroid</li> <li>Adrenal</li> <li>Ovary</li> <li>Testis</li> <li>Pineal</li> </ul>	<ul> <li>Moistens, warms, and filters air</li> <li>Passes air over vocal cords to produce sound</li> <li>Diffuses oxygen into the blood and carbon dioxide out of the blood</li> </ul>	Nose Larynx Pharynx Trachea Bronchi Lungs Diaphragm

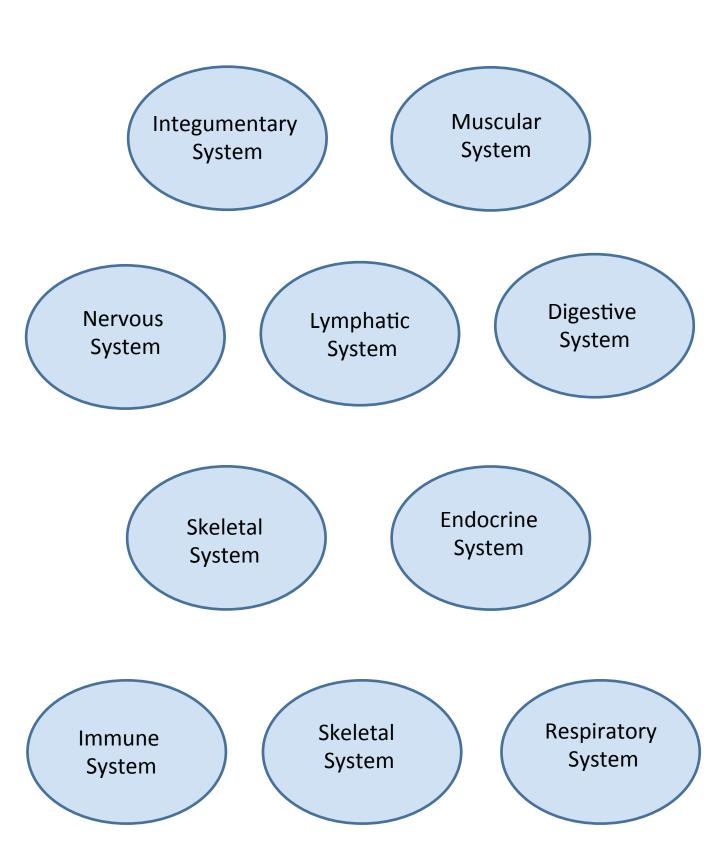




## System/Parts Cards

Muscular System		Skeletal System		
Functions	Parts	Functions	Parts	
Contracts muscles to:  •Move skeleton for body movement such as chewing or running, and to move diaphragm for lung function.  •Move substances through organs such as the stomach, intestines, or blood vessels.  •Pump blood through the heart.	<ul> <li>Cardiac muscles</li> <li>Smooth muscles</li> <li>Skeletal muscles</li> <li>A complete muscle consists of muscle fibers, connective tissue, nerve tissue, and blood tissue, and is considered one organ by itself.</li> </ul>	<ul> <li>Provides support for the body.</li> <li>Protects the internal organs.</li> <li>Produces blood cells.</li> </ul>	Bone     Osteocyte cells	

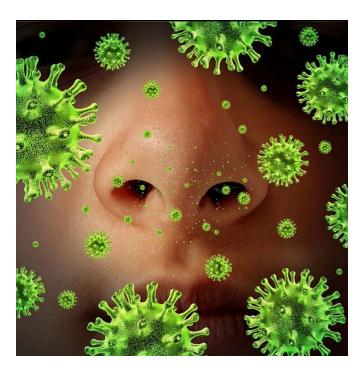
### **Systems Name Cards**





## **Activity Diagram 1**

## Infection





## **Activity Diagram 2**







## **Activity Diagram 3**

## Running

