Dear Parent,

Your son’s or daughter’s science class has begun exploring the unit entitled “Body Systems.” In this unit, students will learn about the how life is organized and how organ systems interact to carry out life functions. By the end of the unit, students should demonstrate a clear understanding of and discuss the following topics:

1. How life is organized
   * The body has levels of organization that build on each other. **Cells** make up **tissues**, tissues make up **organs**, and organs make up **organ systems**.
2. How systems interact to carry out life processes
   * Humans—and other complex multicellular organisms—have systems of organs that work together, carrying out processes that keep us alive.
   * The function of an organ system depends on the integrated activity of its organs. For instance;

| **Organ system** | **Function** | **Organs, tissues, and structures involved** |
| --- | --- | --- |
| Cardiovascular | Transports oxygen, nutrients, and other substances to the cells and transports wastes, carbon dioxide, and other substances away from the cells; it can also help stabilize body temperature and pH | Heart, blood, and blood vessels |
| Digestive | Processes foods and absorbs nutrients, minerals, vitamins, and water | Mouth, salivary glands, esophagus, stomach, liver, gallbladder, exocrine pancreas, small intestine, and large intestine |
| Muscular | Provides movement, support, and heat production | Skeletal, cardiac, and smooth muscles |
| Nervous | Collects, transfers, and processes information and directs short-term change in other organ systems | Brain, spinal cord, nerves, and sensory organs—eyes, ears, tongue, skin, and nose |
| Respiratory | Delivers air to sites where gas exchange can occur | Mouth, nose, pharynx, larynx, trachea, bronchi, lungs, and diaphragm |
| Urinary | Removes excess water, salts, and waste products from the blood and body and controls pH | Kidneys, ureters, urinary bladder, and urethra |
| Immune | Defends against microbial pathogens—disease-causing agents—and other diseases | Leukocytes, tonsils, adenoids, thymus, and spleen |

* + The survival of the organism depends on the integrated activity of all the organ systems, often coordinated by the endocrine and nervous systems.

We hope this information serves as an aid, for you as the parent, to partner with instruction your child receives at school.

Thank you for all that you do to support learning at Garrett Middle School!

Sincerely,

Science Teacher

Garrett Middle School