The 5 levels of Organization
What are the 5 levels?

1. Cells
2. Tissues
3. Organs
4. Organ Systems
5. Organism
1. Cells

* Cells are the basic unit of all living things.
* Each type of cell performs a different function.

* Examples: blood cells, bone cells and skin cells
EXAMPLES OF CELLS

Blood Cell

Muscle Cell

Plant Epidermal Cell
2. Tissues

- Made up of many cells → (hint! Look for nuclei!)
- A group of cells that work together to perform a specific job.
- Examples: Blood, muscle, and fat.
Examples of Tissue

Blood

Kidney tissue
3. Organs

- Two or more tissues working together to perform a specific job.
- Examples: stomach, intestines, heart.
Examples of Organs

The Heart

In a plant:

a leaf
Examples of Organs

Skin!
4. Organ Systems

* A group of organs working together to perform a specific job.
* If one part of the system fails, it has an effect on the whole system.
* What would happen if your stomach stopped working?
What are some of the functions of the skeletal system?

- Protection
- Storage of minerals
- Movement
- Blood cell formation

*BONES

*http://www.stpeters.k12.nf.ca/skel.jpg
What are some things our muscles do?

- Holds you upright
- Assist in breathing
- Helps you to move
Integumentary System

- SKIN, HAIR, NAILS

- Protects the interior of the body
- First barrier of defense
- Helps regulate temperature
- Insulates
- Absorbs shock
**Circulatory System**

- HEART, VEINS, ARTERIES AND BLOOD.
- Stops bleeding (platelets)
- Fights off germs (white blood cells)
- Transports materials, like oxygen, to and from the cells
Respiratory System

- MOUTH, TRACHEA, LUNGS
- Allows the body to obtain and use oxygen
- It also gets rid of carbon dioxide (CO₂)
Digestive System

- MOUTH, ESOPHAGUS, STOMACH, SMALL INTESTINE, LARGE INTESTINE, LIVER, PANCREAS

- Digests food into small particles to be used by the body.
BRAIN AND NERVES

- Controls and coordinates many things in the body.
- Collects and processes information.
Excretory System

* KIDNEYS, URETER, BLADDER, URETHRA, SKIN

* Removes wastes from the body that are produced during homeostasis in the body.

* Includes the skin and sweat production
HYPOTHALAMUS, PINEAL, PITUITARY, THYROID, ADRENAL, PANCREAS, OVARY, TESTIS

Endocrine glands release hormones into the blood stream as they are needed.

For example, pituitary hormones regulate growth of the skeleton.
Immune System

- Adenoids, tonsils, lymph nodes, spleen, appendix, bone marrow

- Protects the organism from outside threats (e.g. bacteria, viruses, etc.)

- Assists the body in fighting of disease and infections.
Lymphatic System

- LYMPH VESSELS, LYMPH NODES, TONSILS, THYMUS, SPLEEN

- Transports clean fluids back to the blood
- Drains excess fluids from tissues
- Removes “debris” from cells of body
- Transports fats from digestive system
Reproductive System

- Produce haploid cells.
- Include parts of the body that are responsible for the continuation of the human species.
5. **Organism**

- Anything that can live on its own.
- Are made up of at least 1 cell.
- Examples: rabbit, bacteria, pine tree
Quick Quiz!
1-5. What are the 5 levels of organization (simplest to most complex)?
6. What level is this in?
(write the name of the level)

AN EGG
7. What level of organization is this?
8. (The hippo)
9. What level of organization is this?
10. Kidney
A single root.