

Why we are living  
organisms?

# Characteristics of living organisms

# MRS GREN



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- Movement - движение/қозғалыс
- Respiration - дыхание/ тыныс алу
- Sensitivity - чувствительность/ сезімталдық
- Growth - рост/ өсу
- Reproduction - размножение/ көбею
- Excretion - выделение/ бөліп шығару
- Nutrition - питание/ қоректену

# Movement

- an action by an organism causing a change of position or place



Organisms like animals can move their whole body (E.g. walking, running, etc.)



Organisms like plants can only move parts of their body (E.g. opening and closing of flower petals)



# Can you match these types of movement to the pictures?



swimming

migration

chasing for food

flying  
catching insects

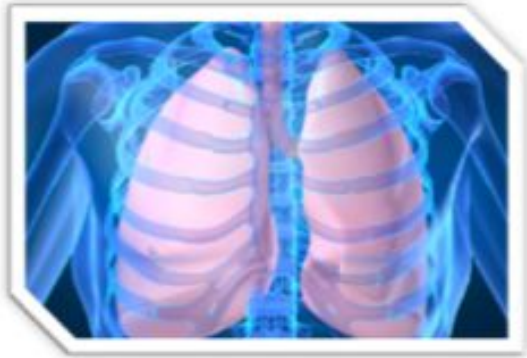
turning flower towards sun

venus fly-trap

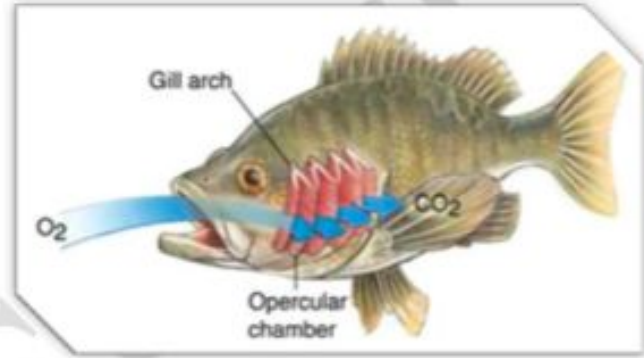
# Respiration

- chemical reactions in cells that break down nutrient molecules and release energy





Humans get oxygen by breathing in air



Fish get oxygen from water

# Sensitivity

- the ability to detect and respond to changes in the environment

Living things respond to conditions around them.  
Organisms can identify **stimuli** in their surroundings and **respond** to them.



Green plants growing toward sunshine



Blinking when light shines into their eyes



Jumping up when stepping on a sharp pointed object like a pin

# Growth

- a permanent increase in size

Repairing body parts (healing injuries, replacing worn parts):  
E.g. Shrubs and trees cover injuries with bark; Crabs grow new legs when old ones are lost; Human beings heal cut skin and broken bones.

Becoming bigger:  
e.g. chick → hen;  
Child → Adult

Becoming more complex:  
e.g. Caterpillar → Butterfly

Living things grow by

Making new parts:  
e.g. teeth in children.

Changing old parts:  
e.g. grasshopper sheds "skin" to make new one.

# Reproduction

- the processes that make more of the same kind of organism



***Reproduction*** is the  
*production of new individuals  
of the same species  
(kind of organism)*



# Excretion

- removal from organisms of toxic materials and substances in excess of requirements





QSI 3688

# Nutrition

- taking in of materials for energy, growth and development

All living things try to get food, and they get it in different ways



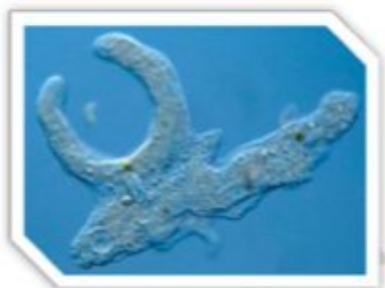
Bite with teeth  
(e.g. Humans and other Animals)



Suck up food with  
specialized suckers  
(e.g. flies and other insects)



Absorb it (soak it up)  
through membranes/skins  
(e.g. Bacteria and Fungi)



Amoeba engulfing food

Do you know of any  
other ways of feeding?



Swallowing prey whole