

Name: _____ Period: _____

CHARACTERISTICS OF LIFE & CELL THEORY

6 characteristics of life

- 1) Organization of cells
- 2) growth and development
- 3) reproduce
- 4) respond to stimuli
- 5) homeostasis
- 6) use of energy

1) Organization (OF CELLS)

Cell: smallest unit of life

Organism: a living thing/things that have all 6 characteristics of life

Unicellular	multicellular
only made of ONE CELL	made of TWO or MORE cells
ex. bacteria	ex. plants and animals

PROKARYOTES: organisms that have NO NUCLEUS

PRO/NO nucleus

EUKARYOTES: organisms that have a NUCLEUS

EU/NU

2) GROWTH AND DEVELOPMENT

ALL living things must GROW and DEVELOP

GROWTH	DEVELOPMENT
in Size (unicellular)	changes in an organism's lifetime
# of cells (multicellular)	-cells specialize

3) REPRODUCTION

To keep species alive, organisms need to reproduce so they don't go extinct

4) RESPONSE TO STIMULI

ALL living things react to their environment and their bodies.

INTERNAL STIMULI	EXTERNAL STIMULI
Body functions/needs (INSIDE) -stomach growls--> eat - Full bladder-->bathroom	(OUTSIDE) Environmental factors -cold --> shiver -hot-->sweat pupils adjust to light

5) MAINTAIN HOMEOSTASIS

Homeo = SAME Stasis = STATUS

Homeo+stasis (Homeostasis) = SAME (INTERNAL) STATUS

- An organism's ability to maintain steady/stable internal conditions when outside conditions change.

*** We need to maintain certain internal conditions to stay alive! ***

Examples: Temperature (98.6--> if not, we sweat or shiver)
Water level (70% water)--> drink or pee

6) USE OF ENERGY

EVERYTHING living things do requires ENERGY

Living things (organisms) get energy by MAKING their own FOOD, or EATING/ABSORBING food.

CELL THEORY

- 1) All living things are made of ONE or MORE cells
- 2) The cell is the smallest unit of life
- 3) All cells come from old cells

