**Characteristics of Living Things**

**Energy**

= uses materials for metabolism

**Respond** to stimuli

**Adapt** & **Evolve**

= change over time

**Homeostasis**

= maintaining a stable internal balance

**Reproduce**

= passes on genetic code: DNA/RNA

**Growth**

**& Development**

Made up of 1 or more **cells** & contain **DNA**

**C H A R G E R**

**2 Types of Reactions**

**Unicellular**

= \_\_\_\_\_\_\_\_\_\_

Ex: All bacteria & some protista

Each cell divides to make new cells (cell division)- results in growth

This is how organisms can undergo cell differentiation/ specialization

Ex:

Neurons vs. muscular cells

**Stimuli-**

Factors in the environment that living things **\_\_\_\_\_\_\_\_\_\_** to

Ex: light, temperature, sound, etc.

**1. Anabolism**

= **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Ex: Putting amino acids together to make proteins

Change happens in a population of organisms **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Individuals **\_\_\_\_\_\_\_\_\_\_\_\_\_**evolve!

**Example #1:**

extra layers of fur, changes in behavior, etc.

**Example #2**

**1. Asexual**

**\_\_\_\_** parent, budding/ binary fission

-no genetic variability

**Example #1:**

Our body shivers or sweats to compensate for temperature changes in our environment

**Example #2:**

All living things have **\_\_\_\_\_\_\_\_\_**

DNA passes on **\_\_\_\_\_\_\_\_\_\_\_**information from one generation to the next

**Multicellular**

= **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Ex: plants, & animals

**2 Energy Types**

**2. Catabolism**

= **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

-Ex: Breaking down starch into usable sugars by the body

i.e. glucose

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ -**

Use energy from sun

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ -**

Make energy by consuming nutrients from their environment

**2. Sexual**

**\_\_\_** sex cells required (sperm & egg)

-genetic variability; preferred by nature