|  |  |
| --- | --- |
| What is life?  How are cells organized in organisms?  What are the chemicals of life?  What do all cells need?  How do organisms interact with their environment?  What is the difference between growth and development?  Where do organisms get their traits?  Where do living things come from?  What is **spontaneous generation**?  What was Redi’s experiment?  What was Pasteur’s discovery?  What do all living things need?  How do organisms obtain food?  What is **homeostasis?** | Living things must:  1. **G**row (develop)  2. **R**espirate (breathe)  3. **R**eproduce  4. **A**dapt  5. **M**etabolize (eat/excretion)  6. **M**ove  Organisms may be composed of only one cell (unicellular) or many cells (multicellular).  1. Water  2. Carbohydrates (energy)  3. Proteins (building blocks)  4. Lipids (building blocks)  5. Nucleic acids (genetic material)  All living things must use energy.  All organisms **respond** (react) to a **stimulus** (action).  Growth means to get larger, and development means to change complexity.  All organisms reproduce to create offspring with their traits.  Livings things come from reproduction.  Spontaneous generation is the idea that life comes from nowhere.  Redi discovered that covering food will keep flies from getting to it (i.e. Flies do not come from rotting meat).  Pasteur discovered that living things do not arise from nonliving material (pasteurized milk removes bacteria)  1. Water  2. Food  3. Living space (habitat)  4. Stable internal conditions  **Autotrophs** make their own food (plants), and **heterotrophs** get food from different sources (like us).  Homeostasis is the maintenance of stable internal conditions (balance). |

Summary: