**7 Characteristics of Living Things**

|  |  |
| --- | --- |
| **Living things are based on a universal genetic code**  Ex: blue eyes are passed from parent to offspring  **Living things are made of cells**  Ex: bacteria are single celled organisms  **Living things grow and develop**  Ex: bamboo plants can grow 10 cm a day  **Living things reproduce**  Ex: Spiders reproduce asexually and can lay 1000 eggs depending on the species.  **Living things obtain and use material and energy**  Ex: Plants produce energy using the process of photosynthesis.  **Living things respond to their environment**  Ex: Plants grow toward a light source.  **Living things maintain a stable internal environment**  Ex: Humans maintain a body temperature of 98.6 degrees F or 37 degrees C.  **Living things adapt to their environment through evolution**  Ex: Galapagos Finches beaks and bodies changed allowing them to eat nuts and seeds. | **-DNA controls the structure and function of cells.**  **-All organisms store information they need to live, grow, and reproduce in a genetic code written in a molecule called DNA.**  **-Characteristics of living things are passed on to the next generation.**  **-Basic unit of life.**  **-All things composed of one or more cells.**  **-Cells are the smallest living things.**  **-Cells are complex and very organized.**  **-Living things may change as they grow.**  **-Every organism develops at a different rate.**  **-During development a single cell divides again and again.**  **-Increase in size.**  **-Mature over time.**  **-Has a lifespan (live and die).**  **-Organisms make other organisms similar to themselves.**  **-Organisms produce offspring.**  **-Sexual reproduction (2 parents)**  **-Asexual reproduction (1 parent)**  **-Organisms either make their own food, eat other things, or break down dead material.**  **-All organisms must take in materials and energy to grow, develop, and reproduce.**  **-Chemical reactions breaks down materials in what is called metabolism.**  **-A stimulus is an external change.**  **-All living things respond to external changes or stimuli.**  **-Organisms detect and respond to signals from their environment.**  **-Sensitive and can react rapidly to surroundings.**  **-All organisms need to keep their internal environment relatively stable, even when external conditions change dramatically.**  **-This is called homeostasis.**  **-Evolution is change over a long period of time to better survive in an environment.**  **-Species will change not an individual organism.**  **-Due to variation, organisms with advantageous traits will survive and be able to reproduce.** |