**7 Characteristics of Living Things**

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| **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.** |