Chapter 1 Section 1 Name_____
Characteristics of Life

Topics	Notes, Diagrams, Drawings
Organization	Your home is probably organized in some way, ie. the kitchen is for cooking and eating, bedroom is for sleeping and Snapchat All living things have structures that have specific functions and are organized in some way • **Cell**: smallest unit of life **Unicellular organism**: living things that are made of only one cell; structures inside still have specific functions (bacteria, amoeba) **Multicellular organism**: living things that are made of two or more cells; different cells have specialized functions (plants, animals)
Growth and development	When organisms grow, they increase in size • Unicellular organisms grow as the cell itself increases in size • Multicellular organisms grow as the number of their cells increase Changes that occur in an organism during it lifetime are called development • In multicellular organisms, development happens as cells become specialized into different types • For example, skin cells or muscle cells

Reproduction	Reproduction is the process by which one organism makes one or more new organisms
	• Some organisms within a population might not reproduce, but others must reproduce if the species is to survive
	• Organisms reproduce in a variety of ways
	  • Some unicellular organisms reproduce by dividing and become two new organisms
	  • Other organisms have specialized cells for reproduction
	  • Some organisms must have a mate to reproduce, but others can reproduce without a mate
	  • Number of offspring produced varies:

Topics	Notes, Diagrams, Drawings
	• Humans: 1-2 at a time • Frog: 100s at a time

Response to stimuli	Changes in the environment: **stimuli**
	• Internal stimuli: based upon something you feel
	  • What happen if you feel hungry?
	• External stimuli: changes in an organism's environment
	  • Light (plants will grow toward light, humans will respond to light in a variety of ways…skin may darken, redden, freckle)
	  • Temperature (in some animals, if the temperature increases, the blood vessels in skin increase and this allows more blood to flow to skin, cooling an animal)

Homeostasis	Homeostasis: an organism's ability to maintain steady internal conditions when outside conditions change • Maintaining certain conditions—homeostasis—ensures that cells can function • If cells cannot function normally, then an organism might become sick or even die • Example: body temperature • Example: paramecium and water vacuole
Energy	Everything you do, requires energy • Digesting your food, sleeping, thinking, reading, sitting Cells are constantly using energy to transport substances, make new cells, and perform chemical reactions For most organisms, this energy originally came to Earth from the Sun