

Chapter 1 – Themes in Biology Notes

Biology: The study of life

Major Themes of Biology

- ✓ Structure and Function
- ✓ Homeostasis
- ✓ Reproduction and Inheritance
- ✓ Evolution
- ✓ Interdependence of Organisms
- ✓ Matter, Energy, and Organization

Characteristics of Life:

Activity: Living vs. Non-living Activity on the Wormy Comparison (posted on google classroom)

8 Characteristics of Life (MOREGRAH) - “Characteristics Word Map”

M	Made of cells	All living things are made up of cells. Cells are the basic units of structure and function in all living things. <ul style="list-style-type: none"> ✓ <i>Unicellular:</i> Bacterium ✓ <i>Multicellular:</i> Animal, Plant
O	Organization	All living things are organized; structure and function ❖ See Pyramid Chart in yellow activity packet
R	Reproduction	All living things make more of their own kind <ul style="list-style-type: none"> ✓ <i>Sexual Reproduction:</i> requires two organism ✓ <i>Asexual Reproduction:</i> no sexual interaction
E	Energy	All living things require energy <ul style="list-style-type: none"> ✓ <i>Autotrophs:</i> make their own food (flowers) ✓ <i>Heterotrophs:</i> ingest other organisms to gain energy (humans, animals)
G	Growth	All living things display growth <ul style="list-style-type: none"> ✓ Tadpole to frog
R	Response	All living things respond to external factors <ul style="list-style-type: none"> ✓ Flowers turn toward the sunlight to gain energy needed for photosynthesis
A	Adaptation	All living things adapt; that is due to changes in environment and in the process of adjusting to that change, living things may adapt in the following ways: structurally, physiologically, or behaviorally in order to improve their likelihood of survival. <ul style="list-style-type: none"> ✓ Crabs in the intertidal zone have hard shells to protect them from predators, keeps them from drying out, and protects them from being crushed by a wave
H	Homeostasis	All living things strive to maintain an internal balance despite changes in their external environment. <ul style="list-style-type: none"> ✓ Humans regulate their body temperature (sweat, shiver)

Name of Level

Examples / Definitions

