

ZAMANI COLLEGE, KADUNA

SS2 BIOLOGY STUDY PACK TERM 1 2014-2015

TOPIC: GROWTH

- Growth is one of the characteristics of all living things.
- For growth to take place, living organisms need food, in which during catabolism process it is broken down and assimilated to produce new cells (protoplasmic materials).
- Therefore growth is defined as irreversible increase in size due to the incorporation of new protoplasm to the organism.

Refer to the following:

- ❖ Modern Biology pgs 232-242
- ❖ Nelson Functional Biology 1 pgs 70-79
- ❖ Essential Biology pgs 172- 181

Study the following sub-topics:

- Basis of growth (Cell division; mitosis, Cell enlargement, Cell specialization /differentiation)
- The mitotic process (Interphase, prophase, metaphase, anaphase and telophase (cytokinesis))
- Importance of mitosis
- Factors affecting growth (internal and external)
- Phases of growth and growth curves (plants; annuals and perennials, insects, humans)
- Allometric and isometric growth
- Differences between growth in animals and in plants.

Now answer the following questions;

1. Define growth.
2. State four evidence of growth in unicellular organism.
3. State four factors that retard growth of living organisms.
4. Using diagrams briefly describe the four main stages of mitosis.
5. State four reasons why mitosis is important.
6. Give two examples of mitosis.
7. State three differences in the growth of plants and animals.

Note: Answers should be sent in **MS word format to the school email** while all drawings should be submitted to the school administrative office directly however where students wish to submit all study pack answers in written forms, it will be also accepted.