

**GRADE 12 BIOLOGY
INTRODUCTION TO SCIENCE
STUDY GUIDE 1-3 STUDYING LIFE**

Name: _____

Date: _____

SECTION REVIEW - STUDYING LIFE

Living things are made up of units called cells, are based on a universal genetic code, obtain and use materials and energy, grow and develop, reproduce, respond to their environment, maintain a stable internal environment, and change over time.

The study of biology revolves around several interlocking big ideas: the cellular basis of life; information and heredity; matter and energy; growth, development, and reproduction; homeostasis; evolution; structure and function; unity and diversity of life; interdependence in nature; and science as a way of knowing.

Biology includes many overlapping fields that use different tools to study **life** from the level of molecules to the entire planet.

Most scientists use the metric system when collecting data and performing experiments.

23. The process in which two cells from different parents unite to produce the first cell of a new organism is called

- a. homeostasis.
- b. development.
- c. asexual reproduction.
- d. sexual reproduction.

24. The process by which organisms keep their internal conditions relatively stable is called

- a. metabolism.
- b. a genome.
- c. evolution.
- d. homeostasis.

25. Explain. How are unicellular and multicellular organisms alike? How are they different? (in your own ideas as inferred by the readings. There is no one correct answer. Just your own idea)

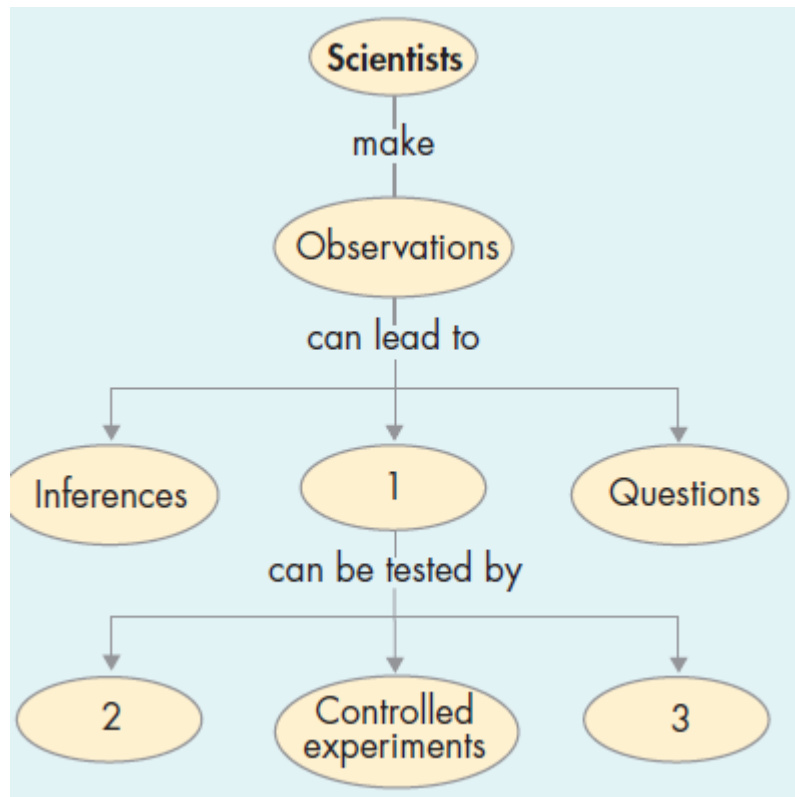
26. From your own thoughts. Give an example of changes that might take place as cells in a multicellular organism grow and differentiate. (Hint: are all cells liver cells?)

27. List three examples, from your own experience, of stimuli that a bird responds to.

CONCEPT MAP

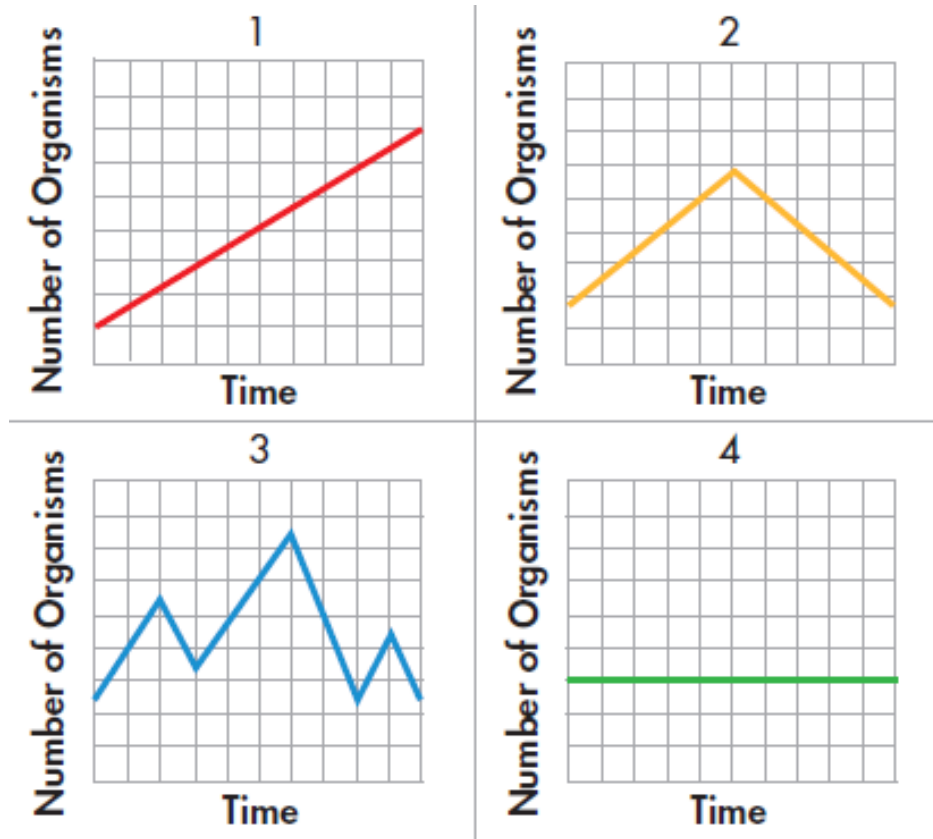
A good way to study and organize your thoughts is the concept map.

28. **Complete the Concept Map.** Using the information in this entire chapter, complete the following concept map: (Complete the numbered areas)



Reading Graphs. Graphs are useful in science! They show how something changes compared to another thing. Often comparing how things change with time is useful too.

Example: Changes in Four Different Populations of Organisms



29. **Write a sentence** summarizing what each graph above shows. The first one is done for us.

Graph 1. *'Graph 1 shows the organism population steadily growing in number at a constant rate of growth.'*

Graph 2.

Graph 3.

Graph 4.