

# THE NATURE OF SCIENCE AND INTRODUCTION TO BIOLOGY GUIDED READING QUESTIONS

- Be able to list the five properties which all living things share.
- For those five properties, you must be able to explain the meaning of each.
- Provide an example of a real living thing displaying each of the five properties. For example, humans maintain body temperature by sweating during exercise. This is an example of homeostasis. Can you produce examples of the other 4 properties in a real living organism?
- Read about Joseph Farman's discovery of the hole in the ozone layer above antarctica. After reading about his discovery, explain the following:
  - What role did each of the following play in helping Joseph Farman discover the hole in the ozone layer?
    - Observations
    - Hypothesis
    - Predictions
    - experimentation
    - Controls
    - Variables
    - Conclusions
- Contrast the terms hypothesis and theory. What is different about them?
- Agree or disagree with the statement below. You must provide an explanation of why you agree or disagree with this statement.
  - Scientific knowledge is 100% certain and never changes.

## INRO UNIT T-NOTES FOR SECTION 1.2

QUESTIONS, MAIN IDEAS, AND VOCABULARY WORDS GO INTO THIS COLUMN	ANSWERS TO QUESTIONS, SUMMARIES OF MAIN IDEAS, AND DEFINITIONS FOR VOCABULARY WORDS GO INTO THIS COLUMN
<ul style="list-style-type: none"><li>○ What are the five properties of life?</li> <li>○ Explanation of each property of life</li></ul>	<ul style="list-style-type: none"><li>○ Cellular organization, metabolism, homeostasis, reproduction, and heredity</li> <li>○ Cellular organization: all things are composed of at least one cell</li> <li>○ Homeostasis: can maintain stable internal conditions within the organism</li> <li>○ Metabolism: needs and can use energy in order to do work</li></ul> <p>(YOU GET THE POINT!)</p>

EXAMPLES OF THE FIVE PROPERTIES OF LIFE IN REAL LIVING THINGS

- HOMEOSTASIS:  
HUMANS SWEAT IN ORDER TO MAINTAIN A STABLE BODY TEMPERATURE DURING EXERCISE
- METABOLISM:  
HUMANS CAN CONVERT THE CALORIES IN THE FOOD THEY EAT INTO ENERGY WHICH THEY USE TO DO WORK LIKE RUNNING, JUMPING, OR EVEN SLEEPING!  
(CAN YOU DO THE OTHER THREE??)

WHAT ELSE CAN YOU USE YOUR READING NOTES FOR?

- IT'S IMPERATIVE THAT YOU SUMMARIZE MAIN POINTS OF DIAGRAMS AND PICTURES YOU COME ACROSS IN YOUR READINGS. MANY TIMES THIS MIGHT BE THE MOST IMPORTANT PART OF THE READING!!
- USE YOUR READING NOTES TO WRITE DOWN THINGS YOU DON'T UNDERSTAND IN THE READING. YOU WILL THEN KNOW WHAT TO ASK ABOUT IN CLASS!!