Intro Chapter Vocabulary

1) Organize

2) Evaluate

3) Cooperate

4) Explain

5) Logic

6) Reason

7) Analyze

8) Engage

9) Explore

10) Elaborate

11) Evidence

Science Safari Name: _____

Today we begin a year-long journey through the world of Biology. To help us find our way, we use our textbook Biology: A Human Approach.

1. Each unit is divided into two main parts. Keep your book closed and look at the edges of the pages. What do you see? How can this help you find each main part of each unit?

2. Turn to the "Table of Contents." The first part of your book is divided into six units. In each unit we will study a major biological concept. Which major concept will be studied in Unit 2?

What do you think this unit would be about? (Do not copy the different topics)

3. Turn to page 150. At the bottom of the page, there is an "Explore" heading. What is the name of the activity?

4. The end of each unit is a series of essays. The essays contain information to increase your understanding of biological principles. Whenever you see a page icon in the margin of the chapter, this is an indication that there is an essay at the end of the unit that will provide information to help you understand the activity. Turn to page 158-159. Find the page icon. What is the name of the essay that will help you better understand the activity? What page is this essay on?

5. The essays contain figures of pictures, charts, and graphs that help explain the essay information. Turn to page 248. Look at figure E6.9. Read the caption carefully and summarize in your own words what this figure is trying to explain.

6. On page 446-447 of the text there is a lab experiemnt dealing with DNA. In the margin next to the "Protocol" section there are 3 icons by the exclamation point icon. To figure out what those icons mean, turn to the Appendix A in the back of the book.

a. What is the appendix about?

b. Summarize the 4th safety rule.

c. Go back to page 447. What does the second icon tell you to do?

7. Appendix B in your book deals with skills related to gathering, organizing, and presenting your data in biology. Technique 2 in Appendix B deals with graphing; one of the activities in this section explains how to make a line graph. When would you use a line graph and not a bar graph?

Using the information given here (and what you recall from Natural Science), list and explain at least 4 critical things must be done when making an effective line graph.

8. Turn to page 284 and locate Figure 7.16D-Energy and Nutrients. Based on the data in the table, what is one food that should be increased in your diet? Why should it be increased?

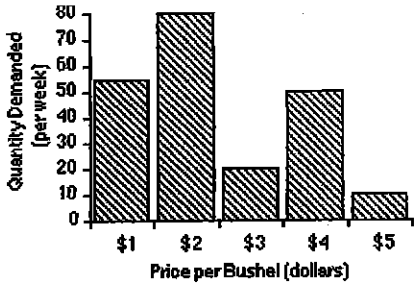
What food should be decreased in your diet? Why should it be decreased?

INTERPRETING GRAPHS

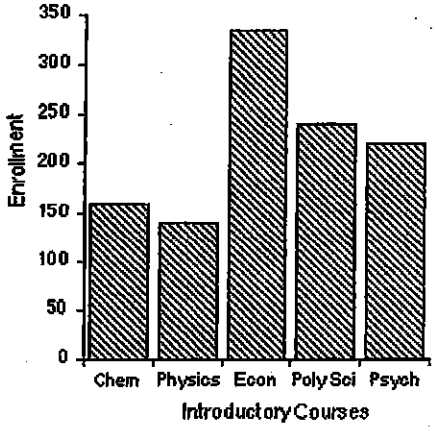
Name_____ Period_____ Date_____

Directions: Answer the questions that correspond to each graph.

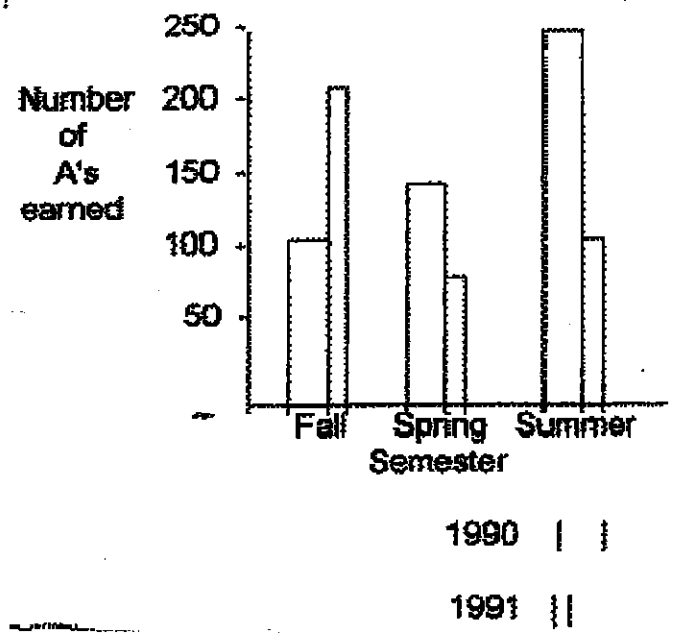
1. Answer these questions about the graph at the right:
   a. What is the dependent variable on this graph?
   b. What is the independent variable?
   c. Does the price per bushel always increase with demand?
   d. What is the demand when the price is 5$ per bushel?



2. The bar graph at right represents the declared majors of freshman enrolling at a university. Answer the following questions:
   a. What is the total freshman enrollment of the college?
   b. How many students are majoring in physics?
   c. How many students are majoring in economics?
   d. How many more students major in poly sci than in chemistry?

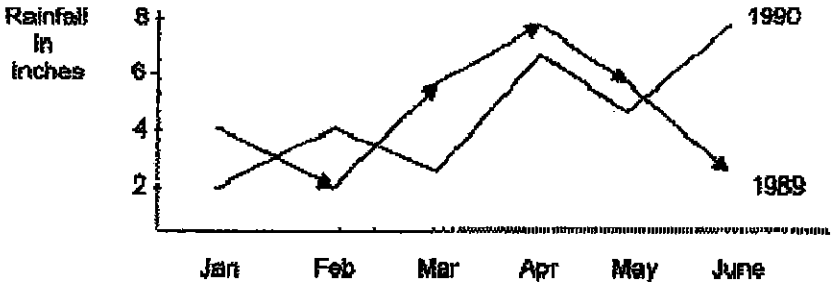


3. This graph represents the number of A's earned in a particular college algebra class. Answer the following questions:
   a. How many A's were earned during the fall and spring of 1990?
   b. How many more A's were earned in the fall of 1991 than in the spring of 1991?
   c. In which year were the most A's earned?
   d. In which semester were the most A's earned?



4. Answer these questions about the graph at the right:

   a. How much rain fell in Mar of 1989?
   b. How much more rain fell in Feb of 1990 than in Feb of 1989?
   c. Which year had the most rainfall?
   d. What is the wettest month on the graph?



Metric Measurements

1. Measure the length of your desk in centimeters and millimeters.

Desk = _____cm

_____mm

2. Measure your foot in inches, centimeters and millimeters.

Foot = _____inches

_____cm

_____mm

3. Measure your pinky in centimeters and millimeters.

Pinky = _____cm

_____mm

4. Measure the height of the lab table in meters and centimeters.

Lab table height = _____m

_____cm

5. Measure your height in meters, millimeters and centimeters.

Your height = _____m

_____cm

_____mm

6. 100 centimeters =_____ meters
7. 1 meter =_____centimeters
8. 100 millimeters = _____meters
9. 1 meter = _____millimeters

Kilo-	**Hecto -**	**Deka-**	**Meter** (length;height) **Gram** ( ) **Liter** (volume;liquid)	**Deci-**		
(10^3)	100 ( )	10 ( )	1 ( )	1/10 (10^{-1})	1/100 ( )	( )

How many millimeters are in 20 centimeters?

20 cm x $\frac{\text{10 mm}}{\text{1 cm}}$ =_____

How many centimeters are in 40 millimeters?

40 mm x $\frac{\text{1 cm}}{\text{10 mm}}$ = _____

How many centimeters are in 12 millimeters? _____

How many millimeters are in 25 centimeters? _____

How many centimeters are in 2 meters? _____

How many millimeters are in 5 meters? _____

Name _____ Date _____

Metric Measurement Conversion

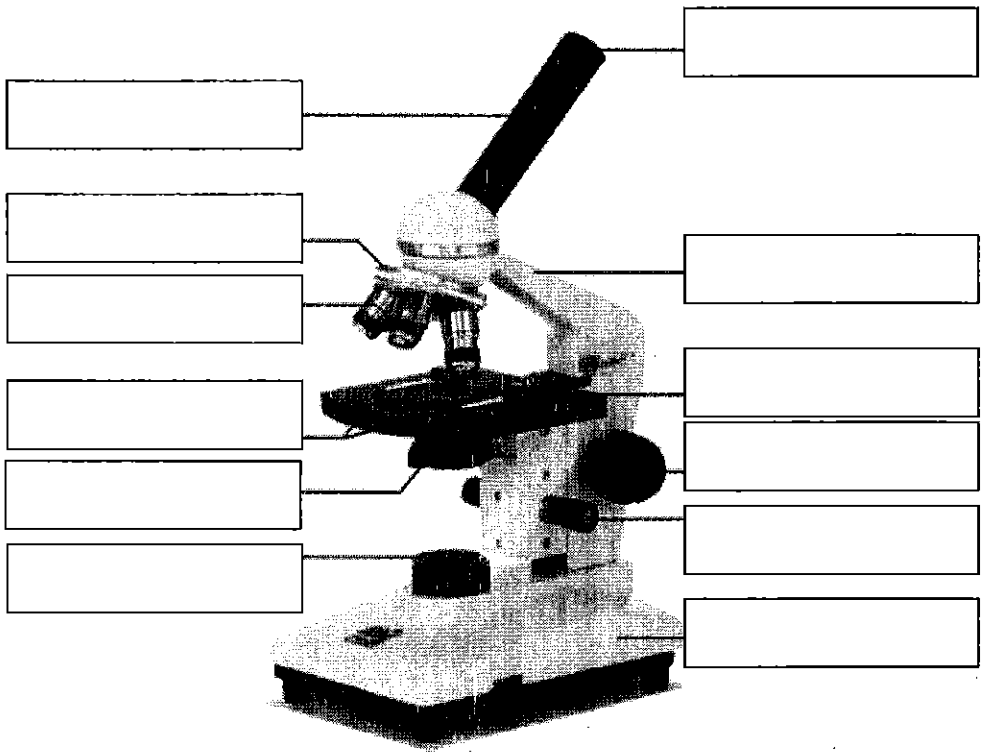
Directions: Write the equivalent measure for the problem.

1. 40 ml = _____ L
2. 5000 L = _____ kl
3. 8 g = _____ kg
4. 12000 L = _____ kl
5. 50 mg = _____ g
6. 6000 m = _____ km
7. 200 kg = _____ g
8. 10000 g = _____ kg
9. 500 ml = _____ L
10. 1 L = _____ ml
11. 4000 L = _____ kl
12. 400 cm = _____ m
13. 20 ml = _____ kl
14. 7000 ml = _____ L
15. 7 cm = _____ mm
16. 9000 L = _____ ml
17. 6 m = _____ mm
18. 1000 cm = _____ m
19. 11 km = _____ m
20. 80 mg = _____ kg
21. 3 m = _____ mm

Microscope Mania Quiz Name _____

1. Use the word list to help you label the microscope. (+12)

Arm	Diaphragm	Objective Lenses
Base	Fine Adjustment Knob	Ocular Lens
Body Tube	Light Source	Stage
Coarse Adjustment Knob	Nosepiece	Stage Clips



2. Calculate the missing information in the chart using your knowledge of the powers of magnification. (+3)

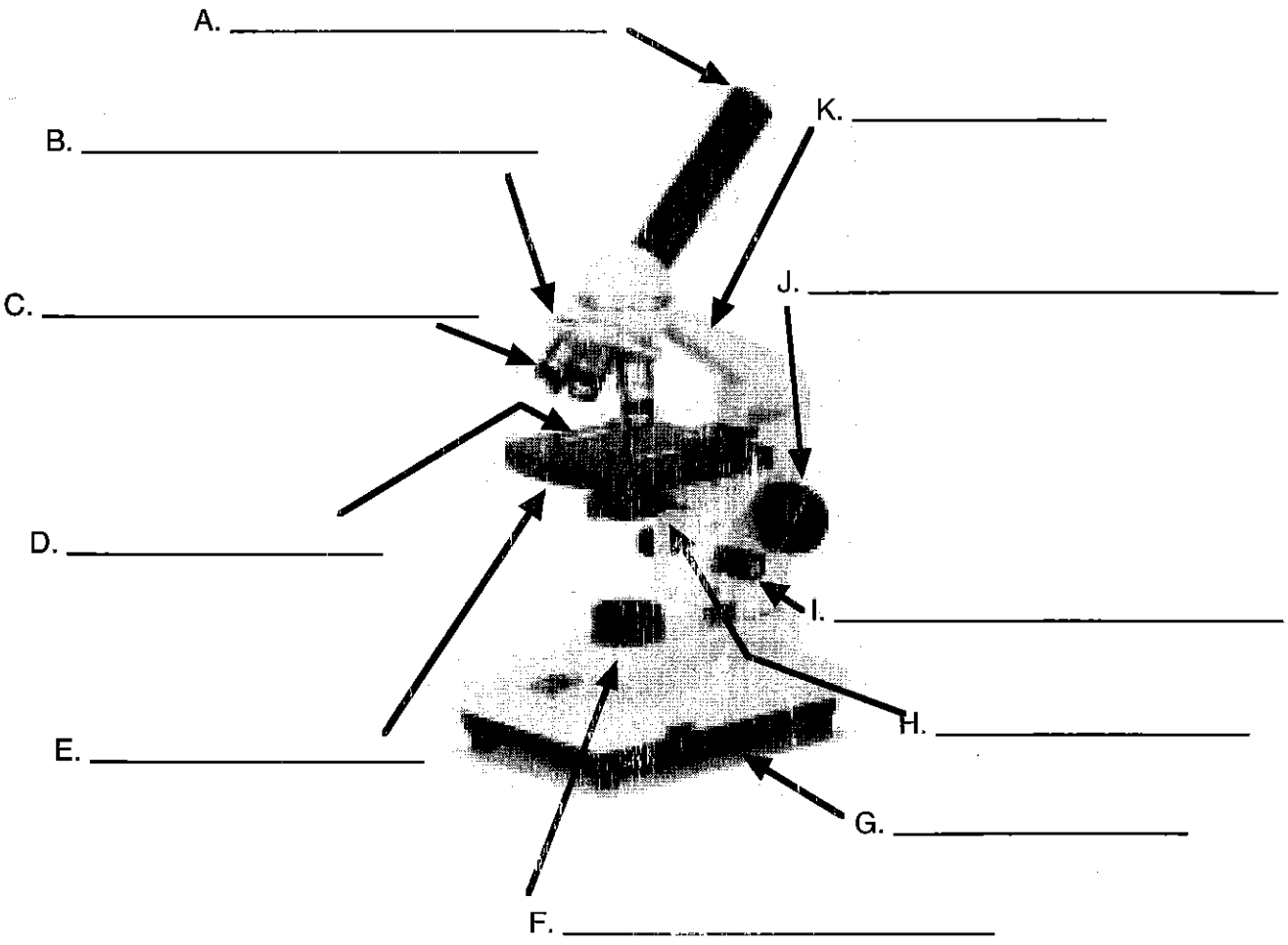
Ocular Lens	Objective Lens	Power of Magnification
10	4	
5		200
	10	120

3. How does the view of a specimen change as you increase the power of magnification? (+2)

Parts of the Light Microscope

Name _____

Label the parts of the light microscope.



WORD BANK:

Nosepiece	Light source
Objective lenses	Diaphragm
Stage clips	Coarse adjustment knob
Base	Fine adjustment knob
Eyepiece	Stage
Arm	