



Name _____ Class _____

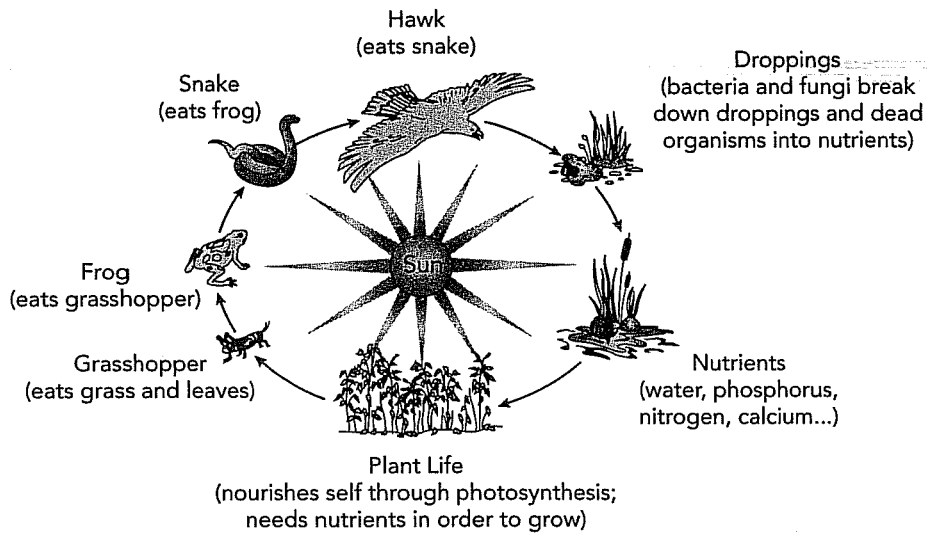
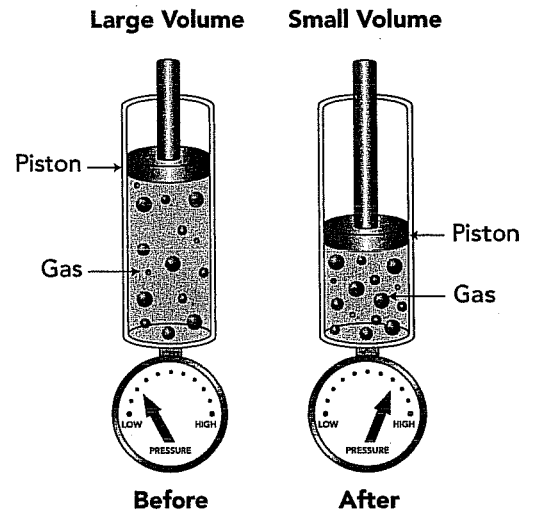
Interpreting Diagrams

Directions: Look at the diagrams below and answer the questions that follow.

1. What happens to the gas molecules in the cylinder as the piston moves down?

2. What happens to the pressure in the cylinder as the piston moves down?

3. How are the gas pressure and volume related?



4. Summarize the diagram in your own words.

5. Suppose the grasshopper population decreases. What would happen to the frog population?

6. How are the organisms in the diagram related?



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Interpreting Tables and Charts

Part A

Directions: Use the information in the chart below to answer the questions that follow.

VITAMIN B COMPLEX

Vitamin	Food Sources	Recommended Dietary Allowance	
		Men	Women
B ₁ (Thiamin)	Enriched, fortified, or whole-grain products; bread and bread products; mixed foods where the main ingredient is grain; ready-to-eat cereals	1.2 mg	1.1 mg
B ₂ (Riboflavin)	Organ meats; milk; bread products; fortified cereals	1.3 mg	1.1 mg
Niacin	Meat; fish; poultry; enriched and whole-grain breads and bread products; fortified ready-to-eat cereals	16 mg	14 mg
B ₁₂ (Cobalamin)	Fortified cereals; meat; fish; poultry	2.4 µg	2.4 µg
B ₆ (Pyridoxine)	Fortified cereals; organ meats; fortified soy-based meat substitutes	1.3–1.7mg	1.3–1.5 mg
Biotin	Liver and smaller amounts in fruits and meats	30 µg*	30 µg*
Folic Acid	Enriched cereal grains; dark leafy vegetables; enriched and whole-grain breads and bread products; fortified ready-to-eat cereals	400 µg	400 µg
Pantothenic Acid	Chicken; beef; potatoes; oats; cereals; tomato products; liver; kidney; yeast; egg yolk; broccoli; whole grains	5 mg*	5 mg*
Choline	Milk, liver, eggs, peanuts	550 mg*	425 mg*

* Represents Adequate Intake instead of Recommended Dietary Allowance

1. In your own words, what information is given in the chart?

2. What foods are a good source of vitamin B₁₂?

3. How many milligrams (mg) of niacin a day should a man take in?

4. What vitamins can be supplied by fortified foods?

5. Vitamin-fortified foods are a growing trend in the food industry. What is the reason for this? Explain your answer.

**Part B**

Directions: Use the table below to answer the questions that follow.

Lake	Surface Area (sq. miles)	Average Depth (feet)	Volume (cubic miles)	Replacement Time (years)
Erie	9,900	60	113	3
Ontario	7,300	280	390	8
Huron	23,000	190	850	25
Michigan	22,000	280	1,200	70
Superior	32,000	485	2,900	180

1. How much water does Lake Erie hold?

2. Which lake is smallest in surface area but second in depth?

3. Which lake holds the greatest amount of water?

4. Which two lakes have the same average depth?

5. Which lake's water level can be replaced in the least amount of time?

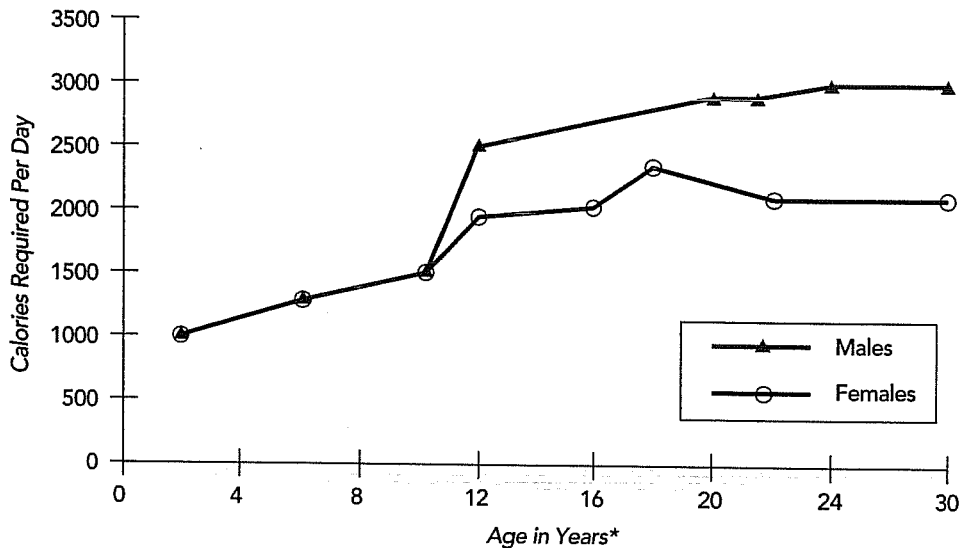


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Analyzing Line Graphs

Part A

Directions: Use the graph below to answer the questions that follow.



*Values given for any age may vary somewhat depending on how active a person is.

1. About how many calories does a 2-year-old boy need daily? a 2-year-old girl?

2. After what age do the caloric needs of males and females begin to differ?

3. How many calories does a 22-year-old man need each day?

4. At what age does a woman's required caloric intake first hit a plateau?

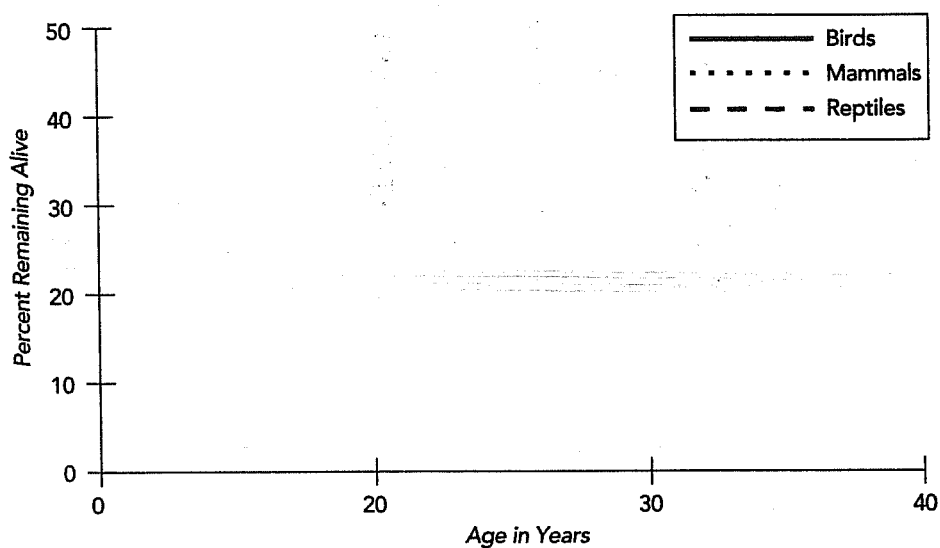
5. Why would both females and males have an increasing need for calories until age 18?



Part B

Directions: Use the chart below to make your own line graph. Plot the points for birds and then connect them with a solid line. Plot the points for mammals and connect them with a short dotted line. Plot the points for reptiles and connect them with a long dotted line.

Age in Years	Percent Remaining Alive		
	Birds	Mammals	Reptiles
20	50	43	39
30	19	10	28
40	3	7	9



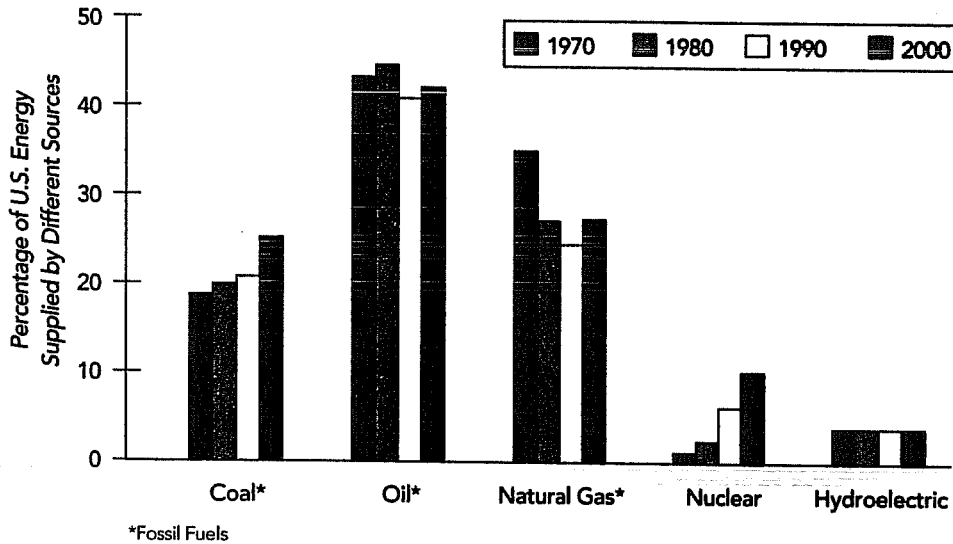


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Analyzing Bar Graphs

Part A

Directions: Use the graph below to answer the questions that follow.



1. Which source has consistently supplied the largest percentage of energy?

2. Which source increased the most between 1970 and 2000?

3. Which source supplied the smallest amount of energy in 2000?

4. What kinds of fuels are coal, gas, and oil?

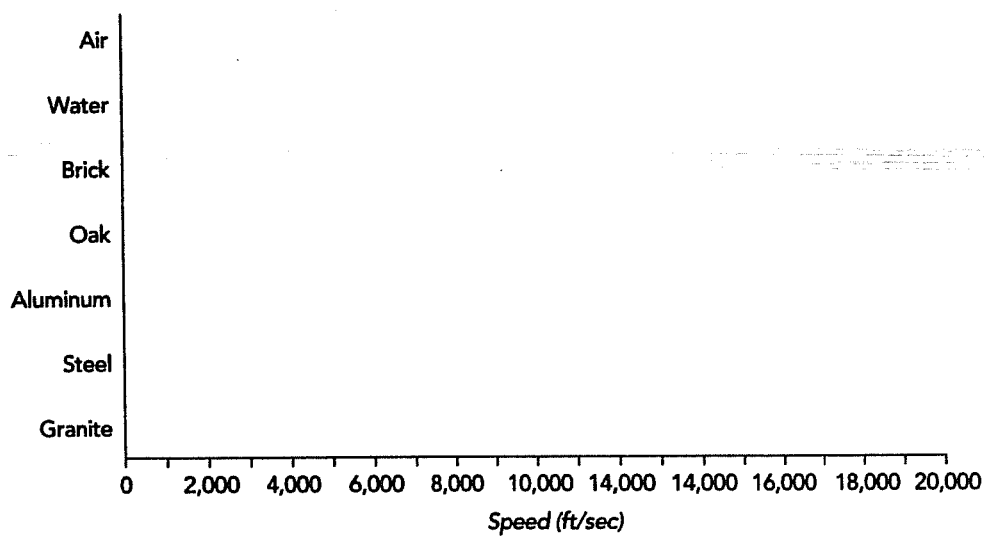
5. About what percentage of energy in 2000 was supplied by coal, gas, and oil combined?

**Part B**

Directions: Use the information in the table below to make your own bar graph. Make a bar for each figure in the table.

SPEED OF SOUND IN VARIOUS METALS

Material	Speed (ft/sec)
Air (68°F)	1,130
Water (59°F)	4,760
Brick	11,970
Oak	12,630
Aluminum	16,730
Steel	17,060
Granite	19,690



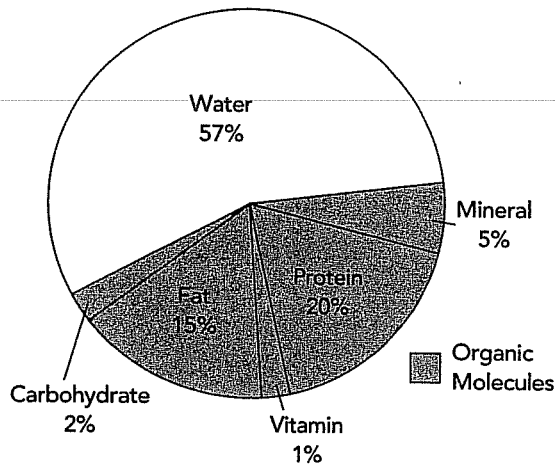


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Analyzing Circle Graphs

Part A

Directions: Use the circle graph below to answer the following questions.



1. What substance makes up more than half the human body?

2. What substances are made of organic molecules?

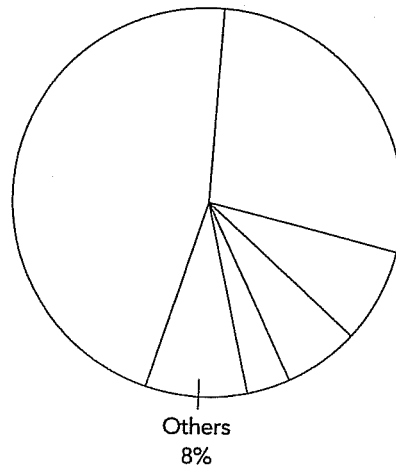
3. What percentage of the body do these organic substances make up?

Part B

Directions: Use the information in the table below to make your own circle graph. Label each section with the appropriate element and percentage. Then answer the questions that follow.

ELEMENTS IN EARTH'S CRUST

Element	Percentage
Oxygen	46
Silicon	28
Aluminum	8
Iron	6
Magnesium	4
Others	8



1. What element accounts for almost half of Earth's crust?

2. What element accounts for between one-fourth and one-third of Earth's crust?
