

Skills Worksheet

# Graphing Skills

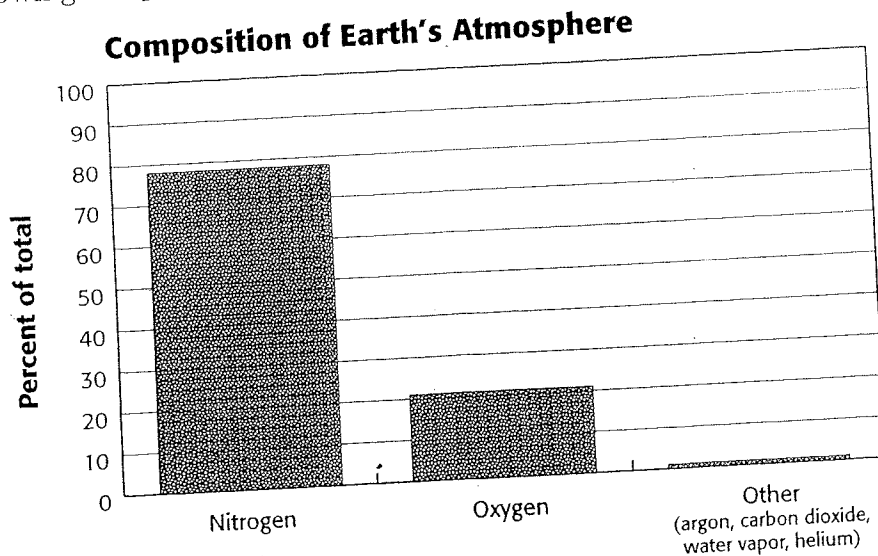
## Bar Graphs

Bar graphs are useful tools for use in comparing data values. For example, you might compare the temperature differences in various layers of the atmosphere. Or, you might compare the percentages of gases that make up Earth's atmosphere. Take a look at the following chart.

**COMPOSITION OF EARTH'S ATMOSPHERE**

Gases	Percent of total
Nitrogen	78
Oxygen	21
Other (argon, carbon dioxide, water vapor, helium)	1

To create a bar graph from the data in this table, you would label three positions on the  $x$ -axis with the names of the gases. On the  $y$ -axis you would include the percent range from 0 to 100 and label this axis "Percent of total." Finally, you would draw the bars to represent the data. Your bar graph would look like the following sample.



### PRACTICE

Answer the following questions based on the information in the graph above.

- Which gas has the highest concentration in Earth's atmosphere? What percent of the atmosphere is it?

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Name:

Date:

Class:

Hour:

## Graphing Practice Problem

A scientist has been studying the development of clams and how water temperature affects them. Here is his data from his first set of trials:

Water Temperature in °C	Number of developing clams
15	75
20	90
25	120
30	140
35	75
40	40
45	15
50	0

Answer these questions on your own sheet of paper.

- A. Write an experimental question.
- B. Write a proper hypothesis.
- C. What is the dependent variable?
- D. What is the independent variable?
- E. What type of data is this?
- F. What type of graph should he use?
- G. Make a graph of the data.
- H. What is the optimum temperature for clam development?