

# Air Pressure and Altitude, Page 1

STUDENT RESOURCE 7.3

ACTIVITY SHEET



We live at the bottom of an “ocean” of air, our atmosphere. At sea level, the atmosphere exerts a pressure of about 14.7 pounds per square inch. On top of a mountain, however, there is less air above you and therefore less pressure. Use the data in the chart below to make a graph showing the air pressure at each altitude. Note: 14.7 pounds of pressure per square inch is equal to 29.92 inches of mercury on a barometer. (You will learn more about barometers in Investigate 4.)

| Feet Above Earth | Average Air Pressure (inches of mercury) |
|------------------|--|
| 0 (sea level)    | 29.92                                    |
| 10,000           | 20.58                                    |
| 20,000           | 13.76                                    |
| 30,000           | 8.90                                     |
| 40,000           | 5.56                                     |
| 50,000           | 3.44                                     |
| 60,000           | 2.14                                     |
| 70,000           | 1.32                                     |
| 80,000           | 0.82                                     |
| 90,000           | 0.51                                     |
| 100,000          | 0.33                                     |

When you have finished making your graph, answer these questions:

- ❶ Where is air pressure the highest?

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- ❷ What happens to air pressure as altitude increases?

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