

Respiratory Lab Worksheet

Data Sheet for Individual Measurements

Record the average of your 3 measurements for each lung volume/capacity below.

Measurements:

Vital Capacity_____

Tidal Volume_____

Expiratory Reserve_____

Inspiratory Reserve_____

Using the above measurements, calculate the following lung volumes and capacities (you will need to assume that your Residual Volume is about 1.2 liters).

1. Inspiratory Capacity = Tidal Volume + Inspiratory Reserve

2. Functional Residual Capacity = Residual Volume + Expiratory Reserve

3. Total Lung Capacity = Tidal Volume + Inspiratory Reserve + Expiratory Reserve + Residual Volume

Table 1. Vital capacity and body size.

Remember that height is recorded in cm, (obtained by multiplying height in inches by 2.54).

Student	Height (cm)	Vital Capacity (averaged, in liters)
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
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24		

Use the data in Table 1 to make a graph in which you plot each individual's vital capacity as a function of their height (you may use Graph 1 below for this if you wish). After examining your graph, answer the following questions:

1. As body size (height) increases, what happens to vital capacity? Why do you think this occurs?

2. List 3 other influences that might affect vital capacity and explain how each would work.

Graph 1. Vital capacity as a function of body size.

