

You Are Really Full of Hot Air!

Student Data Page 5B

Data Table 1 – Tidal Volume and Minute Ventilation

Room Temp ⁰ C:		BTPS Conversion Factor:			
Trials	RR (bpm)	X	TV (L)	=	MV (L/min)
1		X		=	
2		X		=	
3		X		=	
Average		X		=	

Data Table 2 – Vital Capacity (VC), Expiratory Reserve Volume (ERV) and Inspiratory Capacity (IC)

Trials	VC (L)	-	ERV (L)	=	IC (L)
1		-		=	
2		-		=	
3		-		=	
Average		-		=	

Data Table 3 – Total Lung Capacity



Average VC (L)	+	RV (L)	=	TLC (L)
	+	1	=	



Data Table 4 – Class Data all Volume Measurements

Volume Measurement (L)	Mean	Median	Mode	Range
Tidal Volume (TV)				
Minute Ventilation (MV)				
Vital Capacity (VC)				
Expiratory Reserve Volume (ERV)				
Inspiratory Capacity (IC)				
Total Lung Capacity (TLC)				

* See Appendix B for Excel® instructions.

Processing Out:

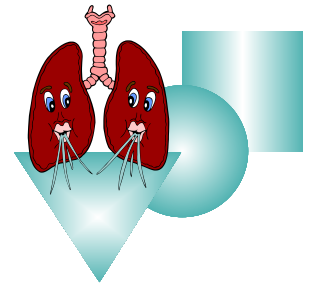


1. What are the class averages for *VC* and *TLC*?

2. What volume measurement is most often represented in the class data for *TLC*?

3. What is the median *MV* measurement for the class?

4. How do your measurements for *TV*, *VC*, *ERV*, *IC* and *TLC* compare to the class averages?



5. Find the individual(s) in the class with volume measurements for *VC* and *TLC* that are most similar to your own. What physical characteristics (height, weight, gender, age, etc.) do you have in common?

6. According to the calculations for range of each measurement, what is the difference in liters between the highest and lowest measurements for *VC* and *TLC*?

7. Describe at least three factors that you believe might account for the variation in lung volume measurements (be prepared to discuss them with the class).

