



iSTEM Module 14 – Biomedical:

Topic 1 – Investigation into Lung Volume

**Measuring Lung Volume Investigation**

Group	Group Type	Procedure
1	Control	<ul style="list-style-type: none"><li>• Blow balloon up in a single breath.</li><li>• Measure the circumference of the balloon and calculate the volume of air in the balloon.</li><li>• Plot a number of times blown vs volume of air graph of your findings.</li><li>• Comment on your findings. Include limitations, significance and relevance/future use of your data in your comments.</li><li>• Collate the entire groups results into a single graph.</li><li>• Comment on your findings. Include limitations, significance and relevance/future use of your data in your comments.</li></ul>
2	Variable/ Experimental	<p>Investigate effects of physical exercise on lung volume.</p> <ul style="list-style-type: none"><li>• Perform some agreed upon physical exercise. Examples include, a short run, jumping jacks, high knees etc. Exercise must leave students feeling out of breath.</li><li>• Follow procedure one above.</li></ul>
1 AND 2		<ul style="list-style-type: none"><li>• Comment on any variances between the two groups' findings. Include the significance and relevance/future use of the combined data for the design of a ventilator</li><li>• Document your findings in a Report</li></ul>