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| **“Exploring Boyle’s Law”** | |
| **3 SECOND MUSICAL GRAPHIC INTRODUCTION** | |
| Boyle knew that a gas confined to a small container will exert greater pressure upon the container walls, compared to a gas confined to a larger container. **BUT how** are we going to get students to understand that they can predict the behavior of gasses | **P1 V1 = P2 V2** |
| Let’s see how we can visualize this concept with the Labdisc.  It only takes three simple steps to get started.   1. We will first select the air pressure sensor from the sensor list. 2. Then select recording in manual sampling rate 3. And select 10 samples |  |
| Now I will call my dear friend Ido  We will set the syringe at a 60ml volume of air, then move it to 50, 40, 30 – and at each position we take a sample of air pressure. |  |
| Ido please press the select button to start recording.  And press the scroll button to take the first sample. Now I will change the volume to 50 ml, and we take another sample. 40 ml and we one more sample. And 30 and we take the final sample. | TAKING THE MEASURES “60” and “50”…. |
| That’s it we have 4 samples of air pressure in different volumes. In the GlobiLab software we get 4 bars representing different samples of air pressure at different volumes.  We can first annotate each bar. All we need to do is click the annotation icon, go to the first bar and write 60 ml.  The second bar represents air pressure measured at a volume of 50 ml, so we write 50ml, we can also add an image of our syringe taken by digital camera and place it on the graph.  But that’s not all. We can export data to excel and there we can add the volume and calculate air pressure by volume and show exactly what Boyle predicted. Boyle’s famous law claimed that the multiplication of air pressure by volume is a constant.  Let’s prove it!  We will add another column where we multiply the different air pressure by different volumes.  Wow! Here you go we got the same results – another complicated process becomes easy.  Ido so now you understand what air pressure is? | DISPLAY PC SCREEN |
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