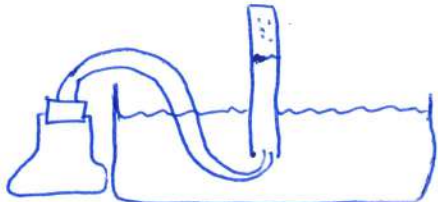


Name: Key Period: _____ Date: _____

Video Notes: Dalton's Law Applied - Collecting Gas Over Water

BIG IDEAS

DETAILS

Dalton's Law	Earth's atmosphere is a <u>mixture</u> of gases. Like any mixture, the total pressure is equal to the <u>sum</u> of the partial pressures from the components. Since over 70% of the atmosphere is <u>nitrogen</u> , it creates most of the pressure.
Collecting Gas over water	<p>To collect gas "over water", a <u>tube</u> filled with water is held upside down in a tub of water. When the gas you are collecting is added, it <u>rises</u> to the top.</p> <p>Sketch what it looks like to collect gas over water:</p>  <p>But it's not alone! There is also <u>water vapor</u> present.</p> <p>When the water level inside the tube and outside are <u>equal</u>, it means the pressure inside the tube is <u>equal</u> to the pressure outside - which is the atmospheric <u>pressure</u>. Since it is a gas mixture inside, Dalton's law applies:</p> $P_{\text{atmospheric}} = P_{\text{H}_2\text{O}} + P_{\text{gas collected}}$ <p>As always - <u>rearrange</u> the equation BEFORE plugging in numbers</p>
SUMMARY	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>