

Item #	Topic	Text
1.	Physics -What is it? <ul style="list-style-type: none"> - Kinematics - study of how objects move. - Role of instruments in experimental physics to collect data. - Distinguish between accuracy and precision of data. - Idea of Measurement in a physics lab. - Experiment → collect data → draw graph → analyze graph → develop equations → work with equations. - Experimental Error – Definition, Sources& Calculation e.g. Random, Systematic, Parallax - Discrepancy & Percent Discrepancy 	-----
2.	Measurement & Handling Numbers <ul style="list-style-type: none"> - Significant Digits – addition, subtraction, multiplication & division - Base Units & Derived Units - Scientific Notation , Metric Prefixes & Conversions 	344- 349
3.	Uniform Motion Lab <ul style="list-style-type: none"> - Compare motion of two objects moving at different speeds. - Use ticker tape method or stop watch and rulers. - Graph data on same graph; compare slopes. - Discuss independent, dependent variables, slope calculations, units of speed, area under v-t graph. - Average speed, instantaneous speed, equation $v = d / \Delta t$ 	372-373
4.	Analysis of Uniform Motion Graphs <ul style="list-style-type: none"> - Reading graphs. - Distance vs Time (motion left, right, stopped) - Speed vs Time (motion left, right, stopped) 	354-365 & 446-451
5.	Distinguish between distance-displacement and speed-velocity <ul style="list-style-type: none"> - Define scalar and vector and give examples. - Discuss vector notation and introduce tail-to-tip method. - Vectors in same direction, opposite direction and at right angles. 	414-429
6.	Uniform Motion Equations: <ul style="list-style-type: none"> - Problem solving $\vec{v}_{AV} = \frac{\vec{d}}{\Delta t} = \frac{\vec{x}_f - \vec{x}_i}{\Delta t}$	432-436
7.	Uniform Acceleration <ul style="list-style-type: none"> - Study the motion of a cart moving down a ramp. - Use ticker tape method or Sonar equipment. 	394-395
8.	Analysis of d-t graphs for uniform acceleration <ul style="list-style-type: none"> - Tangent method. - Moving right speeding up & slowing down. - Moving left speeding up & slowing down. 	449
9.	Analysis of v-t graphs for uniform acceleration <ul style="list-style-type: none"> - Slope = acceleration & Area = displacement - Moving right speeding up & slowing down. - Moving left speeding up & slowing down. 	390-393
10.	Acceleration Equation <ul style="list-style-type: none"> - Problem solving $\vec{a}_{AV} = \frac{\Delta \vec{v}}{\Delta t} = \frac{\vec{v}_f - \vec{v}_i}{\Delta t}$	384-388 & 362-379