SCHEME OF WORK PHYSICS

FORM 3 2022 TERM I

ENDARASHA BOYS

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| **WK** | **LSN** | **TOPIC** | **SUB-TOPIC** | **OBJECTIVES** | **T/L ACTIVITIES** | **T/L AIDS** | **REFERENCE** | **REMARKS** |
| **2** | 1 | Linear Motion | Introduction of linear motion | By the end of the lesson, the learner should be able to:  Define distance, displacement, speed, velocity and acceleration | Defining distance, speed, displacement, velocity and acceleration | Charts on motion Trolleys  Inclined planes | Comprehensive secondary physics book 3 pages 1 Comprehensive secondary physics teachers book 3 pages 1-3  Secondary physics KLB students book 2 page 1-7 Physics made easier vol. 2 pages 1-2  Secondary physics (M.N Patel) pages 5-8 |  |
| 2 | Linear Motion | Introduction of linear motion | By the end of the lesson, the learner should be able to:  Define distance, displacement, speed, velocity and acceleration | Defining distance, speed, displacement, velocity and acceleration | Charts on motion Trolleys  Inclined planes | Comprehensive secondary physics book 3 pages 1 Comprehensive secondary physics teachers book 3 pages 1-3  Secondary physics KLB students book 2 page 1-7 Physics made easier vol. 2 pages 1-2  Secondary physics (M.N Patel) pages 5-8 |  |
| 3-4 | Linear Motion | Determining velocity | By the end of the lesson, the learner should be able to:  Describe experiments to determine velocity | Describing experiments on velocity | Trolleys Stop watches Graph paper Ticker timer | Comprehensive secondary physics book 3 pages 2-3 Comprehensive secondary physics teachers book 3 pages 1-3  Secondary physics KLB students book 3 page 4-6 Physics made easier vol. 2 pages 2  Secondary physics (M.N Patel) pages 9-14 |  |
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|  | 5 | Linear Motion | Motion time graphs | By the end of the lesson, the learner should be able to:  Plot and explain motion time graphs | Plotting and interpreting motion-time graphs | Appropriate charts on velocity time and distance graphs Graph paper  Data showing different distance, velocity and time | Comprehensive secondary physics book 3 pages 5-9 Comprehensive secondary physics teachers book 3 pages 8-18  Secondary physics KLB students book 3 page 4-6 Physics made easier vol. 2 pages 3-5  Secondary physics (M.N Patel) pages 21-25 |  |
| **3** | 1 | Linear Motion | Measuring speed, velocity and acceleration | By the end of the lesson, the learner should be able to:  Describe experiments to determine and measure speed, velocity and acceleration | Describing experiments to determine and measure speed velocity & acceleration | Graphs Ticker timer Tapes Graphs | Comprehensive secondary physics students book 3 pages 2-3  Comprehensive secondary physics teachers book 3 pages 1-3  Secondary physics KLB students book 3 page 18-25 Physics made easier vol. 2 pages 1-5  Secondary physics (M.N Patel) pages 9-14 |  |
| 2 | Linear Motion | Measuring speed, velocity and acceleration | By the end of the lesson, the learner should be able to:  Describe experiments to determine and measure speed, velocity and acceleration | Describing experiments to determine and measure speed velocity & acceleration | Graphs Ticker timer Tapes Graphs | Comprehensive secondary physics students book 3 pages 2-3  Comprehensive secondary physics teachers book 3 pages 1-3  Secondary physics KLB students book 3 page 18-25 Physics made easier vol. 2 pages 1-5  Secondary physics (M.N Patel) pages 9-14 |  |
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|  | 3-4 | Linear Motion | Measuring speed, velocity and acceleration Acceleration | By the end of the lesson, the learner should be able to:  Describe experiments to determine and measure speed, velocity and acceleration  Describe acceleration | Describing experiments to determine and measure speed velocity & acceleration  Describing acceleration Problem solving | Graphs Ticker timer Tapes Graphs  Charts on acceleration Graphs  Data on velocity and time | Comprehensive secondary physics students book 3 pages 2-3  Comprehensive secondary physics teachers book 3 pages 1-3  Secondary physics KLB students book 3 page 18-25 Physics made easier vol. 2 pages 1-5  Secondary physics (M.N Patel) pages 9-14 Comprehensive secondary physics students book 3 pages 2-3  Comprehensive secondary physics teachers book 3 pages 1-3  Secondary physics KLB students book 3 page 7-8 Physics made easier vol. 2 pages 1-5  Secondary physics (M.N Patel) pages 7-8 |  |
| 5 | Linear Motion | Acceleration | By the end of the lesson, the learner should be able to:  Describe acceleration | Describing acceleration Problem solving | Charts on acceleration Graphs  Data on velocity and time | Comprehensive secondary physics students book 3 pages 2-3  Comprehensive secondary physics teachers book 3 pages 1-3  Secondary physics KLB students book 3 page 7-8 Physics made easier vol. 2 pages 1-5  Secondary physics (M.N Patel) pages 7-8 |  |
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| **4** | 1 | Linear Motion | Equations of motion | By the end of the lesson, the learner should be able to:  Derive and apply the equations of uniform acceleration | Stating the equations of motion  Deriving the equations of motion  Applying the equations of motion | Graphs  Worked examples on motion | Comprehensive secondary physics students book 3 pages 7-9  Comprehensive secondary physics teachers book 3 pages3-5  Secondary physics KLB students book 3 page 26-29 Physics made easier vol. 2 pages 6-7  Secondary physics (M.N Patel) pages 25-27 |  |
| 2 | Linear Motion | Equations of motion | By the end of the lesson, the learner should be able to:  Derive and apply the equations of uniform acceleration | Stating the equations of motion  Deriving the equations of motion  Applying the equations of motion | Graphs  Worked examples on motion | Comprehensive secondary physics students book 3 pages 7-9  Comprehensive secondary physics teachers book 3 pages3-5  Secondary physics KLB students book 3 page 26-29 Physics made easier vol. 2 pages 6-7  Secondary physics (M.N Patel) pages 25-27 |  |
| 3-4 | Linear Motion | Acceleration due to gravity | By the end of the lesson, the learner should be able to:  ;  Determine acceleration due to gravity by free-fall and simple pendulum | Determining acceleration by tree-fall and pendulum method | Pendulum bob String  Stop watches Ticker-timer | Comprehensive secondary physics students book 3 pages 3-5  Comprehensive secondary physics teachers book 3 pages1-3  Secondary physics KLB students book 3 page 29-36 Physics made easier vol. 2 pages 7-10  Secondary physics (M.N Patel) pages 15-21 |  |
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|  | 5 | Refraction Of Light | The meaning of refraction | By the end of the lesson, the learner should be able to:  Describe simple experiments to illustrate refraction of light | Experiments demonstrating refraction of light | Beakers Water  Stick or glass rod Basins  Coins  Glass blocks Pin | Comprehensive secondary physics students book 3 pages 11-12 Comprehensive secondary physics teachers book 3 pages6-9  Secondary physics KLB students book 3 page 41-46 Physics made easier vol. 2 pages 15-16  Secondary physics (M.N Patel) pages 37-40 |  |
| **5** | MID TERM EXAMS AND BREAK | | | | | | | |
| **6** | 1 | Refraction Of Light | Laws of refraction | By the end of the lesson, the learner should be able to:  State the laws of refraction and define refractive index | Discovering Snell?s law of refraction through experiments  Defining refractive index Stating the laws of refraction | Glass blocks Pins  Soft board Plain paper Geometric set | Comprehensive secondary physics students book 3 pages 12-14 Comprehensive secondary physics teachers book 3 pages6-9  Secondary physics KLB students book 3 page 47-61 Physics made easier vol. 2 pages 16-18  Secondary physics (M.N Patel) pages 40-42 |  |
| 2 | Refraction Of Light | Laws of refraction | By the end of the lesson, the learner should be able to:  State the laws of refraction and define refractive index | Discovering Snell?s law of refraction through experiments  Defining refractive index Stating the laws of refraction | Glass blocks Pins  Soft board Plain paper Geometric set | Comprehensive secondary physics students book 3 pages 12-14 Comprehensive secondary physics teachers book 3 pages6-9  Secondary physics KLB students book 3 page 47-61 Physics made easier vol. 2 pages 16-18  Secondary physics (M.N Patel) pages 40-42 |  |
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|  | 3-4 | Refraction Of Light | Laws of refraction Refractive index | By the end of the lesson, the learner should be able to:  State the laws of refraction and define refractive index  Determine the refractive index of a given substance | Discovering Snell?s law of refraction through experiments  Defining refractive index Stating the laws of refraction  Experiments to determine the refractive index of rates and glass by real and apparent depth method | Glass blocks Pins  Soft board Plain paper Geometric set  Water Pins  Plain papers Coins Beakers | Comprehensive secondary physics students book 3 pages 12-14 Comprehensive secondary physics teachers book 3 pages6-9  Secondary physics KLB students book 3 page 47-61 Physics made easier vol. 2 pages 16-18  Secondary physics (M.N Patel) pages 40-42 Comprehensive secondary physics students book 3 pages 14-15 Comprehensive secondary physics teachers book 3 pages6-9  Secondary physics KLB students book 3 page 61-68 Physics made easier vol. 2 pages 17-19  Secondary physics (M.N Patel) pages 42-45 |  |
| 5 | Refraction Of Light | Application of a total internal reflection in a prism periscope, optical fibre | By the end of the lesson, the learner should be able to:  Explain the working of a prisms and optical fibres among other applications | Making a periscope Discussion on working of an optical fibre | Charts on total internal reflection and applications | Comprehensive secondary physics students book 3 pages 18-19 Comprehensive secondary physics teachers book 3 pages6-9  Secondary physics KLB students book 3 page 76-79 Physics made easier vol. 2 pages 20-23  Secondary physics (M.N Patel) pages 49-52 |  |
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| **7** | 1 | Refraction Of Light | Dispersion of white light and recombination of colors of the spectrum | By the end of the lesson, the learner should be able to:  Describe an experiment to illustrate the dispersion of light | Experiment on dispersion of light using glass prisms | Triangular glass prisms Source of light  Screen | Comprehensive secondary physics students book 3 pages 19-20 Comprehensive secondary physics teachers book 3 pages6-9  Secondary physics KLB students book 3 page 79-89 Physics made easier vol. 2 pages 21-22  Secondary physics (M.N Patel) pages 45-46 |  |
| 2 | Refraction Of Light | Dispersion of white light and recombination of colors of the spectrum | By the end of the lesson, the learner should be able to:  Describe an experiment to illustrate the dispersion of light | Experiment on dispersion of light using glass prisms | Triangular glass prisms Source of light  Screen | Comprehensive secondary physics students book 3 pages 19-20 Comprehensive secondary physics teachers book 3 pages6-9  Secondary physics KLB students book 3 page 79-89 Physics made easier vol. 2 pages 21-22  Secondary physics (M.N Patel) pages 45-46 |  |
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|  | 3-4 | Refraction Of Light | Dispersion of white light and recombination of colors of the spectrum Problems of refractive index and critical angle | By the end of the lesson, the learner should be able to:  Describe an experiment to illustrate the dispersion of light  Solve problems involving the refractive index and critical angle | Experiment on dispersion of light using glass prisms  Discussions and problem solving in critical angle using the formulae sin C=i/n and n=sin i/sin r | Triangular glass prisms Source of light  Screen  Review questions Past exams  Examples in the topic | Comprehensive secondary physics students book 3 pages 19-20 Comprehensive secondary physics teachers book 3 pages6-9  Secondary physics KLB students book 3 page 79-89 Physics made easier vol. 2 pages 21-22  Secondary physics (M.N Patel) pages 45-46 Comprehensive secondary physics book 3 pages 21-  22  Comprehensive secondary physics teachers book 3 pages6-9  Secondary physics KLB students book 3 page 82-86 Physics made easier vol. 2 pages 24-25  Secondary physics (M.N Patel) pages 53-55 |  |
| 5 | Refraction Of Light | Problems of refractive index and critical angle | By the end of the lesson, the learner should be able to:  Solve problems involving the refractive index and critical angle | Discussions and problem solving in critical angle using the formulae sin C=i/n and n=sin i/sin r | Review questions Past exams  Examples in the topic | Comprehensive secondary physics book 3 pages 21-  22  Comprehensive secondary physics teachers book 3 pages6-9  Secondary physics KLB students book 3 page 82-86 Physics made easier vol. 2 pages 24-25  Secondary physics (M.N Patel) pages 53-55 |  |
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| **8** | 1 | Refraction Of Light | Total material reflection and its effect Critical angle | By the end of the lesson, the learner should be able to:  Describe an experiment to explain the total internal reflection and its effects  Define critical angle | Experiments to explain the total internal reflection and its effects Defining critical angle Observations and discussions on critical angle  Total internal reflection | Glass blocks Soft boards Pins Geometrical set Source of light | Comprehensive secondary physics students book 3 pages 16-17 Comprehensive secondary physics teachers book 3 pages6-9  Secondary physics KLB students book 3 page 68-76 Physics made easier vol. 2 pages 19-20  Secondary physics (M.N Patel) pages 46-49 |  |
| 2 | Refraction Of Light | Total material reflection and its effect Critical angle | By the end of the lesson, the learner should be able to:  Describe an experiment to explain the total internal reflection and its effects  Define critical angle | Experiments to explain the total internal reflection and its effects Defining critical angle Observations and discussions on critical angle  Total internal reflection | Glass blocks Soft boards Pins Geometrical set Source of light | Comprehensive secondary physics students book 3 pages 16-17 Comprehensive secondary physics teachers book 3 pages6-9  Secondary physics KLB students book 3 page 68-76 Physics made easier vol. 2 pages 19-20  Secondary physics (M.N Patel) pages 46-49 |  |
| 3-4 | Newton?s Law?s Of Motion | Newton?s Laws of motion | By the end of the lesson, the learner should be able to:  State the Newton?s laws of motion  State and explain the significance of a Newton?s laws of motion Describe simple experiments to illustrate inertion | Discussion on Newton?s laws  Experiments to illustrate  ? Education Plus Agencies  Newton?s laws of motion | Inclined plane Trolley Marbles  Spring balances | Comprehensive secondary physics students book 3 pages 23-27 Comprehensive secondary physics teachers book 3 pages 13-17  Secondary physics KLB students book 3 page 87-  102  Physics made easier vol. 2 pages 26-27  Secondary physics (M.N Patel) pages 56-65 |  |
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|  | 5 | Newton?s Law Of Motion | Conservation of linear momentum Elastic collision Inelastic collision Recoil velocity | By the end of the lesson, the learner should be able to:  By the end of the lesson, the leaner should be able to:  State the law of conservation of momentum Define elastic and inelastic collisions  Determine recoil velocity | Discussions of the laws of conservation of linear momentum Determining recoil velocity | Marbles Trolleys Meter rules Stop watches Plasticine | Comprehensive secondary physics students book 3 pages 28-30 Comprehensive secondary physics teachers book 3 pages 13-17  Secondary physics KLB students book 3 page 103-  108  Physics made easier vol. 2 pages 28-30  Secondary physics (M.N Patel) pages 66-72 |  |
| **9** | 1 | Newton?s Law Of Motion | Friction | By the end of the lesson, the learner should be able to:  Define friction  State and explain types of frictions  Describe and experiment to illustrate friction and state the applications of friction  State laws of friction | Defining friction Stating and explaining types of frictions  Describing an experiment to illustrate friction Stating the applications of the frictions  Stating laws of friction | Block of wood Spring balance Pulley  Flat surface | Comprehensive secondary physics students book 3 pages 28-39 Comprehensive secondary physics teachers book 3 pages 13-17  Secondary physics KLB students book 3 page 109-  115  Physics made easier vol. 2 pages 30-31  Secondary physics (M.N Patel) pages 73-76 |  |
| 2 | Newton?s Law Of Motion | Friction | By the end of the lesson, the learner should be able to:  Define friction  State and explain types of frictions  Describe and experiment to illustrate friction and state the applications of friction  State laws of friction | Defining friction Stating and explaining types of frictions  Describing an experiment to illustrate friction Stating the applications of the frictions  Stating laws of friction | Block of wood Spring balance Pulley  Flat surface | Comprehensive secondary physics students book 3 pages 28-39 Comprehensive secondary physics teachers book 3 pages 13-17  Secondary physics KLB students book 3 page 109-  115  Physics made easier vol. 2 pages 30-31  Secondary physics (M.N Patel) pages 73-76 |  |
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|  | 3-4 | Newton?s Law Of Motion Newton?s Laws Of Motion | Friction Viscosity | By the end of the lesson, the learner should be able to:  Define friction  State and explain types of frictions  Describe and experiment to illustrate friction and state the applications of friction  State laws of friction  By the end of the lesson, the leaner should be able to:  Define viscosity Explain the concept of terminal velocity | Defining friction Stating and explaining types of frictions  Describing an experiment to illustrate friction Stating the applications of the frictions  Stating laws of friction  Distinguishing viscous from- non-viscous liquids Defining viscous liquids Defining and explaining terminal viscosity | Block of wood Spring balance Pulley  Flat surface  Glycerin Paraffin Water  Ball bearings Stat watches Meter rule  Measuring cylinders | Comprehensive secondary physics students book 3 pages 28-39 Comprehensive secondary physics teachers book 3 pages 13-17  Secondary physics KLB students book 3 page 109-  115  Physics made easier vol. 2 pages 30-31  Secondary physics (M.N Patel) pages 73-76 Comprehensive secondary physics students book 3 pages33  Comprehensive secondary physics teachers book 3 pages 13-17  Secondary physics KLB students book 3 page 115-  119  Physics made easier vol. 2 pages 31-33  Secondary physics (M.N Patel) pages 76-78 |  |
| **10** | END OF TERM EXAMS | | | | | | | |

Dennis