SCHEME OF WORK PHYSICS

FORM 1 2022 TERM II

ENDARASHA BOYS

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| **WK** | **LSN** | **TOPIC** | **SUB-TOPIC** | **OBJECTIVES** | **T/L ACTIVITIES** | **T/L AIDS** | **REFERENCE** | **REMARKS** |
| **2** | 1-2 | Particulate Nature Of Matter | Diffusion in liquid, gases and solids Revision on Particulate nature of matter | By the end of the lesson, the learner should be able to:  Explain diffusion in gases/liquids and solids  Answer questions in students Book 1 | Experiments Discussions Discussion Demonstrations Asking questions Answering questions | Promise gas Jars Potassium permanganate Solvent  Hydrochloric acid Ammonia  Glass tube cotton wool | Comprehensive secondary physics Students Book 1 page 46-49  Teacher?s Book 1 pages 15-18  Secondary Physics students Book 1 (KLB) pages 132-136  Golden tips physics pages 69  Principles of Physics(M.Nelko) pages 146-147  Secondary Physics students Book 1 (KLB) pages 136-138  Golden tips physics pages 69-70  Principles of Physics(M.Nelko) pages 164  Past Papers |  |
| 3 | Thermal Expansion | Expansion of solids | By the end of the lesson, the learner should be able to:  Define temperature Describe the functionally of various thermometers  Explain the expansion and contraction in solids Explain forces due to expansion and contraction | Experiments Demonstration Experiments | Meter rule Metal rods  Materials that conduct or do not conduct heat Ball and ring apparatus Bar gauge | Comprehensive secondary physics  Students Book 1 page 50-  52  Teacher?s Book 1 pages 18-21  Secondary Physics students Book 1 (KLB) pages 139-144  Golden tips physics pages 70-72  Principles of Physics(M.Nelko) pages 168,175-176 |  |
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|  | 4 | Thermal Expansion | Expansion of solids | By the end of the lesson, the learner should be able to:  Define temperature Describe the functionally of various thermometers  Explain the expansion and contraction in solids Explain forces due to expansion and contraction | Experiments Demonstration Experiments | Meter rule Metal rods  Materials that conduct or do not conduct heat Ball and ring apparatus Bar gauge | Comprehensive secondary physics  Students Book 1 page 50-  52  Teacher?s Book 1 pages 18-21  Secondary Physics students Book 1 (KLB) pages 139-144  Golden tips physics pages 70-72  Principles of Physics(M.Nelko) pages 168,175-176 |  |
| **3** | 1-2 | Thermal Expansion | Molecules and heat  Revision on thermal expansion | By the end of the lesson, the learner should be able to:  Explain the effect of heat on the molecules of solid, liquid and gases  Answer questions involving thermal expansions | Discussions Experiments Demonstrations  Questions answers | Solids Liquids Air  Source of heat Containers Set questions | Comprehensive secondary physics  Students Book 1 page 60-  61  Teacher?s Book 1 pages 18-21  Secondary Physics students Book 1 (KLB) pages 139-162 Comprehensive secondary physics  Students Book 1 page 61-  62  Teacher?s Book 1 pages 21  Secondary Physics students Book 1 (KLB) pages 161-162  Golden tips physics pages 85-86  Principles of Physics(M.Nelko) pages 185 |  |
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|  | 3 | Thermal Expansion | Applications of expansion in solids | By the end of the lesson, the learner should be able to:  Explain the application of expansion and contraction | Demonstrations Discussions Experiments | Charts on the application of expansion Rivets Bimetallic strips | Comprehensive secondary physics  Students Book 1 page 52-  54  Teacher?s Book 1 pages 18-21  Secondary Physics students Book 1 (KLB) pages 145,151-153 Golden tips physics pages 73  Principles of Physics(M.Nelko) pages 177-179 |  |
| 4 | Thermal Expansion | Expansion and contraction of liquid and gases | By the end of the lesson, the learner should be able to:  Explain the expansion of liquid  Describe the anomalous expansion of water and its effect | Discussions Experiments Demonstrations | Water Spirit Alcohol  thermometer | Comprehensive secondary physics  Students Book 1 page 54-  56  Teacher?s Book 1 pages 18-21  Secondary Physics students Book 1 (KLB) pages 149-155  Golden tips physics pages 72-73  Principles of Physics(M.Nelko) pages 182 |  |
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| **4** | 1-2 | Thermal Expansion Heat Transfer | Thermometers Heat and temperature | By the end of the lesson, the learner should be able to:  Explain the functioning of various thermometers Describe the functioning of various thermometers  define heat  State the difference between heat and temperature | Demonstrations Discussions  Definitions Discussions Experiments | Liquid in glass thermometers Clinical thermometers Maximum and minimum thermometers  Materials that conduct heat and materials that do not conduct heat | Comprehensive secondary physics  Students Book 1 page 56-  59  Teacher?s Book 1 pages 18-21  Secondary Physics students Book 1 (KLB) pages 155-161  Golden tips physics pages 70-72  Principles of Physics(M.Nelko) pages 168-173  Comprehensive secondary physics  Students Book 1 page 63 Teacher?s Book 1 pages 22-24  Secondary Physics students Book 1 (KLB) pages 163  Golden tips physics pages 774  Principles of Physics(M.Nelko) pages 168 |  |
| 3 | Heat Transfer | Heat and temperature | By the end of the lesson, the learner should be able to:  define heat  State the difference between heat and temperature | Definitions Discussions Experiments | Materials that conduct heat and materials that do not conduct heat | Comprehensive secondary physics  Students Book 1 page 63 Teacher?s Book 1 pages 22-24  Secondary Physics students Book 1 (KLB) pages 163  Golden tips physics pages 774  Principles of Physics(M.Nelko) pages 168 |  |
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|  | 4 | Heat Transfer | Conduction of heat | By the end of the lesson, the learner should be able to:  State and explain modes of heat transfer  Explain factors affecting conduction |  | Metal rods Source of heat Test tube Water  Ice in gauge | Comprehensive secondary physics  Students Book 1 page 63-  67  Teacher?s Book 1 pages 22-24  Secondary Physics students Book 1 (KLB) pages 163-186  Golden tips physics pages 74-77  Principles of Physics(M.Nelko) pages 234-242 |  |
| **5** | MID TERM EXAMS AND BREAK | | | | | | | |
| **6** | 1-2 | Heat Transfer | Convection Radiation | By the end of the lesson, the learner should be able to:  Demonstrate convection in liquids  Explain the working of hot water systems, car engine, cooling system and land sea breeze Explain the molecular application of convection in fluids  Compare absorption and emission of radiant heat Explain the working of solar concentrators, heat taps and solar heaters Explain the working of a thermos flask | Experiments Discussion | Water Potassium permanganate Source of heat  Smoke cell apparatus Chart on hot water system  Car engine Experiments  Making comparisons Discussions Explanations | Comprehensive secondary physics  Students Book 1 page 67-  69  Teacher?s Book 1 pages 23  Secondary Physics students Book 1 (KLB) pages 177-188 Principles of Physics(M.Nelko) pages 238-2433  Comprehensive secondary physics  Students Book 1 page 70-  74  Teacher?s Book 1 pages 18-24  Secondary Physics students Book 1 (KLB) pages 187-195  Golden tips physics pages 75  Principles of Physics(M.Nelko) pages 246 |  |
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|  | 3 |  | REVISION | By the end of the lesson, the learner should be able to:  Answer questions on heat transfer | Questions Answers | Set questions |  |  |
| 4 | Recti-Linear Propagation And Reflection Of Light On Plane Surfaces | Propagation of light | By the end of the lesson, the learner should be able to:  Define opaque, translucent and transparent objects Describe the types of beams  Perform and describe experiments to show rectilinear propagation of light | Discussions Experiments Descriptions Explanations | Opaque objects Glass  Greased paper Card board Source of light Screens | Comprehensive secondary physics  Students Book 1 page 76-  77  Teacher?s Book 1 pages 25-27  Secondary Physics students Book 1 (KLB) pages 199-204  Golden tips physics pages 75  Principles of Physics(M.Nelko) pages 251-252 |  |
| **7** | 1-2 | Recti-Linear Propagation And Reflection Of Light On Plane Surfaces | The pin-hole camera | By the end of the lesson, the learner should be able to:  Explain the functions and principles involved in working of a pin-hole camera | Experiments Drawing Discussion | Pin hole camera  Source of light (candle) | Comprehensive secondary physics  Students Book 1 page 77 Teacher?s Book 1 pages 25-27  Secondary Physics students Book 1 (KLB) pages 211-219  Golden tips physics pages 99  Principles of Physics(M.Nelko) pages 252-255 |  |
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|  | 3 | Recti-Linear Propagation And Reflection Of Light On Plane Surfaces | Shadows | By the end of the lesson, the learner should be able to:  Describe the formation of shadows  Describe the solar and linear eclipses | Experiments Discussions Demonstrations Explanations Descriptions | Opaque objects  Chart of the eclipse of earth and moon Source of light Screen | Comprehensive secondary physics  Students Book 1 page 78-  79  Teacher?s Book 1 pages 25-27  Secondary Physics students Book 1 (KLB) pages 203-219 Principles of Physics(M.Nelko) pages 254-257 |  |
| 4 | Recti-Linear Propagation And Reflection Of Light On Plane Surfaces | Reflection of light on plane surfaces | By the end of the lesson, the learner should be able to:  Verify experimentally the law of reflection | Experiments Descriptions Explanations Discussions | Plane mirrors Pins  White sheets of paper Soft boards | Comprehensive secondary physics  Students Book 1 page 80-  82  Teacher?s Book 1 pages 25-27  Secondary Physics students Book 1 (KLB) pages 222-228  Golden tips physics pages 100  Principles of Physics(M.Nelko) pages 260 |  |
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| **8** | 1-2 | Recti-Linear Propagation And Reflection Of Light On Plane Surfaces | Image formation The application of plane mirrors | By the end of the lesson, the learner should be able to:  ? Education Plus Agencies  Locate images in place mirrors and state their characteristics  Explain the reflection of light on plane surfaces at an angle  Explain the working of a periscope and kaleidoscope | Experiments Descriptions Discussions Experiments Explanations Descriptions Discussions | Pins Boards Protractor Mirror  Plane mirrors  Objects such as candles Pipe  Card board | Comprehensive secondary physics  Students Book 1 page 83-  84  Teacher?s Book 1 pages 25-27  Secondary Physics students Book 1 (KLB) pages 228-230  Golden tips physics pages 100-101  Principles of Physics(M.Nelko) pages 264  Comprehensive secondary physics  Students Book 1 page 84-  86  Teacher?s Book 1 pages 25-27  Secondary Physics students Book 1 (KLB) pages 235-240  Golden tips physics pages 101 |  |
| 3 | Recti-Linear Propagation And Reflection Of Light On Plane Surfaces | Revision | By the end of the lesson, the learner should be able to:  solve problems involving the propagation and reflection of light on plane surfaces | Problem solving Questions and answers Discussion | Set questions | Comprehensive secondary physics  Students Book 1 page 87-  88  Teacher?s Book 1 pages 28-29  Secondary Physics students Book 1 (KLB) pages 241-244  Golden tips physics pages 101-102  Principles of Physics(M.Nelko) pages 266-267 |  |
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|  | 4 | Electrostatics | Charging materials by induction and contact | By the end of the lesson, the learner should be able to:  Explain the charging of materials by induction and contact  Describe origin of charge  State the law of charges | Demonstrations Discussions Experiments | Polythene bags Thrust  Glass rod | Comprehensive secondary physics  Students Book 1 page 89 Teacher?s Book 1 pages 29-32  Secondary Physics students Book 1 (KLB) pages 245-250  Golden tips physics pages 133-134  Principles of Physics(M.Nelko) pages 264 |  |
| **9** | 1-2 | Electrostatics | Charging an electroscope by induction | By the end of the lesson, the learner should be able to:  charge an electroscope by induction | Demonstrations Discussions Experiments | Electroscope Glass rod Ebonite rod | Comprehensive secondary physics  Students Book 1 page 94-  96  Teacher?s Book 1 pages 29-32  Secondary Physics students Book 1 (KLB) pages 248-249 Principles of Physics(M.Nelko) pages 513-515 |  |
| 3 | Electrostatics | Charging an electroscope by EHT source | By the end of the lesson, the learner should be able to:  Charge electroscope by an EHT source | Descriptions Experiments Discussions | Rods of conductors and non-conductors Electroscope  Tiles | Comprehensive secondary physics  Students Book 1 page 97 Teacher?s Book 1 pages 29-32 |  |
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|  | 4 | Electrostatics | Laws of charge | By the end of the lesson, the learner should be able to:  By the end of the lesson the learner should be able to:  Describe the electrostatic charge Explain the electrostatic charge  State types of charge | Experiments Discussion Observations | Rubber  Piece of paper Glass  Amber  Silk material Fur Electroscope | Comprehensive secondary physics  Students Book 1 page 89-  91  Teacher?s Book 1 pages 29-32  Secondary Physics students Book 1 (KLB) pages 245-248  Golden tips physics pages 133  Principles of Physics(M.Nelko) pages 509-510 |  |
| **10** | END OF TERM2 EXAMS AND CLOSING OF SCHOOL | | | | | | | |