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 solidsAnswer questions in students Book 1 | Experiments Discussions Discussion Demonstrations Asking questions Answering questions | Promise gas Jars Potassium permanganate SolventHydrochloric acid AmmoniaGlass tube cotton wool | Comprehensive secondary physics Students Book 1 page 46-49Teacher?s Book 1 pages 15-18Secondary Physics students Book 1 (KLB) pages 132-136Golden tips physics pages 69Principles of Physics(M.Nelko) pages 146-147Secondary Physics students Book 1 (KLB) pages 136-138Golden tips physics pages 69-70Principles of Physics(M.Nelko) pages 164Past 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 thermometersExplain the expansion and contraction in solids Explain forces due to expansion and contraction | Experiments Demonstration Experiments | Meter rule Metal rodsMaterials that conduct or do not conduct heat Ball and ring apparatus Bar gauge | Comprehensive secondary physicsStudents Book 1 page 50-52Teacher?s Book 1 pages 18-21Secondary Physics students Book 1 (KLB) pages 139-144Golden tips physics pages 70-72Principles 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 thermometersExplain the expansion and contraction in solids Explain forces due to expansion and contraction | Experiments Demonstration Experiments | Meter rule Metal rodsMaterials that conduct or do not conduct heat Ball and ring apparatus Bar gauge | Comprehensive secondary physicsStudents Book 1 page 50-52Teacher?s Book 1 pages 18-21Secondary Physics students Book 1 (KLB) pages 139-144Golden tips physics pages 70-72Principles of Physics(M.Nelko) pages 168,175-176 |  |
| **3** | 1-2 | Thermal Expansion | Molecules and heatRevision 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 gasesAnswer questions involving thermal expansions | Discussions Experiments DemonstrationsQuestions answers | Solids Liquids AirSource of heat Containers Set questions | Comprehensive secondary physicsStudents Book 1 page 60-61Teacher?s Book 1 pages 18-21Secondary Physics students Book 1 (KLB) pages 139-162 Comprehensive secondary physicsStudents Book 1 page 61-62Teacher?s Book 1 pages 21Secondary Physics students Book 1 (KLB) pages 161-162Golden tips physics pages 85-86Principles 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 physicsStudents Book 1 page 52-54Teacher?s Book 1 pages 18-21Secondary Physics students Book 1 (KLB) pages 145,151-153 Golden tips physics pages 73Principles 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 liquidDescribe the anomalous expansion of water and its effect | Discussions Experiments Demonstrations | Water Spirit Alcoholthermometer | Comprehensive secondary physicsStudents Book 1 page 54-56Teacher?s Book 1 pages 18-21Secondary Physics students Book 1 (KLB) pages 149-155Golden tips physics pages 72-73Principles 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 thermometersdefine heatState the difference between heat and temperature | Demonstrations DiscussionsDefinitions Discussions Experiments | Liquid in glass thermometers Clinical thermometers Maximum and minimum thermometersMaterials that conduct heat and materials that do not conduct heat | Comprehensive secondary physicsStudents Book 1 page 56-59Teacher?s Book 1 pages 18-21Secondary Physics students Book 1 (KLB) pages 155-161Golden tips physics pages 70-72Principles of Physics(M.Nelko) pages 168-173Comprehensive secondary physicsStudents Book 1 page 63 Teacher?s Book 1 pages 22-24Secondary Physics students Book 1 (KLB) pages 163Golden tips physics pages 774Principles 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 heatState the difference between heat and temperature | Definitions Discussions Experiments | Materials that conduct heat and materials that do not conduct heat | Comprehensive secondary physicsStudents Book 1 page 63 Teacher?s Book 1 pages 22-24Secondary Physics students Book 1 (KLB) pages 163Golden tips physics pages 774Principles 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 transferExplain factors affecting conduction |  | Metal rods Source of heat Test tube WaterIce in gauge | Comprehensive secondary physicsStudents Book 1 page 63-67Teacher?s Book 1 pages 22-24Secondary Physics students Book 1 (KLB) pages 163-186Golden tips physics pages 74-77Principles 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 liquidsExplain the working of hot water systems, car engine, cooling system and land sea breeze Explain the molecular application of convection in fluidsCompare 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 heatSmoke cell apparatus Chart on hot water systemCar engine ExperimentsMaking comparisons Discussions Explanations | Comprehensive secondary physicsStudents Book 1 page 67-69Teacher?s Book 1 pages 23Secondary Physics students Book 1 (KLB) pages 177-188 Principles of Physics(M.Nelko) pages 238-2433Comprehensive secondary physicsStudents Book 1 page 70-74Teacher?s Book 1 pages 18-24Secondary Physics students Book 1 (KLB) pages 187-195Golden tips physics pages 75Principles 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 beamsPerform and describe experiments to show rectilinear propagation of light | Discussions Experiments Descriptions Explanations | Opaque objects GlassGreased paper Card board Source of light Screens | Comprehensive secondary physicsStudents Book 1 page 76-77Teacher?s Book 1 pages 25-27Secondary Physics students Book 1 (KLB) pages 199-204Golden tips physics pages 75Principles 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 cameraSource of light (candle) | Comprehensive secondary physicsStudents Book 1 page 77 Teacher?s Book 1 pages 25-27Secondary Physics students Book 1 (KLB) pages 211-219Golden tips physics pages 99Principles 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 shadowsDescribe the solar and linear eclipses | Experiments Discussions Demonstrations Explanations Descriptions | Opaque objectsChart of the eclipse of earth and moon Source of light Screen | Comprehensive secondary physicsStudents Book 1 page 78-79Teacher?s Book 1 pages 25-27Secondary 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 PinsWhite sheets of paper Soft boards | Comprehensive secondary physicsStudents Book 1 page 80-82Teacher?s Book 1 pages 25-27Secondary Physics students Book 1 (KLB) pages 222-228Golden tips physics pages 100Principles 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 AgenciesLocate images in place mirrors and state their characteristicsExplain the reflection of light on plane surfaces at an angleExplain the working of a periscope and kaleidoscope | Experiments Descriptions Discussions Experiments Explanations Descriptions Discussions | Pins Boards Protractor MirrorPlane mirrorsObjects such as candles PipeCard board | Comprehensive secondary physicsStudents Book 1 page 83-84Teacher?s Book 1 pages 25-27Secondary Physics students Book 1 (KLB) pages 228-230Golden tips physics pages 100-101Principles of Physics(M.Nelko) pages 264Comprehensive secondary physicsStudents Book 1 page 84-86Teacher?s Book 1 pages 25-27Secondary Physics students Book 1 (KLB) pages 235-240Golden 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 physicsStudents Book 1 page 87-88Teacher?s Book 1 pages 28-29Secondary Physics students Book 1 (KLB) pages 241-244Golden tips physics pages 101-102Principles 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 contactDescribe origin of chargeState the law of charges | Demonstrations Discussions Experiments | Polythene bags ThrustGlass rod | Comprehensive secondary physicsStudents Book 1 page 89 Teacher?s Book 1 pages 29-32Secondary Physics students Book 1 (KLB) pages 245-250Golden tips physics pages 133-134Principles 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 physicsStudents Book 1 page 94-96Teacher?s Book 1 pages 29-32Secondary 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 ElectroscopeTiles | Comprehensive secondary physicsStudents 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 chargeState types of charge | Experiments Discussion Observations | RubberPiece of paper GlassAmberSilk material Fur Electroscope | Comprehensive secondary physicsStudents Book 1 page 89-91Teacher?s Book 1 pages 29-32Secondary Physics students Book 1 (KLB) pages 245-248Golden tips physics pages 133Principles of Physics(M.Nelko) pages 509-510 |  |
| **10** | END OF TERM2 EXAMS AND CLOSING OF SCHOOL |