Dennis

SCHEME OF WORK PHYSICS

FORM 1 2022 TERM I

ENDARASHA BOYS

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| **WK** | **LSN** | **TOPIC** | **SUB- TOPIC** | **OBJECTIVES** | **T/L ACTIVITIES** | **T/L AIDS** | **REFERENCE** | **REMARKS** |
| **3** | 1 | Introduction To Physics | Physics as a science | By the end of the lesson, the learner should be able to:Explain what the study of physics involves Relate physics to other subjects and to technologyIdentify career opportunities related to physics | Discussions of value and meaning of physics Drawing flow charts of the braches of physics Listing career opportunities related to physics | Chart on definition of physicsFlow charts on branches of physics Chart on scientific methodList of career related to physics | Comprehensive secondary physicsStudents Book 1 page 1-2Teacher?s Book 1 pages 1-3Secondary Physics students Book 1 (KLB) pages 1-6 |  |
| 2-3 | Introduction To Physics | Basic laboratory rules | By the end of the lesson, the learner should be able to:State and explain the basic laboratory rules | Discussions Explanation of rules | Chart on standard laboratory rules Pictures showing dangers of not observing laboratory rules | Comprehensive secondary physicsStudents Book 1 page 1-2Teacher?s Book 1 pages 1-3Secondary Physics students Book 1 (KLB) pages 6-7 |  |
| 4 | Measurements | Measuring length, area volume and mass | By the end of the lesson, the learner should be able to:Define length, area, volume, mass and state their symbols and SI units | Conversions Measuring Experiment Counting Demonstrations | Meter rule Burette PipetteMeasuring cylinder Weighing balance RodShadow | Comprehensive secondary physicsStudents Book 1 page 4-8Teacher?s Book 1 pages 4-6Secondary Physics students Book 1 (KLB) pages 8,22,14,33Golden tips physics pages 1-7Principles of Physics(M.Nelkon) pages 4-9 |  |
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| **4** | 1 | Measurements | Measuring density | By the end of the lesson, the learner should be able to:Determine and mentally explain the density of substancesWork our density of mixturesSolve numerical problems involving density | ExperimentWorking out answers to problems | Measuring cylinder Mass weighing balance Density bottle | Comprehensive secondary physicsStudents Book 1 page 9-12Teacher?s Book 1 pages 4-6Secondary Physics students Book 1 (KLB) pages 35-48Golden tips physics pages 7,10 |  |
| 2-3 | Measurements | Measuring instruments | By the end of the lesson, the learner should be able to:Use measuring instrument accurately Metre rule, tape measure, beam balance, stop clock, measuring cylinder, pipette and burette | Demonstrations Reading scales and correcting errors | Meter rule Pipettes Burettes Stop watchesTape measure Measuring cylinder, beam balance | Comprehensive secondary physicsStudents Book 1 page 6-7Teacher?s Book 1 pages 5-6Secondary Physics students Book 1 (KLB) pages 10,28Golden tips physics pages 2Principles of Physics(M.Nelkon) pages 7-9 |  |
| 4 | Measurements | Measuring Time | By the end of the lesson, the learner should be able to:Determine experimentally, the measurement of time | Experiments with pendulum Timing events | Pendulum Clock Watch | Comprehensive secondary physicsStudents Book 1 page 12-15Teacher?s Book 1 pages 6 Secondary Physics students Book 1 (KLB) pages 46-47Golden tips physics pages 8Principles of Physics(M.Nelkon) pages 23 |  |
| **5** | MID TERM EXAMS AND BREAK |

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| **6** | 1 | Forces | Types of forces | By the end of the lesson, the learner should be able to:Define force and state its SI unitsDescribe types of forces State the effects of force | Discussions Explaining Demonstrations Identifying effects of forces | Charts of force StringElastic material MagnetsWater GreeceOil spring balance | Comprehensive secondary physicsStudents Book 1 page 61-19Teacher?s Book 1 pages 6-10Secondary Physics students Book 1 (KLB) pages 49-68Golden tips physics pages 11-12Principles of Physics(M.Nelkon) pages 64-65 |  |
| 2-3 | Forces | Mass and weight | By the end of the lesson, the learner should be able to:State and explain the relationship between mass and weightDefine scalar and vector magnitude | Demonstrations Discussions Problems solving on mass and weight | Beam balance Spring balance SpongeStore Polythene | Comprehensive secondary physics Students Book 1 page 17-22Teacher?s Book 1 pages 6-10Secondary Physics students Book 1 (KLB) pages 72-75Golden tips physics pages 7Principles of Physics(M.Nelkon) pages 40 |  |
| 4 | Forces | Pressure and force | By the end of the lesson, the learner should be able to:Define pressure and state its SI unitsDetermine pressure exerted by solids | Discussions Demonstrations Problem solving | Block of wood Spring balance Meter rule | Comprehensive secondary physicsStudents Book 1 page 6-10Teacher?s Book 1 pages 6-10Secondary Physics students Book 1 (KLB) pages 82-85Golden tips physics pages 44Principles of Physics(M.Nelkon) pages 119-121 |  |
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| **7** | 1 | Forces | Surface tension | By the end of the lesson, the learner should be able to:Describe experiments to illustrate cohesion, adhesion and surface tensionState the factors affecting surface tension, its consequence and importance | Discussions Demonstrations Explaining the effects of surface tensions | Funnel Water Wire loop TapSoap/detergent | Comprehensive secondary physicsStudents Book 1page 19-22Teacher?s Book 1 pages 6-10Secondary Physics students Book 1 (KLB) pages 63-70Golden tips physics pages 12 |  |
| 2-3 | Forces | Measuring Force | By the end of the lesson, the learner should be able to:Measure weight using spring balanceSolve numerical problems on numerical forces | Discussions Experiments | Spring balance Chart on vectors and scalars | Comprehensive secondary physicsStudents Book 1 page 17-18Teacher?s Book 1 pages 17-15 |  |
| 4 | Pressure | Pressure in liquids | By the end of the lesson, the learner should be able to:Investigate experimentally the factors that affect pressure in liquids (Fluids)Derive the formula for calculating pressure in fluidsState the principle of transmission of pressure in fluids | Demonstrations Working out problems Discussions Experiments | Communication tubes Tin with holes at different heights Waters | Comprehensive secondary physics Students Book 1 page 27-30Teacher?s Book 1 pages 12-15Secondary Physics students Book 1 (KLB) pages 49-68Golden tips physics pages 44-45Principles of Physics(M.Nelkom) pages 121-124 |  |
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| **8** | 1 | Pressure | Pressure in gases | By the end of the lesson, the learner should be able to:Explain atmospheric pressure and its effects State and explain how pressure is transmitted in fluids | Demonstrations Explanation of pressure transmission in fluids discussions | Water/oil Syringe | Comprehensive secondary physics Students Book 1 page 25-26,30-32Teacher?s Book 1 pages 12-15Secondary Physics students Book 1 (KLB) pages 115-116,93-100Golden tips physics pages 45-46Principles of Physics(M.Nelko) pages 124 |  |
| 2-3 | Pressure | Ganges and siphons | By the end of the lesson, the learner should be able to:Describe the working of siphon and pressure gauge | Discussions Explanations Questions and answers | Barometer Bourdon gauge Syringes | Comprehensive secondary physics Students Book 1 page 31-34Teacher?s Book 1 pages 13-15Secondary Physics students Book 1 (KLB) pages 113,117Golden tips physics pages 44-45Principles of Physics(M.Nelko) pages 133 |  |
| 4 | Pressure | Revision on question on the topic pressure | By the end of the lesson, the learner should be able to:Answer questions on pressure | Questions and answers | Questions in students book 1 | Comprehensive secondary physicsStudents Book 1 page 39-41Teacher?s Book 1 pages 13-15Secondary Physics students Book 1 (KLB) pages 119-123Golden tips physics pages 54-55Principles of Physics(M.Nelko) pages 138-140 |  |
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| **9** | 1 | Pressure | Application of pressure in liquids and gases | By the end of the lesson, the learner should be able to:Explain the working of a hydraulic, braking system of vehicle Explain the working of mercury and forties barometer, bicycle pump and pressure gauges | Explaining the application of pressure in liquids and gasesClass discussion on the principles of pressure in liquidsExperiments | Chart showing the working of a hydraulic braking systemModel of hydraulic brake system BarometerBicycle pump | Comprehensive secondary physics Students Book 1 page 30-39Teacher?s Book 1 pages 13-15Secondary Physics students Book 1 (KLB) pages 96-112Golden tips physics pages 46-47Principles of Physics(M.Nelko) pages 124-132 |  |
| 2-3 | Particulate Nature Of Matter | States of matter | By the end of the lesson, the learner should be able to:By the end of the lesson, the learner should be able to show that matter is made of up tiny particles | Demonstration Discussions of kinetic theory | Beaker Crystals Solutes Solvent | Comprehensive secondary physics Students Book 1 page 42Teacher?s Book 1 pages 15-18Secondary Physics students Book 1 (KLB) pages 124-128Golden tips physics pages 68Principles of Physics(M.Nelko) pages 142 |  |
| 4 | Particulate Nature Of Matter | The Brownian motion | By the end of the lesson, the learner should be able to:Give evidence that matter is made up of tiny particlesDemonstrate the Brownian motion in liquids & gasesExplain the arrangement of particles in matter Explain the state on matter in terms of particle movement | Experiments Observations Discussions | Chalk dust Transparent lid Pollen grains LensBeaker Smoke cellSource of light | Comprehensive secondary physicsStudents Book 1 page 43-48Teacher?s Book 1 pages 15-18Secondary Physics students Book 1 (KLB) pages 127-130Golden tips physics pages 68Principles of Physics(M.Nelko) pages 148-150 |  |

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| **10** | END OF TERM EXAMS |

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