

Science Scope and Sequence - Physics

Term: 2nd Nine Weeks

| Taught | Term | TAKS Obj | Curriculum Sequence TEKS/SE and Alignment Objectives | | Inst. Level | TAKS |
|--|------|----------|---|---|-------------|------------|
| Strand: Physics/Scientific Processes | | | | | | |
| TEKS Strand: Field and Lab Investigations | | | | | | |
| | 1-4 | | Phy 1A | Demonstrate safe practices during field and laboratory investigations. | MT | T10 T11 |
| | 1-4 | | Phy 1B | Make wise choices in the use and conservation of resources and the disposal or recycling of materials. | M | |
| TEKS Strand: Scientific Methods | | | | | | |
| | 1-4 | | Phy 2A | Plan and implement experimental procedures including asking questions, formulating testable hypotheses, and selecting equipment and technology. | MT | T10 T11 |
| | 1-4 | | Phy 2B | Make quantitative observations and measurements with precision. | MT | T10 T11 |
| | 1-4 | | Phy 2C | Organize, analyze, evaluate, make inferences, and predict trends from data. | MT | T10 T11 |
| | 1-4 | | Phy 2D | Communicate valid conclusions. | MT | T10 T11 |
| | 1-4 | | Phy 2E | Graph data to observe and identify relationships between variables. | IDM | |
| | 1-4 | | Phy 2F | Read the scale on scientific instruments with precision. | IDM | |
| TEKS Strand: Critical Thinking/Scientific Problem Solving | | | | | | |
| | 1-4 | | Phy 3A | Analyze, review, and critique scientific explanations, including hypotheses and theories, as to their strengths and weaknesses using scientific evidence and information. | MT | T10 T11 |
| | 1-4 | | Phy 3B | Express laws symbolically and employ mathematical procedures including vector addition and right-triangle geometry to solve physical problems. | IDM | |
| | 1-4 | | Phy 3C | Evaluate the impact of research on scientific thought, society, and the environment. | DM | |
| | 1-4 | | Phy 3D | Describe the connection between physics and future careers. | DM | |
| | 1-4 | | Phy 3E | Research and describe the history of physics and contributions of scientists. | DM | |
| TEKS Strand: Change | | | | | | |
| | 2 | | Phy 5A | Interpret evidence for the work-energy theorem. | IDM | |
| | 2 | | Phy 5B | Observe and describe examples of kinetic and potential energy and their transformations. | IDM | |

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|--|------|----------|---|-------------|------|
| | 2 | | Phy 5C Calculate the mechanical energy and momentum in a physical system such as billiards, cars, and trains. | IDM | |
| | 2 | | Phy 5D Demonstrate the conservation of energy and momentum. | IDM | |
| TEKS Strand: Forces in Nature | | | | | |
| | 2 | | Phy 6A Identify the influence of mass and distance on gravitational forces. | IDM | |
| | 2-4 | | Phy 6B Research and describe the historical development of the concepts of gravitational, electrical, and magnetic force. | IDM | |
| TEKS Strand: Laws of Thermodynamics | | | | | |
| | 2 | | Phy 7A Analyze and explain everyday examples that illustrate the laws of thermodynamics. | IDM | |
| | 2 | | Phy 7B Evaluate different methods of heat energy transfer that result in an increasing amount of disorder. | IDM | |
| | | | I = Introduced - the objective is introduced to the student | | |
| | | | T = Taught - the objective is presented | | |
| | | | D = Developed - the objective is developed through specific activities | | |
| | | | M = Mastered - the objective is mastered | | |
| | | | TM = Teacher Made | | |
| | | | CPL = Conceptual Lab Manual | | |
| | | | CPP = Conceptual Probeware Manual | | |
| | | | LF = Laying the Foundation | | |
| | | | T10 = Tested on 10th grade TAKS | | |
| | | | T11 = Tested on 11th grade TAKS | | |