



Course Title: Academic Physics

Content Area: Science

Grade Level: 10-12

Scope and Sequence

| Unit or Topic | Standards | Length of Time | Key Content | Assessment Tools | Scaffolding Strategies (Interventions, Special Education) | Resources & Materials |
|--------------------------|-----------|----------------|--|---|---|---|
| 1 dimensional kinematics | 3.2.P.B1. | 5 weeks | Motion, distance, velocity, acceleration | Lab worksheets, homework problems, quizzes, tests | Online content that parallels the classroom work that can be accessed as needed, extra credit problems for students as needed, lab groups to assist students, modified tests and quizzes as needed. | Physicsclassroom.com Teacher created labs Teacher created worksheets Teacher created quizzes and tests |
| Freefall | 3.2.P.B1. | 2 weeks | Gravitational acceleration | Lab worksheets, homework problems, quizzes, tests | Online content that parallels the classroom work that can be accessed as needed, extra credit problems for students as needed, lab groups to assist students, modified tests and quizzes as needed. | Physicsclassroom.com Teacher created labs Teacher created worksheets Teacher created quizzes and tests |
| Newton's Laws and Forces | 3.2.P.B1. | 5 weeks | Forces and free body diagrams, | Lab worksheets, homework | Online content that parallels the classroom work that | Physicsclassroom.com Teacher created labs |



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| | | | Newton's 3 laws of forces | problems, quizzes, tests | can be accessed as needed, extra credit problems for students as needed, lab groups to assist students, modified tests and quizzes as needed. | Teacher created worksheets Teacher created quizzes and tests |
| Vectors and 2-dimensional motion | 3.2.P.B1. | 5 weeks | Trigonometric calculations with motion | Lab worksheets, homework problems, quizzes, tests | Online content that parallels the classroom work that can be accessed as needed, extra credit problems for students as needed, lab groups to assist students, modified tests and quizzes as needed. | Physicsclassroom.com Teacher created labs Teacher created worksheets Teacher created quizzes and tests |
| Momentum and Impulse | 3.2.12.B2. | 3 weeks | Momentum of collisions and moving objects, impulse needs to change momentum | Lab worksheets, homework problems, quizzes, tests | Online content that parallels the classroom work that can be accessed as needed, extra credit problems for students as needed, lab groups to assist students, modified tests and quizzes as needed. | Physicsclassroom.com Teacher created labs Teacher created worksheets Teacher created quizzes and tests |
| Work, energy, and power | 3.2.12.B2. | 5 weeks | Work, kinetic energy, gravitational | Lab worksheets, homework | Online content that parallels the classroom work that | Physicsclassroom.com Teacher created labs |



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| | | | potential energy, elastic energy, power, and conservation of mechanical energy | problems, quizzes, tests | can be accessed as needed, extra credit problems for students as needed, lab groups to assist students, modified tests and quizzes as needed. | Teacher created worksheets Teacher created quizzes and tests |
| Vibrations and waves | 3.2.P.B5. | 4 weeks | Wave properties, wave addition and superposition, standing waves and nodes, wave speed calculations. | Lab worksheets, homework problems, quizzes, tests | Online content that parallels the classroom work that can be accessed as needed, extra credit problems for students as needed, lab groups to assist students, modified tests and quizzes as needed. | Physicsclassroom.com Teacher created labs Teacher created worksheets Teacher created quizzes and tests |
| Sound and Music | 3.2.P.B5. | 4 weeks | Opened and closed tube instruments, stringed instruments, harmonics | Lab worksheets, homework problems, quizzes, tests | Online content that parallels the classroom work that can be accessed as needed, extra credit problems for students as needed, lab groups to assist students, modified tests and quizzes as needed. | Physicsclassroom.com Teacher created labs Teacher created worksheets Teacher created quizzes and tests |



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