|  |  |  |
| --- | --- | --- |
| **Week** | **Coursework Topics and Texts** | **Evaluation Strategies**  |
| Term 31 | **Physical Science: Energy and Forces**Law of conservation of energyEnergy transfer and transformationEfficiency calculations Review understanding of kinetic and potential energyWorkPotential energy calculations | Diagnostic: Energy and forcesFormative: Energy transformation |
| 2 | Kinetic energy calculationsDefinition of mechanical energyMechanical energy calculations | Formative: Mechanical energy |
| 3 | Newtons First Law of Motion: The law of InertiaPractical applications of Newton’s Second LawNewton’s Second Law of Motion: The Law of AccelerationPractical applications of Newton’s Second Law | Formative: Inertia and force |
| 4 | Newton’s Third Law of MotionApplications of Newton’s Third LawFree body diagrams showing interaction of forces and net force. | Formative: Action and reaction forces |
| 5 | Review of Energy and Forces | **Summative: Energy and forces 17.5%** |
| 6 | **Physical Science: Motion**Distance and displacementSpeed and velocityAccelerationKinematic equations of motion | Formative: Motion calculations |
| 7 | *Investigation: Students plan, carry out and interpret results of an investigation* | ***Validation: Pendulums 15%*** |
| 8 | Displacement-time graphsVelocity-time graphs | Formative: Graphing motion |
| 9 | Review of Physics of Motion |  |
| 10 | (Year 10 Camp Wed-Thu) | **Summative: Physics of motion 17.5%** |
| Term 41 | **Space Science: Cosmology**Characteristics of StarsLife Cycle of a Star - applications for measuring age and distance to stellar bodies  | Diagnostic: Earth and space scienceFormative: Stars |
| 2 | The Big Bang Theory – how the universe began and implications in the universe nowThe Doppler Effect and red-shiftStellar Parallax | Formative: The expanding universe |
| 3 | **Earth Science: Cycles in the Biosphere**Why nutrients must be recycledCarbon cycle and nitrogen cycle | Formative: Cycles |
| 4 | Cause and effect of greenhouse effectImpact of humans on recycling Global temperatures and sea level rise |  |
| 5 | Impact on ocean currents and weatherImpact on Biodiversity | Formative: Climate change |
| 6 | Earth & space consolidation | **Summative: Earth and space science 15%** |
| 7 | Examination Revision |  |
| 8 | Examination Revision |  |
| 9 | Examination | **Summative: Examination 35%** |

|  |
| --- |
| Assessment Outline |
| Investigations | 15% |
| Tests | 50% |
| Exam | 35% |
| Total | 100% |