

Outcomes	Marks allocated*	Assessment tasks
<p>Outcome 1</p> <p>Analyse gravitational, electric and magnetic fields, and use these to explain the operation of motors and particle accelerators and the orbits of satellites.</p>	30	<p>At least one task (which is different from the task/s selected for Outcomes 2 and 3) selected from:</p> <ul style="list-style-type: none"> • annotations of at least two practical activities from a practical logbook • a report of a student investigation • a report of a physics phenomenon • data analysis • media analysis/response • design, building, testing and evaluation of a device • an explanation of the operation of a device • a proposed solution to a scientific or technological problem • a response to structured questions • a reflective learning journal or blog related to selected activities or in response to an issue • a test (short answer and extended response) (approximately 50 minutes or not exceeding 1000 words for each task)
<p>Outcome 2</p> <p>Analyse and evaluate an electricity generation and distribution system.</p>	30	<p>Analysis and evaluation of stimulus material. At least one task (which is different from the task/s selected for Outcomes 1 and 3) selected from:</p> <ul style="list-style-type: none"> • annotations of at least two practical activities from a practical logbook • a report of a student investigation • a report of a physics phenomenon • data analysis • media analysis/response • design, building, testing and evaluation of a device • an explanation of the operation of a device • a proposed solution to a scientific or technological problem • a response to structured questions • a reflective learning journal or blog related to selected activities or in response to an issue • a test (short answer and extended response) (approximately 50 minutes or not exceeding 1000 words for each task)
<p>Outcome 3</p> <p>Investigate motion and related energy transformations experimentally, analyse motion using Newton's laws of motion in one and two dimensions, and explain the motion of objects moving at very large speeds using Einstein's theory of special relativity.</p>	30	<p>At least one task (which is different from the task/s selected for Outcomes 1 and 2) selected from:</p> <ul style="list-style-type: none"> • annotations of at least two practical activities from a practical logbook • a report of a student investigation • a report of a physics phenomenon • data analysis • media analysis/response • design, building, testing and evaluation of a device • an explanation of the operation of a device • a proposed solution to a scientific or technological problem • a response to structured questions • a reflective learning journal or blog related to selected activities or in response to an issue • a test (short answer and extended response) (approximately 50 minutes or not exceeding 1000 words for each task)
Total marks	90	

*School-assessed Coursework for Unit 3 contributes 21 per cent.

Practical work and assessment

Practical work is a central component of learning and assessment. As a guide, between 3½ and 5 hours of class time should be devoted to student practical work and investigations for each of Areas of Study 1, 2 and 3.

External assessment

The level of achievement for Units 3 and 4 is also assessed by an end-of-year examination, which will contribute 60 per cent to the study score.