

CSEC<sup>®</sup>

**REVISION GUIDE**

**Physics**

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# Introduction

Written by experienced teachers and authors, Macmillan Education's CSEC® Revision Guides provide a clear route to exam success. Inside this book you'll find complete, concise revision notes on all key syllabus topics, in addition to practical advice on how to approach your revision and tackle the exams themselves, helping you to prepare effectively for your examinations.

Having reviewed the key points of each topic, you can refresh your knowledge and build your confidence with in-text practice questions, before moving on to sample practice exam papers at the end of the book. Questions are written in CXC examination style so that you will become familiar with exam wording and know exactly how to achieve your best possible grades.

Answers to questions are available online at [www.macmillan-caribbean.com](http://www.macmillan-caribbean.com).

## How to Use This Book

### Self Check

*Tick the box that shows how confident you feel*

Yes

Maybe

No

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------

*Each section begins with a checklist so you can rate your confidence in each topic and prioritise your revision effectively.*

*Each section starts with a concept map showing key topics and, crucially, how they link together. Does X cause Y? Does X run in tandem with Y? Does X allow Y to happen?*

*At the end of each section you will have the opportunity to fill in your own blank concept map to check your understanding. It will also provide a useful summary for last-minute self-testing.*

Reviewed  Revised  Mastered

*You'll find these checkboxes for each topic so you can track your learning and be confident you've covered everything thoroughly. Review the topic and return to your Student's Book if there's anything you don't understand, then come back and revise the topic in this Revision Guide – and tick 'Mastered' when all of your answers were correct!*

*Test Yourself* with these quick fire questions to monitor your progress.

*Revision Tips* provide you with interesting ways to make sure you retain all of this information.

Whenever you find a **keyword** highlighted like this, you can find out its meaning in the glossary at the back of the book.

### Remember boxes

contain handy nuggets of key information.

If you don't understand these, go back to your Student's Book and refresh the topic.

# Revision and Exam Tips

The content in this revision guide has been carefully written to make sure you have all of the key information needed for CSEC success at your fingertips. It has already been broken down for you into manageable chunks, based on the official CXC syllabus and exam structure.

## Here are some tips to help you get the best out of this material:

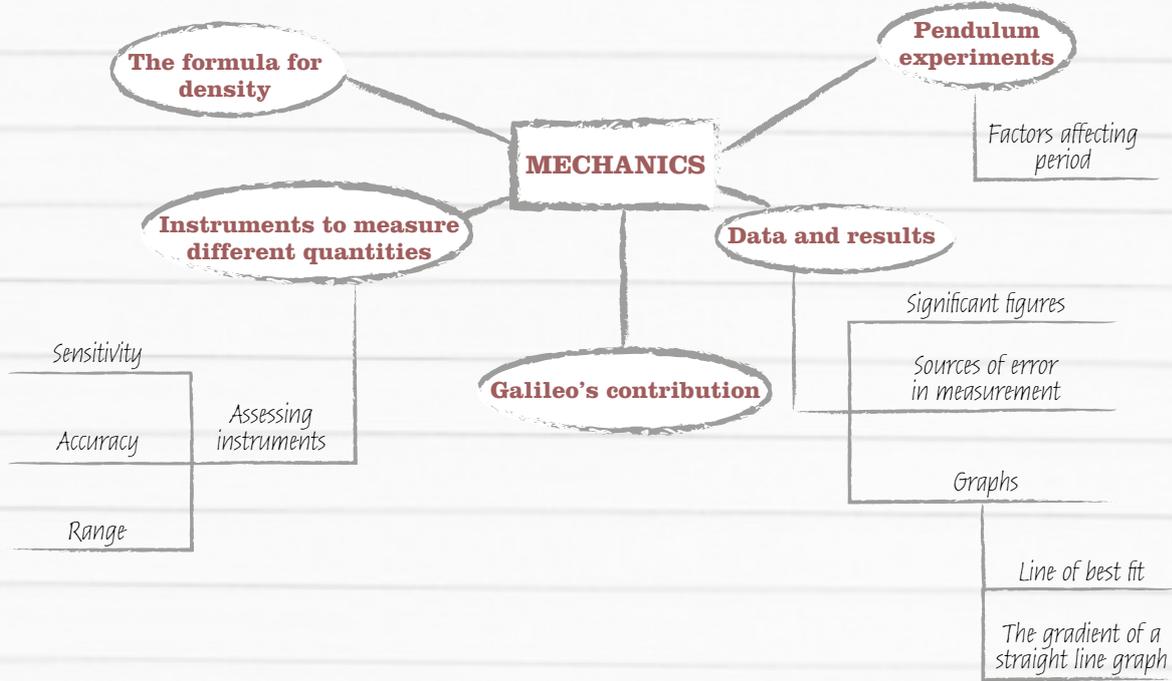
- Start preparing ahead of the exams so you can give yourself enough time to get through all your work.
- Set long-term and short-term goals to help break up the work into manageable chunks.
- Write out a revision plan to help you stay on track; make sure to include breaks as learning is much more effective when spaced out over stretches of time.
- Remove all distractions from your study area.
- Make sure you have all the resources you need – this guide, a pen and extra paper.
- Use practical memory aids where you can; make flash cards, and use tables and mind maps like the ones in this guide.
- Try explaining all of the key words to another person without looking at the glossary.
- Test yourself and ask someone to test you.
- Recognise your revision milestones using the self-check boxes provided.

## In the exam:

- Spend the first 10 minutes reading through the paper carefully, and work out a rough schedule to make sure you complete all the questions.
- Read each question before trying to answer it.
- Check your work and presentation carefully.
- Make sure you understand what the questions mean, so you can apply your knowledge properly:
  - **Analyse:** study something in detail and identify characteristics of each piece of information
  - **Assess:** make a judgement based on the facts provided
  - **Calculate:** work out the value
  - **Comment:** give your opinion
  - **Compare:** give similarities
  - **Contrast:** give differences
  - **Define:** give the meaning
  - **Describe:** give the characteristics
  - **Discuss:** give the key points
  - **Estimate:** give a value based on rough working
  - **Explain:** give reasons
  - **Identify:** name/characterise
  - **Illustrate:** give examples
  - **Justify:** support your answer with evidence

# Unit 1 Mechanics

## Concept Map



## Self Check

Tick the box that shows how confident you feel

Yes

Maybe

No

I can discuss how the methodology of Galileo contributed to the development of physics.

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

I can investigate the factors that affect the period of a simple pendulum.

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

I can use graphs of experimental data from a simple pendulum.

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

I can draw a line of best fit.

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

I can determine the gradient of a straight line graph.

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

I can express the result of a measurement or calculation to an appropriate number of significant figures.

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

I can discuss types and sources of error.

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

<input type="checkbox"/>
<input type="checkbox"/>
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I can use a variety of instruments to measure different quantities.

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

<input type="checkbox"/>
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<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

I can assess the suitability of instruments.

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<input type="checkbox"/>
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