

KURIKULUM STANDARD SEKOLAH MENENGAH

# PHYSICS

## Form 4

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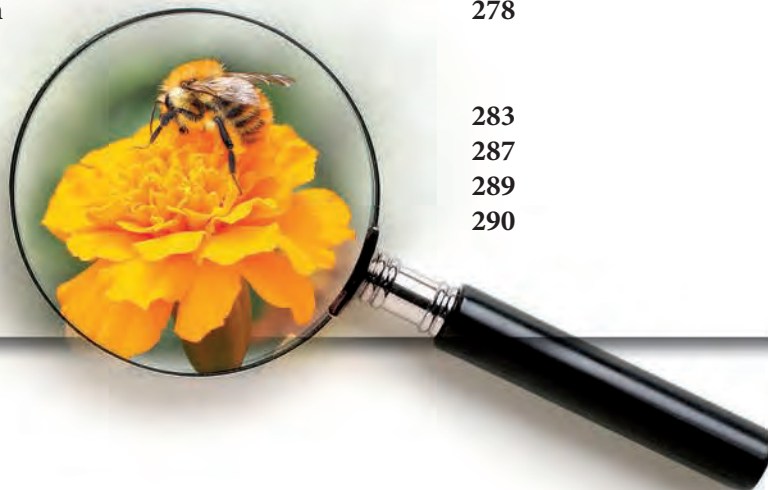
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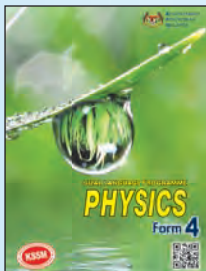
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# Introduction

The Form 4 Physics *Kurikulum Standard Sekolah Menengah* (KSSM) textbook is written based on the *Dokumen Standard Kurikulum dan Pentaksiran* (DSKP) for Form 4 prepared by the Ministry of Education Malaysia. For successful implementation of KSSM and to cater to the needs of DSKP, this book is written based on three domains, which are knowledge, skills and values. This book incorporates special features with more emphasis on Science, Technology, Engineering and Mathematics (STEM), thinking skills, scientific skills and computational thinking (CT) so that pupils are equipped with 21<sup>st</sup> century skills and become scientifically-thoughtful individuals. Special features incorporated in this book are as follows:



Scan the QR code on the cover of the book to obtain:

- Description of themes in the book
- Biodata of authors
- Updated information and facts (if available)

## STEM (STEM)

Activities are project-based with Science, Technology, Engineering and Mathematics (STEM) approach. The STEM approach is a teaching and learning approach that applies knowledge, skills and values of STEM.

## 21<sup>st</sup> Century Skills

Activities involve:

- Critical Thinking and Problem-solving Skills (CPS)
- Interpersonal and Self-reliance Skills (ISS)
- Information and Communication Skills (ICS)

## 21<sup>st</sup> Century Learning Activities

Activities emphasize on pupil-centred learning and elements of Higher Order Thinking Skills (HOTS).

## Learning Standards (1.1.1)

Learning Standards on each page.

## Computational Thinking

Activities involve:

- Decomposition
- Pattern Recognition
- Abstraction
- Algorithms
- Logical Reasoning
- Evaluation

## Thinking tools

Various thinking tools such as graphic organisers, mind maps and thinking maps help pupils master thinking skills.



Information on patriotic elements, culture and achievements of Malaysians

## Cross Curricular Corner

Information across curriculum related to a topic



Information on career related to physics

Activities include:



Discussion



Project



Individual



Multimedia



Sharing of information



Problem-solving



Simulation



Extensive reading



Experiment

**Gateway to SCIENCE TECHNOLOGY and SOCIETY**

Information on the applications of science and technology to society

**Info File**

Additional interesting information on a topic

**Conceptual Framework**

A summary at the end of each chapter in the form of a concept map

**Interactive Quiz**

An interactive quiz at the end of every chapter by scanning QR code



HOTS questions to evaluate pupils' ability to apply knowledge, skills and values to solve problem, make decision, be innovative and inventive.

**SMART INFO**

Short notes to help pupils understand



Simple activity for pupils to carry out on their own



Scan QR code to gather additional information from websites

**Formative Practice**

Questions to test pupils' understanding at the end of each chapter

**SELF-REFLECTION**

Evaluation of pupils' understanding of the chapter learned



**Enrichment Corner**

Enrichment exercises with HOTS questions of Level 5 (Evaluating) and Level 6 (Creating)

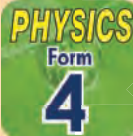


**Performance Evaluation**

Questions of various level of Lower and Higher Order Thinking Skills to test pupils' understanding at the end of each chapter.

**Guideline to scan AR (Augmented Reality) for Three-dimensional Animations**

Scan this QR code to download the application.



Then, use the application to scan the page with the AR icon (pages 88, 91 and 256).

