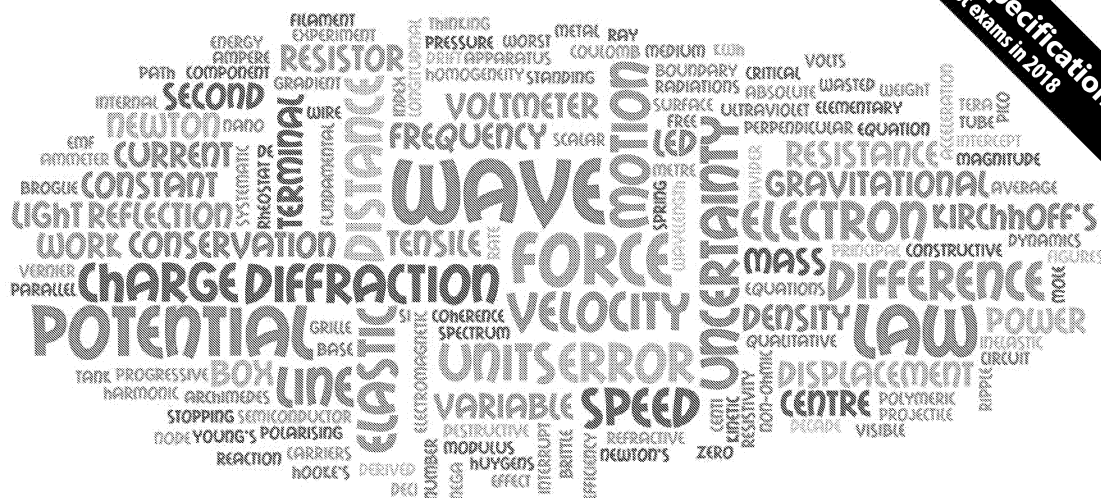


2016 specification
first exams in 2018



Technical Terminology Activity Pack

for A Level Year 1 OCR Physics A

**CX3/
9667**

**POD
9667**

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Teacher's Introduction

Overview

This resource has been produced to support teaching and learning of the **A Level OCR Physics A** specification **H556 – Modules 1–4**. The learning content is covered by the following sets of keywords with matching descriptions, which cover all of the learning aims for the topic:

- SI Units
- Practical and maths skills
- Kinematics
- Forces in action
- Work, energy and power
- Materials
- Newton's laws, momentum, and investigating motion
- Charge and current
- Circuit components
- Energy, power and resistance
- Wave motion
- Electromagnetic waves
- Superposition and stationary waves
- Quantum physics

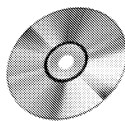
For each set, there are a number of different keyword activities on CD designed to give you a range of different options for classroom use, homework and revision. This variety enables you to take a different approach to different topics – such as using the Crosswords as homework for one topic, and the Match-up as a starter for another.

Alternatively, differentiate the activity for a given topic; for example, you might want to give your stronger students the **Crosswords** early on while you start weaker learners on the **Match-up** (where terms and definitions are both available). **Domino** and **Bingo** activities add an element of fun and reinforcement, as well as the potential for pair and group work. Finally, the **Flash Cards** come into their own for revision and the **Table-fill** and **Write Your Own Glossary** allow students to test their understanding by correctly filling in keywords or definitions.

For more information about the different activities included, see overleaf. →

Digital Format!

All of the activities are provided electronically on the accompanying CD. To use on a school network, the entire contents of the CD need to be copied and pasted into an accessible location.



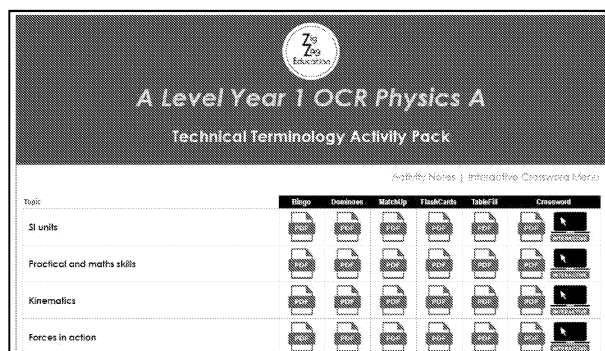
Providing easy access to the activities are two HTML menus:

1. Access All Menu



Location: <index.html>

This menu, designed primarily for teacher use, includes links to everything provided on the CD – allowing you to easily select what you need when preparing your lessons. If you intend to give learners access to this menu, then be aware that it does include links to the solutions.



2. Interactive Crossword Menu



Location: <interactive-crosswords/index.html>

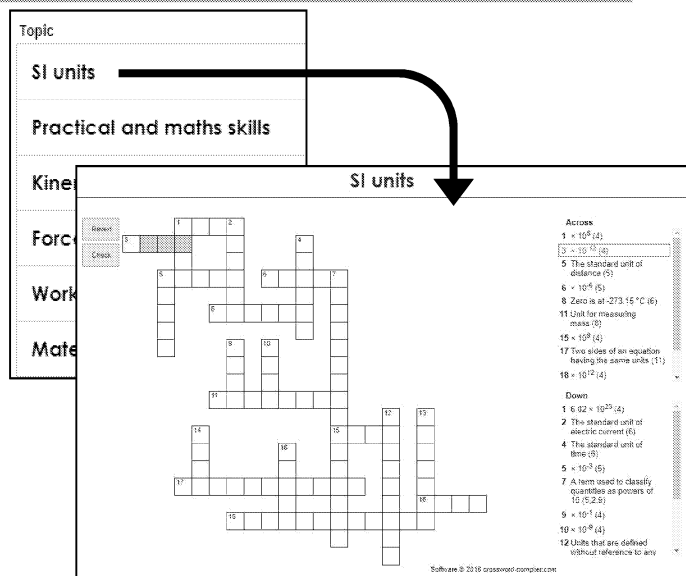
This menu, which can be accessed via the Access All Menu, is included to allow learner access to just the interactive crosswords (without the answers).

Free Updates!

Register your email address to receive any future free updates* made to this resource or other Physics resources your school has purchased, and details of any promotions for your subject.

* resulting from minor specification changes, suggestions from teachers and peer reviews, or occasional errors reported by customers

[Go to zzed.uk/freeupdates](http://zzed.uk/freeupdates)



Activity Types

All activities are provided as PDF files, allowing for easy printing and sharing on your school's internal network or VLE. In addition, each of the single-page activities (*Crosswords*, *Match-up* and *Table-fill*), as well as the solutions, are provided on paper too.

The activities included in this resource are as follows:

Bingo

Each student is given a different bingo card containing a selection of words from the set. The teacher reads the definitions using the Keyword Answers, and the student must match the definition to the words on their card to complete rows, columns, and the full bingo card. The bingo activity is available for sets with 12 or more words.

✓ PDF

Crosswords

These traditional keyword activities are equally effective as lesson or homework activities – and are also an excellent way of easing students into their revision programme.

✓ PDF ✓ PAPER



INTERACTIVE

In addition to the photocopiable worksheets and PDF, the crosswords are provided in interactive format on the accompanying CD-ROM. These are web-based (HTML5) and will run straight from your Internet browser.

Dominoes / Loop Cards

This is essentially another match-up activity, but this one is designed to be used in a more active way to engage students. It is recommended that students work in pairs or small groups.

✓ PDF

Half of each card contains a keyword, and the other half contains a description. To complete the activity, students must align all the cards in the correct order. There is a 'Start' and a 'Finish', meaning that if any cards are left outside the chain, then students have gone wrong somewhere.

Match-up

Students match descriptions to their keywords by drawing lines between them. Because there are similar descriptions and keywords, students are likely to make the odd mistake while completing the activity, so it is recommended that they use a pencil to start with! By eliminating the keywords that they are familiar with, students can then think about and learn the ones that they are less confident with.

✓ PDF ✓ PAPER

Flash Cards

These are a helpful revision tool. To make the cards, fold the page in half, then cut out each card and stick them together so the keyword is on one side and the definition the other. In addition, students could use these to play a game of pairs. Cut each card in two and place them all face down on the table. Students will then take it in turns to turn over two cards with the aim of matching a keyword to its definition. Matched-up cards are removed, and the game is finished when all the cards have been matched.

✓ PDF

Glossary Builders

Table-fill

Nothing fancy – students simply write the keyword which is being described, without any other help. Because this activity tests the students' own knowledge, it is best used as a homework activity at the end of each topic or during revision. This then acts as a check that they have grasped the key terminology for each topic. Alternatively, the tables could be given to students at the beginning of the topic, to see what they already know.

✓ PDF ✓ PAPER

Write Your Own Glossary

Like the Table-fill, this activity can be used to test students before learning a topic, or as a revision tool after learning a topic. Students are given a list of the keywords and need to produce their own definitions. Using Table-fill and Write Your Own Glossary, lessons can be differentiated for all levels of learner.

✓ PDF

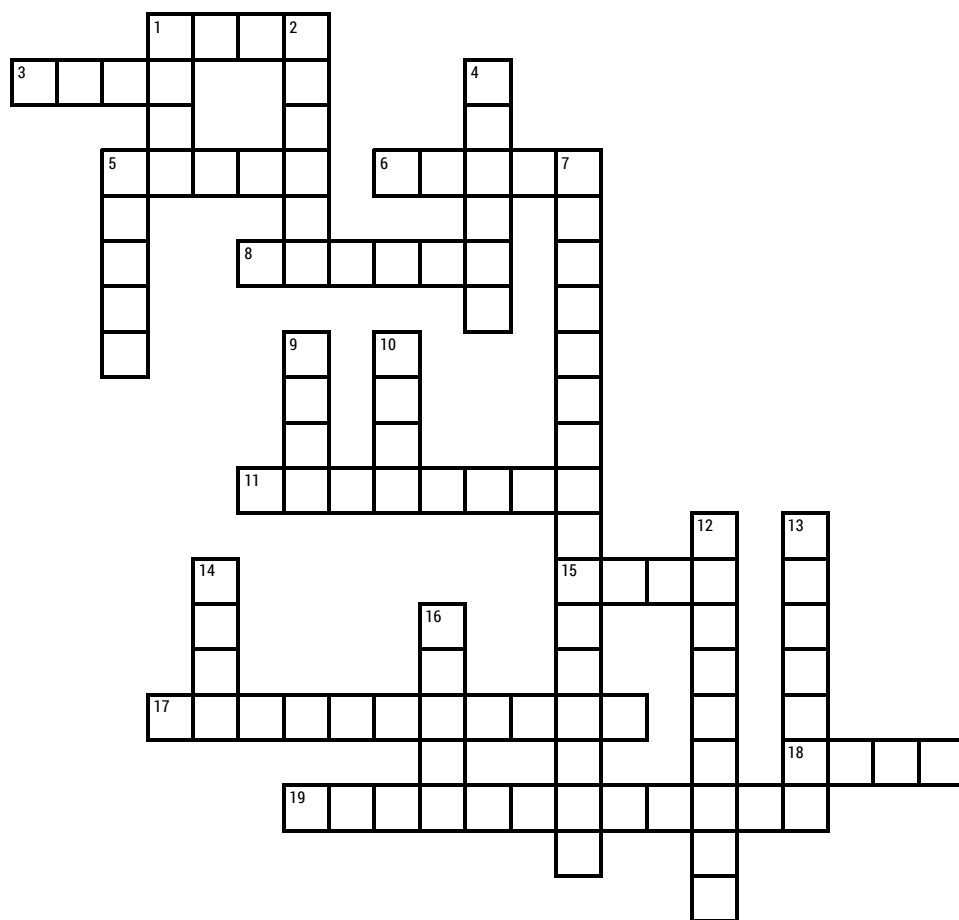
Selected Activities and Completed Glossary Page

This sample shows one example of several activities.

The whole resource contains approximately 100 activities –
6 or 7 activities for each of the 14 topics.

The resource covers 301 key terms.

SI units



Across

- 1** $\times 10^6$ (4)
3 $\times 10^{-12}$ (4)
5 The standard unit of distance (5)
6 $\times 10^6$ (5)
8 Zero is at -273.15°C (6)
11 Unit for measuring mass (8)
15 $\times 10^9$ (4)
17 Two sides of an equation having the same units (11)
18 $\times 10^{12}$ (4)
19 Units that are defined by their relationships with other units (7,5)

Down

- 1** 6.02×10^{23} (4)
2 The standard unit of electric current (6)
4 The standard unit of time (6)
5 $\times 10^6$ (5)
7 A term used to classify quantities as powers of 10 (5,2,9)
9 $\times 10^{-1}$ (4)
10 $\times 10^{-9}$ (4)
12 Units that are defined without reference to any other unit (4,5)
13 A system of units with precise definitions, used for almost all scientific measurements (2,5)
14 $\times 10^3$ (4)
16 $\times 10^2$ (5)

SI units (Match Up)

1	A property that defines the size or quantity of an object in powers of 10
2	A system of units with precise definitions, used for almost all scientific measurements
3	Prefix to illustrate a number to be order of magnitude $\times 10^{-1}$
4	Prefix to illustrate a number to be order of magnitude $\times 10^{12}$
5	Prefix to illustrate a number to be order of magnitude $\times 10^{-12}$
6	Prefix to illustrate a number to be order of magnitude $\times 10^{-2}$
7	Prefix to illustrate a number to be order of magnitude $\times 10^3$
8	Prefix to illustrate a number to be order of magnitude $\times 10^{-3}$
9	Prefix to illustrate a number to be order of magnitude $\times 10^6$
10	Prefix to illustrate a number to be order of magnitude $\times 10^{-6}$
11	Prefix to illustrate a number to be order of magnitude $\times 10^9$
12	Prefix to illustrate a number to be order of magnitude $\times 10^{-9}$
13	The amount of a substance containing 6.02×10^{23} molecules
14	The standard unit of distance
15	The standard unit of electric current
16	The standard unit of temperature, with 0 being the point at which molecules have minimum energy
17	The standard unit of time
18	Two sides of an equation having the same units
19	Unit for measuring mass
20	Units that are defined by their relationships with other units
21	Units that are defined without reference to any other unit

SI units	
Kilogram	
Metre	
Second	
Ampere	
Kelvin	
Mole	
Base units	
Derived units	
Homogeneity	
Pico	
Nano	
Micro	
Milli	
Centi	
Deci	
Kilo	
Mega	
Giga	
Tera	
Order of magnitude	

SI units (Table Fill)

A system of units with precise definitions, used for almost all scientific measurements	
Unit for measuring mass	
The standard unit of distance	
The standard unit of time	
The standard unit of electric current	
The standard unit of temperature, with 0 being the point at which molecules have minimum energy	
The amount of a substance containing 6.02×10^{23} molecules	
Units that are defined without reference to any other unit	
Units that are defined by their relationships with other units	
Two sides of an equation having the same units	
Prefix to illustrate a number to be order of magnitude $\times 10^{-12}$	
Prefix to illustrate a number to be order of magnitude $\times 10^{-9}$	
Prefix to illustrate a number to be order of magnitude $\times 10^{-6}$	
Prefix to illustrate a number to be order of magnitude $\times 10^{-3}$	
Prefix to illustrate a number to be order of magnitude $\times 10^{-2}$	
Prefix to illustrate a number to be order of magnitude $\times 10^{-1}$	
Prefix to illustrate a number to be order of magnitude $\times 10^3$	
Prefix to illustrate a number to be order of magnitude $\times 10^6$	
Prefix to illustrate a number to be order of magnitude $\times 10^9$	
Prefix to illustrate a number to be order of magnitude $\times 10^{12}$	
A property that defines the size or quantity of an object in powers of 10	

SI units