

OCR A LEVEL (H446) FREE RESOURCES

These free resources provide everything you need to cover the following topics:

It covers: **Structure and function of the processor, Types of processor, Input, output and storage**

Each unit contains three folders:



Activities

Contains all the activities for you to share with your students. We often provide **more** activities than your students could reasonably complete in the time provided. We constantly improve and add to our bank of activities for each SLR, so please check each year for the latest updates! Pick and choose the most appropriate activities for your students as required.



Answers

Contains all the activities **plus** model answers. For you to use as you see fit. Ideal for displaying at the front of the class.



Assessment

Contains the Structure Learning Records for your students to fill out as they carry out the activities above. These provide your method of assessment. There is a video in this folder explaining how to get the most out of our SLRs. Contains answers to the exam questions set in the SLRs.

We also provide a blank copy of our “A Level Key Terminology” document.

Students can use this to build up a glossary of the key terms throughout the course. It is not essential, but will provide them with a useful revision tool. Definitions are included in the premium resources.

For guidance on how to formally assess your students at the end of this topic and to get the most out of our Structured Learning Records (SRLs) please check out the following video on our YouTube channel:



[Assessment with Craig'n'Dave – \(AS/A Level\)](#)



Theory coverage

With Craig 'n' Dave resources, you do not need to teach the content of the course from the front of the class. Instead, you set students a video to watch ahead of the lesson from our student page:

student.craigndave.org

Advise them to pause the video and make notes in an exercise book that they bring to lessons to help them complete the theory activities. The entire specification is covered point by point in these videos.

The screenshot shows the website interface for 'Craig 'n' Dave For Students'. At the top, there is a navigation bar with a power button icon, the text 'Craig 'n' Dave For Students', and links for 'Shop' and 'Videos'. Below this is a red banner with the text 'OCR A Level H046/H446 Videos'. A paragraph below the banner reads: 'To make the most of our videos, we recommend using the Cornell method of note taking. You can read more about it on the [Cornell note taking page](#) on our website.' Below this is a grid of 10 video thumbnails, each with an icon and a title:

- SLR01 – Structure and function of the processor (AS & A'Level)
- SLR02 – Types of processor (AS & A'Level)
- SLR03 – Input output and storage (AS & A'Level)
- SLR04 – Operating systems – Systems software (AS & A'Level)
- SLR05 – Application generation (AS & A'Level)
- SLR06 – Software development (AS & A'Level)
- SLR07 – Types of programming language (A'Level Only)
- SLR08 – Introduction to programming (AS Level Only)
- SLR09 – Compression encryption and hashing (A'Level Only)
- SLR10 – Databases (AS & A'Level)

If you wish to deliver our theory videos in a more traditional approach however we also provide them as PowerPoints file. These can be downloaded from your premium resources login.



Additional resources

Don't forget a premium subscription comes with full access to **ALL UNITS / TOPICS** as well as all our additional resources, these include:

- Programming resources (Python, C#, T.I.M.E, Defold games development)
- Delivery guides/calendars
- Teacher marking checklist
- Key terminology databases
- AS recap lessons to use in year 13 before embarking on new material
- Student revision checklists
- “Those little extras” pack
- PDF copy of our “Essential algorithms and data structures” book from Amazon
- PDF copy of our “Documenting Defold programming projects OCR H446” book from Amazon
- Cheat sheets
- Text-based adventure game (Telium)

Network and the internet

Understand physical star topology and logical bus network topology
Differentiate between them and explain their operation

2. Using the items shown here, construct a diagram that shows your understanding of a physical star topology.

Internal computer architecture

Minimum expectations and learning outcomes of the basic internal components of a computer system

Each other: • processor • main memory • address bus • data bus • control bus • I/O controllers

bits. In particular, understand the concept of a bus and how address, data and control buses are used

ptions. Use a line connector shape to join them together.
ue = execute

ore than one colour?

- Stores the address of the next instruction to be fetched
- Stores the address of the instruction or data to be fetched
- Stores data read from or being written to the RAM
- Stores the instruction currently being executed

Week	Week	Lessons	File
1	1		
2	2	SLP1-4.111	
3	3	SLP1-4.116/9.7	
4	4	Programming	
5	5	SLP2-4.119	
6	6	SLP2-4.115	
7	7	SLP3-4.123	
8	8		
9	9		
10	10		
11	11	SLP6-4.141	
12	12	SLP6-4.136/9	
13	13	SLP7-4.142	
14	14	Programming	
15	15	SLP10-4.156/6	
16	16		
17	17	SLP14-4.161	
18	18	SLP18	
19	19	Programming	
20	20	SLP19-4.162	
21	21	SLP19-4.158	
22	22	SLP19-4.162/3	
23	23	SLP19-4.162	
24	24	SLP19-4.162	
25	25	SLP19-4.162	
26	26	SLP19-4.161	
27	27	SLP19-4.161	
28	28	SLP19-4.161	
29	29	SLP19-4.161	
30	30	SLP19-4.161	
31	31	SLP19-4.161	
32	32	SLP19-4.161	

Unit	Topic	Lessons
1	Project intro	Analysis
2	Analysis	Analysis
3	1	SLP19-4.161
4	2	SLP19-4.161
5	3	SLP19-4.161
6	4	SLP19-4.161
7	5	SLP19-4.161

2. Describe what each of the following higher-order functions do. [6]

Map:

Filter:

Fold or Reduce:

3. What would be the result of making the following function calls? [3]

foldl (*) 2 [1,2,3]

filter (>10) [7,3,10,11,4,12,9]

map (\x -> * x + 5) [0,5,10,15]

Unit	Topic	Lessons
1	Programming basics	Data type
2	Programming basics	Integer
3	Programming basics	Real/float
4	Programming basics	Boolean
5	Programming basics	Character
6	Programming basics	String
7	Programming basics	Date/time
8	Programming basics	Pointer/reference
9	Programming basics	Record
10	Programming basics	Array/list
11	Programming basics	User-defined data type
12	Programming basics	Assignment
13	Programming basics	Subroutine
14	Programming basics	Sequence
15	Programming basics	Selection
16	Programming basics	Iteration
17	Programming basics	Count-controlled loop
18	Programming basics	Condition-controlled loop

Minimum expectations and learning outcomes

- Terms 346-349 from A Level Key Terminology should be included and underlined.
- Provide an example of a simple program you have written in a functional programming language.
- Show an understanding of what a higher-order function is and show your understanding of the following higher-order functions: map, filter and reduce or fold.
- Show your understanding of the following list processing operations by providing annotated examples of some simple functional programs: return head of list, return tail of list, return for empty list, return length of list, construct an empty list, prepend an item to a list, append an item to a list.
- Answer the exam questions.

Feedback

Strength	Depth	Presentation	Understanding
<input type="checkbox"/> All	<input type="checkbox"/> Analyzed	<input type="checkbox"/> Excellent	<input type="checkbox"/> Excellent
<input type="checkbox"/> Most	<input type="checkbox"/> Explained	<input type="checkbox"/> Good	<input type="checkbox"/> Good
<input type="checkbox"/> Some	<input type="checkbox"/> Described	<input type="checkbox"/> Fair	<input type="checkbox"/> Fair
<input type="checkbox"/> Few	<input type="checkbox"/> Identified	<input type="checkbox"/> Poor	<input type="checkbox"/> Poor

Comment and action required

READY TO BUY?

If you like what we have to offer then head over to our online shop to purchase.

All purchases come with a lifetime sitewide licence for a single institution.



shop.craigndave.org/store

Our pedagogy

Read more about our pedagogy here:



YouTube



craigndave.org/our-pedagogy

We have additional videos which you might find useful which explain the Flipped Classroom method of teaching on our YouTube channel:



YouTube



[youtube.com/watch?v=ErJIJ5xhW-M&list=PLCiOXwirraUBEEFcJfSQgE2P-
pcor9b9c](https://youtube.com/watch?v=ErJIJ5xhW-M&list=PLCiOXwirraUBEEFcJfSQgE2P-
pcor9b9c)

More reasons to teach with Craig 'n' Dave

Find out more about why we think our resources are the best available for delivering A Level Computer Science here:



craigndave.org/why-teach-with-craigndave-resources

If you have issues opening any of the files or experience any other problems, or you just want to ask us a question / provide feedback feel free to email us:



✉ admin@craigndave.co.uk



