

# AQA A LEVEL – SLR 2 PROGRAMMING NEXT STEPS

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All files needed for this topic are in this folder.

It covers:      3.1.1.9 – 3.1.1.14 from the AS Level specification  
                    4.1.1.9 – 4.1.1.16 from the A Level specification

It contains the following three sub-folders:



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.



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



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.

If you wish to follow our dedicated scheme of learning and delivery calendars these can be downloaded separately from your premium resources login by selecting the following tile:

- Other A level 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 – \(AS/A Level\)](#)

# README – Getting the most out of our resources

## Theory coverage

With Craig 'n' Dave resources, you do not need to teach the content of the course from the front of the class. That is why we don't include PowerPoints of the theory. Instead, you set students a video to watch ahead of the lesson from our student page: [👁 student.craigndave.org](https://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 purple banner with the text 'AQA A Level 7516/7517 Videos'. A paragraph of text recommends using the Cornell method of note taking. Below the text is a grid of 10 video thumbnails, each with a white icon on a purple background and a corresponding label below it.

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.

SLR01 – Programming basics	SLR02 – Programming next steps	SLR03 – Programming paradigms	SLR04 – Data structures	SLR05 – Algorithms
SLR06 – Abstraction and automation	SLR07 – Regular & context free languages	SLR08 – Classification of algorithms	SLR09 – A model of computation	SLR10 – Number systems and bases

# README – Getting the most out of our resources

## Additional resources

Don't forget, your subscription comes with full access to all our additional resources. These can all be downloaded from your premium resource's login. These include:

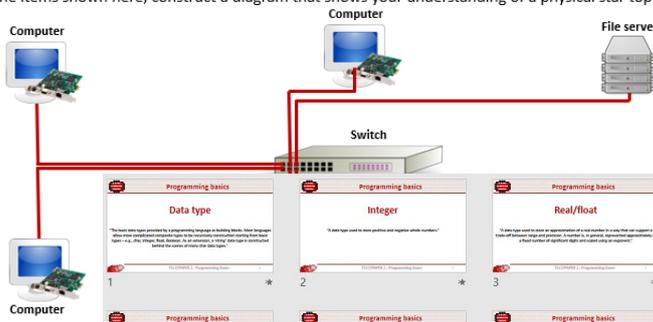
- Programming resources (Python, C#, T.I.M.E, Functional programming, Defold games development)
- Delivery guides/calendars
- Teacher marking checklist
- AS recap lessons to use in year 13 before embarking on new material
- Key terminology databases
- Student revision checklists
- Computational thinking exercises
- "Those little extras" pack
- PDF copy of our "Essential algorithms and data structures" book from Amazon
- Cheat sheets

Week	Lessons	File
1	1	
2	2	SLR1-4.111
3	3	SLR1-4.116.7
4	4	Programming
5	5	SLR2-4.119
6	6	SLR2-4.119
7	7	SLR3-4.123
8	8	SLR4-4.241
9	9	SLR4-4.261
10	10	Programming
11	11	SLR5-4.411
12	12	SLR5-4.136.9
13	13	SLR7-4.421
14	14	Programming
15	15	SLR8-4.196.6
16	16	Programming
17	17	SLR9-4.541
18	18	BUFFER
19	19	Programming
20	20	SLR10-4.510
21	21	SLR10-4.510
22	22	SLR10-4.520.3
23	23	TEST
24	24	SLR11-4.192
25	25	SLR11-4.192
26	26	SLR11-4.821
27	27	SLR11-4.821
28	28	SLR12-4.730.5
29	29	SLR12-4.730.5
30	30	SLR12-4.119.4
31	31	SLR12-4.119.4
32	32	SLR12-4.119.4

### 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.

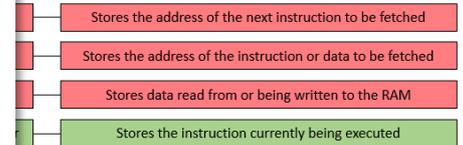


### Internal computer architecture

Understand the basic components of a computer system  
Understand the basic components of a computer system and how they interact with each other: processor • main memory • address bus • data bus • control bus • I/O controllers  
In particular, understand the concept of a bus and how address, data and control buses are used

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

more than one colour?



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

Target:  Overall grade:

- Minimum expectations and learning outcomes
- Terms 346-349 from A Level Key Terminology should be included and defined.
  - 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, rest 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.

Breadth	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

## README – Getting the most out of our resources

### Our pedagogy

Read more about our pedagogy here:



[craigdave.org/our-pedagogy](https://craigdave.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.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 GCSE Computer Science here:

[craigdave.org/why-teach-with-craigdave-resources](https://craigdave.org/why-teach-with-craigdave-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@craigdave.co.uk](mailto:admin@craigdave.co.uk)

