## Landau Learner Curriculum Overview

Subject: Computer Science Director of Learning: IA Year: 10

Curriculum organisation				
Students are taught in mixed ability for the equivalent of six single lessons per fortnight. These sessions are split between 2 staff 50/50 split between SDC and IA				
What topics will students be studying this year? Includes links to National Curriculum, Curriculum Intent and Prior Related Learning*				
Term 1:	Term 2:	Term 3:	Term 4:	Term 5:
<ul> <li>Networks</li> </ul>	System Security	Memory/Storage	<ul> <li>Storage</li> </ul>	Ethical and Legal Implication of
<ul> <li>Algorithms design</li> </ul>	<ul> <li>System Software</li> </ul>	<ul> <li>Computational Logic</li> </ul>	System Architecture	Computer Science
	<ul> <li>Programming Techniques</li> </ul>	<ul> <li>Translators &amp; Facilities of Language</li> </ul>	<ul> <li>Algorithms for Conversion</li> </ul>	<ul> <li>Controlled Assessment Preparation</li> </ul>
	<ul> <li>Producing Robust Programs</li> </ul>		<ul> <li>Controlled Assessment Prep</li> </ul>	
Prior learning:	Prior learning:	Prior learning:	Prior learning:	Prior learning:
Computational thinking Y7 T5. Y9 T1,2,3,4,5	Programming Y7 T1, T3, Y8 T1, Y9 T1,2,3,4	Computer components Y7 T1	Computer components Y7 T1. Memory Y10 T3	Programming Y7 T1, T3, Y8 T1, Y9 T1,2,3,4
Networks Y7 T1	National Curriculum:	Computational thinking Y7 T5. Y9 T1,2,3,4,5	Computational thinking Y7 T5. Y9 T1,2,3,4,5,	Control Y7 T5
Control Y7 T5	develop their capability, creativity and	Y10 T1,	Y10 Term 1,2,3	Computational thinking Y7 T5, Y9 T1,2,3,4,5, Y10
National Curriculum:	knowledge in computer science, digital	National Curriculum:	Programming Y7 T1, T3, Y8 T1, Y9 T1,2,3,4 Y9	T1,,3,4
develop their capability, creativity and	media and information technology	develop their capability, creativity and	T1,,3,4,5	National Curriculum:
knowledge in computer science, digital	develop and apply their analytic, problem-	knowledge in computer science, digital media	National Curriculum:	develop their capability, creativity and knowledge
media and information technology	solving, design, and computational thinking	and information technology	develop their capability, creativity and	in computer science, digital media and information
develop and apply their analytic, problem-	skills	develop and apply their analytic, problem-	knowledge in computer science, digital media	technology
solving, design, and computational thinking	understand how changes in technology	solving, design, and computational thinking	and information technology	develop and apply their analytic, problem-solving,
skills	affect safety, including new ways to protect	skills	develop and apply their analytic, problem-	design, and computational thinking skills
understand how changes in technology	their online privacy and identity, and how to	understand how changes in technology affect	solving, design, and computational thinking	Understand how changes in technology affect
affect safety, including new ways to protect	report a range of concerns	safety, including new ways to protect their	skills	safety, including new ways to protect their online
their online privacy and identity, and how to	Curriculum Intent:	online privacy and identity, and how to report	understand how changes in technology affect	privacy and identity, and how to report a range of
report a range of concerns	This enables students develop their	a range of concerns	safety, including new ways to protect their	concerns.
Curriculum Intent:	programming understanding and	Curriculum Intent:	online privacy and identity, and how to report	Curriculum Intent:
This enables students develop their	application to program and game	This enables students develop their	a range of concerns	This enables students develop their programming
programming understanding and application	development process that would be used in	programming understanding and application	Curriculum Intent:	understanding and application to program and
to program and game development process	industry. This develops their digital literacy	to program and game development process	This enables students develop their	game development process that would be used in
that would be used in industry. This	and develops the mind-set of a computer	that would be used in industry. This develops	programming understanding and application	industry. This develops their digital literacy and
develops their digital literacy and develops	scientist	their digital literacy and develops the mind-set	to program and game development process	develops the mind-set of a computer scientist
the mind-set of a computer scientist		of a computer scientist	that would be used in industry. This develops	
			their digital literacy and develops the mind-	
			set of a computer scientist	

Equipment needed for sessions:	What can you do to support your child?		
<ul> <li>Cambridge Elevate Textbook (Provided by College)</li> <li>Computer Science Exercise book (IA/SDC)</li> <li>Computer and internet access (provided by College)</li> <li>Lesson resources (Digital and physical provided by the learning tutor)</li> </ul>	<ul> <li>Encourage your student to engage with their homework and complete it on time and to a high standard, asking them to show you the finished work.</li> <li>Take an interest in what you child is learning and talk to them about Computing in the real world</li> <li>Encourage them to watch television shows, documentaries and films that include computer science and developing technology.</li> </ul>		
How will learning be assessed and progress measured?	Extension and enrichment activities:		
End of Topic assessment	Robotics and Coding Club (Thursday with IA)		
Marking of written and practical work is carried out on a regular basis in line with the College policy	The National Museum of Computing/Bletchley Park/ Manchester's Museum of Science & industry		
End of year summative assessment.	At-Bristol Science Centre / National Space Centre		
Regular peer and self-marking.	The Science Museum / National Media Museum/ Jodrell Bank		
	Leicester Retro Computer Museum		