Landau Learner Curriculum Overview

Subject: Computer Science   **Director of Learning: SDC 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:
• Networks • Algorithms design	• System Security • System Software • Programming Techniques • Producing Robust Programs	• Memory/Storage • Computational Logic • Translators & Facilities of Language	• Storage • System Architecture • Algorithms for Conversion • Controlled Assessment Prep	• Ethical and Legal Implication of Computer Science • Controlled Assessment Preparation
Prior learning: Computational thinking Y7 T5. Y9 T1,2,3,4,5 Networks Y7 T1 Control Y7 T5 **National Curriculum:** develop their capability, creativity and knowledge in computer science, digital media and information technology develop and apply their analytic, problem-solving, design, and computational thinking skills understand how changes in technology affect safety, including new ways to protect their online privacy and identity, and how to report a range of concerns **Curriculum Intent:** This enables students develop their programming understanding and application to program and game development process that would be used in industry. This develops their digital literacy and develops the mind-set of a computer scientist	**Prior learning**: Programming Y7 T1, T3, Y8 T1, Y9 T1,2,3,4 **National Curriculum:** develop their capability, creativity and knowledge in computer science, digital media and information technology develop and apply their analytic, problem-solving, design, and computational thinking skills understand how changes in technology affect safety, including new ways to protect their online privacy and identity, and how to report a range of concerns **Curriculum Intent:** This enables students develop their programming understanding and application to program and game development process that would be used in industry. This develops their digital literacy and develops the mind-set of a computer scientist	**Prior learning**: Computer components Y7 T1 Computational thinking Y7 T5. Y9 T1,2,3,4,5 Y10 T1, **National Curriculum:** develop their capability, creativity and knowledge in computer science, digital media and information technology develop and apply their analytic, problem-solving, design, and computational thinking skills understand how changes in technology affect safety, including new ways to protect their online privacy and identity, and how to report a range of concerns **Curriculum Intent:** This enables students develop their programming understanding and application to program and game development process that would be used in industry. This develops their digital literacy and develops the mind-set of a computer scientist	**Prior learning**: Computer components Y7 T1. Memory Y10 T3 Computational thinking Y7 T5. Y9 T1,2,3,4,5, Y10 Term 1,2,3 Programming Y7 T1, T3, Y8 T1, Y9 T1,2,3,4 Y9 T1,,3,4,5 **National Curriculum:** develop their capability, creativity and knowledge in computer science, digital media and information technology develop and apply their analytic, problem-solving, design, and computational thinking skills understand how changes in technology affect safety, including new ways to protect their online privacy and identity, and how to report a range of concerns **Curriculum Intent:** This enables students develop their programming understanding and application to program and game development process that would be used in industry. This develops their digital literacy and develops the mind-set of a computer scientist	**Prior learning**: Programming Y7 T1, T3, Y8 T1, Y9 T1,2,3,4 Control Y7 T5 Computational thinking Y7 T5, Y9 T1,2,3,4,5, Y10 T1,,3,4 **National Curriculum:** develop their capability, creativity and knowledge in computer science, digital media and information technology develop and apply their analytic, problem-solving, design, and computational thinking skills Understand how changes in technology affect safety, including new ways to protect their online privacy and identity, and how to report a range of concerns. **Curriculum Intent:** This enables students develop their programming understanding and application to program and game development process 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?
• Cambridge Elevate Textbook (Provided by College) • Computer Science Exercise book (IA/SDC) • Computer and internet access (provided by College) • Lesson resources (Digital and physical provided by the learning tutor)	• 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. • Take an interest in what you child is learning and talk to them about Computing in the real world • Encourage them to watch television shows, documentaries and films that include computer science and developing technology.

How will learning be assessed and progress measured?	Extension and enrichment activities:
• End of Topic assessment • Marking of written and practical work is carried out on a regular basis in line with the College policy • End of year summative assessment. • Regular peer and self-marking.	• Robotics and Coding Club (Thursday with IA) • The National Museum of Computing/Bletchley Park/ Manchester's Museum of Science & industry • At-Bristol Science Centre / National Space Centre • The Science Museum / National Media Museum/ Jodrell Bank • Leicester Retro Computer Museum