Landau Learner Curriculum Overview

Subject: Computer Science **Director of Learning: IA Year: 8**

Curriculum organisation						
Students are taught in mixed ability for the equivalent of four single lessons per fortnight.						
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**
Python Basics & Adventure Game BAFTA Young game designer	8LF1, 8LF2, 8LF3 Virtual Internship Project with Cambridge University	8LF4, 8LF5, 8LF6 8LF7 Rebranding Project Ethical & Environmental implications	8LF1, 8LF2, 8LF3 Rebranding Project Ethical & Environmental implications	8LF4, 8LF5, 8LF6 8LF7 Virtual Internship Project with Cambridge University	HTML/JS Cryptography, Binary addition & Hexadecimal	Databases Computational Legislation
Prior learning: Programming Y7 T1,3,5, Design and Developments, Y7 T2 Computational thinking Y7 T1,3,5 **National Curriculum:** Undertake creative projects Create, reuse, revise and repurpose digital artefacts for a given audience, with attention to trustworthiness, design and usability Use 2 or more programming language understand several key algorithms that reflect computational thinking **Curriculum Intent:** Holistic development of Computing based skills enabling them to access day to day computing related tasks. Development of knowledge, skills and understanding to allow students to progress. To have a relevant and informed education to enable their growth and development in digital literacy, equipping students to enable them to contribute to an increasingly digital society.	**Prior learning**: Design and Developments, Y7 T2 **National Curriculum:** Undertake creative projects Create, reuse, revise and repurpose digital artefacts for a given audience, with attention to trustworthiness, design and usability **Curriculum Intent:** Holistic development of Computing based skills enabling them to access day to day computing related tasks. Development of knowledge, skills and understanding to allow students to progress. To have a relevant and informed education to enable their growth and development in digital literacy, equipping students to enable them to contribute to an increasingly digital society.	**Prior learning**: Design and Developments, Y7 T2 **National Curriculum:** Undertake creative projects Create, reuse, revise and repurpose digital artefacts for a given audience, with attention to trustworthiness, design and usability **Curriculum Intent:** Holistic development of Computing based skills enabling them to access day to day computing related tasks. Development of knowledge, skills and understanding to allow students to progress. To have a relevant and informed education to enable their growth and development in digital literacy, equipping students to enable them to contribute to an increasingly digital society	**Prior learning**: **National Curriculum:** Undertake creative projects Create, reuse, revise and repurpose digital artefacts for a given audience, with attention to trustworthiness, design and usability **Curriculum Intent:** Holistic development of Computing based skills enabling them to access day to day computing related tasks. Development of knowledge, skills and understanding to allow students to progress. To have a relevant and informed education to enable their growth and development in digital literacy, equipping students to enable them to contribute to an increasingly digital society.	**Prior learning**: **National Curriculum:** Undertake creative projects Create, reuse, revise and repurpose digital artefacts for a given audience, with attention to trustworthiness, design and usability **Curriculum Intent:** Holistic development of Computing based skills enabling them to access day to day computing related tasks. Development of knowledge, skills and understanding to allow students to progress. To have a relevant and informed education to enable their growth and development in digital literacy, equipping students to enable them to contribute to an increasingly digital society	**Prior learning**: Programming Y7 T1,3,5, Design and Developments, Y7 T2 Computational thinking Y7 T1,3,5 **National Curriculum:** Undertake creative projects Use 2 or more programming language Understand several key algorithms that reflect computational thinking Design, use and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems **Curriculum Intent:** Holistic development of Computing based skills enabling them to access day to day computing related tasks. Development of knowledge, skills and understanding to allow students to progress. To have a relevant and informed education to enable their growth and development in digital literacy, equipping students to enable them to contribute to an increasingly digital society.	**Prior learning**: Spreadsheets Y7 T4 **National Curriculum:** design, use and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems **Curriculum Intent:** Holistic development of Computing based skills enabling them to access day to day computing related tasks. Development of knowledge, skills and understanding to allow students to progress. To have a relevant and informed education to enable their growth and development in digital literacy, equipping students to enable them to contribute to an increasingly digital society.

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