OLA Curriculum Implementation: Computing

To ensure that our intent transfers into everyday classroom practice, our pedagogy and subject specific CPD is based on the Rosenshine Principles (incorporated within Plymouth CAST Principles Teaching and Learning) and Ebbinghaus' Forgetting Curve theory. This ensures that subject content is expertly delivered. We also deliver individualised coaching to all teachers to continually improve our practice.

Core concepts in Computing		
Digital Literacy	**Information Technology**	**Computer Science**
		
Know how to effectively and critically navigate, evaluate, create, and communicate information using digital technologies safely and responsibly.	**Know how to use computer systems, software, networks, and digital infrastructure to store, process, transmit, and secure data.**	**Understand computers, algorithms, data structures, programming, and problem-solving using computational methods.**

The curriculum is mapped using these core concepts and units align with the Purple Mash scheme of work. We plan for progression using the structure outlined in the impact section below. Lesson content is planned towards these progression points and follows the model of direct instruction, shared and modelled practice before culminating in independent practice and mastery. Substantive knowledge is acquired through each unit of study to ensure that pupils develop a broad and balanced understanding of each discipline. This is supported by the use of vocabulary prompts and knowledge organisers, and reinforced using retrieval strategies using 'Do it Now' activities at the start of each lesson.

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Lesson Timetabling

Units have a varying number of lessons but roughly equate to one discrete lesson per week. Pupils are further given opportunities across the curriculum to apply their computing knowledge and skills. In Early Years, children receive one discrete lesson per half term and ongoing access to devices during the continuous provision.

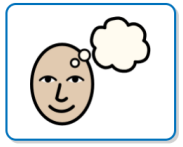
Lesson Delivery Structure in Computing

Introduction	Concept Explanation	Guided Practice	Independent Practice	Assessment & Reflection
• *Prior knowledge check* • *Lesson objectives* • *Real-world context*	• *Theory & demonstration* • *Step by step explanation* • *Interactive discussion*	• *Hands on activity* • *Pair or group work* • *Troubleshooting*	• *Independent Task*	• *Respond to lesson enquiry question* • *Explore links to Big Ideas*

Adaptation, Extension & Enrichment:

We make **adaptations** to learning in Computing for pupils as follows:

- Small step instructions with symbols or icons instead of written instructions if possible
- Provision of word mats and knowledge organisers with images, diagrams & widgets
- Differentiation of task to reduce cognitive load but not learning
- Individualised learning tasks targeting the Gateway key for the unit
- Opportunities for paired talk/work
- Simplified text to match reading ability
- Reduce the need for typing
- Allow extra time where needed
- Adjust text size, contrast or background colour where needed
- Use SEND friendly digital literacy tools



We **extend** learning in Computing by:

- By setting challenges and open ended projects
- Encouraging pupils to make wider connections within and beyond the curriculum area
- Encouraging pupils to understand the limitations of the software
- Encouraging pupils to problem solve for themselves and others

The Computing curriculum is **enriched** for all pupils through:

- Cross-curricular activities such as the the Y6 entrepreneurial project, or storytelling through animation
- Learning about careers in computing and how it is used in the wider world
- Teaching children to become responsible digital citizens through online safety lessons in Computing and PSHE
- Coding club offer and competitions