# MENTOR DEVELOPMENT: Understanding the ITE Partnership Curriculum

## Computing

Subject rationale

Our computing curriculum aims to develop BSTs’ technological, pedagogical and content knowledge to equip them to plan, teach and assess computing sequences across the primary and early years. We aim to build confidence and skills that provide a foundation for the teaching of computing and the use of technology to extend and enhance learning and teaching across the curriculum, including online, to meet and exceed the expectations of the National Curriculum.

## **Sequencing the subject for each phase**

Phase 1: Explore perspectives on what computing is and why we should teach it. Learn about the three pillars of progression, considering digital literacy in more depth, closely linked to developing children’s critical thinking and responsible behaviour regarding online information and the use of AI. Consider the role of talk, interest and relevance in computing. Self-evaluate BSTs’ own digital literacy. Introduce teaching technologies such as interactive whiteboards and assistive technology.

Phase 2: Examine pedagogy, creativity and assessment through the lens of information technology and digital literacy. Critically evaluate pedagogies and frameworks (including Predict-Run-Investigate-Modify-Make and Design-Apply-Refine-Evaluate-Share) for planning, teaching and assessing sequences. Analyse planning for assessment pedagogies in the context of a sequence of stop motion animation lessons.

Phase 3: Consider the 12 computing pedagogies from the National Centre for Computing Education (NCCE) to support pupil understanding and adaptive practice. Explore computational thinking and consider how to develop this through learning activities with Beebots, Scratch Junior/3.0. Consider how to assess for computational thinking and programming knowledge & skills. Promote positive, diverse representation in computing.

### How mentors can support BSTs in school

* ​​​​​​​​​​​​​​​​​​​​Model how to and provide opportunities for the BST to teach using a wide range of technologies (virtual learning environments, programming software, robotics, apps, IWBs, visualisers, AI, data loggers etc.) across the curriculum and for adaptive teaching through assistive technology. Deconstruct the pedagogical principles underlying your practice.
* ​​​​​​​Explain how your school’s computing curriculum is organised to ensure coverage and progression of essential concepts, knowledge, skills and principles, modelling how your planning, teaching and assessing develops pupils’ computing capital and how children are supported to develop digital literacy across the curriculum.
* ​​​​​​​Model how to use concrete representations, metaphors, powerful analogies, illustrations, examples, explanations and demonstrations of abstract ideas through ‘unplugged’ and ‘plugged’ activities to support pupil understanding.
* ​​​​​​​Deconstruct the planning and teaching process in order to avoid overloading working memory, taking into account pupils’ prior knowledge when planning how to break complex material into smaller steps (e.g. using partially completed examples) in order to progress learners towards increasing independence.
* ​​​​​​​Explore with the BST the impact of applying pedagogical frameworks of PRIMM, DARES into planning and teaching. (See Partnership Matters! Phase 3)
* ​​​​​​​Guide the BST in assessment of computing, thinking ahead about what would indicate understanding, identifying misconceptions and alternative frameworks.
* ​​​​​​​Explore how the use of intentional modelling and scaffolding of technical vocabulary and talk through class discussion and thoughtful paired/group work impacts aspiration and achievement.

### Indicative open access reading

1. Department for Education. (2022) Ofsted Research Review Series: Computing. Available at: [Research review series: computing - GOV.UK (www.gov.uk)](https://www.gov.uk/government/publications/research-review-series-computing)
2. Teach Computing. (2023). Promoting effective computing pedagogy. National Centre for Computing Education and Raspberry Pi Foundation. Available at: [Pedagogy (teachcomputing.org)](https://teachcomputing.org/pedagogy)