**Computing at Glendale Middle School**

**Intent**

In our school we believe high-quality computing education equips all young people with the skills and knowledge of computational thinking and creativity to help them comprehend the ever-changing technological world we live in. Computing is a significant part of everyone’s lives and young people are at the forefront of those developments, therefore enhancing their learning and confidence around new technology is vital.

We fulfil the requirements of the National Curriculum, utilising the NCCE scheme to progress through the key stages, building on prior attainment and focusing on the three key components:

* Computer Science – principles of information and computation and how digital systems work
* Information Technology – create programs, systems and content to develop products or solutions to problems including physical computing like Crumbles
* Digital Literacy – use, access and express themselves through digital literacy reflecting on the impact on society and on individuals at a level suitable for the digital world we live in

Keeping young people safe on-line is underpinned throughout the curriculum. As technology develops, so does the need to better understand how to be a responsible online citizen. We endeavor to ensure our pupils recognise online risks, critically evaluate the materials and content they access (or come across) online and know where to report incidents to. We take part in Safer Internet Day annually to highlight the most recent issues young people face online.

**Implementation**

Our pupils build on knowledge and experience from early KS2 (First School) to use a range of technology to create, organise, manipulate, store and retrieve digital content.

* Computer Systems and Networks – Focussing on the development of computing, layers in computing systems, the internet and how search engines work to rank and select results
* Media - Digital Design/Creativity will be covered using Inkscape for Vector Graphics, TinkerCAD for computer aided design and Canva for presenting information across the year groups
* Programming – Using software like Scratch or Crumble, pupils will design, write and debug programs to accomplish a specific goal. They will use sequencing, selection and repetition in programming, use reasoning to decode simple algorithms and correct errors in their own and existing programs. Programming progression will see KS3 pupils accessing Edublocks and eventually Python programming.
* Developing – mobile app development using Applab will be covered in KS3
* Data and Information – spreadsheets and databases are covered across KS2 and KS3 using Microsoft Excel, Google Sheets and J2E.
* Physical computing - Computing is inherently a cross-curricular subject with some specific links being made in Design Technology where Crumble Controllers are used to program buggies to move according to a sequence of coding.

Pupils are given access to a variety of software on a range of digital devices which they can use to safely, responsibly and respectfully to access content whilst ensuring they keep themselves, and others, safe online.

**Impact**

A mixture of formative and summative assessment is used across the topics to ascertain pupil progress. Progression and achievement will be demonstrated in each pupils personal Learning Diary held on Google Classroom. Feedback is given verbally during lessons and written in Individual Computing Diaries (Google Slides on Google Classroom) as positive feedback for areas of improvement. Assessment is made against a set of learning outcomes and through curriculum expectations throughout the academic year. Data analysis is completed to inform further planning.

We see pupils who are responsible, competent, confident and creative users of computer technology, who have the ability to use this technology to support them in their continuing education and for enjoyment.