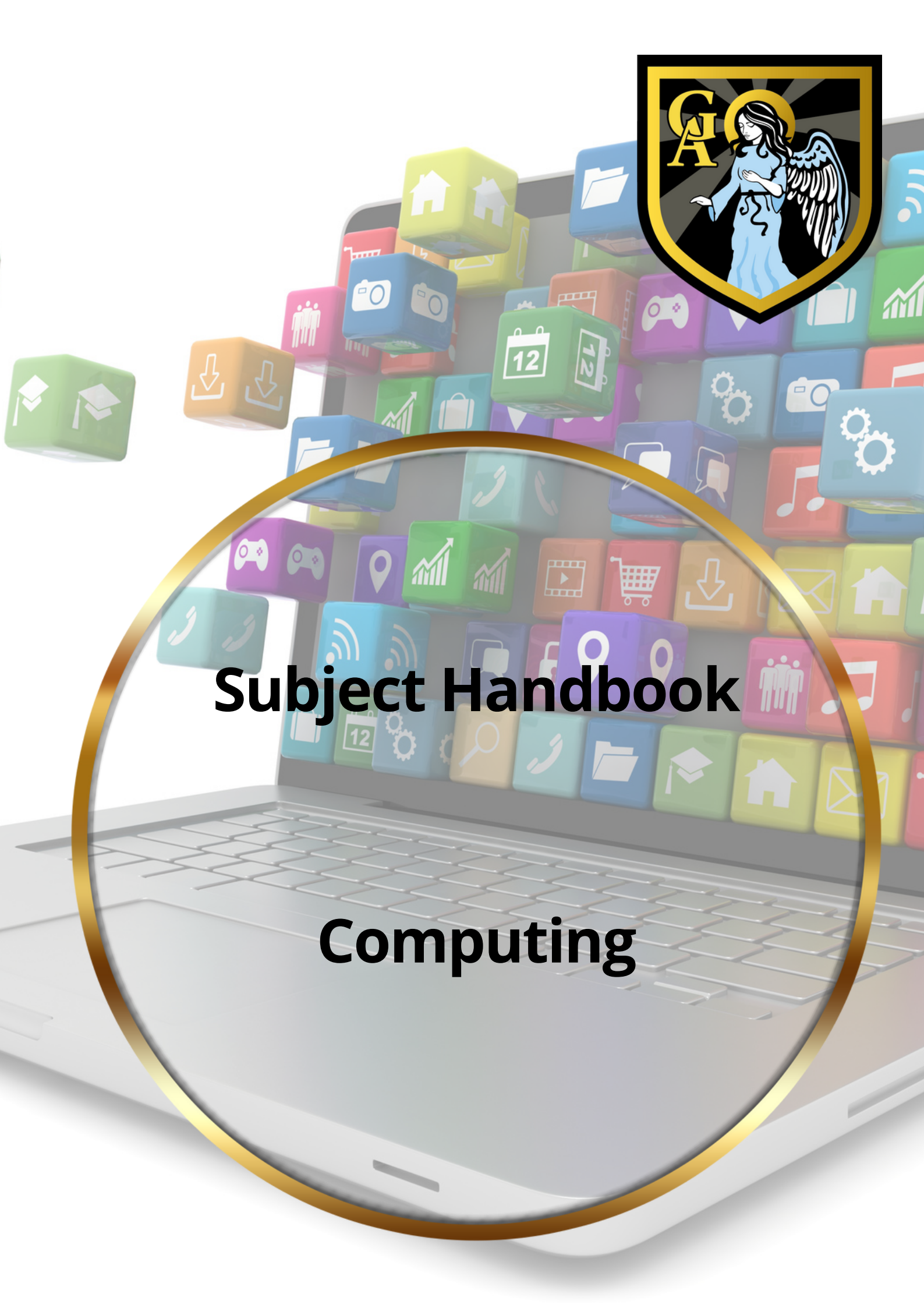

Subject Handbook

Computing

Computing Handbook

Vision for Computing

Our Computing curriculum addresses the challenges and opportunities offered by the technologically rich world in which we live. We use computing to enrich our curriculum across the key stages and ensure coverage of the national curriculum expectations.

Following a clear progression of skills throughout the school, there are opportunities for children to solve problems, create online games and create videos.

Our Computing Curriculum

The computing curriculum at Guardian Angels is based on the Entrust Computing Scheme of Work. This is skills based equipping children to use computational thinking and creativity to understand the principles of information and computation, how digital systems work and programming.

Our curriculum is sequenced through a spiral curriculum that builds upon what has gone before and prepares pupils for what comes next. The units from year to year have been sequenced to include the consolidation and extension of skills and knowledge. Key learning outcomes are identified for each unit to explain what pupils need to know about the current topic to ensure that they are prepared to understand and succeed in the next topic.

We are very proud of the way that we have integrated the use of technology into our curriculum as we want our children to be fully competent and confident users of technology, possessing a wide range of skills and knowledge across a variety of programmes, software, platforms and devices.

Our Computing Curriculum Will Enable Pupils to:

- Use and express and develop their ideas through, information and communication technology
- Create simple algorithms and programmes
- Debug programming errors
- Create, store, manipulate and retrieve digital content using a mixture of word processing, paint packages, digital photography and video packages
- Be aware of their responsibilities online and know what to do if they have any concerns
- Know how information is stored on computers and how it travels, connecting people across the world through the use of the World Wide Web
- Explain their thinking behind their programmes
- Explore how search engines work
- Consider how their online actions can impact on others
- Know when and how to report an online concern
- Create computer games
- Use technology safely and respectfully
- Use logical reasoning to predict the behaviour of simple programs
- Identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies

Intent

The goal of the computing curriculum at Guardian Angels Catholic Primary School is to provide our children with vital skills that will follow them to their adult life. Our aim is to help children become capable users of technology. This entails providing them with the skillset to use technology to aid their lives socially, in their education, and – eventually – the workplace.

As well as our children becoming adept technology users and becoming responsible digital citizens, we want to encourage our children to understand that computing involves far more than just computers. We want them to understand that, through computational thinking, they can develop their creativity, become better at problem-solving through abstraction and become critical thinkers.

Implementation

At Guardian Angels Catholic Primary School, we provide our computing curriculum in a variety of ways. The majority of our computing learning comes in the form of discrete computing lessons, which uses the Entrust Computing Scheme are based on the 'Just 2 Easy' (J2E) software. Every taught lesson, planned as part of this scheme of work, was planned to ensure that children experience a natural progression of skills which are built upon year after year. They were also planned to meet the needs of all pupils in our schools, and also to ensure that all of our pupils can achieve all of the objectives outlined in the National Curriculum.

Much of our eSafety curriculum, delivered through the Project Evolve scheme of work, will also be taught through discrete computing lessons. We also aim to provide cross-curricular activities that utilise computing, such as using technology to make recordings in science experiments, or by using online manipulatives to help children understand number in maths. On top of this, children will also experience using iPads through crosscurricular activities in lessons such as maths or English. This results in a more thorough understanding of how different operating systems and devices function.

Our E-Safety curriculum is a vital part of our computing curriculum. It is delivered through both discrete computing lessons (Project Evolve) and as part of our PSHE / RHE curriculum. Our E-Safety curriculum is designed to ensure that children end up with a thorough understanding of its 8 strands: selfimage and identity; online relationships; online reputation; online bullying; managing online information; health, wellbeing and lifestyle; privacy and security; copyright and ownership.

Impact

Our curriculum is planned to help our students expand on their knowledge and skillsets within the computing curriculum, and demonstrate steady progression over time. Where children are able to keep up with the objectives outlined in their year group's plans, they are deemed to be making expected or above expected progress. We also rely on a variety of other methods to measure the success of our computing curriculum:
•Children understand the three different branches of computing – computer science, information technology (IT) and digital literacy – and have an understand of the differences between all three. •Children can utilise the underlying principles of computer science, including abstraction, logic, algorithms and data representation in a wide array of different applications.
•Children can make use of technology to come up with solutions for problems they face in day-to-day life.
•Children can responsibly and competently utilise a variety of information and communication technology for a range of purposes

Our Computing Curriculum is high quality, well thought out and is planned to demonstrate progression. If children are keeping up with the curriculum, they are deemed to be making good or better progress. In addition, we measure the impact of our curriculum through the following methods:

· A reflection on standards achieved against the planned outcomes (Key Objective Sheets linked to National Curriculum objectives)
· Tracking of knowledge and monitoring work via BGFL365;
· Pupil / Teacher discussions about their learning;

Curriculum Overviews

Curriculum overviews are available to inform planning. They identify which unit the object is covered within the curriculum with clearly defined end points.

Progression

The progression maps carefully maps the development of key ideas within a strand from EYFS to Y6 ensuring that the learning journey is cohesive and that each new element builds on the appropriate conceptual components.