Rosehill School

Computing Policy

Key Personnel:	Computing Lead
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Appendix A: Computing Guidelines

Rosehill School Computing Policy

Extract: Whole School Curriculum Policy

Curriculum Vision
Rosehill aims to deliver an enriching, challenging and highly personalised curriculum that promotes learners to achieve the best possible outcomes and reflects the world the children and young people live in today.

Through inclusive cross-curricular and engaging experiences, the children will foster a passion for learning, developing them academically, socially, emotionally and physically, in order to fulfil their true potential and participate fully in society.

Overview
At Rosehill, we have worked hard to tailor our curriculum to be exciting, broad, balanced and innovative, specifically designed to meet the needs of children and young people with autism. Our pupils have an extremely wide range of associated learning needs as well as a complex profile of additional needs.

Our Curriculum offers a positive and supportive framework that helps our learners receive an education that enables them to fulfil their aspirations and to become active citizens.

Key Aims
Enable learners to:

- **Communicate as confident individuals and interact with the people around them** (to become as independent as possible and enjoy being with others)
- **Stay safe and healthy as responsible citizens** (leading safe, healthy and fulfilling lives and making positive contributions to society)
- **Be successful learners and to do things for themselves and make good choices** (enjoying school and life beyond school, making good progress and achieving a range of personal outcomes i.e. qualifications)

All curriculum subject policies, ensure that these core aims are at the heart of learning and teaching plans.

Our Computing Vision

At Rosehill, we believe the teaching of computing is essential to enable pupils to develop skills to prepare them for the digital world. Computing is integrated and embedded throughout the curriculum to provide pupils with meaningful and personalised learning experiences which prepare them to become responsible global citizens. Technology gives children the power of choice. It empowers children to collaborate, communicate, develop confidence, be creative and become critical thinkers. Pupils expand their knowledge and understanding of the world by being actively involved in experiencing, investigating, manipulating, and using information technology in a variety of forms including, audio, text, symbols, graphics, photographs, music and video, all of which promote and supports pupils to express themselves in an inclusive way.

The use of information technology is an integral part of the National Curriculum and is a key skill for everyday life. Computers, tablets, programmable robots, digital and video cameras are a few of the tools that can be used to acquire, organise, store, manipulate, interpret, communicate and present information. At Rosehill School we recognise that pupils are entitled to quality hardware and software

and a structured and progressive approach to the learning of the skills needed to enable them to use it effectively and safely.

Our Approach

At Rosehill every pupil is entitled to a broad, balanced and enriched curriculum through which their computing skills will be developed. The Computing curriculum is designed to give pupils experience of all aspects of Computing through as many different means as possible, depending on each pupils' ability to access subject content and individual learning preferences.

The school aims to teach and support each pupil with autism and associated differences by understanding their unique view point on how they see the world, and how they think and learn. All pupils will have the opportunity to experience and engage in all areas of the computing curriculum appropriate to their individual developmental needs.

We therefore ensure computing is personalised and tailored to pupil learning needs, considering EHCP outcomes~~,~~ and assessment of learning outcomes. Each pupil's unique journey in learning computing skills is valued, celebrated and respected and there is a strong emphasis on developing self-confidence and self-esteem. Teachers are able to describe each pupil's strengths and needs accurately and also their barriers to learning.

For some pupils, we need to address their developing skills in computing through explorative and sensory opportunities, through the use of the immersion facilities in the Multi Immersive Learning Environment (MILE), sensory equipment and touch screens. This will be addressed within the Engagement steps and the Computing Progression Pathways 1&2 (where learners will typically require a sensory and practical approach to tasks and activities).

Computing is delivered as both a discrete subject and through more 'formal' subject specific teaching and learning. Throughout the curriculum, computing is used to enhance and enrich learning experiences. It is used to facilitate effective communication and access to the whole curriculum. During the more 'formal' computing sessions, pupils are taught the skills required to use technology efficiently and safely. As the pupils are at such different stages of learning we know they require highly differentiated teaching and learning approaches therefore, differentiation within a whole class session, is essential to our sequenced teaching delivery.

Intent

At Rosehill School we follow the guidance of the National Curriculum, however we make some alterations to suit our context and overall intent. We use EQUALS Scheme of Work to inform planning and curriculum. This is particularly helpful with ensuring that there is a breadth of experiences, continuity and progression for children and young people with SEN. Furthermore, the programme enables teachers to set suitable learning challenges which respond to pupils' diverse learning needs.

Through this programme, pupils will be taught essential knowledge and skills across the three areas of computing at a level appropriate to their individual level of development, from encountering and awareness, through engagement and participation, to gaining skills and understanding.

The overarching aims of Computing at Rosehill School are:

- Pupils will be able to develop skills and knowledge to use a range of technologies safely and wisely.

- They will understand how to keep themselves safe online, including how and why filtering and monitoring are systems in place at school and understand the consequences of their actions.
- They will learn how to emphasise with others and develop social skills.
- Allow pupils to take a greater responsibility in their learning, planning and organising their ideas and presenting them creatively using a variety of media.
- Understand how they can access a range of digital material and ways that it can help them in engaging in a range of experiences which will help them become responsible global citizens.
- Be proud of who we they are and develop their confidence, motivation and independence in their learning and communication.
- Develop a greater understanding of the wider world and bring learning experiences to life by using a range of devices and multimedia tools including the use of green screens, photos, virtual tours and videos.

The National Curriculum for computing aims to ensure that all pupils:

- Begin to understand and apply the fundamental principles of computer science, including logic, algorithms, data representation, and communication
- Have opportunities to analyse problems in computational terms, and have repeated practical experience of solving such problems
- Experience the evaluation and application of information technology, including new or unfamiliar technologies, analytically to solve problems.
- Work towards responsible, competent, confident and creative use of information and communication technology.

Computing in the Primary and Middle School

In the Primary and Middle School, computing is taught by class teachers and is incorporated throughout other subjects and the relevant topic at the time. This ensures a holistic approach in the acquisition of computing skills and knowledge.

EYFS and Key Stage 1

In the EYFS, there are seven areas of learning and development that must shape educational programmes, all of which are important and inter-connected. Computing actively contributes to all of the areas but has a particularly important contribution to make towards the following areas: *Understanding the World, Personal, Social and Emotional Development and Communication & Language.* At Rosehill, for EYFS and KS1 children, computing aims to encourage pupils to develop their understanding of the world, develop their personal, social and emotional skills and communication and language through the key skills of: observing, controlling devices and communicating. Through the provision of practical and sensory based learning opportunities we will encourage pupils to:

EYFS and KS1:

- Start to experience, observe and notice with curiosity.
- Take part in different activities and begin to understand the world around us.
- Communicate about what they have found out.
- Have hands on experiences whilst developing their computing skills.

Key Stages 2

The teaching delivery within **Key Stages 1 and 2** will aim to encourage pupils to develop their **computing knowledge and understanding of how technology works** (key skills: observing,

controlling devices, communication, presenting information, logic and safety). Through the provision of more structured lessons and practical learning opportunities all pupils will be enabled to:

- Begin to develop understanding of how different technology works by observing and noticing with curiosity.
- Explore how to control devices to perform a specific task.
- Begin to understand how to keep themselves safe on computers.
- Talk about/communicate what they have found out through their explorations.

Computing in the Upper School

Key Stage 3 pupil's learning is greatly focused towards building independent and problem-solving skills to allow pupils to develop their own ability to explore and find things out.
In KS4 and KS5, computing is generally taught through accreditation and vocational experiences.

Key Stage 3
Through the provision of structured lessons and challenging learning opportunities, pupils will further understand the uses and implications of computing and will develop their computing skills by:

- Understanding cause and effect and the need for clear instructions.
- Developing a better understanding of how to correct problems through debugging.
- Start to predict how the world operates recognising that technology changes and develops over time.
- Show more understanding about e-safety and steps involved to keep themselves safe.
- Decide how to answer questions through research using the internet.

KS4/Post 16 Aims of Provision
The teaching delivery of computing in our **Post 16 provision** will aim to encourage students to develop their **computing knowledge, conceptual** understanding, **independence** in using and understanding the **implications** of computing in everyday life through practical life skills activities and functional learning. Pupils will:

- Use computing skills in daily living activities and learning.
- Safely use the internet for specific purposes and explain why we have rules to follow when using computers.
- Make choices about what they access on the computer and whether it is legitimate and age appropriate.
- Experience/learn about a range of technology to positively impact on independence.

Implementation

We follow a tailored curriculum and scheme of work for computing at Rosehill which has been devised to meet the needs of the pupils, alongside the National Curriculum to ensure complete coverage of the knowledge and understanding elements of the curriculum.

The scheme of work is linked to Rosehill's curriculum programme for key stages 1 - 4 to provide opportunities for learning to be consolidated and extended into other contexts and subject areas. We recognise the importance of cross curricular links in helping students with autism to generalise their learning.

In Key stages 4 and 5, students follow a Foundation curriculum which incorporates core subjects, practical skills and creative subjects. This approach aims to teach students in a more holistic way. Students may choose to follow ASDAN units appropriate to their stage of development, strengths,

and interests. Many of these contain a strong computing element. Computing is a core skill which is reinforced in a cross-curricular way as part of the Foundation programme.

The pupils at Rosehill will develop an understanding of how technology works through objects and events, relating to everyday experiences. In conjunction with this, pupils will learn about the various ways of thinking and finding out about the world as well as communicating their ideas in different ways.

The computing programme at Rosehill ensures pupils learn more and remember more through a carefully planned and implemented programme of study. This is because;

- Computing is made accessible to all pupils through a focus on practical work, first-hand experience and special events designed to inspire and engage learners. Teaching key skills such as controlling devices, finding information, cause and effect and e-safety are of equal importance to knowledge and understanding.
- Computing offers a breadth of learning opportunities tailored towards each individual. This approach enables pupils to build upon their knowledge (long-term memory).

Planning

The Computing framework comprises of three areas:

- **Computer Science**, where pupils are taught the basic principles of how digital systems work, they will develop their understanding of what algorithms (instructions) and programs (a set of algorithms put in order) are.

- **Information Technology** can be broken down into 3 categories-
  - What is a computer- how computers work and what they can do and different types of devices.
  - Communication- Multimedia (music, film, photography, paint).
  - Communication- data (collecting, presenting and interpreting data).

- **Digital Literacy,** where pupils are taught how to use technology safely. Through e-safety sessions, pupils develop their understanding of the main risks relating to:
  - Content – being exposed to illegal, inappropriate or harmful material
  - Contact – being subjected to harmful online interaction with other users
  - Conduct – online behaviour that increases the likelihood of, or causes, harm.

The long-term plan for computing is mapped out as a 3-year Programme of Study. The Computing Lead adopts units each term from within the above core areas, which also link with topics, ensuring learning remains sequenced and there is a broad and balanced computing curriculum delivered.

The Programme of Study plan will:

- Provide a **forward vision** of the range, content and curriculum coverage, and focus over a 3-year period
- Provide a **shared, agreed pathway through the key stages**
- Will be **adaptable** and may **evolve** according to changing circumstances and needs
- Draw on **broader strands of progression** that can be traced and linked to other subjects
- Will be **evaluated** through feedback to see that it matches the needs of the learners

Medium-term plans are for the academic term or, more usually, half term, setting out what specific aspect of the computing curriculum will be covered.

The medium-term plan will:

- **Link to the long-term Programme of Study plan**
- Clearly focus on **specific aspects of progression**, around suitable objectives and assessment outcomes
- **Identify strategies** and **activities** that will support pupils in working towards these objectives and outcomes
- Present a coherent and **engaging sequence** for teaching and learning and put learning in meaningful contexts for pupils
- Make close reference to **appropriate resources**
- Be **adaptable** and **evolve** to the needs of particular groups and individual pupils
- Provide **planned opportunities** to develop pupils' experience and understanding of **key concepts**
- Be **evaluated** through feedback

The class teacher is responsible for delivering the computing curriculum using the curriculum programme and the scheme of work as a planning framework. The teacher will complete a short-term plan for a group of lessons. Objectives set will link to the target in EHCPs – in most cases these objectives will represent 'small steps' towards achieving that target. Also, the Computing Progression Pathways.

All lessons are planned and delivered to make learning experiences accessible, relevant, and stimulating for all pupils. Computing may be taught at a whole class, small group, or individual level as appropriate. Groups or individuals may be taught by teaching assistants working under the guidance of the class teacher. A strong emphasis is placed upon carefully structured 'hands on experience' in order to develop skills in computing.

Sequence of knowledge and concepts

The teaching of computing is delivered through a range of 'vehicles' - from structured teaching and learning sessions which focus on the development of key skills and concepts, as well as personalised learning outcomes woven into Individual Pupil Learning Journey's (IPLJ) – through areas of Cognition & Learning; Communication & Interaction; Sensory, Physical & Health and Independence; and Preparation for my Future. This process and all subsequent assessments ensure teachers develop pupils' new knowledge and skills (next steps/targets) building on what has already been taught.

Learning outcomes are determined following assessment of learning identified within each pupil's IPLJ plan and Computing Pathways system.

Resources

The ICT infrastructure within Rosehill School is managed by Schools IT. Any issues need to be logged with the Schools IT service desk so a technician can be assigned to resolve them.

- Each class has access to its own PC and a multi-touch interactive display.
- Each class has access to an iPad. A bank of 9 iPads are available to utilise throughout the school day, for computing lessons or for cross curricular use.
- Each class has access to its own camera to utilise in computing lessons or for cross curricular use.
- Each department has access to a green screen, iPad tripod and hue camera available to utilise throughout the school day, in computing lessons or for cross curricular use.

- All computers are networked to the school server and wireless internet connection. Each department within school has a printer/photocopier and there is a full colour printer/copier with multiple functions based in the internet café area of the central core.
- There is an ICT suite located in the upper school with 6 PCs and a colour printer. This suite is available and timetabled to utilise throughout the school day as part of Computing and ICT lessons and for cross curricular use.
- There is a bank of central computing resources which include; control toys, bee-bots, Sphero, switches and tracker pads. These are available for the use of all classes across the school.
- The MILE (Multi Immersive Learning Environment) is an important resource for all pupils in a Computing capacity. The MILE is a fully immersive room which pupils control through touch.
- In addition to the above resources there is a snow machine, smoke machine and bubble machine, which can be used either in the MILE or in class areas.
- Each department also has a mini MILE (Multi Interactive Learning Environment) for accessing sensory play on a smaller scale, these rooms have projectors, bubble tubes, light panels and sensory toys/materials

Impact Statements (End Points)

- Make progress from their differing starting points/ progress over time.
- Learning remains sequential and builds on long-term memory and experience (learning more and remembering more).
- Well prepared for the next stage of their learning.
- Enjoy their learning and engage well, developing an interest/ love of computing.
- Begin to develop various ways of thinking; learning how to investigate and solve problems as well as communicating these ideas.
- Develop an understanding and knowledge of how technology evolves, is used and how it works.
- Gain an understanding of ways information can be presented.
- Develop an understanding of the importance of staying safe online.
- Discover why computing is important in the world and how we use the skills during every day functional activities.
- Further shape their own ability to think, learn, solve problems and make informed decisions.
- Enable pupils to lead a life after school which is as independent as possible.

Assessment

Teachers will at each key stage take note of desirable outcomes for each individual pupil, and monitor individual progress by using the Progression Pathway Tool and end of Key Stage points.

There is an appropriate learning objective on the pupil's EHCP/Pupil learner journey. This is shared visually with pupils, and other staff to ensure targets are monitored and assessed.

Assessment is also based on observations obtained over a period of time, possibly using video or photographic evidence when pupils are participating in a wide range of activities, and also discussions with parents/carers. This will be uploaded onto the schools Earwig evidence base.

Security

- Schools IT along with the ICT technician will be responsible for regularly updating anti-virus software.
- Use of Computing and ICT will be in line with the school's 'E-safety policy' which must be read by all staff.
- All pupils and parents will be aware of the school rules for responsible use of Computing and ICT.
- The agreed rules for safe and responsible use of Computing and ICT and the internet will be displayed in all Computing and ICT areas.

- The rules of e-safety are displayed where any child can access the internet.

Health and safety

The school is aware of the health and safety issues involved in children's use of Computing and ICT. Portable electrical equipment in school is PAT tested every twelve months. All staff should visually check electrical equipment before they use it and take any damaged equipment out of use before reporting it to the ICT technician.

- trailing leads should be made safe behind equipment
- liquids must not be taken near the computers
- e-safety guidelines are set out in the e-safety policy

Monitoring and Review

Each year the Subject Lead will complete an action plan which outlines any computing aims to be completed during the year. The Lead will monitor teaching and learning in computing at Rosehill, ensuring that the content of the Long-Term Plan Scheme of Work is covered and the delivery of Computing maximises learning.

Pupils will be involved in the evaluation of their own work and achievements as part of their weekly, termly and Annual Review process.

Internal and external moderation of standards in computing will be completed (see moderation cycle).

The Subject Lead will monitor the policy on a biennial basis as part of the School Self Evaluation Policy and Guidelines.

Appendix A – Computing Guidelines

There are different responsibilities for staff members in the delivery of computing

1 Responsibility of Teachers

1.1 Plan for progression
1.2 Use the Long-Term Plan and Medium & Short Term Plans
1.3 Plan for individual needs and differentiate work
1.4 Record pupil's progress using IPLJ's and Earwig evidence and assessment
1.5 Provide appropriate information to the Subject Leader
1.6 To carry out any appropriate risk assessments associated with Computing

2 Responsibility of Subject Leader

2.1 Monitor the teaching of the subject
2.2 Complete an annual subject action plan
2.3 Support colleagues in planning, teaching styles, use of resources
2.4 Purchase resources and organise them in a way that ensures effective and efficient use
2.5 Ensure curriculum coverage across the whole school and be aware of continuity and progression in the subject
2.6 Monitor and evaluate computing across the school as part of the School Self Evaluation process and provide appropriate information on computing to the Governors of the school
2.7 Monitor pupil's progression
2.8 Maintain the Subject Leader's file
2.9 Monitor the Subject policy

3 Responsibility of the Senior Leadership Team

3.1 Ensure adequate resources
3.2 Ensure access to training for the Subject Leader
3.3 Ensure access to training for teachers and support staff
3.4 Have an overview of the subject area

4 Responsibility of Governors

4.1 To monitor the delivery of the subject in line with the policy through reports from the Subject Leader
4.2 To approve the Subject policy and any subsequent updates

5 Resources

5.1 Resources will be purchased by the Subject Leader to underpin the effective teaching delivery of computing. The Subject Leader will audit expenditure and keep a record

6 Assessment and Recording

6.1 Pupils will be assessed using the computing Pathways assessment Earwig evidence tool. Pupils work can additionally be recorded through photographs, print out of work, etc

6.2 Pupils within Post-16 classes will also be assessed using the ASDAN assessment criteria found within relevant Personal Progress and Personal and Social Development

7 Delivery

7.1 We will strive for excellence in the teaching delivery of computing by:

- The quality of learning which pupils' experience
- The quality of teaching that we provide
- The richness of the environment in which they learn

7.2 The computing curriculum will use whatever specialist techniques and teaching approaches, which motivate, support the needs, or improve the access of any individual. Teachers will therefore, look at matching their teaching approaches to individual pupil's learning styles

8 Delivery of subject

8.1 Computing will be taught in a range of settings within the school.

- Timetabled lessons
- Whole class, small group and individual teaching
- Cross-curricular
- Special events

9 Planning

9.1 Teachers will follow the established Scheme of Work and Plans for computing. It will be the responsibility of the Subject Leader to ensure these various plans work accurately reflects the learning needs of the pupils and follows the curriculum vision

10 Accreditation

10.1 Students in Key Stage 4 and Post 16 will have the opportunities to undertake accredited units of work within the ASDAN Personal Progress and Personal and Social Development modules of work. Teachers in this department will determine on an individual basis the appropriateness of each unit based on student need ensuring these add value to individual learning.

10.2 The awards obtained by the pupils will be formally presented during the annual Celebration of Achievements events during the Summer Term

11 Equal Opportunities

11.1 Teachers will ensure that provision reflects Cultural Diversity, Ethnicity, Religion, Gender, Ability, Disability and Age

12 Health and Safety

12.1 All staff should ensure the health and safety of all pupils and staff at all times. Appropriate risk assessments will be implemented, as required