# Computing Policy

SEPTEMBER 2020

# Oasis Academy Putney Primary School
# Computing Policy

**School Vision**

Together we learn, grow and achieve.

**Intent**

Computing lessons at Oasis Academy Putney aim to equip pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which our pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, we equip pupils to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

**Aims**

Teaching of computing at Oasis Academy Putney aims to make sure that every child:

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- are responsible, competent, confident and creative users of information and communication technology

**Objectives**

Every child should leave Oasis Academy Putney:

- With an understanding of algorithms and logical progression when programming a computer
- Having had the opportunity to use a number of basic programming languages
- With a broad range of knowledge of current innovations in information technology
- With the skills required to use computers effectively to present information in a number of ways
- With a deep knowledge of how to stay safe and keep others safe in an online environment and how to receive support and advice when things go wrong

**Teaching and Learning**

To provide adequate time for developing computing knowledge, skills and understanding, each teacher will provide regular computing lessons. These may vary in length based on the objectives being explored. Teachers will base their planning on the programmes of study for their relevant year groups and the "I Can" statements provided in this document and will identify the most appropriate teaching strategy to suit the purpose of each particular learning situation. Some units may be best taught as a discrete piece of learning whilst other units may work best as an integrated part of the topic for the term. There are a variety of ways in which the teaching and learning may be effective. It should always be made clear that computing is being taught even when it is integrated in to a topic.

Computing lessons have no imposed formal structure but should typically contain some of the following elements: discussion; whole class, group or individual learning; practical work; recording; communicating.

### Foundation Stage

We teach computing in the Foundation stage as an integral part of the topic work covered during the year. It comes under Understanding the World in the EYFS. Children must be supported in developing the knowledge, skills and understanding that help them to make sense of the world. Their learning must be supported through offering opportunities for them to experience computers in a wide range of ways and situations.

### Key Stage 1

The main aim of computing in Key Stage 1 is to provide children with a breadth of new experiences and to begin to develop an understanding of the breadth of use of computers, begin to use common packages and applications and begin to understand logical use of algorithms.

It is important throughout Key Stage 1 to prepare children to use a variety of computer packages and teach children to develop skills of computational thinking such as logical progression.

### Key Stage 2

Throughout Key Stage 2 we aim to continue to provide the best possible breadth of access to new and existing technology. We aim to provide children with the best possible access to computing in order to prepare them to leave Oasis Academy Putney ready to access the curriculum at Key Stage 3 and beyond.

It is important that we focus heavily on computing skills and knowledge such as logic in coding and underpinning technologies such as how a search engine works in order to embed this deeply in children's long term memory. The focus of computing in Key Stage 2 is not simply "how to use applications" so much as "how computers work".

**Planning**

The school will be using iCompute for Primary schools - the whole-school scheme of work for Reception to Year 6 pupils. iCompute fully meets the objectives of the National Curriculum for Computing and allows for clear progression in computing. Pupil progress towards these objectives will be recorded by teachers as part of the school recording system. Staff will follow iCompute's planning guidance and pupil progress trackers.

A minority of children will have particular teaching and learning requirements which go beyond the provision for that age range and if not addressed, could create barriers to learning. This could include G&T children, those with SEN or those who have EAL. Teachers must take account of these requirements and plan, where necessary, to support individuals or groups of pupils to enable them to participate effectively in the curriculum and assessment activities. During any teaching activities, teachers should bear in mind that special arrangements could be made available to support individual pupils. This is in accordance with the school inclusion policy. These children should be identified and discussed at pupil progress meetings to ensure that appropriate provisions and/or interventions are effected.

### Long Term Planning

This is provided by the school and is shown in Appendix A.

This should be referred back to the national curriculum and it is each teacher's responsibility to also be aware of the national curriculum objectives at their given stage.

### Medium Term Planning

This is completed by teachers on the agreed format. All teachers should work with year group partners to ensure the same diet of computing education is provided for all pupils. Teachers should use iCompute to plan out the medium term planning in advance of a new half-term.

### Short Term Planning

Teachers use medium term plans and iCompute to develop more detailed short term planning. This planning is for the teachers to use but consideration should be made that this will often be shared between year groups. Teachers should adjust this as required for their own class and the particular context of children involved.

Information such as specific vocabulary, timings of lessons, resources, key questions and key concepts being taught should be included in short term planning.

It is important that iCompute lesson plans should be ready before the session and lessons will require reading, preparation and adaptation ahead of time.

**Assessment**

Teachers regularly assess progress through observations and evidence. Key objectives to be assessed are taken from the National Curriculum to assess computing

each term.  The school also uses iCompute's assessment criteria and pupil progress trackers as a guide.  Assessing computing is an integral part of teaching & learning and key to good practice.

Assessment should be process orientated - reviewing the way that techniques and skills are applied purposefully by pupils to demonstrate their understanding of computing concepts. As assessment is part of the learning process, it is essential that pupils are closely involved.  Assessment can be broken down into;

>Formative assessments are carried out during and following short focused tasks and activities. They provide pupils and teaching staff the opportunity to reflect on their learning in the context of the agreed success criteria. This feeds into planning for the next lesson or activity.

>Summative assessment should review pupils' ability and provide a best fit 'level'. Independent tasks provide a number of opportunities and scope for pupils to demonstrate their capability throughout the term. There should be an opportunity for pupil review and identification of next steps. Summative assessment should be recorded for all pupils – showing whether the pupils have met, exceeded or not achieved the learning objectives.

We assess the children's work in computing by making informal judgments as we observe the children during lessons.   Once the children complete a unit of work, we make a summary judgment of the work for each pupil as to whether they have yet to obtain, obtained or exceeded the expectations of the unit.

## Security

We take security very seriously.  As such:

- Children will be explicitly taught about online safety and how to report concerns in every year group
- the computing technician will be responsible for regularly updating anti-virus software.
- use of IT and computing will be in line with the school's 'acceptable use policy'. All staff, volunteers and children must sign a copy of the schools AUP.
- parents will be made aware of the 'acceptable use policy' at school entry and ks2.
- all pupils and parents will be aware of the school rules for responsible use of IT and computing and the internet and will understand the consequence of any misuse.
- the agreed rules for safe and responsible use of IT and computing and the internet will be displayed in all computing areas.

## Resources

The school acknowledges the need to continually maintain, update and develop its resources and to make progress towards consistent, compatible computer systems by investing in resources that will effectively deliver the objectives of the National Curriculum and support the use of IT, computer science and digital literacy across the school. Teachers are required to inform the computing subject leader of any faults as soon as they are noticed. Oasis Community Learning support the subject leader to

fulfil this role both in hardware & software. Computing network infrastructure and equipment has been sited so that:

- Every classroom from reception to Y6 has a computer connected to the school network and an interactive whiteboard with sound and video facilities.
- There is a school bank of laptops and two banks of iPads
- There is an iPad Sync & Charge cabinet in school containing 20 USB ports
- Internet access is available in all classrooms.
- Each class from Y1 – Y6 has an allocated slot one afternoon per week for teaching computing as a discrete subject.
- The laptops and iPads are available for use throughout the school day as part of computing lessons and for cross-curricular use.
- Pupils may use IT and computing independently, in pairs, alongside a TA or in a group with a teacher.
- The school has a computing technician who is in school weekly and can be contacted by email

**Role of the Subject Leader**

- To monitor the subject and be able to comment accurately on:
    - o standards throughout the school
    - o progression of skills throughout the school
    - o trends over time
- Know the strengths and weaknesses in science and implement an action plan in line with school policy.
- Write, maintain and develop a policy for the delivery of science in the school.
- Advice and assist members of staff within the school in the delivery of science.
- Order and maintain resources so the subject can be successfully delivered throughout the school.
- Manage the science budget.
- Maintain professional development of the subject leaders and staff within the school in regard to science.
- Lead staff meetings and feedback to staff on any undertaken CDP.
- Work alongside the SENCO and staff to support the provision for identified pupils

**Appendix A**
Curriculum Overview Computing

# Computing Curriculum Overview 2020 - 2021

| | Autumn | | Spring | | Summer | | |
|---|---|---|---|---|---|---|---|
| Reception | See iCompute website.  Includes 28 short weekly units that can be carried out in order. | | | | | | |
| Year 1 | iAlgorithm (6 Weeks) | iWrite (4 weeks) | iData (4—5 weeks) | iProgram (5-6 weeks) | iModel (4-5 weeks) | iProgram (5-6 weeks) | iSafe (4 weeks) |
| Year 2 | iProgram (6 weeks) | iSearch (5-6 weeks) | iAnimate (6 weeks) | iPub (6 weeks) | iBlog (6 weeks) | iDo Mail (3-4 weeks) | iSafe (5 weeks) |
| Year 3 | iProgram (6 weeks) | iSimulate (5-6 weeks) | iNetwork (4-5 weeks) | iData (4-5 weeks) | iConnect (7 weeks) | Isafe (6 weeks) | |
| Year 4 | iProgram (6 weeks) | iData (6 weeks) | iMail (5-8 weeks) | iAnimate (6 weeks) | iProgram (2 weeks) | iSafe (8 weeks) | |
| Year 5 | iProgram – Unit 1 (8 weeks) | iAlgorithm (4 weeks) | iCrypto (6 weeks) | iWeb (6 weeks) | iProgram—Unit 2 (8 weeks) | iSafe (6 weeks) | |
| Year 6 | iProgram—Unit 1 (6 weeks) | iNetwork (6 weeks) | iData (5-6 weeks) | iApp—Unit 2 6 weeks | iProgram- Unit 2 (6 weeks) | iApp—Unit 1 6 weeks | iSafe 6 weeks |