

**Computing**

**Planning**

**Guidance for Staff**

**Pendeen School Computing Principles**

**Intent**

At Pendeen our computing curriculum broadly follows the National Curriculum, with play at the heart of learning and hands-on discovery a key part of our intention.

Children will be discovering, through a range of activities, how to develop computational thinking, through **logic**, **evaluation**, **algorithms**, **patterns**, **decomposition** and **abstraction**.

The approach to getting children to develop this thinking is through a series of activities that encourage **tinkering**, **creating**, **debugging**, **persevering** and **collaborating**.

Across the whole school, online safety is of paramount importance and forms a pivotal part of the Pendeen curriculum to ensure that all children develop to become responsible digital citizens and are able to keep themselves safe online, identify concerns and report them appropriately.

Some computing lessons are delivered discretely, but others will be delivered in a cross-curricular manner to coincide with the relevant subject and required outcomes.

In EYFS and KS1, children will access the curriculum in a manner in which they may not realise they are learning ‘to compute’ but will give them first steps into developing computational vocabulary and understanding, as well as developing a grasp on how to use equipment and access it safely.

In KS2, children will confidently use computational vocabulary and demonstrate their understanding in practical ways.

The curriculum has been designed to ensure maximum impact and use of the equipment we have invested in as a school over the past two years.

**Implementation**

One unit, per half term (or full term, depending on the particular unit) will be delivered by the class teacher, across the school. Each unit has been devised to meet both the needs of the children at Pendeen School – for example in KS1, children are given ample opportunity to learn to use their equipment to help them to access the remaining curriculum areas – as well as ensuring broad and balanced coverage of the National Curriculum outcomes.

Learning outcomes are designed to engage and inspire the children of Pendeen School to become responsible digital citizens having a depth of understanding of the technological world around them.

Whilst there will be no formal written outcome and limited recording from practical lessons through this curriculum, and since computing will be delivered alongside other subjects, evidence of learning can take many forms:

* Presentations and documents produced in other subject areas – documented in writing books or in subject specific memory books.
* Children have a portfolio of digital work, available on the Children’s shared folder.
* Children can speak about their computing learning using a wide array of subject-specific vocabulary in pupil conferencing.
* Pupil surveys.
* Parent surveys.
* Lesson observations by either the lead teacher and / or the headteacher.

**Impact**

Monitoring of delivery shall take place termly by the subject lead alongside an separate monitoring visit by a SHiP partner annually – two headteachers from other local schools in our academy trust.

The lead teacher for computing shall request a range of evidence from class teachers on the delivery of the Computing curriculum, alongside forming a pupil group from all ages to discuss how computing is delivered and to monitor the depth of their understanding of what they are being taught.

Termly, teachers are required to report progress against agreed computing targets for each child on our data system, Target Tracker, which is monitored by the subject lead and the headteacher.

**Programme**

Some outcomes can be planned by the teacher, appropriate to the cohort and assessed learning need.

Skills and knowledge taught every year – applied in the first year and consolidated/mastered in the second.

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|  | **Autumn 1**  | **Autumn 2**  | **Spring 1**  | **Spring 2**  | **Summer 1**  | **Summer 2**  |
| Kynsa(YR) | Using the iPad and accessing educational games. Understanding safety online. | Simple Programming / Computational Thinking | Creating simple algorithms / Learning to Type |
| Nessa (Y1/2) | How do I use my equipment?How do I keep myself safe online? | What is a computer program? | How do I use the computer to create, organise, store, manipulate and retrieve content?+ Internet Safety Day | How do I create a simple program?What is an algorithm? | How do I fix the mistakes?Where is information & computing technology used? | How do I keep myself safe online? |
| Teyr (Y3/4)  | How do I use my equipment?How do I keep myself safe online? | How do I choose the right software to achieve my goals? | How do sequences, selection and repetitions in programs work?+ Internet Safety Day | What is logical reasoning?How do I fix errors in my algorithms? | How do I design, write and debug programs to achieve specific goals? | How do I keep myself and others safe online? How can I report concerns & spot unacceptable behaviour? |
| Peswara (Y5/6)  | How does my equipment link to the world?How do I keep myself safe online? | What opportunities can ICT services offer for communication and collaboration? | How do computer networks work?How can I present my work?+ Internet Safety Day | How do I make effective searches and know which results to trust? | How do I design, write and debug programs to achieve specific goals? | How I solve problems with my own coding programming? |

Resources for planning

Pendeen School Curriculum, glossary of key terms and supporting resource links provided.

Computing resources to support learning outcomes Staff Share > Whole School > Curriculum > Computing

Teacher login:

Barefoot Computing:

**Lesson Structure**

Lesson structure will vary, dependent upon the Key Stage, the activity, the lesson as part of the wider remit and the learning outcome.

Some lessons shall be practically based, some will be delivered alongside outcomes in other curriculum areas and others will be based in play and ‘tinkering’ to allow children practical experience and gain confidence.

**Non-negotiables:**

Learning outcomes to be shared with children at the beginning of each unit of work and the lessons to follow.

Wherever possible and appropriate, computing work should be shared with parents via Class Dojo, our home communication portal.

Computing lessons should feel like ‘fun’ – children will learn through play.

Computational thinking posters should be on display in every classroom.

Key computing vocabulary should also be on display and particularly in KS2, children should be able to begin to explain what the term means and how they apply it.