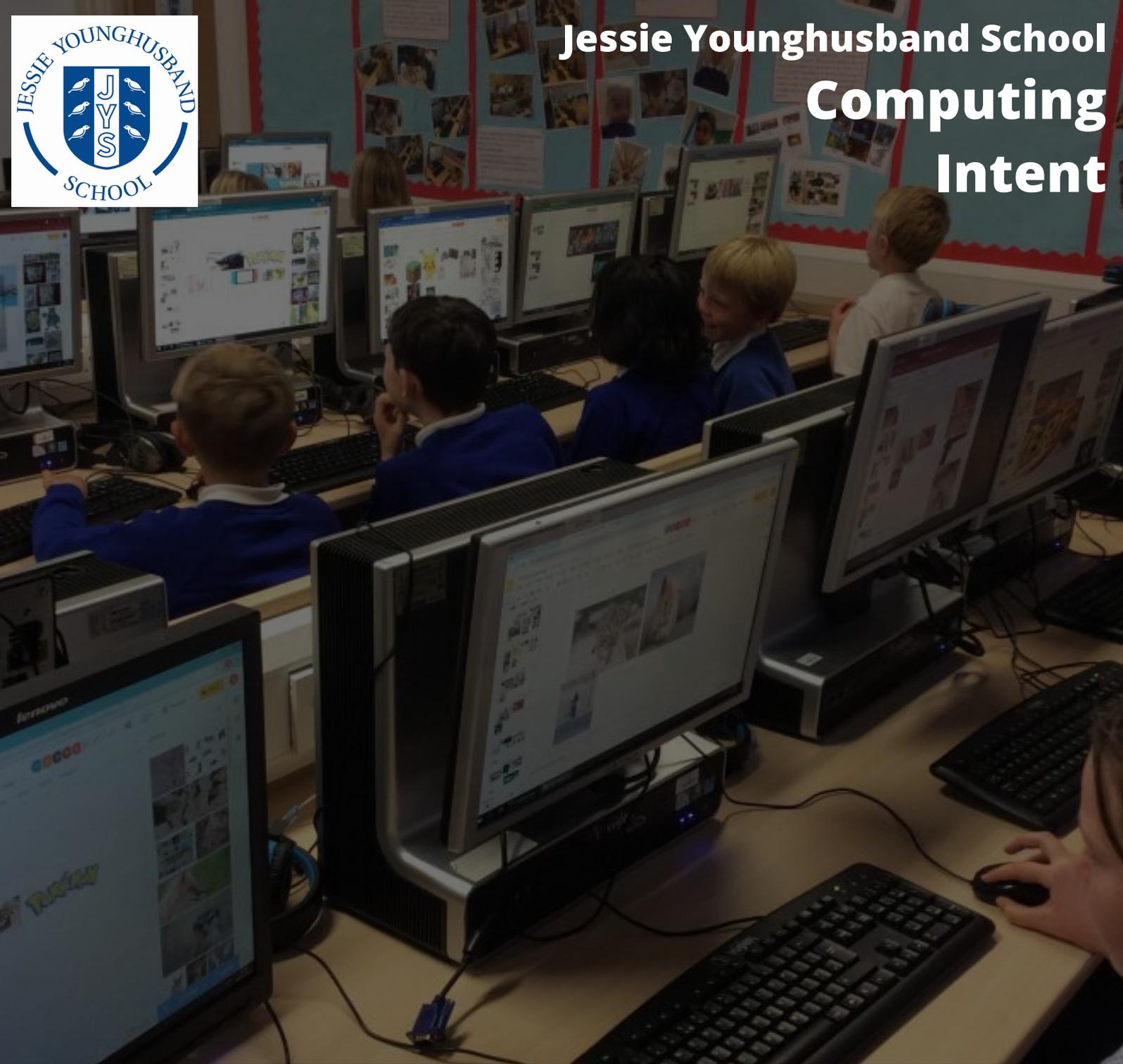


# Jessie Younghusband School Computing Intent



At Jessie Younghusband School, whenever we touch computing in our curriculum, we always begin with the question 'How can technology help us?'. This is because we are aware that many of our young children have access to a lot of modern technology, but they are not always understanding of when it is good to use technology and when it is not so good. We then help them to make decisions about when to use technology across the whole curriculum.

We have committed to always ask the question 'How can we keep ourselves safe online?' as this is so important to our safeguarding and our children's ability to thrive. In the background of this, is our hands on and connected approach to learning and we endeavour to make the abstract nature of algorithms more concrete through the use of practical and physical games and hands on experiences. This is also supported with our cross curriculum approach as we can then be using our computing learning to support other curriculum subjects. We approach computing in a truly cross curriculum manner.

Our progression is developed through this intent as this structure provides the progression, along with our own professional judgement of the questions we need to ask the children at each point. As progress is made, less time needs to be spent on the grounding questions and we can spend time going deeper with the technology.



# Computer Science

## YEAR 1

Vocab: software, hardware, technology, Internet, programs, information, systems, password, blog

- To understand what algorithms are; that programs execute by following precise and unambiguous instructions.
- To create simple programs.
- To use logical reasoning to predict the behaviour of simple programs.
- To recognise common uses of information technology beyond school.



## YEAR 2

Vocab: algorithms, online, responsibility, blog, debug

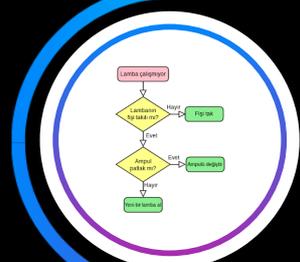
- To understand that algorithms are implemented as programs on digital devices.
- To debug simple programs.
- To use logical reasoning to predict the behaviour of more complex programs.



## YEAR 3

Vocab: algorithms, data, online, database, password

- To design write and debug programs that accomplish specific goals.
- To use sequence, selection and repetition in programs.
- To recognise common uses of information technology beyond school.



## YEAR 4

Vocab: ranking, logic, digital content, digital footprint, manipulation

- To solve problems by decomposing them in smaller parts.
- To use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.



## YEAR 5

Vocab: abstraction, analysis, ranking, variables, copyright

- To understand computer networks including the internet.
- To design, write and debug programs that accomplish specific goals.
- To use sequence, selection and repetition in programs.
- To work with variables and various forms of input and output.



## YEAR 6

Vocab: abstraction, data representation, database, source, copyright

- To understand how networks can provide multiple services, such as the world wide web, and the opportunities they offer for communication and collaboration.
- To design, write and debug programs that include controlling or simulating physical systems and solving problems by decomposing them into smaller parts.
- To use logical reasoning to explain how more complex algorithms work and to detect and correct errors in algorithms and programs.



## KEY STAGE 3

Vocab: computational abstraction, Boolean logic, digital artefacts, computational thinking and problems

- To understand several key algorithms that reflect computational thinking and use logical reasoning to compare the utility of alternative algorithms for the same problem.



# Digital Literacy

## YEAR 1

Vocab: software, hardware, technology, Internet, programs, information, systems, password, blog

- To use technology safely and respectfully, keeping personal information private.

## YEAR 2

Vocab: algorithms, online, responsibility, blog, debug

- To identify where to go for help and support when they have concerns about content on the internet or other online technologies.

## YEAR 3

Vocab: algorithms, data, online, database, password

- To use technology safely, respectfully and responsibly.
- To recognise acceptable/ unacceptable behaviour.
- To use search technologies effectively.

## YEAR 4

Vocab: ranking, logic, digital content, digital footprint, manipulation

- To identify a range of ways to report concerns about content and contact online.
- To appreciate how results are selected and ranked and be discerning in evaluating digital content.

## YEAR 5

Vocab: abstraction, analysis, ranking, variables, copyright

- To continue to use technology safely, respectfully and responsibly, including how to give respectful feedback.
- To continue to recognise acceptable/ unacceptable behaviour.
- To identify more ways to report concerns about content and contact.
- To use search technologies effectively.

## YEAR 6

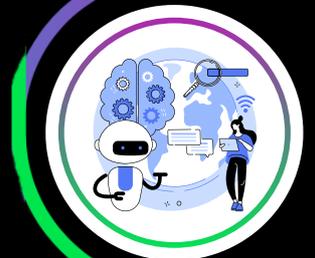
Vocab: abstraction, data representation, database, source, copyright

- To further develop the skills to allow you to appreciate how results are selected and ranked and to be more discerning in evaluating digital content.

## KEY STAGE 3

Vocab: computational abstraction, Boolean logic, digital artefacts, computational thinking and problems

- To understand a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; recognise inappropriate content, contact and conduct, and know how to report concerns.





# Information Communication Technology

## YEAR 1

Vocab: software, hardware, technology, Internet, programs, information, systems, password, blog

- To use technology purposefully to create, store and manipulate digital content.

## YEAR 2

Vocab: algorithms, online, responsibility, blog, debug

- To use technology purposefully to create, organise, store, manipulate and retrieve digital content.

## YEAR 3

Vocab: algorithms, data, online, database, password

- To select and use a variety of software on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals.
- To collect, analyse, evaluate and present data and information.

## YEAR 4

Vocab: ranking, logic, digital content, digital footprint, manipulation

- To select and use a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals.

## YEAR 5

Vocab: abstraction, analysis, ranking, variables, copyright

- To select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals.

## YEAR 6

Vocab: abstraction, data representation, database, source, copyright

- To explore different ways using ICT to collect, analyse, evaluate and present data and information.

## KEY STAGE 3

Vocab: computational abstraction, Boolean logic, digital artefacts, computational thinking and problems

- To design, use and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems.
- To use 2 or more programming languages, at least one of which is textual, to solve a variety of computational problems; make appropriate use of data structures [for example, lists, tables or arrays]; design and develop modular programs that use procedures or functions.

