|  |  |  |  |
| --- | --- | --- | --- |
|  | **Year R** | **Year 1** | **Year 2** |
| Expectations | * recognise that a range of technology is used in places such as homes and schools * They select and use technology for particular purposes.   *Key Language: technology, instructions, how and why, information, passwords, private* | * know how to use technology safely and respectfully, keeping personal information private. * recognise and talk about what an algorithm is * use technology purposefully to create, organise and manipulate digital content. * recognise and name common uses of information technology beyond school   *Key Language: internet safety, private information, algorithm, websites, debug, decomposition* | * explain what algorithms are; how they are implemented as programs on digital devices; and that programs work by following precise instructions * create and debug simple programs * use logical reasoning to predict the behaviour of simple programs * identify where to go for help and support when they have concerns about content on the internet or other online technologies.   *Key Language: algorithms, digital, debug, logical, robot, data, graph, abstraction* |
| Wider Use of Technology | 1. Recognise that a range of technology is used in places such as homes and schools. 2. Select and use technology for particular purposes | 1. Recognise uses of technology beyond school 2. Recognise and can give examples of common uses of technology they encounter in their daily routine 3. Begin to identify some of the benefits of using technology | 1. Speak about why technology is used in the classroom/home/community 2. Learn how computers are used in the wider world |
| Using software | 1. Use a simple online paint tool to create digital art | 1. Logging in and out and saving work on their own account 2. Use a basic range of tools within graphic editing software 3. Take and edit photos 4. Understand how to create digital art using an online paint tool 5. Develop control of the mouse through dragging, clicking, resizing 6. Understand the different software tools | 1. Develop word processing skills including altering text, copying, pasting and using keyboard shortcuts 2. Using word processing software to type and reformat text 3. Create and label images |
| Programming | 1. Follow instructions as part of practical activities and games and learning to debug when things go wrong 2. Use logical reasoning to read simple instructions and predict the outcome 3. Learn to give simple instructions 4. Learn that an algorithm is a set of instructions to carry out a task in a specific order 5. Experiment with a Beebot and learn how to give simple commands 6. Learn to debug instructions, with the help of an adult, when things go wrong | 1. Program a Beebot to follow a planned route 2. Learn to debug instructions when things go wrong 3. Develop a how-to video to explain how the Beebot works 4. Learn to debug an algorithm in an unplugged scenario 5. Follow a basic set of instructions 6. Assemble instructions into a simple algorithm 7. Use decomposition to solve unplugged challenges | 1. Use logical thinking to explore software, predict, test and explain what things do 2. Use an algorithm to write a basic computer program 3. Decompose a game to predict the algorithms used to create it 4. Learn what abstraction is 5. Explain what an algorithm is 6. Learn that computers use algorithms to make predictions 7. Create a clear and precise algorithm |
| Hardware | 1. Learn how to operate a camera to take photographs of meaningful creations or moments 2. Learn how to explore and tinker with hardware to develop familiarity and introduce relevant vocabulary | 1. Learn what a mouse is and develop skills such as moving and clicking 2. Learn how to explore and tinker with hardware to find out how it works 3. Learn where keys are located on the keyboard 4. Learn how to operate a camera | 1. Understand what a computer is and that its made up of different components 2. Use greater control when taking photos with tablets 3. Develop confidence with the keyboard 4. Recognise that buttons cause effects and technology follows instructions |
| Using Data | 1. Represent data through sorting and categorising objects in unplugged scenarios 2. Representing data through pictograms 3. Explore branch databases through physical games | 1. Begin to look at spreadsheets 2. Represent data in tables, charts and pictograms 3. Sort data and create branching databases 4. Identify where digital content can have advantages over paper when storing and manipulating data | 1. Collect and input data into a spreadsheet 2. Interpret data |
| Online Safety | 1. Know that the internet is a place you need to keep safe 2. Know that there are adults we can trust and adults we can’t trust in person | 1. Discuss what personal information is and why it needs to be kept private 2. Understand the importance of a password 3. Explain who to go to when something unexpected or worrying is seen online. 4. Speak about the importance of being kind and polite. 5. Recognise an age appropriate website. 6. Agree and follow sensible online safety rules. | 1. Explain why it is important to keep my password and personal information private. 2. Describe things that happen online that an adult should be told about. 3. Speak about why you should only go online for a short amount of time. 4. Speak about why it is important to be kind and polite online and in real life. 5. Understand that not everyone is who they say they are on the internet |