Barrow CE School

Computing Long Term Provision Map

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| **Year A Acorn Class Autumn**  **Topic and Key Knowledge** | **Year A Acorn Class Spring**  **Topic and Key Knowledge** | **Year A Acorn Class Summer**  **Topic and Key Knowledge** |
| **Year 1 Autumn, Term 1**  **Internet Safety**  **Sticky Knowledge**  I know how to use technology safely.  I know where to go for help if I am concerned.  I know how to keep my personal information private.  I know which websites are safe me to use.  I know how to use an iPad camera to take photographs.  **EYFS Starting Points**  Why do we use the internet?  What do I do if something worrying or unexpected happens when I’m using the internet?  How do I stay kind to my friends?  How much time should I spend using a computer/tablet/game device?  What can technology be used for? | **Year 1 Spring, Term 1**  **Programming**  **Sticky Knowledge**  I can give instructions to my friend and follow their instructions to move around.  I know what happens when I press buttons on a programmable robot.  I know what an algorithm is.  I know how to create a set of instructions and plan a journey for a programmable toy.  I know what the word debug means when I correct mistakes.  I know how to use some apps/software to create movement  **EYFS Starting Points**  Which computer games and software do I like to use?  What happens when I touch or click on buttons when I’m using simple software?  How do I make a programmable toy move? | **Year 1 Summer, Term 1 and 2**  **Multimedia**  **Sticky Knowledge**  I know how to use technology to present some of my ideas.  I know how to save information and retrieve it.  I know how to use the keyboard or a word bank to enter text.  **EYFS Starting Points**  How do I move objects on a screen?  How do I create shapes and writing on a screen?  How can I use technology to help me with my learning? |
| **Internet Safety Vocabulary**  internet, device, computer, laptop, iPad, tablet, camera, personal information | **Handling Data Vocabulary**  software, programmable toy, instructions, algorithm, debug, test | **Multi Media Safety Vocabulary**  keyboard, word bank, drawing program, save, retrieve |
| **Year 1 Autumn, Term 2**  **Technology in our Lives**  **Sticky Knowledge**  I know how we use technology in our classrooms  I know how technology is used at home.  I understand the benefits of using technology.  I know how to use links to websites to find information.  **EYFS Starting Points**  What technology do we use in school?  What technology do we use at home?  What technology do you use e.g. iPads, laptop, etc.  How can technology be used to help me play and learn? | **Year 1 Spring Term, 2**  **Handling Data**  I can talk about the different ways in which information can be shown.  I know how to use technology to collect information, including photos, video and sound.  I know how to sort different kinds of information and present it to others.  I know how to add information to a simple graph e.g. block graph or pictogram and talk about what I have found out.  **EYFS Starting Points**  Tell me about the different kinds of information we have e.g. pictures, video, text and sound…  How do we take a photograph on an iPad/tablet? |  |
| **Technology in our lives vocabulary**  device, laptop, computer, iPad, tablet, mobile phone, game console, X Box, Switch, Playstation, TV | **Handling Data vocabulary**  data, pictogram, block graph, popular, least popular, camera, photograph, sound, microphone, record |  |

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| **Year A Oak Class Autumn**  **Topic and Key Knowledge** | **Year A Oak Class Spring**  **Topic and Key Knowledge** | **Year A Oak Class Summer**  **Topic and Key Knowledge** |
| **Autumn, Term 1**  **Internet Safety**  **Sticky Knowledge**  I know why I need to keep my password and personal information private.  I can describe the things that happen online that I must tell an adult about.  I know why I should only go online for a short amount of time.  I know why it is important to be kind and polite online and in real life.  I know that not everyone is who they say they are on the internet. | **Spring, Term 1**  **Handling Data**  **Sticky Knowledge**  I can talk about the different ways I use technology to collect information, including a camera, sound recorder and possibly a microscope.  I know how to make and save a chart or graph using the data I have collected.  I can talk about the data that is shown in my chart or graph.  I know what type of information I could use to help me investigate a question.  I can start to tell you about a branching database. | **Summer Term 1 & 2**  **Multimedia**  **Sticky Knowledge**  I know how to use technology to organise and present my ideas in different ways.  I can use the keyboard on my device to add, delete and space text for others to use.  I can tell you about an online tool I can use that can help me to share my ideas with other people.  I know how to save and open files on the device I am using. |
| **Internet Safety vocabulary**  Internet safety, personal information, online rules, concerns, password | **Handling Data vocabulary**  data, information, frequency, graph, chart, most popular, least popular, block graph, pictogram, bar chart | **Multimedia vocabulary**  keyboard, mouse, screen, save, open, retrieve, delete, space, text, image, font, colour, size |
| **Autumn, Term 2**  **Programming**  **Sticky Knowledge**  I know how to give instructions to my friend (using forward, backward and turn) and physically follow their instructions.  I can tell you the order I need to do things to make something happen and talk about this as an algorithm.  I know how to program a robot or software to do a particular task.  I can look at my friend’s program and tell you what will happen.  I know how to use programming software to make objects move.  I know how to debug simple programmes after I have noticed it has gone wrong. | **Spring, Term 2**  **Technology In Our Lives**  **Sticky Knowledge**  I can tell you why I use technology in the classroom.  I know how to use the keyboard on my device to add, delete and space text for others to read.  I can tell you about an online tool that will help me to share ideas with other people.  I can tell you what kind of information I could use to help me investigate a question. |  |
| **Programming vocabulary**  algorithm, instructions, debug, program, forwards, backwards, left, right, full turn, quarter turn, half turn | **Technology in our lives vocabulary**  laptop, computer, keyboard, delete, space, enter, text, image |  |

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| **Year B Oak Class Autumn**  **Topic and Key Knowledge** | **Year B Oak Spring Term**  **Topic and Key Knowledge** | **Year B Oak Class Summer**  **Topic and Key Knowledge** |
| **Autumn, Term 1**  **Internet Safety**  **Sticky Knowledge**  I know what makes a secure password and know why passwords are important.  I know how to protect my personal information when I do different things online.  I can use the safety features of websites as well as knowing how to report concerns to an adult.  I know how to make good choices about how long I spend online.  I can recognise websites and games appropriate for my age.  I know to ask an adult before downloading files and games from the internet.  I know the importance of posting positive comments online. | **Spring, Term 1**  **Handling Data**  **Sticky Knowledge**  I can talk about the different ways data can be organised.  I know how to search a ready-made database to answer questions.  I know how to answer a question by collecting data.  I know how to add to a database.  I know how to make a branching database.  I know how to use a data logger to monitor changes and talk about the information collected. | **Summer, Term 1 & 2**  **Multimedia**  **Sticky Knowledge**  I know how to create different effects with different technology tools.  I know to combine a mixture of text, graphics and sound to share my ideas and learning.  I know how to use appropriate keyboard commands to amend text on my device, including making use of a spell checker.  I know how to evaluate my work and improve its effectiveness.  I can use an appropriate tool to share my work online. |
| **Internet safety vocabulary**  Internet safety, personal information, online rules, concerns, password, positive comments | **Handling Data vocabulary**  database, branching database, data, data logger, pictogram, bar char, block graph, frequency, least/most popular | **Multimedia vocabulary**  keyboard, graphics, image, spell checker, text, sound, word, drawing programs |
| **Autumn, Term 2**  **Programming**  **Sticky Knowledge**  I know how to break an open-ended problem up into smaller parts.  I can put programming commands into a sequence to achieve a specific outcome.  I know how to keep testing my program and can recognise when I need to debug it.  I know how to use repeated commands.  I can describe the algorithm I will need for a simple task.  I can explain how to detect a problem in an algorithm which could result in unsuccessful programming. | **Spring, Term, 2**  **Technology In Our Lives**  **Sticky Knowledge**  I know how to save and retrieve work on the internet, the school network or my own device.  I can talk about the different parts of the computer.  I know some of the different ways of communicating online.  I can talk about the World Wide Web as the part of website that contains websites.  I know how to use search tools to find and use an appropriate website. |  |
| **Programming vocabulary**  algorithm, instructions, debug, program, forwards, backwards, left, right, full turn, quarter turn, half turn, clockwise, anticlockwise, repeat command, sequence, decomposition, programming | **Technology in our lives vocabulary**  World Wide Web (www), internet, websites, laptop, device, computer, iPad, tablet, mobile phone, network, save, retrieve, keyboard, screen |  |

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| **Year A Willow Class Autumn**  **Topic and Key Knowledge** | **Year A Willow Class Spring**  **Topic and Key Knowledge** | **Year A Willow Class Summer**  **Topic and Key Knowledge** |
| **Autumn, Term 1**  **Internet Safety**  **Sticky Knowledge**  I know what makes a password secure and why they are important.  I know the importance of protecting my personal information when I do different things online.  I know how to use the safety features of websites and know when to report concerns to an adult.  I can recognise websites and games that are appropriate for my age.  I know how to make good choices about how long I spend online.  I know to ask an adult before downloading files and games from the internet.  I know to only post positive comments online. | **Spring, Term 1**  **Handling Data**  **Sticky Knowledge**  I know some of the different ways data can be organised.  I know how to search a ready-made database to answer questions.  I can collect data to help me answer a question.  I know how to add to a database.  I know how to make a branching database.  I know how to use a data logger to monitor changes and talk about the information collected. | **Summer, Term 1 & 2**  **Multimedia**  **Sticky Knowledge**  I know how to create different effects with different technology tools.  I know how to combine a mixture of text, graphics and sound to share my ideas and learning.  I know how to use appropriate keyboard commands to amend text on my device, including making use of a spellchecker.  I know how to evaluate my work and improve its effectiveness.  I can use an appropriate tool to share my work online. |
| **Internet Safety vocabulary**  Internet safety, personal information, online rules, concerns, password, positive comments | **Handling Data vocabulary**  database, branching database, data, data logger, pictogram, bar char, block graph, frequency, least/most popular, pie chart | **Multimedia vocabulary**  keyboard, graphics, image, spell checker, text, sound, word, drawing programs |
| **Autumn, Term 2**  **Programming**  **Sticky Knowledge**  I know how to break up an open-ended problem into smaller parts (decomposition).  I know how to put programming commands into a sequence to achieve a specific outcome.  I know to test my program and can recognise when I need to debug it.  I know how to use repeat commands.  I can describe the algorithm I need for a simple task.  I know how to detect a problem in an algorithm which could result in unsuccessful programming. | **Spring, Term 2**  **Technology in Our Lives**  **Sticky Knowledge**  I know how to save and retrieve work on the internet, the school network or my own device.  I know the different parts of the computer.  I know how I should be communicating with others online.  I can describe the World Wide Web as part of the internet that contains websites.  I know how to use search tools to find and use an appropriate website.  I know how to use image that I find online in my own work. |  |
| **Programming vocabulary**  algorithm, instructions, debug, program, forwards, backwards, left, right, full turn, quarter turn, half turn, clockwise, anticlockwise, repeat command, sequence, decomposition, programming | **Technology in our lives vocabulary**  World Wide Web (www), internet, websites, laptop, device, computer, iPad, tablet, mobile phone, network, save, retrieve, keyboard, screen |  |

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| **Year B Willow Class Autumn**  **Topic and Key Knowledge** | **Year B Willow Class Spring**  **Topic and Key Knowledge** | **Year B Willow Class Summer**  **Topic and Key Knowledge** |
| **Autumn, Term 1**  **Internet Safety**  **Sticky Knowledge**  I know the importance of choosing a secure password and username.  I know to protect my password and other personal information.  I can explain how to protect myself and my friends and the best way to do this. This includes reporting concerns to an adult.  I know that anything I post online can be seen, used and may affect others.  I know the dangers of spending too long online or playing a game.  I know the importance of communicating kindly and respectfully.  I know the importance of choosing an age appropriate website, app or game.  I can explain why I need to protect my computer or device form harm | **Spring, Term 1**  **Handling Data**  **Sticky Knowledge**  I know how to use a spreadsheet and database to collect and record data.  I can choose an appropriate tool to help me collect data.  I can present data in an appropriate way.  I know how to search a database using different operators to refine my search.  I understand how mistakes in data can be checked. | **Summer, Term 1 & 2**  **Multimedia**  **Sticky Knowledge**  I know how to use text, photo, sound and video editing tools to refine my work.  I know how to select, use and combine the appropriate technology tools to create effects that will have an impact on others.  I can select an appropriate online tool to share ideas.  I can review and improve my own work and support others to improve their work. |
| **Internet Safety vocabulary**  username, secure password, age appropriate websites/games/apps, digital footprint, cyberbullying, personal information | **Handling data vocabulary**  data, spreadsheet, database, search, operators, pie chart, bar chart, frequency table, axis | **Multimedia vocabulary**  text, image, sound, record, save, retrieve, powerpoint, word, excel, |
| **Autumn, Term 2**  **Programming**  **Sticky Knowledge**  I know how to decompose a problem into smaller parts.  I know how to design an algorithm for a specific outcome and use this to write a program.  I know how to use a variable e.g. lives in a game, points in a game, use a counting timer to measure time.  I know how to change an input to a program to achieve a different outcome.  I know how to use ‘if’ and ‘then’ commands to select an action.  I know how to use logical reasoning to detect and debug mistakes in a program. | **Spring, Term 2**  **Technology in Our Lives**  **Sticky Knowledge**    I can describe different parts of the internet.  I know how to use different online tools for different purposes.  I know how to use a search engine to find appropriate information and check its reliability.  I know how to evaluate different types of information I find on the World Wide Web. |  |
| **Programming vocabulary**  outcomes, input, output, logical reasoning, algorithm, debug, ‘if’ command, ‘then’ command,  variable, decompose, decomposition | **Technology in our lives vocabulary**  search engines, reliability, internet |  |

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| **Year C Willow Class Autumn**  **Topic and Key Knowledge** | **Year C Willow Class Spring**  **Topic and Key Knowledge** | **Year C Willow Class Summer**  **Topic and Key Knowledge** |
| **Autumn, Term 1**  **Internet Safety**  **Sticky Knowledge**  I know how to protect my password and other personal information.  I can explain the consequences of sharing too much about myself online.  I know how to support my friends to protect themselves online, including reporting concerns to an adult.  I can explain the consequences of spending too much time online or on a game.  I can explain the consequences of not communicating kindly and respectfully online.  I know how to protect my computer or device from harm on the internet. | **Spring, Term 1**  **Handling Data**  **Sticky Knowledge**  I know how to select the most appropriate tool to collect data for my investigation.  I can collect my own data and interpret it.  I can present the data I collect in an appropriate way. | **Summer, Term 1 & 2**  **Multimedia**  **Sticky Knowledge**  I can decide how I would like to present my ideas.  I can combine a range of media, recognising the contribution of each to achieve a particular outcome.  I can explain why I select a specific online tool for a specific purpose.  I can evaluate my own work and that of others. |
| **Internet Safety vocabulary**  username, secure password, age appropriate websites/games/apps, digital footprint, cyberbullying, personal information | **Handling data vocabulary**  data, spreadsheet, database, search, operators, pie chart, bar chart, frequency table, axis | **Multimedia vocabulary**  text, image, sound, record, save, retrieve, powerpoint, word, excel |
| **Autumn, Term 2**  **Programming**  **Sticky Knowledge**  I know how to deconstruct a problem into smaller steps, recognising similarities to solutions used before.  I can explain and program each of the steps in my algorithm.  I know how to evaluate the effectiveness and efficiency of my algorithm while I continually test the programming of that algorithm.  I know how to use a variable and operators to stop a program.  I can use different inputs to control a device or onscreen action and predict what will happen.  I know how to use logical reasoning to detect and correct errors in algorithms and programs. | **Spring, Term 2**  **Technology in Our Lives**  **Sticky Knowledge**    I can select an appropriate tool to communicate and collaborate online.  I can talk about the way search engines are selected and ranked. |  |
| **Programming vocabulary**  outcomes, input, output, logical reasoning, algorithm, debug, ‘if’ command, ‘then’ command,  variable, decompose, decomposition | **Technology in our lives vocabulary**  search engines, ranking, |  |