

New Computing Curriculum – KS 1

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| Year 1 2014 | Term 1 | Term 2 | Term 3 |
| | <u>Our School</u> | <u>Food</u> | <u>Toys</u> |
| | <p>Focus – DL e-safety Personal safety: washing hands, walking. Moving around the school safely. People in school - who can we talk to if we have a problem (work or personal). Safe use of equipment – classroom equipment, playground equipment, tool safety. Create safety poster.</p> <p>Software & equipment: iPad/camera. (Pupils working above P8 should be introduced to the concept of being safe on the internet), Hectors World</p> | <p>Focus – CS Algorithms First/Then boards – select symbols and place correctly on the board. Identify next symbol for the timetable. Simple if/then e.g. playtime, if it's cold wear a coat. Create and record simple sequences for preparing food or drinks e.g. making toast: bread, toaster, butter. Melting chocolate/ice using a hairdryer/microwave if it's melted turn it off else, press switch again. Daily routines.</p> <p>Software & Technology: switch control box,</p> | <p>Focus – IT Data and Data representation. Link pictures to toys. Create a simple pictogram/graph of favourite toys. Sort old and new toys. Toys that use batteries and those that don't. Save and retrieve pictures of toys.</p> <p>Software & Technology: iPad/camera, battery operated toys, PC</p> |
| | Term 4 | Term 5 | Term 6 |
| <u>What's special to me</u> | <u>Growing</u> | <u>The Seaside</u> | |
| <p>Focus – CS Programming Explore lights and sound making equipment. Create simple lighting and/or sound patterns. Turn on lights using a variety of</p> | <p>Focus – IT Presenting information Use simple graphics package to create flowers (experiment with symmetry Stop motion video of seeds growing or flowers opening. Understand that this is</p> | <p>Focus – DL communication and collaboration Create postcards – find a picture, save and print it. Create own seaside image and print it.</p> | |

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DI = Digital Literacy (Communicating, Collaborating and e-Safety, Multimedia, Digital imagery, Music and Sound), CS = Computer Science (Control and Monitoring, Floor and Screen Turtles, Programming, Modelling and Simulation) IT = Information Technology (Data Handling, Research (using the Internet and computer software))

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| | <p>switches. Play simple turn taking/interaction games with adults and partners.</p> <p>Software & Technology: Ant Chorus Infant Music Toolkit, Lighting effect, battery operated lights. Interactive room and drama studio lighting effect.</p> | <p>stored on the computer and can be watched again. Use digital microscope to examine plants and flowers. Take pictures and manipulate these. Save and retrieve. Use them to create a display</p> <p>Software & Technology: iPad/camera, digital microscope, Infant Video Toolkit, 2Paint,</p> | <p>Experience sending a postcard via the post. Send and receive an e-card Katie Morag, Arthur, Disney</p> <p>It is vital that teachers check searches before and reinforce e-safety rules during this unit.</p> <p>Software & Technology: 2paint a picture, IVT (2Publish)</p> |
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New Computing Curriculum – MDVI and Sensory (KS1)

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| Year 1 2014 | Term 1 | Term 2 | Term 3 |
| | <u>Ourselves/Our School</u> | <u>Mealtimes</u> | <u>Bears</u> |
| | Focus – DL e-safety Personal space – reinforce through tack pack sessions. What is me/not me? My things – recognise/identify own belongings. Create a collage of own pictures. Reject a picture that is not them. Explore pictures of family members, carers and helpers. Personal privacy should be reinforced through personal care routines. | Focus – CS Algorithms Respond to simple sequences e.g. by pressing a switch to activate equipment. Make selections e.g. reaching towards, feeling or choosing topping for Pizza or sandwich. Touching or feeling the next item to go in a cake. Co-operating/anticipating next stage in a familiar routine (getting dressed, undressing for PE/Aqua Learn, transitioning between activities) | Focus – IT Creativity Use touch screen to explore creating contrasting lines. Request preferred music, lighting effect in the Interactive room, Hydrotherapy, Drama studio. (using gesture, eye gaze or preferred mode of communication) Use ribbons attached to chairs to create patterns. Pupils may select/indicate chosen direction. |
| | Software & Technology: AAC, Clicker, Comic Life. Pic Collage (iPad),, iPad/camera, Tack Pack. | Software & Technology: Environmental control boxes, switches, switch accessible toys | Software & Technology: Reactickles, 2Paint a picture, 2Publish, iPad: Mandalas, Somantics, Reactickles Magic |
| | Term 4 | Term 5 | Term 6 |
| | <u>Spring festivals</u> | <u>Growing</u> | <u>The Seaside</u> |
| Focus – CS Programming Explore directions and pathways when creating Holi dance. Select/indicate direction to take. Demonstrate recognition when following the pathway | Focus – IT Data and presenting data. Create collages or patterns using simple graphics packages or by making selections of colours/images to include Explore flowers/plants in different forms | Focus – DL Safety and Communication Sun safety – gather together items needed to stay safe in the sun e.g. sun hat, sun cream, T-shirt, water bottle. Co-operate with shared exploration of | |

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| | <p>again (during the lesson) Explore simple sequences of sounds selecting/indicating instrument to add to the sound pattern. Demonstrate preference when they hear a sound/instrument. Recognise when their chosen sound/instrument is played again.</p> <p>Software & Technology: Music Toolkit, Finger paint, Toca Band (iPad), Sound Beam, AAC VOCAs</p> | <p>e.g. real objects, replica (plastic flowers or plants), essential oils, photographs, pictures. Create box or storyboard (pupils to be involved in making decisions of what to include) linked to these and revisit showing consistent response to the items in the box. Share the items in an assembly.</p> <p>Software & Technology: iPad/camera, Mandalas, Finger paint, My Story (iPad), 2Paint a Picture, 2Publish, 2Create a story.</p> | <p>these and when sun cream is applied. Use safe search to find images of the seaside allowing pupils to indicate preference or make a selection using their chosen method of communication. Create a postcard to send home or exchange within the class.</p> <p>Software & Technology: 2Publish, AAC and VOCAs,, Internet access, Switch</p> |
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New Computing Curriculum – MDVI/Sensory (KS2)

| Year | Term 1 | Term 2 | Term 3 |
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| 1 | <p style="text-align: center;"><u>Transport and Movement</u></p> <p>Focus – CS algorithms</p> <p>Explore directions during Dance and PE. Use preferred mode of communication to select or indicate direction they wish to travel. Select different ways of moving e.g. fast, slow, slide, spin. Use ribbons to emphasise pathway they have travelled or lay out ribbons/rope and explore pathways to different objects e.g. follow the blue ribbon and get to the bubble tube.</p> <p>Software & Technology: AAC, VOCA</p> | <p style="text-align: center;"><u>Food and Drink</u></p> <p>Focus – IT presenting and sharing information</p> <p>Create a shopping basket of real or role play foods to explore and revisit. Support pupils to sort foods in simple way e.g. those they like or dislike; fruit and vegetables; healthy and unhealthy foods. Take photographs on a visit to the shops and make these into a Photostory, collage or story board that they can revisit and/or share in an assembly.</p> <p>Software & Technology: Photostory, Pic Collage (iPad), iPad/camera, AAC</p> | <p style="text-align: center;"><u>Safety - Looking after ourselves</u></p> <p>Focus – DL e-safety</p> <p>Reinforce personal space, what is me/not me? (Tack pack). Identify own belongings either using real objects or images. Find own image. Indicate recognition of familiar adults linked to care. Create storyboard or book linked to family and carers to explore with pupil. Help symbol or VOCA with 'help me' recorded on it to be used to make request for support e.g. pick up item they have dropped, get a drink, turn on the fan/music.</p> <p>Software & Technology: Tac pack, AAC, VOCA, 2 Create a Story, Clicker, My Story, Stories about Me (iPad)</p> |
| | Term 4 | Term 5 | Term 6 |
| | <p style="text-align: center;"><u>Senses</u></p> <p>Focus – IT Creativity</p> <p>Use technology to focus on different</p> | <p style="text-align: center;"><u>Weather</u></p> <p>Focus – DL Research and share data</p> <p>Create boxes linked to different weather</p> | <p style="text-align: center;"><u>The Environment</u></p> <p>Focus CS technology in the environment</p> <p>Pupils should be given the opportunity</p> |

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| | <p>senses. E.g. Hearing - Sound beam, music apps, voice recordings. Sight – Graphics packages and apps, video recordings. Support pupils to make choices/express preferences when exploring. Support multimodal creation e.g. choosing a photograph and creating a sound effect to go with it. Adding vocalisations or sounds to video clips.</p> <p>Software & Technology: AAC and digital recoding devices, QuickVoice, sound drop, Music Ball, Bla, Bla, Bla, Recording Lite, Fluid Monkey, Fluid, Mandalas, Somantics, Reactickles Magic, Ooze, Fireworks, Finger Paint (iPad), Reactickles, 2Paint a Picture, 2Publish</p> | <p>conditions e.g. Winter box would contain ice packs, warm clothing, gloves and hats, animals that live in cold climates, images of pupils taken during cold weather, CD with SFX and music appropriate to cold weather. Pupils should revisit and explore these boxes to develop the understanding that the items can be stored and accessed again and to gain familiarity with them. Set up interactive room to reflect a particular season/weather condition. Take pupils out to experience different weather condition.</p> <p>Software & Technology: Multisensory room, CD player, VOCA and AAC</p> | <p>to experience technology in their local environment e.g. cross the road using a pelican crossing or pedestrian crossing. Support pupils to press the button to change the traffic lights. Place items on conveyor belt in a supermarket. Use automatic doors to go in and out of a shop. Pass through automatic barriers. Experience calling and travelling in a lift. Use a variety of everyday household equipment linked to environmental controllers.</p> <p>Visit a theme park, fun fair.</p> <p>Software & Technology: Environmental control boxes and switches, VOCA, AAC, push buttons, proximity/movement sensors, light sensors.</p> |
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New Computing Curriculum – KS2

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| Year 1 | Term 1 | Term 2 | Term 3 |
| | <u>Transport and holidays</u> | <u>Food and drink</u> | <u>Looking after ourselves</u> |
| | <p>Focus – CS algorithms Use symbols to program Probot/Roamer. Layout program steps and then enter. Use Our Town floor mat (or create your own) and plot route to given house/shop. Explore algorithms (sequences) through stories linked to topic or shared literacy books: sequence parts of the story. Answer simple questions what comes first/next? What happens if we get the story in the wrong order. Create a train track/roadway – use preferred mode of communication to request pieces (straight, curved). How will we get to ...?</p> <p>Software & Technology: Probot, IVT: 2Go</p> | <p>Focus – IT Creating digital content Use images (photographs or pictures) or symbols to investigate favourite foods/dishes. Create your own recipe book recording work in Food Tech or favourite recipes. Use photographs or images created in graphics package to illustrate. Use Clicker grid to add ingredients and recipe. Teach pupils that work can be saved and retrieved at a later stage.</p> <p>Software & Technology: IVT2paint, 2Publish, CiP, Clicker 5, 2Paint a picture</p> | <p>Focus – DL safety Revisit rules for keeping safe: in school, outside, online. What is personal information? Identify own belongings, find own name and address. What information can we share and with whom? Acceptable ways to behave: create class rules, Internet safety rules. Who can we talk to? Identify who to turn to for help in class, in the playground, at home, in the street.</p> <p>Software & Technology: Lee and Kim, CiP, Clicker, IVT: 2Publish, 2Create a story, Toontastic (iPad)</p> |
| | Term 4 | Term 5 | Term 6 |
| <u>The Senses</u> | <u>Weather and Time</u> | <u>The Environment</u> | |
| <p>Focus – IT gathering and sharing data Create tall charts or pictograms to record eye colour.</p> | <p>Focus – DL Digital imagery and sound Explore safety rules linked to different weather conditions e.g. sunshine – wear</p> | <p>Focus – CS technology in the environment Identify uses of technology at home and</p> | |

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| | <p>Use application to create a pictogram or chart (2Count, 2Graph) from this data. Develop understanding that data/information can be saved and retrieved on the computer. Discuss how to save the information (give the file a meaningful name, where is it saved). Link with another class in the department/school or with another school and share the data collected. Create a display to celebrate and share work.</p> <p>Software & Technology: IVT 2Paint, 2Count, 2Chart, email</p> | <p>hat and put on sunscreen. Raining – wear raincoat and boots. Take photographs or use symbol to record weather over the term. Use safe search to find images of different weather conditions. Use these to create presentation or Photostory. Find sounds or record music/sfx to reflect the chosen weather conditions</p> <p>Software & Technology: PowerPoint, 2Create a Story or Photostory, Internet, iPad/camera, Music Toolkit or digital recorder (Easispeak or microphones linked to PC), Audacity.</p> | <p>in the local environment e.g. automatic doors, lifts, pelican crossings ... Create a storyboard to identify as many different examples of technology as possible. Explore traffic light sequences and create a sequence using symbols to turn traffic lights on and off. Test using coloured lights, Lego bricks or MindStorm to replicate the sequence. Create a lighthouse – write sequence to turn the lighthouse light on. NB More able pupils could use 2Question to create a branching database to identify when the light should be off or on.</p> <p>Software & Technology: Light Sequence Pelican crossing, Control Inside, Control outside 2Simple Mindstorm, IVT 2Question.</p> |
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New Computing Curriculum – MDVI/Sensory (KS3 & 4)

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| Year 1 | Term 1 | Term 2 | Term 3 |
| | <u>Autumn</u> | <u>Festivals (Divali)</u> | <u>Winter</u> |
| | <p>Focus – IT Creating digital content Record the weather over a period (1 week/1 term). Use photographs and objects of reference to create simple pictogram linked to what the weather was like on different days.</p> <p>Create a tactile and/or digital book linked to the seasons. Include images, textures, sound effects, objects, video clips.</p> <p>Involve pupils in choosing what should be included and revisit the book in its different formats. Set up 1 or 2 switches so that pupils can control the digital version of the story. Link to work in music/dance and create sound patterns or dances for different weather conditions.</p> <p>Software & Technology: My Story (iPad), 2Create a story, Photostory, Clicker, camera/iPads, sound recorders</p> | <p>Focus – CS Control and algorithms Explore sequences of lights. Use symbols signs or objects and support pupils create their own sequences. (The sequence could include sounds and music linked to Divali).</p> <p>Include options e.g. one switch would trigger light sequence the other would trigger sounds/images.</p> <p>Software & Technology: Interactive room, Show Magic (in drama studio, aqua learn), battery and plug in lights (chasers, sequencing lights), environmental controllers, switch boxes, switches, Somantics (iPad), Mandala (iPad)</p> | <p>Focus – DL Using Technology safely. Keep warm in winter. Pupils should explore and learn how to safely control equipment. E.g. turn on a heater, use the microwave to heat up a drink or food. Make toast. Heat water for a hot water bottle. Observe a fire being lit and feel the heat from the flames.</p> <p>They should be supported to compare the hot and cold versions and learn handle or use caution if something may be hot. They may anticipate that something that comes out of the oven is hot but out of the fridge/freezer it will be cold.</p> <p>Software & Technology; Kitchen equipment, hot water bottles, switches, environmental controllers, heater, barbecue, chimnea or fire pit.</p> |
| | Term 4 | Term 5 | Term 6 |
| | <u>Spring</u> | <u>Animals</u> | <u>Summer</u> |
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| | <p>Focus – IT Manipulating content Explore pictures and real objects that reflect spring: flowers, buds, new growth, and young animals. Explore effects in graphic applications to create spring images based on own original artwork or photographs of spring. Use digital microscope, iPad, camera or visualiser to capture images.</p> <p>Software & Technology: iPad, camera, Digital microscope, visualiser, Textease Studio, Photo Simple, Photo Booth (iPad), Pic Collage (iPad), Skitch (iPad)</p> | <p>Focus – DL Personal safety, communication. Work could be linked to visits from Pippa or trip to farm/pet shop. Pupils should learn how to handle animals safely and gently. Reinforce hygiene rule after handling animals. Create an assembly or presentation linked to animal safety</p> <p>Software & Technology: PowerPoint, Textease Studio C, camera, iPad</p> | <p>Focus – CS Modelling and simulation Create summer/seaside theme in the Interactive room. Set up beach/seaside area outside or in class using tents, water and sand trays. Explore and revisit resources. Create and record fantasy seaside trip using video, stills and sounds. Link this to real trip to the seaside. Make choices to select materials, features or images to include for a seaside image and display next to image from real trip to the seaside.</p> <p>Software & Technology: camera, iPad, Show Magic, 2Create a story, Jigworks, Textease Studio CT</p> |
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New Computing Curriculum – KS3

| Year | Term 1 | Term 2 | Term 3 |
|------|---|---|--|
| 1 | <p style="text-align: center;"><u>Our class is a safe space</u></p> <p>Focus – DL e-safety Revisit e-safety rules. Identify person information. What can we share what should we keep private? Who do we tell? Create an avatar and nickname for use on the internet. Create animation or poster to detail rules for using technology safely and respectfully.</p> <p>Software & Technology: Textease, 2Animate, Toontastic (iPad)</p> | <p style="text-align: center;"><u>Digital design</u></p> <p>Focus – creating digital content Explore Christmas or greeting cards. Identify elements of the card (image, text). Create storyboard of images/cards they like. Pupils to use safe search, camera or graphics package to create image for their greeting card. Save, retrieve and amend work. Create caption/greeting to include on card (NB use pop up word banks to support literacy). Explore changing fonts/colour (save versions so they can compare and choose the one they like most). Print final version of card.</p> <p>Software & Technology: 2Publish, Publisher, Textease CT, CiP, Clicker, Internet,</p> | <p style="text-align: center;"><u>Got it sorted</u></p> <p>Focus – CS computational thinking Explore different methods of sorting data/objects. Find sets objects or pictures which can be sorted on different criteria e.g. cutlery in different colours could be sorted on colour or function (i.e. all knives together). Find the heaviest item in a group (3+) Find the tallest person in the class: do this by standing in a line and swapping places according to height e.g. Natasha, James, Amy and Abdul stand in a line. Natasha and James swap places if Natasha is smaller than James. Natasha then compares height with Amy and swaps if she is smaller and so on through the group until everyone is in the right order. (Bubble sort). Click here for full explanation.</p> <p>Software & Technology:</p> |
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| | <p style="text-align: center;"><u>Food of life</u></p> | <p style="text-align: center;"><u>Is anyone listening</u></p> | <p style="text-align: center;"><u>Our town</u></p> |
|--|--|--|---|
| | <p>Focus – IT Data Handling Investigate favourite foods or pizza toppings. Use safe search to research prices of pizzas e.g. Pizza Hut, Pizza express, Dominos, different supermarkets. Create a simple database to record the information. Pupils should understand that information can be saved and retrieved. They should learn to identify different storage formats e.g. CPU, Memory stick, DVD or CD. Compare these to printed information (menus, flyers, prices lists) Create charts/graphs to record simple questions. Experiment with displaying the information in different formats – what is the effect? Which is easiest to understand? Software & Technology: Internet, Textease Studio</p> | <p>Focus – DL Communication and collaboration Set up a simple class blog or wiki to record work or some aspect of school life e.g. books they are reading, favourite groups, football teams. Revisit e-safety rules emphasising appropriate behaviour and rules when posting messages. Explore blogs from other schools. If permission is gained parents, friends or other pupils could be invited to view and/or contribute to the blog. Involve pupils in moderation. Software & Technology: TUK, TUK Games Safer Internet Org</p> | <p>Focus – CS Modelling and simulation Explore maps of local town (NAG, Gravesend, Dartford). Go for walks in the area and record what they see. Link to work in Geography exploring use of buildings and man made/natural features. Explore fantasy City (e.g. Myst Exile, Tate Kids) and use a stimulus – what would their city look like? Choose features, colours.. Use graphic package to create own imaginary city or develop an area of the locality. Pupils could use gaming software e.g. Sims City or Kodu to create an imaginary world. It is important that the difference between the real and imaginary is emphasised. Software & Technology: Tate Kids Imaginary City, Kodu, Sims City, Myst Exile, 2Draw, Textease Studio.</p> |

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New Computing Curriculum – KS4

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|------|--|--|---|
| 1 | <p style="text-align: center;"><u>How safe are you</u></p> <p>Focus – DL e-Safety Revisit e-Safety rules. Explore Social Networking, Instant messaging blogging etc. Pupils should know what information is personal and should not be shared and what they can share. They should be taught to understand the difference between friends in school and those people we meet on line (Stranger Danger – we do not really know who these people are). They should learn simple rules for keeping safe on the Internet and who to tell and how to report concerns. E.g. recognising the report abuse  icon, Childline logo  and Lock, Block, Report icons. Pupils could create a presentation, play or leaflet to be shared with parents/guardians and other classes.-</p> | <p style="text-align: center;"><u>Tell me a story</u></p> <p>Focus – IT Creating digital content.</p> <p>Use animation or book making software and apps to create an interactive story. The story might be based on a class book, retelling of a fairy tale or well known story or an original piece of work. Pupils should include text (this could be recorded, typed or selected from pop up word/sentence grids or entered by scribe), images (original, photographs or CC images), video, sound and music. Pupils should be encouraged to make a choice of the appropriate software, application or technology they should use. They should understand that their work can be saved, retrieved and amended and recognise a printed version of their work. Stories could be shared with pupils in other departments or placed in the library when they are completed.</p> | <p style="text-align: center;"><u>How do they do that?</u></p> <p>Focus – CS Investigating games Pupils to explore simple arcade style games. They should be able to identify the icons for these games and be able to make choices. Emphasis should be placed on the difference between real and imaginary settings. Pupils may use programming applications and software to create simple games. At the most basic form this might be designing a circuit for a car to travel around in Textease or a route for ALEX to follow They could create a simple playground or class game e.g. Human Crane (see Computing Resources)</p> <p>Software & Technology: Scratch, Kodu, ALEX (iPad), Pixel Press</p> |

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| | <p>Software & Technology: Internet, PowerPoint, Textease, graphics or word processing apps or packages.</p> | <p>Software & Technology: Dragon dictation, Clicker, word processing and graphic packages, ZU3D and animation software, camera/iPad/video recorder, sound recording devices (easi speak, digital microphones) apps or software.</p> | |
| | <p>Term 4</p> | <p>Term 5</p> | <p>Term 6</p> |
| | <p><u>Exploring the environment</u> Focus – IT Data handling This work could link to work at Hadlow/Bore Place or science work. Choose a focus for their research – plants, trees, or animals. Recap work on branching databases. Create a simple document to record findings – involve pupils in deciding what software or app they should use. What are they going to record? What questions will they ask? Use suitable application to create a branching database (Differentiation – do this in a practical way setting out pathways to students to follow depending on whether they answer Yes or No to the questions). Test with known items first then use to identify a plant, tree or animal they have found. Check</p> | <p><u>We're all connected</u> Focus – DL Research and Communication Pupils should explore computer networks. This could be done on a very simple practical level using ribbons or ropes to link pupils in the class. Pass messages (envelopes or packets attached to the line) along the 'network'. What happens if we don't agree a protocol (rules) about how these should be passed around (messages being passed in different directions along the same line, someone not ready to receive a message). Create own protocols. Look at school network and wifi. Pass messages between classes e.g. written messages or video conferencing/Skype.</p> | <p><u>Robot Wars</u> Focus – CS Control and Monitoring. Pupils will explore not only programming their robot but also include the use of sensors (sound, light or touch) so that their robot will react to different situations e.g. if it bangs into an object, if the light goes out or comes on, response to a spoken command. They should plan, write/record their programmes and then test them and debug (fix the problems). Software & Technology: Lego Mindstorms, Roamer (with sensors), Kodu,</p> |

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| | | | |
|--|---|--|--|
| | <p>data for errors and correct.</p> <p>Software & Technology: Textease CT Studio, Smart Notebook, Excel,</p> | <p>Learn to differentiate between the Internet (the computer connections and their networks) and the World Wide Web (service provided – web pages and hypertext). Create posters/presentations to record their work and findings.</p> <p>Software & Technology: computer network, Flashmeeting, Skype, Video conferencing, web cams, word processing/presentation software.</p> | |
|--|---|--|--|

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APPENDIX I – Glossary of terms

| Term | Definition | Term | Definition |
|-------------|--|-------------------|--|
| algorithm | an unambiguous procedure or precise step by - step guide to solve a problem or achieve a particular objective. | computer networks | the computers and the connecting hardware (wifi access points, cables, fibres, switches and routers) that make it possible to transfer data using an agreed method ('protocol'). |
| control | using computers to move or otherwise change 'physical' systems. The computer can be hidden inside the system or connected to it. | data | a structured set of numbers, representing digitised text, images, sound or video, which can be processed or transmitted by a computer |
| debug | to detect and correct the errors in a computer program | digital content | any media created, edited or viewed on a computer, such as text (including the hypertext of a web page), images, sound, video (including animation), or virtual environments, and combinations of these (i.e. multimedia). |
| information | the meaning or interpretation given to a set of data by its users, or which results from data being processed. | input | data provided to a computer system, such as via a keyboard, mouse, microphone, camera or physical sensors. |
| internet | the global collection of computer networks and their connections, all using shared protocols (TCP/IP) to communicate. | logical reasoning | a systematic approach to solving problems or deducing information using a set of universally applicable and totally reliable rules. |
| output | the information produced by a computer system for its user, typically on a screen, through speakers or on a printer, but possibly through the control of motors in physical systems. | program | a stored set of instructions encoded in a language understood by the computer that does some form of computation, processing input and/or stored data to generate output. |

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| | | | |
|----------------|---|------------|--|
| repetition | a programming construct in which one or more instructions are repeated, perhaps a certain number of times, until a condition is satisfied or until the program is stopped. | search | to identify data that satisfies one or more conditions, such as web pages containing supplied keywords, or files on a computer with certain properties. |
| selection | a programming construct in which the instructions that are executed are determined by whether a particular condition is met. | sequence | to place programming instructions in order, with each executed one after the other |
| services | programs running on computers, typically those connected to the internet, which provide functionality in response to requests; for example, to transmit a web page, deliver an email or allow a text, voice or video conversation. | simulation | –using a computer to model the state and behaviour of real-world (or imaginary) systems, including physical and social systems; an integral part of most computer games. |
| software | computer programs, including both application software (such as office programs, web browsers, media editors and games) and the computer operating system. The term also applies to ‘apps’ running on mobile devices and to web-based services. | variables | a way in which computer programs can store, retrieve or change simple data, such as a score, the time left, or the user’s name |
| World Wide Web | a service provided by computers connected to the internet (web servers), in which pages of hypertext (web pages) are transmitted to users; the pages typically include links to other web pages and may be generated by programs automatically | | |

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Appendix II – ICT Resources available for use during Key Stage 1 & 2

| Mouse Skills | CIP | Clicker 5 | Myst Exile |
|-------------------------|-----------------------------------|----------------------------|------------|
| Toy Shop | ORT/Abi's books | Clicker Sounds | |
| Pelican Big Books – Y2 | Infant Video ToolKit | Clicker Animations | |
| Book Spinner | Music Tool kit | 2Type | |
| Doodle Plus | 2create a story | 2Email | |
| Switch on Travel | Simple City | Digital Blue Movie Creator | |
| Press to Play – Animals | 2Connect | 2Type | |
| First Keys to Literacy | 2Animate | Photostory | |
| Splatter | 2Paint a Picture | SENSwitcher | |
| Switch on – Gadgets | 2Control NXT | Reactickles | |
| First Steps | Lego Mindstorm sets | Smartnotebook | |
| Spider and friends | Maths City 1 | Bsquared | |
| Number Train | 2Create | Adobe | |
| Happenings | Real Player/Quick Time or similar | Flash | |

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Appendix III Additional resources to support the teaching of ICT at KS 1 and 2

| | Location | | Location | | Location |
|---|----------------|--|----------------|-------------------------------|-------------------|
| Easi-Speak Microphones | ICT Technician | Desk Microphone | ICT Technician | BeeBot | KS1 |
| Hub chargers for above | ICT Technician | Headphones | ICT Technician | Transparent BeeBot Mat | KS1 |
| Digiblue Snap cameras | ICT Technician | Visualiser | ICT Technician | Hand held metal detector | KS1 |
| DigiBlue Movie Makers | ICT Technician | Animation Background | ICT Technician | Large metal detector | KS1 |
| DigiBlue Movie Maker 3 | ICT Technician | Samson Microphone | ICT Technician | Mobile phones | KS1 |
| DigiBlue Headcam | ICT Technician | Sennheiser Microphone | ICT Technician | Pixie | KS2 |
| Swan Necked Web Cams (useful for animation work) | ICT Technician | Portable Halogen lights (for film work) | ICT Technician | ProBot | KS2 |
| Chatter -Block | ICT Technician | Tripods | ICT Technician | Large Metal detector | KS2 |
| Light Box | ICT Technician | Microphone Stand | ICT Technician | Hand held metal detector | KS2 |
| Robosapiens | ICT Technician | Nintendo DS + brain training academy | ICT Technician | Electronic Stopwatch/timer | ICT Technician |
| | | | | Pixie | KS2 |

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Appendix IV - Software available for use during Key Stage 3 & 4

| 2Control NXT | Clicker 5 | Pilote Faisons les courses |
|---------------------|--------------------|--|
| 2Connect | Clicker Animations | Switch Skills |
| 2 Draw | Clicker Sounds | Switch Skills 1 |
| 2Investigate | CIP | Switch It Hygiene |
| 2Publish | 2Type | Cyberlink Power DVD |
| Textease CT Studio | Music Tool kit | Audacity |
| Maths Games 1 | Textease Movies CT | Photostory |
| Photo Simple | Jigworks | SENSwitcher |
| 2Handwrite | Karzouche | Reactickles |
| Science Simulations | MSW Logo | Smartnotebook |
| Modelling Toolkit | Roamer World | Bsquared |
| 2Email | Pilote Moi | Foxit, Flash, Real Player/Quick Time or similar, Windows Movie Maker |
| 2Create a Story | Pilote Mon ecole | Windows Media Movie Maker |
| Comic Life | Zu3D | |

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Appendix VI Additional resources to support the teaching of ICT at KS 3 and 4

| | Location | | Location | | Location |
|---|--------------------|---|--------------------|--|--------------------|
| Digital Cameras | See ICT Technician | Bluescreen backdrop | See ICT Technician | Roamer (3) | See ICT Technician |
| WebCams | See ICT Technician | Black backdrop and stand | See ICT Technician | Jackets for above (2 grey, 1 red, 1 green) | See ICT Technician |
| Digital Blue Movie Creator + snap cameras | See ICT Technician | Animation Backgrounds (4) | See ICT Technician | Roamer Motor Pack | See ICT Technician |
| Digital Microscope | See Janet | Samson Microphone | See ICT Technician | Roamer Sensor Pack | See ICT Technician |
| Digital Cameras | See ICT Technician | Sennheiser Microphone | See ICT Technician | Roamer Mats (Street, Desert Island) | See ICT Technician |
| WebCams | See ICT Technician | Portable Halogen lights (for film work) | See ICT Technician | Lego Mindstorm sets | See ICT Technician |
| DVD Player | See ICT Technician | Tripods | See ICT Technician | Nintendo DS + Brain training | See ICT Technician |
| Myst Exile | See ICT Technician | Microphone Stand | See ICT Technician | Easi-Speak Plus Microphones (10) | See ICT Technician |
| Chatter Block | See ICT Technician | Visualiser | See ICT Technician | | |
| | | | | | |
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| | | | | | |

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APPENDIX VII - Useful Links and hyperlinks included in the document

Search Engines – **DO NOT** use adult search engines with pupils. The following are suitable for use in class.

<http://search.creativecommons.org/>

<http://search.bbc.co.uk>,

<http://yahooligans.yahoo.com/>

<http://kids.findit-quick.com/>,

<http://www.askbasil.com/>

Multimedia - remember when using images, music or sound effects in your resources that copyright still applies. Please follow the guidelines for copyright and usage on the individual websites

Sounds

<http://ibeat.org/> loops of sounds provided under creative commons licensing

<http://audionautix.com/> - all under creative commons licensing

<http://audio.lgfl.org.uk/> - Searchable database of music and songs for all occasions and topics. Only accessible at school.

<http://www.bbc.co.uk/schoolradio/earlylearning/stimulusounds.shtml> short sound clips and sound effects.

<http://www.a1freesoundeffects.com/noflash.htm> Sound effects although they are not all available for free download.

Images

<https://www.flickr.com/creativecommons>

gallery.e2bn.net Stills, video and sound effects organised by topic.

www.itscotland.org.uk royalty free black and white and colour illustrations. Grouped in topics.

ngfl.northumberland.gov.uk clip art organised in topics

www.pics.tech4learning.com photographs and clip art. Free to schools

<http://www.dorlingkindersley-uk.co.uk/static/cs/uk/11/clipart/home.html> curriculum related clip art and photographs.

Video

http://whiteboard.bristol-cyps.org.uk/vis_lit1/ News Clips from Digital videos for Literacy

http://whiteboard.bristol-cyps.org.uk/vis_lit2/Film%20Trailers/ Film trailers from Digital Literacy

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[http://whiteboard.bristol-cyps.org.uk/nwn_week2/Using%20Digital%](http://whiteboard.bristol-cyps.org.uk/nwn_week2/Using%20Digital%20Literacy) Animated films from Digital Literacy
www.tv-ark.org.uk/ Video clips from TV. Includes children's TV.
www.britishpathe.com free access available only from school until summer 2008-07-17
www.getty.com/bbcmotiongallery covers many school topics
<http://www.bbcworldwidelearning.com/marketing/>
www.teachertube.com like Youtube but accessible from school and safe content.
<http://www.bbcworldwidelearning.com/marketing/> BBC Learning zone. Very good for short clips

IWB

www.whiteboardroom.org IWB resources for SLD and PMLD pupils. Organised by subject. Also PowerPoint resources.
<http://www.heritageexplorer.org.uk> images and IWB resources for KS1 and 2 relating to English History.
<http://www.kented.org.uk/ngfl/subjects/numeracy/IWB/index.htm> Numeracy resources (for more able pupils)
<http://www.kented.org.uk/ngfl/subjects/literacy/IWB/index.htm> Literacy resources (for more able pupils)
<http://www.education.smarttech.com/ste/en-GB> Smarttech educational resources.
http://www.kented.org.uk/ngfl/ict/IWB/general_resources.htm general resources for IWB
<http://www.topmarks.co.uk/> Links to sites at Foundation, KS1 and KS2 which work well on the IWB

Games

<http://www.priorywoods.middlesbrough.sch.uk/resources/videos.htm>
<http://www.helpkidzlearn.com/online> games and activities suitable for switch users
http://www.bbc.co.uk/cbeebies/grownups/about/specialneeds/physical_cbeebies.shtml CBeebies switch games
<http://www.bbc.co.uk/cbbc/games/switch/#> More switch games from the BBC and Inclusive Technology.
http://www.northerngrid.org/ngflwebsite/new_resource_area/sen_home.html SEN Switcher and other resources for PMLD and SLD
<http://www.kented.org.uk/ngfl/earlyict/index.htm> Early ICT Website hosted by KentEd NGFL. Contains links to web based resources as well as resources for you to use across the curriculum. Although they relate to Early Learning Goals they are applicable to our pupils
<http://www.bbc.co.uk/schools/laac/menu.shtml> Animal Activity Centre

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General

<http://www.learninggrids.com> – ready made grids for Clicker 5 for all curriculum areas. Registration is free and grids can be used online or downloaded and amended

<http://www.widgit.com/resources/index.htm> symbols resources for the curriculum

<http://www.comptuerkidsonline.com> – online resources

<http://vtc.ngfl.gov.uk> – Virtual Teacher Centre is a searchable database of information and resources

<http://www.ncaction.org.uk> – National Curriculum Online

http://www.bbc.co.uk/learning/subjects/childrens_learning.shtml BBC Learning online support and advice page

<http://www.dltk-kids.com/> - printable craft ideas for children, including craft to support RE and Geography

<http://www.bigeyedowl.co.uk/> - multicultural and seasonal songs and activities

<http://www.enchantedlearning.com/Home.html> - ideas and activities for just about everything. Some only available if you register

<http://www.under5s.co.uk/> - although designed for early years they have some ideas which can be used for pupils at KS1

<http://www.clusterweb.org.uk/cwpages/home.cfm> - extranet for KCC education staff and schools

<http://www.bbc.co.uk/cbeebies/green-balloon-club/watch/green-balloon-club-reports/> Green Balloon Club

<http://www.bbc.co.uk/cbeebies/green-balloon-club/watch/green-balloon-club-spots/> Green Balloon Spots

<http://www.bbc.co.uk/cbeebies/mr-blooms-nursery/watch/> Mr Bloom's Nursery

Hyperlinks referenced in document

Ant Chorus <http://www.bbc.co.uk/cbeebies/zingzillas/games/zingzillas-ant-chorus/>

Katie Morag <http://www.visitcoll.co.uk/Coll.php?p=ecards>

Arthur <http://pbskids.org/arthur/games/ecards/>

Disney <http://www.disney.co.uk/disney-create/ecards/>

Make a Dance <http://www.bbc.co.uk/cbeebies/boogie-beebies/games/boogie-beebies-makeadance/>

Lee and Kim http://www.thinkuknow.co.uk/5_7/leeandkim/

Safer Internet Org <http://www.saferinternet.org.uk/advice-and-resources/teachers-and-professionals/teaching-internet-safety/resources>

ThinkUKnow <https://www.thinkuknow.co.uk/teachers/resources/>

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TUK Games http://www.thinkuknow.co.uk/8_10/Games/

Big Bang Friendship Algorithm <http://www.quietyoutube.com/watch?v=koxgjUhEG3U>

Bubble Sort <http://computationaltales.blogspot.co.uk/2011/04/bullies-bubble-sort-and-soccer-tickets.html>

Tate Kids Imaginary City <http://kids.tate.org.uk/games/my-imaginary-city/>

Links to work on school network.

Pelican Crossing T:\ICT\Control\Pelican_Crossing_sequence.ppt

Control Inside T:\ICT\Control\Control_inside.ppt

Control Outside T:\ICT\Control\Control_outside.ppt

Traffic Light Sequence T:\ICT\Control\light_sequence.ppt

Traffic Lights T:\ICT\Control\light_sequence.ppt

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