ICT Overview of Long Term Planning

Current subject leader:

Year 1	• Keyboard familiarity	• Mouse control	• The language of control	•		
Year 2	• Word Processing	• Using ICT to create art	• Navigating web pages	• Control	•	
Year 3	• Word Processing	• Recording sound and making music in ICT	• Databases	• E-mail	•	
Year 4	• Word Processing	• Using ICT to create art	• Databases	• Control	•	
Year 5	• Object based graphic packages	• Databases	• Spreadsheets	• Control	• Data Logging	•
Year 6	• Producing multi-media pages	• Spreadsheets	• Control	• The Internet	•	

ICT Overview of Long Term Planning

Current subject leader: Lee Noble

Reception	Key Techniques to be taught by the end of Reception. • Give opportunities to control a programmable toy, for example a floor robot. • Help children become aware of technology around them in the setting, local environment and home, for example washing machines, street lights, telephones, cash registers and burglar alarms. • Stimulate all children's interest in ICT and other technology. • Teach simple skills of using equipment, for example switching on and off. • Help children understand how things work by giving them opportunities to take apart and reassemble, for example telephones and radios. • Build on ICT skills that children develop at home. • Teach and encourage the use of ICT in the setting, for example tape recorders and headphones, programmable toys and clicking on different icons to cause different things to happen on a paint program. • Provide opportunities in role play areas to use ICT. • Introduce the correct language in conversations, for example the names of technological equipment and the operations performed on them, such as 'eject', 'double click', 'rewind' and 'crash'. • Give opportunities for the use of ICT to develop skills across the areas of learning, for example a talking word processor to develop language and communication, vocabulary and writing, talking books for early reading, a paint program to develop early mark making, a telephone for speaking and listening, CD-ROMs, video and television and musical tapes to find things out. • Encourage children to observe and talk about the use of ICT in the environment on local walks, for example traffic lights, telephones, street lights, bar code scanners to identify prices in shops. • Encourage children to show each other how to use ICT equipment.

Year 1	Key Techniques to be taught by the end of Year 1: • Keyboard familiarity • Select, and listen to text, using a mouse. • Use pictograms to answer simple questions. • Put activities into the correct order. • Use directional language to 'control' someone else's actions. • To use unit length and a common language *e.g. repeat and stop.* • To record a sequence of instructions in a common format. • To read a set of instructions, predict the result and follow the instructions to test their prediction.

Year 2	Key Techniques to be taught by the end of Year 2: • To use the back space key to make corrections. • To type in text, including spaces between words, and to use the shift key. • To use the return key/enter key to insert line breaks. • To enter text with spaces and use the shift key to type capital letters. • To delete and insert text to improve readability. • To select and use simple mark making tools. • To use 'save as'. • To select and use the straight line, geometric shapes and flood fill tools. • To select and use the spray tool. • To use buttons to navigate a CD rom or web page. • To search using menus, index, and key words. • To use hotlinks or hyperlinks to navigate a CD rom or web page. • To use the appropriate keys to make the floor turtle go forward, backward, left and right by using instructions such as forward 5, right 1. • To enter a sequence of instructions. • To use the repeat key to produce symmetrical shapes. • To use the search tool to find answers to simple questions.

Year 3	Key Techniques to be taught by the end of Year 3: • To alter font type, size and colour for emphasis and effect. • To amend text and save changes. • To combine graphics and text. • To use the shift key to type characters such as question marks. • To use ICT to record sound. • To use icons to arrange musical phrases. • To add a record to a file in a computer database. • To answer simple questions by matching the contents of a single field. • To answer simple questions by ordering records by a key field and then taking the top or bottom record. • To use a database to produce a bar chart. • To enter data into a computer simulation. • To read e-mail. • To read, annotate and reply to e-mail. • To send an e-mail using an address book. • To add an attachment to an email.

Year 4	Key Techniques to be taught by the end of Year 4: • To alter font size and use effects to indicate relevant importance. • To use cut and paste to reorder a piece of text. • To delete, insert and replace text to improve clarity and create mood. • To use spell check to amend texts using find and replace. • To use stamps and/or the copy tool to alter the size of the brush tool to select areas, copy and resize them. • To use a range of visual effects such as reflection or symmetry. • To use 'save as' to keep drafts. • To search a branching database. • To design simple questionnaires to record numbers, text and choices. • To use ICT to create pie charts and line graphs. • To transfer floor turtle instructions to the screen and understand common language. • To type commands in immediate mode. • To write a list of commands to produce a pre-drawn shape. • To use pen down and pen up to move the turtle. • To use the repeat command. • To use and change a prewritten procedure. • To write a procedure that uses other procedures to produce a result.

Year 5	Key Techniques to be taught by the end of Year 5: • To move, rotate and resize graphic elements. • To use geometric tools to create objects that can be manipulated using an object based graphic package. • To search a database using =< and => • To search a database using 'AND' • To search a database using 'OR' • To skim read and sift information to modify a search strategy. • To check for accuracy by checking data. • To check for anomalies using graphical representation. • To enter labels and numbers into a spreadsheet. • To enter formulae into a spreadsheet. • To use 'SUM' to calculate the total of a set of numbers in a range of cells. • To control simple devices, such as small motors, light bulbs, buzzers, by giving direct instructions. • To use simple procedures to control more than one output device. • To use simple control language to active multiple devices concurrently. • To control output devices, by building a sequence of events to solve a problem. • To attach a sensor to a device attached to a computer and take readings. • To use the programs 'Set up' features to set variables such as selected sensor and time span of recording.

Year 6	<u>Key Techniques to be taught by the end of Year 6:</u> • Design multimedia pages. • To sample sounds. • To produce a diagram that shows the links between pages. • To create buttons that link pages. • To identify formulae and enter them into a spreadsheet. • To copy cells. • To use a spreadsheet to draw a graph. • To change the data and formulae in a spreadsheet to answer 'what if...?' questions and check predictions. • To use 'if' 'then' 'and' 'repeat forever' • To use a light sensor. • To use and program to input sockets. • To develop a system that controls events in response to conditions. • To access an internet site using a favourite list to print a page from the internet. • To use a search engine to find information. • To use the internet using 'and' • To choose hyperlinks to trail an idea. • To type in an URL to locate a web page. • To save and use pictures and text to import into a document for a presentation.

Statutory National Curriculum Areas to be covered by the end of the year

ICT. Reception. Continuous areas.

Outcomes & Assessment Judgement Based from Level Descriptors

National Curriculum Level W
Some children will not have made so much progress & will:
P5
- Use computer programs, for example, to move a device to manipulate something on screen.
- Make connections between control devices and information on screen.

P6
- Use ICT to interact with other pupils and adults. They use a keyboard or touch screen to select letters and/or images for their own names.
- They show they understand that information can be stored on a computer.
- They respond to simple instructions to control a device.
- They operate some devices independently.

P7
- Gather information from different sources.
- Use ICT to communicate meaning and express ideas in a variety of contexts.
- They begin to choose equipment and software for a familiar activity.

P8
- Find similar information in different formats, (photo in paper, in book, on website, from TV programme).
- Use ICT to communicate and present their ideas.
- Can load a resource and make a choice from it.
- Communicate about their use of ICT.

National Curriculum Level 1c
Age Related Expectation we need to be delivering at is that the majority of children will:

- Talk about their use of ICT
- Recognise that many everyday devices respond to signals and instructions.

National Curriculum Level 1b
The AA/AA+ children will have progressed further & will also:

- Explore information from various sources, showing they know that information exists in different forms.
- Use ICT to work with text, images and sound to help them share their ideas.

Stepping stones

- Know how to operate simple equipment.
- Complete a simple program on the computer and/or perform simple functions on ICT apparatus.
- Find out about and identify the uses of everyday technology and use information and programmable toys to support their learning.

(For children working at 1c or above follow the POS for KS1.)

Programme of Study Areas

Finding things out

1) Pupils should be taught how to:

a) gather information from a variety of sources [for example, people, books, databases, CDROMs, videos and TV]

b) enter and store information in a variety of forms [for example, storing information in a prepared database, saving work]

c) retrieve information that has been stored [for example, using a CDROM, loading saved work]

Developing ideas and making things happen

2) Pupils should be taught:

a) to use text, tables, images and sound to develop their ideas

b) how to select from and add to information they have retrieved for particular purposes

c) how to plan and give instructions to make things happen [for example, programming a floor turtle, placing instructions in the right order]

d) to try things out and explore what happens in real and imaginary situations [for example, trying out different colours on an image, using an adventure game or simulation]

Exchanging and sharing information

3) Pupils should be taught:

a) how to share their ideas by presenting information in a variety of forms [for example, text, images, tables, sounds]

b) to present their completed work effectively [for example, for public display]

Reviewing, modifying and evaluating work as it progresses

4) Pupils should be taught to:

a) review what they have done to help them develop their ideas

b) describe the effects of their actions

c) talk about what they might change in future work

Key Skills to be delivered during the coverage above

- communication
- application of number
- information technology
- working with others
- improving own learning and performance
- problem solving

I.C.T. Year 1. Continuous areas.

Outcomes & Assessment Judgement Based from Level Descriptors

National Curriculum Level 1b
Some children will not have made so much progress & will:

- Explore information from various sources, showing they know that information exists in different forms.
- Use ICT to work with text, images and sound to help them share their ideas.

National Curriculum Level 1a
Age Related Expectation we need to be delivering at is that the majority of children will:

- Make choices when using such devices to produce different outcomes.

National Curriculum Level 2c
The AA/AA+ children will have progressed further & will also:

- They talk about their experiences of ICT both inside and outside school.
- They enter, save and retrieve work.

Programme of Study Areas

Finding things out

1) Pupils should be taught how to:

a) gather information from a variety of sources [for example, people, books, databases, CDROMs, videos and TV]

b) enter and store information in a variety of forms [for example, storing information in a prepared database, saving work]

c) retrieve information that has been stored [for example, using a CDROM, loading saved work]

Developing ideas and making things happen

2) Pupils should be taught:

a) to use text, tables, images and sound to develop their ideas

b) how to select from and add to information they have retrieved for particular purposes

c) how to plan and give instructions to make things happen [for example, programming a floor turtle, placing instructions in the right order]

d) to try things out and explore what happens in real and imaginary situations [for example, trying out different colours on an image, using an adventure game or simulation]

Exchanging and sharing information

3) Pupils should be taught:

a) how to share their ideas by presenting information in a variety of forms [for example, text, images, tables, sounds]

b) to present their completed work effectively [for example, for public display]

Reviewing, modifying and evaluating work as it progresses

4) Pupils should be taught to:

a) review what they have done to help them develop their ideas

b) describe the effects of their actions

c) talk about what they might change in future work

Key Skills to be delivered during the coverage above

- communication
- application of number
- information technology
- working with others
- improving own learning and performance
- problem solving

I.C.T. Year 2

Outcomes & Assessment Judgement Based from Level Descriptors

National Curriculum Level 2c
Some children will not have made so much progress & will:

- They talk about their experiences of ICT both inside and outside school.
- They enter, save and retrieve work.

National Curriculum Level 2b
Age Related Expectation we need to be delivering at is that the majority of children will:

- They plan and give instructions to make things happen and describe the effects.
- They use ICT to explore what happens in real and imaginary situations.

National Curriculum Level 2a
The AA/AA+ children will have progressed further & will also:

- Use ICT to help them generate, amend and record their work and share their ideas in different forms, including text, tables, images and sound.
- Use ICT to organise and classify information and to present their findings.

Programme of Study Areas

Finding things out

1) Pupils should be taught how to:

a) gather information from a variety of sources [for example, people, books, databases, CDROMs, videos and TV]

b) enter and store information in a variety of forms [for example, storing information in a prepared database, saving work]

c) retrieve information that has been stored [for example, using a CDROM, loading saved work] .

Developing ideas and making things happen

2) Pupils should be taught:

a) to use text, tables, images and sound to develop their ideas

b) how to select from and add to information they have retrieved for particular purposes

c) how to plan and give instructions to make things happen [for example, programming a floor turtle, placing instructions in the right order]

d) to try things out and explore what happens in real and imaginary situations [for example, trying out different colours on an image, using an adventure game or simulation]

Exchanging and sharing information

3) Pupils should be taught:

a) how to share their ideas by presenting information in a variety of forms [for example, text, images, tables, sounds]

b) to present their completed work effectively [for example, for public display]

Reviewing, modifying and evaluating work as it progresses

4) Pupils should be taught to:

a) review what they have done to help them develop their ideas

b) describe the effects of their actions

c) talk about what they might change in future work

Key Skills to be delivered during the coverage above

- communication
- application of number
- information technology
- working with others
- improving own learning and performance
- problem solving

I.C.T. Year 3. Continuous areas.

Outcomes & Assessment Judgement Based from Level Descriptors

National Curriculum Level 2b
Some children will not have made so much progress & will:

- They plan and give instructions to make things happen and describe the effects.
- They use ICT to explore what happens in real and imaginary situations.

National Curriculum Level 2a
Age Related Expectation we need to be delivering at is that the majority of children will:

- Use ICT to help them generate, amend and record their work and share their ideas in different forms, including text, tables, images and sound.
- Use ICT to organise and classify information and to present their findings.

National Curriculum Level 3c
The AA/AA+ children will have progressed further & will also:

- Use ICT to save information and to find and use appropriate stored information, following straightforward lines of enquiry.
- Describe their use of ICT and its use outside school.

Programme of Study Area

Finding things out

1) Pupils should be taught:

a) to talk about what information they need and how they can find and use it [for example, searching the internet or a CDROM, using printed material, asking people]

b) to interpret information, to check it is relevant and reasonable and to think about what might happen if there were any errors or omissions.

Developing ideas and making things happen

2) Pupils should be taught:

a) how to develop and refine ideas by bringing together, organising and reorganising text, tables, images and sound as appropriate [for example, desktop publishing, multimedia presentations]

b) how to create, test, improve and refine sequences of instructions to make things happen and to monitor events and respond to them [for example, monitoring changes in temperature, detecting light levels and turning on a light]

Exchanging and sharing information

3) Pupils should be taught:

a) how to share and exchange information in a variety of forms, including e-mail [for example, displays, posters, animations, musical compositions]

b) to be sensitive to the needs of the audience and think carefully about the content and quality when communicating information [for example, work for presentation to other pupils, writing for parents, publishing on the internet] .

Reviewing, modifying and evaluating work as it progresses

4) Pupils should be taught to:

a) review what they and others have done to help them develop their ideas

b) describe and talk about the effectiveness of their work with ICT, comparing it with other methods and considering the effect it has on others [for example, the impact made by a desk top published newsletter or poster]

c) talk about how they could improve future work.

Key Skills to be delivered during the coverage above

- communication
- application of number
- information technology
- working with others
- improving own learning and performance problem solving

I.C.T. Year 4

Outcomes & Assessment Judgement Based from Level Descriptors

National Curriculum Level 3c
Some children will not have made so much progress & will:

- Use ICT to save information and to find and use appropriate stored information, following straightforward lines of enquiry.
- Describe their use of ICT and its use outside school.

National Curriculum Level 3b
Age Related Expectation we need to be delivering at is that the majority of children will:

- Use ICT to generate, develop, organise and present their work.
- Share and exchange their ideas with others.

National Curriculum Level 3a
The AA/AA+ children will have progressed further & will also:

- Use sequences of instructions to control devices and achieve specific outcomes.
- Make appropriate choices when using ICT-based models or simulations to help them find things out and solve problems.

Programme of Study Areas

Finding things out

1) Pupils should be taught:

a) to talk about what information they need and how they can find and use it [for example, searching the internet or a CDROM, using printed material, asking people]

b) to interpret information, to check it is relevant and reasonable and to think about what might happen if there were any errors or omissions.

Developing ideas and making things happen

2) Pupils should be taught:

a) how to develop and refine ideas by bringing together, organising and reorganising text, tables, images and sound as appropriate [for example, desktop publishing, multimedia presentations]

b) how to create, test, improve and refine sequences of instructions to make things happen and to monitor events and respond to them [for example, monitoring changes in temperature, detecting light levels and turning on a light]

Exchanging and sharing information

3) Pupils should be taught:

a) how to share and exchange information in a variety of forms, including email [for example, displays, posters, animations, musical compositions]

b) to be sensitive to the needs of the audience and think carefully about the content and quality when communicating information [for example, work for presentation to other pupils, writing for parents, publishing on the internet] .

Reviewing, modifying and evaluating work as it progresses

4) Pupils should be taught to:

a) review what they and others have done to help them develop their ideas

b) describe and talk about the effectiveness of their work with ICT, comparing it with other methods and considering the effect it has on others [for example, the impact made by a desk top published newsletter or poster]

c) talk about how they could improve future work.

Key Skills to be delivered during the coverage above

- communication
- application of number
- information technology
- working with others
- improving own learning and performance
- problem solving

I.C.T. Year 5. Continuous areas.

Outcomes & Assessment Judgement Based from Level Descriptors

National Curriculum Level 3a
Some children will not have made so much progress & will:

- Use sequences of instructions to control devices and achieve specific outcomes.
- Make appropriate choices when using ICT-based models or simulations to help them find things out and solve problems.

National Curriculum Level 4c
Age Related Expectation we need to be delivering at is that the majority of children will:

- They add to, amend and combine different forms of information from a variety of sources.
- They compare their use of ICT with other methods and with its use outside school.

National Curriculum Level 4b
The AA/AA+ children will have progressed further & will also:

- They use ICT to present information in different forms and show they are aware of the intended audience and the need for quality in their presentations.
- They exchange information and ideas with others in a variety of ways, including using e-mail.
- Pupils understand the need for care in framing questions when collecting, finding and interrogating information.

Programme of Study Areas

Finding things out

1) Pupils should be taught:

a) to talk about what information they need and how they can find and use it [for example, searching the internet or a CDROM, using printed material, asking people]

b) how to prepare information for development using ICT, including selecting suitable sources, finding information, classifying it and checking it for accuracy [for example, finding information from books or newspapers, creating a class database, classifying by characteristics and purposes, checking the spelling of names is consistent]

c) to interpret information, to check it is relevant and reasonable and to think about what might happen if there were any errors or omissions.

Developing ideas and making things happen

2) Pupils should be taught:

a) how to develop and refine ideas by bringing together, organising and reorganising text, tables, images and sound as appropriate [for example, desktop publishing, multimedia presentations]

b) how to create, test, improve and refine sequences of instructions to make things happen and to monitor events and respond to them [for example, monitoring changes in temperature, detecting light levels and turning on a light]

c) to use simulations and explore models in order to answer 'What if ... ?' questions, to investigate and evaluate the effect of changing values and to identify patterns and relationships [for example, simulation software, spreadsheet models] .

Exchanging and sharing information

3) Pupils should be taught:

a) how to share and exchange information in a variety of forms, including email [for example, displays, posters, animations, musical compositions]

b) to be sensitive to the needs of the audience and think carefully about the content and quality when communicating information [for example, work for presentation to other pupils, writing for parents, publishing on the internet] .

Reviewing, modifying and evaluating work as it progresses

4) Pupils should be taught to:

a) review what they and others have done to help them develop their ideas

b) describe and talk about the effectiveness of their work with ICT, comparing it with other methods and considering the effect it has on others [for example, the impact made by a desk top published newsletter or poster]

c) talk about how they could improve future work.

Key Skills to be delivered during the coverage above

- communication
- application of number
- information technology
- working with others
- improving own learning and performance
- problem solving

I.C.T. Year 6. Continuous areas.

Outcomes & Assessment Judgement Based from Level Descriptors

National Curriculum Level 4b
Some children will not have made so much progress & will:

- They use ICT to present information in different forms and show they are aware of the intended audience and the need for quality in their presentations.
- They exchange information and ideas with others in a variety of ways, including using e-mail.
- Pupils understand the need for care in framing questions when collecting, finding and interrogating information.

National Curriculum Level 4a
Age Related Expectation we need to be delivering at is that the majority of children will:

- They interpret their findings, question plausibility and recognise that poor-quality information leads to unreliable results.
- They use ICT systems to control events in a predetermined manner and to sense physical data.
- They use ICT-based models and simulations to explore patterns and relationships, and make predictions about the consequences of their decisions.

National Curriculum Level 5
The AA/AA+ children will have progressed further & will also:

- Pupils select the information they need for different purposes, check its accuracy and organise it in a form suitable for processing.
- They use ICT to structure, refine and present information in different forms and styles for specific purposes and audiences.
- They exchange information and ideas with others in a variety of ways, including using e-mail.
- They create sequences of instructions to control events, and understand the need to be precise when framing and sequencing instructions.
- They understand how ICT devices with sensors can be used to monitor and measure external events.
- They explore the effects of changing the variables in an ICT-based model.
- They discuss their knowledge and experience of using ICT and their observations of its use outside school.
- They assess the use of ICT in their work and are able to reflect critically in order to make improvements in subsequent work.

Programme of Study Areas

Finding things out

1) Pupils should be taught:

a) to talk about what information they need and how they can find and use it [for example, searching the internet or a CDROM, using printed material, asking people]

b) how to prepare information for development using ICT, including selecting suitable sources, finding information, classifying it and checking it for accuracy [for example, finding information from books or newspapers, creating a class database, classifying by characteristics and purposes, checking the spelling of names is consistent]

c) to interpret information, to check it is relevant and reasonable and to think about what might happen if there were any errors or omissions.

Developing ideas and making things happen

2) Pupils should be taught:

a) how to develop and refine ideas by bringing together, organising and reorganising text, tables, images and sound as appropriate [for example, desktop publishing, multimedia presentations]

b) how to create, test, improve and refine sequences of instructions to make things happen and to monitor events and respond to them [for example, monitoring changes in temperature, detecting light levels and turning on a light]

c) to use simulations and explore models in order to answer 'What if ... ?' questions, to investigate and evaluate the effect of changing values and to identify patterns and relationships [for example, simulation software, spreadsheet models] .

Exchanging and sharing information

3) Pupils should be taught:

a) how to share and exchange information in a variety of forms, including email [for example, displays, posters, animations, musical compositions]

b) to be sensitive to the needs of the audience and think carefully about the content and quality when communicating information [for example, work for presentation to other pupils, writing for parents, publishing on the internet] .

Reviewing, modifying and evaluating work as it progresses

4) Pupils should be taught to:

a) review what they and others have done to help them develop their ideas

b) describe and talk about the effectiveness of their work with ICT, comparing it with other methods and considering the effect it has on others [for example, the impact made by a desk top published newsletter or poster]

c) talk about how they could improve future work.

Key Skills to be delivered during the coverage above

- communication
- application of number
- information technology
- working with others
- improving own learning and performance
- problem solving