

Stanley Grove Primary and Nursery School

Scheme of work for Computing



We are trusted with Parents' most precious possessions...
... treasure them.

What our children say about Computing.

- “I enjoying using pivot on the laptop because it allows me to be creative” – Year 5
 - “I like doing ICT because I get to use a lot of programs” – Year 3
 - “ICT allows me to do independent research on a topic” –Year 6
 - “I learn how to decode things on the computer” – Year 4

Essentials for this subject:

- All children to be discerning users of the internet and to have an understanding of when to use it.
 - To be confident and creative users, open to new ideas of learning.
 - To treat all equipment with respect.
- To use technology safely and respectfully: keeping personal information private, identify steps needed to remain safe and where to go for support.
 - Children to start to use technology purposefully in a range of context ensuring that the end product if fit for purpose.
 - To gather the knowledge and understanding to become an active participant in the digital world.

Computing

Year 1

Statutory requirements (National curriculum)	Stanley Grove's Key Knowledge and Skills	Suggested outcome/ Activity
<p style="text-align: center;"><u>Computer Science</u></p> <ul style="list-style-type: none"> Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs. 	<p style="text-align: center;"><u>Beebots</u></p> <ul style="list-style-type: none"> To experience toys that have different forms of control. To talk about where computers can be used in the world. Use a beebot with an adults help. Know that to make a beebot you press buttons. To recognise and understand the use of all the beebot buttons. To give an instruction to a programmable toy. Move items on the screen (forwards, backwards, up and down) L1 or using a beebot. Understand the rules when using programmable toys to prolong there life. 	<ul style="list-style-type: none"> Explore a range of control toys. Discuss control in the world e.g. car park barriers, automatic lights. Play control games moving objects on screen using directional instructions. Use the beebots or other programmable toys. Use a digital camera and explore its settings and procedures.
<p style="text-align: center;"><u>Information Technology</u></p> <ul style="list-style-type: none"> Use technology purposefully to create, organise, store, manipulate and retrieve digital content. 	<p style="text-align: center;"><u>Textease Paint</u></p> <ul style="list-style-type: none"> To make simple marks using pen and/or brush tools. Click on pictures and move them around the screen. To be able to change the colour of a brush. To be able to use the tools to clear the screen. To be able to use the paint brush to fill a shape. <p style="text-align: center;"><u>My World/Text</u></p> <ul style="list-style-type: none"> To develop hand eye co-ordination with the mouse. To be able to select a number of objects including words. To be able use the spacebar with support. To be able to save a document using the file and save option with support. To select and use simple mark making tools. To be able to use the backspace key to change or correct text. 	<ul style="list-style-type: none"> To explore simple mark making using textease paint software and its tools. Use the textease software to create a range of simple shapes such as triangles, circles and squares and fill them using paintbrush. Alter the colours of the paint pallet and explore the effects that they can create. <ul style="list-style-type: none"> Use the My World programme to introduce how the mouse can be used to select and move a number of items on screen. Children to select and drag. Demonstrate how to select a brush and how to create different lines and choose different colours. Use simple document tools to write their name or a short sentence, using the spacebar and backspace keys.

	<ul style="list-style-type: none"> To type simple sentences using spaces and capital letters. <p style="text-align: center;"><u>I-Board (Tes)/Databases</u></p> <ul style="list-style-type: none"> To be able to talk about ready made graphs/pictograms explaining what they show. To be able to enter simple information which has been provided, into a ready made template on a computer to make a graph. To be able to talk simply about the results shown on their own graphs. To be able to find answers to a range of simple questions with prompts 	<ul style="list-style-type: none"> Use the I-Board programme from the TES website and get the children to look at a simple graph (eye colour, pets). Children to discuss with support what they can see e.g. count the shapes and pets. Here use the I-Board programme to allow children to add their own information such as 'eye colour' or 'pet' to the graph and look at how it has changed.
Statutory requirements (National curriculum)	Stanley Grove's Key Knowledge and Skills	Suggested outcome/ Activity
<p style="text-align: center;">Digital Literacy</p> <ul style="list-style-type: none"> Recognise common uses of information technology beyond school Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. 	<p style="text-align: center;"><u>Websites</u></p> <ul style="list-style-type: none"> Look at websites with the teacher and discuss what is seen. Understand that the arrow changes on a link or hot spot. Be able to click on links on a website. To be able to use the back button on a website. <p style="text-align: center;"><u>Emails and Messages</u></p> <ul style="list-style-type: none"> Looking at email with the children – discuss what messages are. Understanding there are different ways of sending a message. Recognise what an email may look like. Help send a class email message. <p style="text-align: center;"><u>E-Safety</u></p> <p>Online Research</p> <ul style="list-style-type: none"> Learn that online is not the same as real life. They don't go on the internet unless their teacher or a trusted adult helps them. know how to return to the home page when exploring away from the teacher directed sites so that they can keep safe. 	<ul style="list-style-type: none"> Looking at websites on cbbc/ cbeebies espresso etc and discuss them. Moving the mouse over the screen and watching the icon change – discuss what might be happening Removal of unwelcomed content. <ul style="list-style-type: none"> Look at an email. Show simple email formats Helping write a class email <p>Access online resources</p> <ul style="list-style-type: none"> Cbeebies Museum of Childhood (try also moving toy section) CEOP Thinkuknow resources: based on Hector's World resources www.thinkuknow.co.uk/5_7/

- know how to minimise a screen if they see something inappropriate on a website and tell a trusted adult.

Online communication and collaboration

- understand that passwords should be kept private
- know that online communication is not always confidential and that it can be monitored.

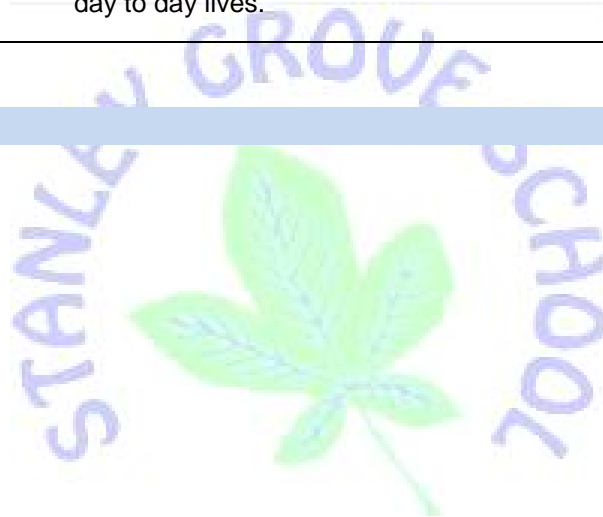
Online publishing

- Learn to respect the work of others which is stored on a shared drive of a network or presented online.

Digital Technology

- To identify a range of digital objects used in our day to day lives.

- Discuss digital technology at home - alarm clock, microwave, digital TV, iPad, SATNAV journey guided or tracked via GPS. Online food ordering for supermarket and take-aways.



Computing

Year 2

Statutory requirements (National curriculum)	Stanley Grove's Key Knowledge and Skills	Suggested outcome/ Activity
<p style="text-align: center;"><u>Computer Science</u></p> <ul style="list-style-type: none"> Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs. 	<p style="text-align: center;"><u>Beebots</u></p> <ul style="list-style-type: none"> Use a beebot more independently. To understand and perform forwards, backwards, up and down instructions. To put together 2 or more instructions to control a programmable toy. To use appropriate keys to make the beebots go forward, backward, left and right and up and down, by using instructions e.g. forward 4, right 1. To enter a sequence of instructions to draw a square. Be able to write/ amend instructions so that they can be followed by others. Be able to look at a set of instructions and predict where the beebot might go. To control a character in an adventure or quest game on screen. To avoid obstacles when giving instructions. 	<ul style="list-style-type: none"> Pre-programme the beebots to follow a path through a set of obstacles. Discuss with the class if the beebots 'knows' where to go. Show how to enter basic instructions. Show how to clear the memory and how to enter instructions one at a time. Children to enter instructions to get the beebots to go to different objects. Demonstrate how to enter sequence of instructions, such as to draw shapes, e.g. forward 10, right 1, forward 5, right 1, forward 5, right 1, forward 5. Give the children opportunity to predict and test sequences of instructions. Describe devices that repeat instructions, such as photocopiers. Show how the repeat button can be used to make the beebots repeat movements. Children to control a character in an adventure or quest game on screen.
<p style="text-align: center;"><u>Information Technology</u></p> <ul style="list-style-type: none"> Use technology purposefully to create, organise, store, manipulate and retrieve digital content. 	<p style="text-align: center;"><u>Textease</u></p> <ul style="list-style-type: none"> To be able to use the backspace key to correct mistakes. To be able to use the space bar key to create spaces between the types words and use the shift key where appropriate. To be able to write in full sentences using spaces, capital letters and full stops. To be able to recognise and use the return/enter key to insert line breaks and create a new paragraph. 	<ul style="list-style-type: none"> Demonstrate to the children how to use the 'delete key' and backspace key to correct mistakes or alter the end text product. Using both digital versions and handwritten versions, discuss the differences between the two examples. Use textease programme to demonstrate how to use spacebar to create a space between words and how the shift key can make a capital letter.

- To be able to highlight text to change the style and font size such as B, U, I.
- To be able to save work using the file and 'save as' option. Those who are comfortable to use the CTL + S function to save a piece of work.
- To be able to retrieve a saved piece of work using the open folder icon with support for all and independently for some children.

Textease Studio Paint

- To be able to use a pen and a brush to create a range of different lines and textures.
- To be able to use the fill tool to ensure that shapes that are created are filled with solid, pattern and gradient fill colours.
- To be able to move and alter the sizes of images and text on the screen with support.
- To be able to resize a shape both with support and independently using the tools available.
- To be able to change the width of a paintbrush, spray and lines to create a range of effects with support and some degree of independence.

Multimedia (inc Power-point)

- To be able to recognise that pictures can be taken with a camera and other digital devices such as an IPOD and IPAD.
- To be able to review these pictures and use the functions available to delete them where necessary.
- To be able to explain what a slide show is and experiment with images and text to create a simple slide show that has a title page and 3 other slides with support.

I-Board (TES)/Databases

- To be able to enter a range of data into a template on a computer to make a graph.
- To be able to talk independently about the results shown on the graphs and create questions about this.
- To be able to fill in a data collection sheet with some support.

- Ask children to assign an appropriate file name to a piece of work when saving so that it can be remembered and retrieved at a later date.
- Ask the children to retrieve a piece of work by using the open file folder within textease.

Using textease paint package ensure that children;

- Can select the brush and pen tools to create different lines and textures.
- Can use the straight line and geometric shapes tool and use a range of colours to fill in these shapes.
- Can manipulate the size of any given image by using the appropriate tools.
- Can recognise that by changing the width of a paintbrush, spray and line can influence the end effect created.
- Children can edit a pre-made slide show (power-point) by changing the number of slides, editing text and pictures to improve it.
- Children can choose and copy appropriate images found on the internet and paste these into a simple slide show presentation.
- Use a topic such as 'pets' and make a list of questions to ask about the pets e.g. what kind of pets do you have? From here, children to create a simple pictogram where simple questions can be answered for e.g. how many people have dogs? Do more people have cats or hamsters? Get the children to think about whether a

	<ul style="list-style-type: none"> • To be able to enter the information collected from the data sheet to make a graph and print this out. • To be able to add a record to a file in a computer database with support. • To be able to ask simple questions about a database. <p>At this stage all children should have a good degree of keyboard skills such as typing, using the spacebar and backspace, delete key and be confident in giving a piece of work a sensible file name so that it can be saved and retrieved for later use.</p>	<p>pictogram can answer this fully.</p> <ul style="list-style-type: none"> • Show the children a simple database and demonstrate to them how the search tool function can be used. • Make a graph from a database, print this and discuss the findings.
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Statutory requirements (National curriculum)	Stanley Grove's Key Knowledge and Skills	Suggested outcome/ Activity
<p><u>Digital Literacy</u></p> <ul style="list-style-type: none"> • Recognise common uses of information technology beyond school • Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. 	<p><u>Websites</u></p> <ul style="list-style-type: none"> • To look at websites and discuss what I see. • To click on links in a website. • To use the back button on a website. • To know that information can be found using the internet. • To print a webpage or espresso page to use as a resource. <p><u>Emails and Messages</u></p> <ul style="list-style-type: none"> • To understand there are different ways of sending a message. • To recognise what an email address looks like. • To join in sending a class email message. • To find the @ key and check that email addresses are in lower case. • To send and reply to messages sent by a safe e-mail partner (within school). <p><u>E-Safety</u></p> <p>Online Research</p>	<p>Remind the children how they use books to find out information, including using the index. Explain how a web page or espresso page contains as much information as several large books. Discuss ways of finding information from a web page or espresso page.</p> <ul style="list-style-type: none"> • Demonstrate how to use the internet safely. Deliver e-safety lessons. Use Hectors world on internet to deliver e-safety messages. • Show how to return to the menu/homepage, use back button on a webpage. • Show how to locate information using a keyword. • Print a webpage to use as a resource. • Removal of unwelcomed content. <ul style="list-style-type: none"> • Create a class email account. • Read and reply to messages from a partner. • Demonstrate how to use email safely. Deliver e-safety lessons.

- Know that you can be accidentally diverted from website through a link to a new website, advertising or pop-up.
- Be able to respond to this by using browser back arrow, or closing the new window.
- Understand what advertising is and learn to ignore embedded advertising
- understand that some information online may be untrue (spoof websites).

Online communication and collaboration

- Keep their password secret.
- Contribute to class discussion forum.

Online publishing

- know that they need to check information before uploading.
- know that the internet can be viewed by anybody and that an secure areas of the school website can only be viewed by people connected to school.

Digital Technology

- To understand the uses of digital objects used in our day to day lives.
- Understanding how digital technology can track and deliver information through smart systems.
- Understand digital technology can be used for leisure.

Teachers introduce spoof websites e.g [moon is made of cheese](#)

CEOP Thinkuknow resources - Hector's World Lessons 1-5 www.thinkuknow.co.uk/5_7/

- Discuss digital technology at home - alarm clock, microwave, digital TV, iPad, SATNAV journey guided or tracked via GPS. Online food ordering for supermarket and take-aways.
- Discuss digital technology at school - Register, Primary tracker, dinner register, IPADS.
- Discuss how parents used digital technology - computerised control and monitoring equipment in manufacturing, productivity suites in an office, or high-end digital tools in creative industries.
- Discuss digital technology whilst shopping - parent may have scanned food at the supermarket, whose supply chain is controlled by smart systems.
- Discuss digital technology as entertainments - Wii or Kinect, smartphones or laptops, tablets and e-book reader.

Computing

Year 3

Statutory requirements (National curriculum)	Stanley Grove's Key Knowledge and Skills	Suggested outcome/ Activity
<p style="text-align: center;"><u>Computer Science</u></p> <ul style="list-style-type: none"> • Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. • Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. • Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. • Understand computer networks including the internet; how they can provide multiple services, such as the World Wide Web; and the opportunities they offer for communication and collaboration. 	<p style="text-align: center;"><u>Beebots</u></p> <ul style="list-style-type: none"> • To use a beebot without adult support. • To control a beebot using forwards, backwards, left, right, up, down. • To avoid obstacles by giving instructions. • Look at a sequence of instructions and predict where the beebot might go. • To enter a sequence of instructions to draw a shape. <p style="text-align: center;"><u>Textease Turtle/ Logo</u></p> <ul style="list-style-type: none"> • To control the textease turtle or equivalent using forwards, backwards, left, right, up, down with support. • To draw a square, rectangle and other regular shapes on screen, using commands such as penup, pendown, repeat etc. • To look at a sequence of instructions and predict where the turtle might go. • To produce an accurate set of instructions that need little amendment. • Use the repeat command. • To use differentiated keypad to give instructions. Yellow (pictorial), Green (Full vocabulary), Blue (Short hand vocabulary). 	<ul style="list-style-type: none"> • Using the car beebots, allow children to experiment with their functions • Model how to programme a specific course into the beebot – children to produce function posters to remind themselves how to use them. • Children use the letters and maps in maths lessons to gain a better understanding of degrees. • Model use of super logo/ Textease Turtle with children • Demonstrate how to use pen up and pen down to write letters. • Demonstrate how a group of instructions can be names such as the procedure for drawing a square. • Show how to put a procedure within a procedure (repeating the procedure for drawing a square e.g. repeat 36(square10))
<p style="text-align: center;"><u>Information Technology</u></p>	<p style="text-align: center;"><u>Textease/word</u></p>	
<ul style="list-style-type: none"> • Use search technologies effectively, appreciate how results are selected and ranked. • Select, use and combine a variety of software (including internet services) on a range of digital 	<ul style="list-style-type: none"> • To insert/delete a word using the mouse and arrow keys. • To be able to highlight text to change its format (B, <u>U</u>, I). 	<ul style="list-style-type: none"> • Look at a variety of printed texts from textease as a model and discuss how the text is altered for effect, focusing on colour, size and type. • Demonstrate how to use the font editing features of

services to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

- To be able to change the font style, format and size of my text using the programme icons.
- To be able to use the automatic spell checker to edit my spellings.
- To be able to use the shift key to type characters such as question marks, capital letters and exclamation marks in my text.
- To be able to save my work independently using an appropriate title.
- To be able to position a text box.
- To be able to align text using L, R and centre functions.
- To be able to insert a picture into a piece of text and resize it.
- To be able to copy graphics from a range of sources such as 'google images' and other appropriate websites and paste them into a suitable package such as 'word', 'textease' or publisher.
- To be able to use a spell check on my whole document independently.

Paint

- To be able to use the shape tools to draw a variety of objects and pictures.
- To be able to use solid, pattern and gradient fills when dealing with shapes and pictures.
- To be able to change the width of brush, spray and lines and use these in combination to create a range of effects.
- To be able to re-size an object independently.
- To be able to copy graphics from a range of sources such as 'google images' and other appropriate websites and paste them into a suitable package such as 'word', 'textease' or publisher.
- To be able to resize graphics and text to make the document fit for purpose.
- To be able to use stamps to create repeat patterns and tessellations.

Multimedia (Power-point)

the package being used. Children to use the key functions to achieve this.

- Ask children to copy a piece of text and then alter these to show different colours, font types and font sizes etc.
- Type in a piece of text with an error. Show how to edit text by highlighting the words and overtyping them.
- Show how to use the shift key to type upper case letters and to type other characters such as question marks
- Demonstrate how to save work and give it a sensible name. Ask the children to edit text and save their work.

- Review activities from Class 2 to ensure children are ready to progress.
- Show the children a piece of text, and then the same piece again but this time with graphics added and discuss the changes and effects.
- Demonstrate to the children on how to locate an image online using a safe search engine (overlap with Web Sites and E-safety)
- Demonstrate how to copy that image using the right mouse button
- Demonstrate how to paste the image into a document and resize/reposition as appropriate.

- Allow the children to collect information from

- To be able use ICT to capture still images for example though a camera, IPOD or an IPAD.
- To be able to create a simple presentation of 3-5 slides that contains a title page, text and images.
- To be able to view the presentation using slide show, by clicking the mouse when appropriate.
- To be able to use images captured from a camera within a presentation for e.g. to support the text within it.

Databases

- To be able to fill in a data collection sheet independently.
- To be able to enter this information and make a graph and print this.
- To be introduced to the grid layout of a spreadsheet programme such as 'excel'.
- To be able to enter data, highlight it and make simple bar charts with support.
- To be able to explain the term record and field and explain how these work briefly when prompted.
- To be able to explain that information can be held as numbers (when being sent), choices or words.
- To be able to translate questions into search criteria to find answers from a database.
- To be able to enter both simple and more complicated data into a database and make bar charts from this.
- To be able to edit data and graphs by changing simple features such as titles and labels.

- around the school grounds using a digital camera, IPAD or other digit device which takes pictures and work with them to upload these to the VLE (shared server) for later independent use.
- Show the children a simple PowerPoint presentation and discuss the features and how this can be improved.
 - Demonstrate how to put an image or graph into a PowerPoint, including using collective images on the class VLE page
 - Demonstrate how to add text and alter it through use of insert text box and the backspace key.
 - Ask the children to create a simple PowerPoint based upon a topic.
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- Create a paper based database of children's information, such as eye colour, pets and hair colour etc.
 - Ask the children to answer questions based on the information they have collected.
 - Get the children to discuss what makes this task easy or difficult (e.g. organising information)
 - Revisit with the children how to input information into I-Board (like in Class 2) and turn this information into a graph.
 - Ask the children to collect information based upon a given topic.
 - Demonstrate how to use the simple functions of a Microsoft spreadsheet.
 - Demonstrate how to create a graph from this information.
 - Ask the children to do these things with the data they have collected.

Digital Literacy

- Understand the opportunities [networks] offer for communication and collaboration
- Be discerning in **evaluating digital content**
- **Use technology safely, respectfully and responsibly;** recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

Websites

- I can click links in a web site.
- I can print a web page to use as a resource.
- I can conduct a search on a web site.
- I can refine my search to get more accurate results.

Network

- I can log on to the pupil shared network
- I can understand a computer network is a group of computers connected together. I know that the internet is a type of network.
- I can add information or files pupil shared network, such as class work or independent research.

Emails and Messages

- I can send and reply to messages sent by a safe e-mail partner (within school).
- I can put a subject title in the correct box
- I can attach a file, such as a piece of homework, to an email I am sending.

E-Safety

Online Research

- Be aware that taking lots of text from websites is stealing other people's work.
- Understand Internet contains fact, fiction and opinion and begin to distinguish between them.

Online communication and collaboration

- Know how to respond to unpleasant communications via mobile phone, text, IM or email, chat rooms. (Save the message and show to trusted adult.).
- Know how to respond when asked for personal details (Learn Five Finger rules, DO NOT give 1. Full Name, 2. Address (Home or School), 3. Telephone/Mobile number, 4. Photographs, 5. E

- Demonstrate how to use a search engine (Google) to find out information about a class topic
- Demonstrate use of Google to find information.
- Give the children a set of questions to research the answers to on the internet.

- Review activities from Class 2 and ensure all children can log onto the computers and the pupil shared network.
- Model making a diagram of a network.
- Model how to add a file, such as a homework activity, to the pupil shared network file.
- What is a computer network?

<http://www.safekidsonline.co.uk/learn/what-is-a-computer-network/>

- Review how to send an email – to each other and to the class teacher
- Discuss the importance of appropriate content in an email.
- Demonstrate and then encourage the children to use the subject box and discuss why this is useful
- Demonstrate how to attach a file to an email and ask the children to do this with something they already have stored

<http://www.lgfl.net/esafety/Pages/safeguarding.aspx>

[Tomato Spider spoof website](#)

<http://www.thinkuknow.co.uk/teachers/>

ThinkUKnow Cybercafé Lessons:

- 1 - Using technology to communicate
- 2 – Introducing cybercafé
- 3 – Communication and information
- 4 – Using email safely

www.thinkuknow.co.uk/8_10/

[Cyber café – Sunil activities](#) found at

CBBC Safesurfing Guide:

<http://www.bbc.co.uk/cbbc/topics/stay-safe>

mail address).

- Know when an email message should not be opened.
- Know the importance of not deleting upsetting emails – saving them for evidence purposes.
- Understand the need to keep personal information and passwords private. (L3)

Online publishing

- Understand the difference to publishing on the safe site and an open site and that if they make their personal information available online it may be seen and used by others. (e.g. use a suitable alias on sites such as ClubPenguin)

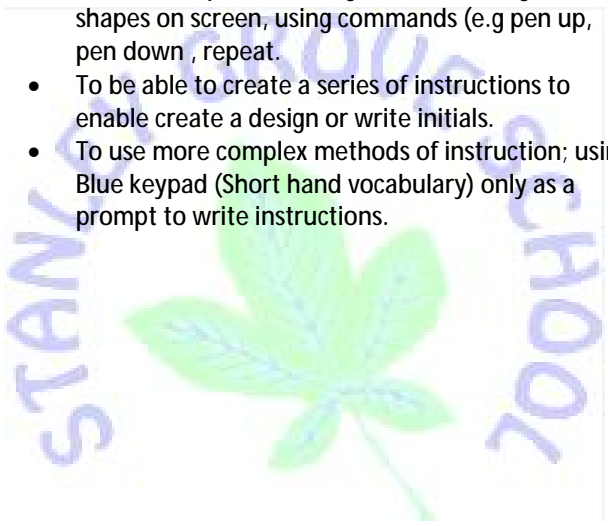
Safesurfing with Doug: Disney-based activities for safety issues

www.disney.co.uk/DisneyOnline/Safesurfing



Computing

Year 4

Statutory requirements (National curriculum)	Stanley Grove's Key Knowledge and Skills	Suggested outcome/ Activity
<p style="text-align: center;">Computer Science</p> <ul style="list-style-type: none"> • Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. • Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. • Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. • Understand computer networks including the internet; how they can provide multiple services, such as the World Wide Web; and the opportunities they offer for communication and collaboration. 	<p style="text-align: center;">Textease Turtle/ Logo</p> <ul style="list-style-type: none"> • To control the textease turtle or equivalent independently. • To draw a square, rectangle and other regular shapes on screen, using commands (e.g pen up, pen down , repeat. • To be able to create a series of instructions to enable create a design or write initials. • To use more complex methods of instruction; using Blue keypad (Short hand vocabulary) only as a prompt to write instructions. 	<ul style="list-style-type: none"> • Ask the class to identify devices that operate on instructions and discuss whether they rely on a single instruction or on a sequence (a barrier in a car park, traffic lights) • Introduce a control box. Show how control language such as 'switch on 1' controls the light • Demonstrate setting up a procedure to flash a light. Demonstrate repeat commands and name the procedure • Children write own procedures to make the bulb flash and sound a buzzer in short bursts • Discuss a simple traffic light set up, discuss the sequence of the lights. Children write own procedure for the lights • Discuss ways in which measurements of environmental data are taken in a range of everyday situations (weather forecasting, central heating) Discuss difficulties when collecting data over a very short or long periods of time and discuss different ways of recording (tables and graphs). • Show how to link a sensor to the computer. Record levels of light etc and show changes on computer screen. Children have a go themselves.
<p style="text-align: center;">Information Technology</p> <ul style="list-style-type: none"> • Use search technologies effectively, appreciate how results are selected and ranked. • Select, use and combine a variety of software (including internet services) on a range of digital 	<p style="text-align: center;">Word</p> <ul style="list-style-type: none"> • To be able to change the font, format and size of any text making appropriate for the text type. • To be able to delete, insert and replace text to improve clarity and create mood depending on the 	<ul style="list-style-type: none"> • Model to the children using word package to show how to change font size and how to use bold to emphasize important text. • Model how cut and paste can be used to reorder a

services to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

- audience.
- To be able to use a spell checker at all times to edit spellings within the text.
 - To be able to highlight text to copy and paste.
 - To be able to use control c/v to copy and paste any words from a document or a range of sources.
 - To be able to can create a text box and position it into a suitable place on the page.
 - To be able to align my text using the left, right and centre tools within the word package independently.
 - To be able to amend text using the find and replace function.
 - To be able to change the page layout to portrait or landscape independently.
 - To be able to confidently format all text to suit the purpose of my document for e.g. letter or instruction text.
 - To be able to use the bullets and numbering tools confidently.
 - To be able to use the word count tool to check the length of my document so that it remains within limit.
 - To be able to 'save as' function to keep drafts and the CTL + S function to save any new updates whilst working on task.

Paint

- To be able to use stamps and the cut copy tool to create multiple repeating patterns independently.
- To be able to copy graphics from a range of sources such as 'google images' and paste it into a word, textease or desktop publishing program.
- To be able to alter the size of the brush tool to create a number of interesting effects.
- To be able to use CTRL C to copy and CTRL V to paste as shortcut keys independently.
- To be able to select appropriate areas of a document, copy and resize them to fit the document.

piece of text (letter or a poem)?

- Model to the children on how to amend text, using delete and find and replace – children to choose better vocabulary
 - Demonstrate the use of the spell check in how it can be effective tool to support correct spelling use but not replace spelling knowledge.
 - To use suggested programmes to polish/edit a piece of text e.g letter, instruction or list.
 - To ensure that a range of writing is produced to meet the needs of an audience.
-
- Explain that some of the same ICT features, such as cut and paste, can be used to develop pictures
 - Collect some wrapping paper that uses repeated patterns, discuss how the patterns and talk about the background colours used within these. Compare how the stamp function can replicate this.
 - Discuss work of Seurat and his use of dots. Demonstrate how to alter the size and pattern of the brush tool to produce a 'pointillist' effect.
 - Demonstrate how different areas of the screen can be selected, copied and resized. Children could create a fish tank by drawing a single fish, then making multiple copies of different sizes.

- To be able to use a range of visual effects, such as reflection and symmetry within a graphics piece.
- To be able to recognise that by choosing an appropriate file type such as a gif or jpeg file format, can affect the size of the saved file.
- To be able to resize graphics and text to suit the document I am making for my audience.
- To be able to make an information poster applying the graphic skills to good effect.

Multimedia

- To be able to use ICT such as cameras, IPOD and IPADS to capture still images independently.
- To be able to use ICT such as camera, IPODS and IPADS to record sounds and capture both still and video images appropriate to the task which is being done.
- To be able to create a presentation of 3 -5 slides that is fit for purpose including text and images.
- To be able to ensure that my presentation moves on with the click of a mouse.
- To be able to put some animation with support into my presentation.
- To be able to make multimedia presentations which contain basic sound, transition animation between slides and buttons (click of the mouse) to navigate with some support.
- I have made a home page for a web site that contains links to other pages.(L4)
- To be able to capture my own simple sounds, videos and images.

Databases

- To be able to design simple questionnaires to record numbers, text and choices.
- To be able to translate questions into search criteria to find answers from a database independently.
- To be able to enter data into a database and make bar charts from this data.
- To be able to know that different graphs such as line graphs and bar charts are used for different

- Teach the skills listed.
- Get the children to examine previous multimedia presentations from previous years and gather ideas and evaluate the effectiveness of these presentations.
- Use the new skills learned in multimedia to create a presentation linked to the class topic.

- Show examples of different graphs: bar charts, pie charts and line graphs and as a class discuss these.
- Remind class about the purpose of fields and records.
- Produce a class database. Suggest fields that could be included in the database (hair, eye colour, sex, height, shoe size etc)
- Children to design a questionnaire to collect data. Remind class about number, text and choice fields.

	<p>purposes such as showing favourite team or temperature throughout the day.</p> <ul style="list-style-type: none"> • To be able to create charts, graphs and tables that I create and copy and paste into other documents with some support. • Use the 'AND' functions in searching a database. • To be able to enter simple labels and numbers into an excel spreadsheet. • To be able to recognise the grid layout of a spreadsheet program • To be able to use the terms cell, rows and columns knowing what they mean with confidence. • To be able to enter data highlight it and make bar charts. • To be able to recognise that the function 'SUM' can be used to calculate the total of a set of numbers in a range of cells. <p>At this point, the children should be applying the skills learnt and starting to produce work which is tailored towards their intended audience and fit for purpose.</p>	<ul style="list-style-type: none"> • Help the children create a database with suitable fields. Interrogate the data and create pie charts. • Enter results from a science experiment, such as pulse rate before, during and after exercise. Draw a line graph of the results. • Discuss the effectiveness of different types of graphs such as bar charts and line graphs as a group. • Show how to move around a spreadsheet and how to enter numbers and labels. Children produce a simple table showing the costs of various items or times table sentences $1 \times 3 = 3$ • Begin to show the children how to enter formula into a spreadsheet` Children to use formulae to add the contents of two cells. Explore subtraction, multiplication and division and predict how cells will change. Introduce the use of 'SUM(c1:c2) to calculate a range of totals.
Statutory requirements (National curriculum)	Stanley Grove's Key Knowledge and Skills	Suggested outcome/ Activity
<p><u>Digital Literacy</u></p> <ul style="list-style-type: none"> • Understand the opportunities [networks] offer for communication and collaboration • Be discerning in evaluating digital content • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact 	<p><u>Websites</u></p> <ul style="list-style-type: none"> • I can conduct a search on a website • I can refine my search to get more accurate results • I search for the most suitable website, refining my search as appropriate. • I can copy extracts of text to paste into a document for editing. <p><u>Network</u></p> <ul style="list-style-type: none"> • I can log on to the pupil shared network • I can understand a computer network is a group of computers connected together. • I can add and retrieve information or files from the pupil shared network, such as class work or 	<ul style="list-style-type: none"> • Use websites as a tool to research class topics. • Review activities from Class 3 and ensure all children can log onto the computers and the pupil shared network. • Model how to retrieve a file, such as a homework

independent research.

- Develop understanding of what a computer network is and know that the internet is a network.
- Understand wireless and wired networks. LAN and WAN Networks.

Emails and Messages

- I can conduct a video chat with someone elsewhere in the school or in another school.
- I can send an e mail with an attachment.
- I can write a blog.



E-Safety

Online Research

- Understand copyright issues – what images / videos / sounds are legal and safe to use.
- Plagiarism.
- Be aware that web sites are not always accurate and that information should be evaluated and checked before it is used.

Online communication and collaboration

- Begin to identify emails that may be malicious or inappropriate to open.
- Begin to recognise when an attachment may be unsafe to open.
- Use sensitive and appropriate language when using email, video chatting and instant messaging.

Online publishing

- Understand that if they make their personal information available online it may be seen and used by others.
- Understand some of the risk and rewards involved in publishing online and know how to keep safe.
- Recognise the effect that their writing or images may have on others.

activity, from the pupil shared network file.

- What is a computer network?
<http://www.safekidsonline.co.uk/learn/what-is-a-computer-network/>

- Demonstrate how to connect and video chat with another child.
- Send an email – to each other and to the class teacher
- Discuss the importance of appropriate content in an email.
- Ensure subject box is used and remind why this is useful.
- Attach a file to an email and ask the children to do this a specific file.
- Demonstrate how to write a blog.
<http://www.epals.com/#!/main>
-

<http://www.lgfl.net/esafety/Pages/safeguarding.aspx>

Tree Octopus: spoof website for evaluation

<http://zapatopi.net/treeoctopus.html>

ThinkUKnow Cybercafe Lessons 5 'responsible use of the internet'

www.thinkuknow.co.uk/8_10/

CyberQuoll

<http://www.cybersmart.gov.au/cyberquoll/index.html>

Age appropriate websites related to topics

Internet explorer

Safe search engines

KS1 and 2 Safer Internet Day Assembly video.

<http://www.thinkuknow.co.uk/teachers/>

- | | |
|--|--|
| <ul style="list-style-type: none">• Respect the ideas and communications of others/ they encounter online.• Know that need to have appropriate permission for use of images of friends or those they have found online. | |
|--|--|



Computing

Year 5

Statutory requirements (National curriculum)	Stanley Grove's Key Knowledge and Skills	Suggested outcome/ Activity
<p style="text-align: center;"><u>Computer Science</u></p> <ul style="list-style-type: none"> Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. Understand computer networks including the internet; how they can provide multiple services, such as the World Wide Web; and the opportunities they offer for communication and collaboration. 	<p style="text-align: center;"><u>Flowe!</u></p> <ul style="list-style-type: none"> To introduce children to Flowe! and how to produce a simple flowchart. To use prompt sheets to write commands. 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 control output devices, by building a sequence of events, to solve a problem. <p style="text-align: center;"><u>Scratch</u></p> <ul style="list-style-type: none"> To introduce children to Scratch and how to produce a simple moving sprite. To be able to create a series of instructions to enable the avatar to move. To use prompt sheets to write commands. To use simple procedures to control more than one sprite and introduce speech to sequence. <p>Hour of Coding @ code.org</p> <p>Lego Mindstorms</p>	<ul style="list-style-type: none"> Ask the class to identify devices that operate on instructions and discuss whether they rely on a single instruction or on a sequence (a barrier in a car park, traffic lights) Introduce a control box. Show how control language such as 'switch on 1' controls the light Demonstrate setting up a procedure to flash a light. Demonstrate repeat commands and name the procedure Children write own procedures to make the bulb flash and sound a buzzer in short bursts Discuss a simple traffic light set up, discuss the sequence of the lights. Children write own procedure for the lights Discuss ways in which measurements of environmental data are taken in a range of everyday situations (weather forecasting, central heating) Discuss difficulties when collecting data over a very short or long periods of time and discuss different ways of recording (tables and graphs). Show how to link a sensor to the computer. Record levels of light etc and show changes on computer screen. Children have a go themselves.
<p style="text-align: center;"><u>Information Technology</u></p> <ul style="list-style-type: none"> Use search technologies effectively, appreciate how results are selected and ranked. Select, use and combine a variety of software 	<p style="text-align: center;"><u>Word/Textease</u></p> <ul style="list-style-type: none"> To be able to change the page layout (landscape, portrait) independently and fitting the purpose of the text. 	<ul style="list-style-type: none"> Here work and activities are linked into more independent topics or class topics which allow children the freedom to use the array of skills learnt in lessons.

(including internet services) on a range of digital services to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

- To be able to confidently choose the correct page setup option when creating my document.
- To be able to ensure that layout is thoughtful and readable for the audience.
- To be able to confidently format all text to suit the purpose of my document such as resizing, changing font type, text wrapping and altering effects e.g. *bold*, *italic* etc
- To be able to independently incorporate graphics where appropriate, using the most effective text wrapping formats.
- To be able to use the 'hanging indent' tool to help format work where appropriate (e.g. a play script).
- To be able to use the word count tool to check the length of my document ensuring that it meets the needs of the audience.
- To be able to use bullets and numbering tools confidently and effectively within pieces of work that ensure it is fit for purpose.
- To be able to use the 'save as' function to keep drafts and the CTL + S function to save any new updates whilst working on task independently.
- To be able to use search engines for information, images and video online with awareness that filtering can vary depending on setting in school and at home, avoiding advertising popups recognising that because links are ranked does not make them the most accurate or Fit for purpose.

Graphics

- To be able to save an image document as a gif or jpeg file format, using the 'save as' command (L4)
- To be able to use the 'save as' when choosing gif or jpeg wherever possible to make the file size smaller (for saving, emailing and future downloading from file)
- To be able to explore the menu options within graphic publications such as Textease paint and experiment with the images collected, (colour, effects, options, snap to grid, grid settings etc).
- To be able to add special effects to alter the appearance of a graphic e.g. word/text art and use of shadow.

Topic work to be word processed and aimed at ultimately sharing with other children or younger children in school.

- Reordering text using cut and paste.
- All work is now aimed at being fit for purpose. Children are to be given task and responsibility is on them recognising how a piece of work should be presented. For instance, they have to decide on a number of things such as font type, font size, any use of graphics, page orientation and layout of the text. The end product is aimed to be 'Fit for Purpose'.

- Discuss techniques used in paint packages such as Textease paint and the limitations of using these specific packaged(difficult to move specific aspects of a picture)
- Focus should be on using the graphics package i.e. Textease paint to create geometric shapes (The Snail by Matisse could be used as inspiration) – shapes can be selected, copied, layered, orientated and resized accordingly.
- Introduce straight and curved lines, geometric shapes and curved shapes – create graphic elements to produce a version of The Snail.

- To be able to choose graphics which are 'Fit for Purpose' and where appropriate use the most effective text wrapping formats.

Multimedia

- To be able to confidently use ICT such as cameras, IPAD or other digital devices to record sounds and capture both still and video images to be saved and used at a later time.
- To be able to make multimedia presentations that contain sound, animation, slide transitions and buttons to navigate through the slide show.
- To be able to create a multimedia presentation that uses an appropriate design aimed at the target audience.
- To be able to produce a slide show that contains links to other pages e.g. clicking on a link within the contents.
- To be able to capture recorder sounds, video and still images and then edit these using an editing package so that they are fit for audience viewing.

Databases

- To be able to search a database using +< and =>.
- To be able to search a database using 'AND'.
- To be able to search a database using 'OR'.
- To be able to create databases and/or spreadsheets, planning the fields, rows and columns carefully so that they fit their function.
- To be able to create charts, graphs and tables that are then copied and pasted into other documents such as 'word'.
- To be able to use ICT to create pie charts and explain them.
- To be able to use ICT to create line graphs and explain them confidently in terms of what they show.
- To be able to use ICT to test an hypothesis.
- To be able use a branching database.

Excel – Spreadsheets

- To be able to enter labels and numbers into a spreadsheet.

- Show a variety of multimedia page designs to the children and then they evaluate them for effectiveness.
- Demonstrate how to record sounds using a microphone and how to create a button which plays the sounds when pressed within the presentation.
- Demonstrate how buttons can create links between pages (i.e. within the presentation itself).

- Use a prepared database on a topic such as birds
- Remind the children how to carry out simple searches using '=' and sorting on one field. Discuss questions which require other types of searches (need for focused searches).
- Show how to use '<=' and '>=' in a search> Ask children to work in groups to answer comparative questions
- Show how to use 'AND' and 'OR@' in a search.

- Children to use excel to work to a budget. This could be a household or party budget. Totals need to be recalculated if prices or quantities change

	<ul style="list-style-type: none"> • To be able to enter formulae into a spreadsheet. • To be able to use 'SUM' function to calculate the total of a set of numbers in a range of cells. • To be able to identify formulae and enter them into a spreadsheet with confidence. • To be able to copy cells. • To be able to use a spreadsheet to draw a graph. • To be able to change data and formulae in a spreadsheet to answer 'what if...?' questions and check predictions. • To be able to use ICT to create pie charts, line graphs and to explain them. 	<ul style="list-style-type: none"> • Review how to move around a spreadsheet and how to enter numbers and labels. Children to produce a table showing costs of various items as a starter. • Review how to enter a formula into a spreadsheet. Children to use formulae to add the contents of two cells. Explore subtraction, multiplication and division and predict how cells will change • Review the use of '=SUM (c1:c2)' as a shorter way of producing totals • Discuss how you can use a spreadsheet to explore a mathematical problem.
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Statutory requirements (National curriculum)	Stanley Grove's Key Knowledge and Skills	Suggested outcome/ Activity
<p style="text-align: center;"><u>Digital Literacy</u></p> <ul style="list-style-type: none"> • Understand the opportunities networks offer for communication and collaboration • Be discerning in evaluating digital content • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact 	<p style="text-align: center;"><u>Network</u></p> <ul style="list-style-type: none"> • I can add and retrieve information or files from the pupil shared network, such as class work or independent research. • Understand wireless and wired networks. LAN and WAN Networks. • Understand the use of routers, servers and meaning of terms such as "gateways", "hubs" and "switches". • Network connects can be establishes through radio or satellite signals, copper wires or fibre-optic cables. <p style="text-align: center;"><u>Emails and Messages</u></p> <ul style="list-style-type: none"> • I can conduct a video chat with someone elsewhere in the school or another school. • I can conduct a video chat with more than one person at a time. • I can send an email with numerous attachments. <p style="text-align: center;"><u>E-Safety</u></p> <p>Online Research</p> <ul style="list-style-type: none"> • Search sensibly for images and video online with 	<p>What is a computer network? http://www.safekidsonline.co.uk/learn/what-is-a-computer-network/</p> <ul style="list-style-type: none"> • Use video conferencing to talk to another school in another part of the world. • Email the teacher, or another child in the class. Attach at least 3 documents to an email to another. <p>Dog Island Free Forever: spoof website for evaluation http://www.thedogisland.com/</p>

awareness that filtering can vary depending on setting in school and at home, avoiding advertising popups and other distractions.

- They use a range of sources to check validity and recognise different viewpoints. They critically evaluate the information they use, and understand some of the potential dangers of not doing so.
- Understand Wikis are multi-author web documents which have not always been verified.

Online publishing

- Demonstrate safe practice in selecting and uploading appropriate images, text, sound and video to the school website. Extend online publishing to using Podcasting sound and video, creating forums and polls and selecting and setting up RSS feeds.
- Understanding severity of the Impact on an individual of sending or uploading unkind or inappropriate content particularly when a wider audience views the content.
- Understand that you should not publish other peoples' pictures or tag them on the Internet without their permission.
- Understand malicious adults use the internet to make contact and groom" young children" and how to report any suspicions (Think You Know REPORT ABUSE page)

Digital Technology

CyberQuoll

<http://www.cybersmart.gov.au/cyberquoll/index.html>

KS 2 Safer Internet Day Assembly video.

<http://www.thinkuknow.co.uk/teachers/>

'You never know who you are talking to' video

<http://www.youtube.com/watch?v=xZHq4CQekTY>

Clair's story from CEOP (11-16)

<http://www.thinkuknow.co.uk/teachers/>

Summer term – please note teachers need training and support to deliver this.

Let's fight it together.Cyberbullying Childnet comprehensive teaching resources and video :

<http://www.digizen.org/>

ThinkUKnow Cybercafe Lesson 9: Social Networking – Safe Profiling

www.thinkuknow.co.uk/8_10/

Computing

Year 6

Statutory requirements (National curriculum)	Stanley Grove's Key Knowledge and Skills	Suggested outcome/ Activity
<p style="text-align: center;"><u>Computer Science</u></p> <ul style="list-style-type: none"> • Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. • Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. • Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. • Understand computer networks including the internet; how they can provide multiple services, such as the World Wide Web; and the opportunities they offer for communication and collaboration. 	<p style="text-align: center;"><u>Flowel</u></p> <ul style="list-style-type: none"> • I can use simple procedures to control more than one output device. • To be able to check procedures for errors. • To be able to create, test, modify and store a sequence of instructions to control a device. • To use simple control language to activate multiple outputs and have more than one predetermined action. • To explore what if questions by planning different scenarios for my control devices. • To use 'if...then...' and 'repeat forever'. • To use ICT to measure sound or light or temperature using sensors. • To interpret data given to me from using the sensors. <p style="text-align: center;"><u>Scratch</u></p> <ul style="list-style-type: none"> • To control a number of sprites by giving direct instructions with support. • To use more complex procedures to control multiple sprites simultaneously e.g. conversation and movement. • To be able to use complex and repeating procedures to create an effect or manipulate the sprites e.g. fade, turn on touch. • To use 'if...then...' and 'repeat forever'. • To use more complex procedures to co-ordinate sprites e.g. speech back and forth, timing. • To be able to check procedures for errors. • To be able to create, test, modify and store a sequence of instructions to control a sprite. 	<ul style="list-style-type: none"> • Review devices that operate on instructions and discuss whether they rely on a single instruction or on a sequence. • Review the control boxes. • Review how to write a sequence of instructions. • Discuss how cause and effect devices work (central heating, security lights. The environment is monitored (when it gets cold the heating comes on). • Discuss difference between a timed event and an event that occurs as a result of measuring physical change. • Look at a simple procedure to make the light sensor work. • Use more complex Flowel challenges.

Statutory requirements (National curriculum)	Stanley Grove's Key Knowledge and Skills	Suggested outcome/ Activity
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Information Technology

- Use search technologies effectively, appreciate how results are selected and ranked.
- Select, use and combine a variety of software (including internet services) on a range of digital services to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

Word

- To be able to change the font , format and size of my text.
- To be able to delete, insert and replace text to improve clarity and create mood.
- To be able to use a spell checker to edit my spellings.
- To be able to highlight text to copy and paste.
- To be able to use control c/v to copy and paste.
- To be able to create a text box and position it.
- To be able to align my text using the left, right and centre tools.
- To be able to change text using find and replace.
- To be able to change the page layout (Landscape/portrait) independently.
- To be able to confidently format all text to suit the purpose of my document.
- To be able to use the bullets and numbering tools confidently for e.g. when writing instruction text.
- To be able to use the word count tool to check the length of my document.
- To be able to use 'save as' to keep drafts so that they can be used at a later time.
- To be able to confidently choose the correct page setup option when creating my document.
- To be able to choose a layout, which is thoughtful and readable.
- To be able to confidently use text-formatting tools, including heading and body text.
- To be able to incorporate graphics where appropriate, using the most effective text wrapping formats.
- To be able use the 'hanging indent' tool to help format work where appropriate (e.g. a play script).
- To be able to use the word count tool to check the length of my document.

Graphics

- To be able to use stamps and the cut copy tool to create multiple repeating patterns independently.
- To be able to copy graphics from a range of sources such as 'google images' and paste it into a word, textease or

- Show how to change font size and how to use bold
- Show how to cut and paste – children to reorder a piece of text (a poem?)
- Show how to amend text, using delete and find and replace – children to choose better vocabulary
- Demonstrate the use of the spell check
- To use suggested programmes to polish/edit a piece of text e.g narrative or recount. Ensure that the finished piece is 'fit for purpose'.
- Here work and activities are linked into more independent topics or class topics which allow children the freedom to use the array of skills learnt in lessons. Topic work to be word processed and aimed at ultimately sharing with other children or younger children in school.
- Reordering text using cut and paste.
- All work is now aimed at being fit for purpose. Children are to be given task and responsibility is on them recognising how a piece of work should be presented. For instance, they have to decide on a number of things such as font type, font size, any use of graphics, page orientation and layout of the text. The end product is aimed to be 'Fit for Purpose'.
- Discuss techniques used in paint packages such as Textease paint and the limitations of using these specific packaged(difficult to move specific aspects of a picture)
- Focus should be on using the graphics package i.e. Textease paint to create geometric shapes (The Snail by

desktop publishing program.

- To be able to alter the size of the brush tool to create a number of interesting effects.
- To be able to use CTRL C to copy and CTRL V to paste as shortcut keys independently.
- To be able to select appropriate areas of a document, copy and resize them to fit the document.
- To be able to use a range of visual effects, such as reflection and symmetry within a graphics piece.
- To be able to recognise that by choosing an appropriate file type such as a gif or jpeg file format, can affect the size of the saved file.
- To be able to resize graphics and text to suit the document I am making for my audience.
- To be able to make an information poster applying the graphic skills to good effect.
- To be able to save an image document as a gif or jpeg file format, using the 'save as' command (L4)
- To be able to use the 'save as' when choosing gif or jpeg wherever possible to make the file size smaller (for saving, emailing and future downloading from file)
- To be able to explore the menu options within graphic publications such as Textease paint and experiment with the images collected, (colour, effects, options, snap to grid, grid settings etc).

Multimedia

- To be able to confidently use ICT such as cameras, IPAD or other digital devices to record sounds and capture both still and video images to be saved and used at a later time.
- To be able to make multimedia presentations that contain sound, animation, slide transitions and buttons to navigate through the slide show.
- To be able to add and change the timings that slides are displayed on screen for.
- To be able to create a multimedia presentation that uses an appropriate design aimed at the target audience.
- To be able to produce a slide show that contains links to other pages e.g. clicking on a link within the contents.
- To be able to capture recorder sounds, video and still

Matisse could be used as inspiration) – shapes can be selected, copied, layered, orientated and resized accordingly.

- Introduce straight and curved lines, geometric shapes and curved shapes – create graphic elements to produce a version of The Snail.
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- Show a variety of multimedia page designs to the children and then they evaluate them for effectiveness.
- Demonstrate how to record sounds using a microphone and how to create a button which plays the sounds when pressed within the presentation.
- Demonstrate how buttons can create links between pages (i.e. within the presentation itself).

images and then edit these using an editing package so that they are fit for audience viewing.

All of the above objectives should be taught alongside those in previous years. In addition, there should be an even greater focus on ensuring that the work is 'fit for purpose'.

Excel – Spreadsheets

- To be able to enter labels and numbers into a spreadsheet.
- To be able to enter formulae into a spreadsheet.
- To be able to use 'SUM' function to calculate the total of a set of numbers in a range of cells.
- To be able to use formulae to make adjustments to the spreadsheet as would be in real life e.g. household budget and bills.
- To be able to identify formulae and enter them into a spreadsheet with confidence.
- To be able to copy cells.
- To be able to use a spreadsheet to draw a graph.
- To be able to change data and formulae in a spreadsheet to answer 'what if...?' questions and check predictions.
- To be able to use ICT to create pie charts, line graphs and to explain them.

- Children to use excel to work to a budget. This could be a household or party budget. Totals need to be recalculated if prices or quantities change
- Review how to move around a spreadsheet and how to enter numbers and labels. Children to produce a table showing costs of various items as a starter.
- Review how to enter a formula into a spreadsheet. Children to use formulae to add the contents of two cells. Explore subtraction, multiplication and division and predict how cells will change
- Review the use of '=SUM (c1:c2)' as a shorter way of producing totals
- Discuss how you can use a spreadsheet to explore a mathematical problem.

Statutory requirements (National curriculum)	Stanley Grove's Key Knowledge and Skills	Statutory requirements (National curriculum)
<p><u>Digital Literacy</u></p> <ul style="list-style-type: none"> • Understand the opportunities networks offer for 	<p><u>Network</u></p> <ul style="list-style-type: none"> • I can add and retrieve information or files from the 	<p><u>Digital Literacy</u></p> <ul style="list-style-type: none"> • Understand the opportunities [networks] offer for

<p>communication and collaboration</p> <ul style="list-style-type: none"> • Be discerning in evaluating digital content • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact 	<p>pupil shared network, such as class work or independent research.</p> <ul style="list-style-type: none"> • Understand in further depth what a computer network is and know that the internet is a network. • To have an understanding that data is digitised numerally. Binary Code. • Understand the term “protocol” or IP. • Understand the range of communication via networks (such as email, video conferencing, blogs, forums, social networks) and collaboration, such as wikis (including Wikipedia) <p style="text-align: center;"><u>Emails and Messages</u></p> <ul style="list-style-type: none"> • I can conduct a video chat with someone elsewhere in the school or another school. • I can conduct a video chat with more than one person at a time. • I can send an email with numerous attachments. <p style="text-align: center;"><u>E-Safety</u></p> <p>Online Research</p> <ul style="list-style-type: none"> • Search sensibly for images and video online with awareness that filtering can vary depending on setting in school and at home, avoiding advertising popups and other distractions. • They use a range of sources to check validity and recognise different viewpoints. They critically evaluate the information they use, and understand some of the potential dangers of not doing so. • Recognise that not all information on the internet is accurate or unbiased (advertising) and develop a range of strategies for identifying the origin of a website. • Understand the issues of plagiarism, copyright and data protection in relation to their work • Understand that the resources they find may be covered by copyright. They understand that not all information on the internet is legal to use or copy, even if sources are acknowledged. <p>Online publishing</p> <ul style="list-style-type: none"> • Demonstrate safe practice in selecting and uploading appropriate images, text, sound and 	<p>communication and collaboration</p> <ul style="list-style-type: none"> • Be discerning in evaluating digital content • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact
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video to the school website. Extend online publishing to using Podcasting sound and video, creating forums and polls and selecting and setting up RSS feeds.

- Understanding severity of the Impact on an individual of sending or uploading unkind or inappropriate content particularly when a wider audience views the content.
- Understand and discuss the need to use privacy settings on SNS. Understanding the pitfalls of your site being linked from your friends' sites.
- understand that you should not publish other peoples' pictures or tag them on the Internet without their permission
- Understand malicious adults use the internet to make contact and groom" young children" and how to report any suspicions (Think You Know REPORT ABUSE page)

