Jerry Clay Academy: Computing – Year Group Expectations

Year 1					
We are treasure hunters	**We are TV chefs**	**We are painters**	**We are collectors**	**We are story tellers**	**We are celebrating**
• I can follow instructions. • I can record a set of instructions. • I can program a toy. • I can give instructions. • I know what input, program and output means for a robot toy. • I can give examples of input, program and output. • I can create a program. • I can spot and correct	• I can write and/or draw the steps of a recipe. • I can change my recipe to make it better. • I know what will happen when others use my recipe. • I can use a video camera to record video. • I can move files from the camera onto the computer. • I can edit video.	• I can use a paint program. • I can edit an image. • I can use a paint program to show details of my character. • I can put more than one image into a document. • I can save my work. • I can save my document in a portable format, for example PDF. • I can find images on the web. • I know how to let my teacher know if I am worried about an image.	• I can look for pictures on the web. • I can copy a picture and put it in my presentation. • I can move pictures in my presentation. • I can resize picture • I can sort pictures in order of size. • I can choose the best pictures for my collection. • I know how to let my teacher know if I am worried about a picture. • I know that there are some pictures I can copy and some that I can't.	• I can practise the sound effects for my book. • I can record the sound effects. • I can listen to the sound effects and make them even better. • I can practise the dialogue for my book. • I can record the dialogue. • I can listen to the dialogue and make it even better. • I can put the sound effects and dialogue together in my book • I can give helpful feedback to my friends.	• I can type words. • I can type symbols. • I can type carefully and check my work for mistakes. • I can change the way the words look in my card. • I can find pictures on the web. • I can edit a picture to suit my card. • I can put words and a picture together to make a card. • I can listen to my friends' ideas and make my card even better. • I can save my work and open it when I next need it.

mistakes in a program (debug). • I can predict where a set of instructions will take a toy or person. • I can look for ways to make a program work better		• I can give helpful feedback to my friends. • I can see how digital images are created. • I can see how images are stored on a computer. • I can make my work even better.	• I can put pictures into groups. • I can use yes or no questions to find a picture. • I can see how drawings and photos are different. • I can add labels to my presentation. • I know I shouldn't put my name or a photo of myself on the web.	• I can save my work and open it when I next need it. • I know how my recording is saved on the computer. • I can see how talking books and reading books are different.	• I know how my card is saved on the computer. • I can see how cards on paper and cards on the computer are different.

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Year 2					
We are astronauts	**We are game testers**	**We are photographers**	**We are researchers**	**We are detectives**	**We are zoologists**
• I can plan a route from one place to another. • I can plan a route to more than one place. • I can pretend to be a robot and follow instructions. • I can program a toy. • I can program a sprite to move in Scratch.	• I can talk about what happens in a computer game. • I can see that a computer game works by following instructions. • I can see how computer games are similar. • I can predict what will happen in a computer game. • I can test a computer game.	• I can take photos. • I can take photos that are in focus. • I can take high quality photos. • I can decide if a photo is worth keeping. • I can edit photos. • I can edit photos to make them look better. • I can choose my best photos for our class collection. • I can talk about how I took,	• I can add questions to a mind map. • I can organise questions in my mind map. • I can find information to add to my mind map. • I can use search engines. • I can use the web to find information. • I know that it is important to say where I found information. • I know that there are some images I can copy and some that I can't.	• I can read an email. • I can write and reply to an email. • I can check my email for mistakes before I send it. • I can see if an email and an attachment are from someone I know and trust. • I can read and understand the headers of an email. • I know how important it is to type an email address correctly. • I can see how an email address has two parts. • I can see that the domain name in an	• I can take photos of bugs. • I can take photos of bugs that are in focus and of high quality. • I can edit my photos (e.g. cropping). • I can label my photos and rate them. • I can move my photos onto the computer or to a website. • I can use yes or no questions to decide which group a bug fits into. • I can create a chart. • I can add a title and label the axes of my chart.

• I can program a sprite to move in Scratch using blocks. • I can predict where instructions will take a person, toy or sprite. • I can record instructions to move a toy or sprite from one place to another. • I can record instructions to move a toy or sprite to more than one place. • I can spot and correct	• I can find and understand the code for a computer game in Scratch. • I can change the code for a computer game in Scratch to make it work better. • I know to tell someone if I am worried about a computer game. • I know that some games are for older children. • I can see why it can be hard to stop playing computer games.	edited and chose my best photos. • I can give helpful feedback to my friends. • I know how to let my teacher know if I am worried about an image. • I know that there are some photos I shouldn't put on the web.	• I can find images and add them to my presentation. • I know how to let someone know if I am worried about something on the web. • I can create a presentation that shows my research. • I can use my presentation to teach others about a topic. • I can present information clearly. • I can make my presentation fun and interesting.	email address gives important information. • I can take notes from an email in writing or using an audio recorder. • I can create a spreadsheet. • I can organise a spreadsheet so it shows me the information I need. • I know what to do if I'm worried about opening an email. • I know that I must always be careful about opening emails and attachments.	• I can change the way my chart looks. • I can show my results in different types of charts. • I can use a digital map to find a place. • I can use GPS to show where I found my bugs. • I can add photos to a digital map. • I can add information about my bugs to a digital map. • I can create a presentation showing my research. • I can present my research to my friends.

mistakes in a program (debug). • I can solve problems. • I can consider the most efficient solution to a problem.	• I know that I need to limit the time I spend playing computer games.			

Year 3					
We are programmers	**We are bug fixers**	**We are presenters**	**We are network engineers**	**We are communicators**	**We are opinion pollsters**
• I can create a storyboard for an animation. • I can include action and dialogue in my storyboard. • I can write a computer program for an animation. • I can put Scratch blocks in the right order. • I can correct mistakes in my program.	• I can correct 'off-by-one' mistakes in a program. • I can make a simple drawing program work better. • I can put the dialogue in a program in the right order. • I can try out different variables in a simulator game's program. • I can describe how a simple maths program works.	• I can work a video camera. • I can record footage to use in my video. • I can upload and edit my footage on a computer. • I can record an audio commentary for my video. • I can study sports programmes to learn how they are filmed. • I can record high quality footage. • I can record an audio	• I can name some of the hardware that connects computers. • I can take part in an activity to show how data passes across the internet. • I can use the ping, ipconfig and tracert commands. • I can see and understand how networks keep me safe online. • I can describe the way hardware works to connect computers. • I can describe how data passes across the internet.	• I can see how email and video conferencing work on the internet. • I can use email and video conferencing to communicate. • I can write an email and speak on video to communicate with others. • I can follow my school's rules and use email and video conferencing safely. • I can see that the internet and the web are different. • I can work with my partner well.	• I can collect data through the internet. • I can show respect for the information people tell me. • I can use software to collect data. • I can use software to present the results of my data. • I can explain how I have used the web to work with others on documents. • I can judge how useful my survey forms and presentations are. • I can move information between

• I can create sound and graphics for my animation. • I can explain how my storyboard and program are linked. • I can use a repeat block in my program. • I can find and correct 'bugs' in my program. • I can upload my animation to the Scratch website. • I can get ideas from the Scratch website.	• I can describe how a simple drawing program works. • I can describe how the dialogue in a program works. • I can correct a program so the animation is more realistic. • I can describe how a simulator game's program works. • I can explain how I correct 'bugs' in a program. • I can explain how the steps	commentary with useful information in it. • I can export my final video in a standard format. • I can look at my footage and decide what does and doesn't work. • I can record original and interesting footage. • I can use and explain data in my audio commentary. • I can use more difficult editing tools, e.g. creating transitions.	• I can describe how the ping, ipconfig and tracert commands are used. • I can see how I must be careful about sharing things about myself on the internet. • I can talk about how my classroom computer is linked to a web server abroad. • I can talk about some of the different ways data is passed across the internet. • I can talk about the output from the ping, ipconfig, tracert and nslookup commands.	• I can show respect for my partner's ideas. • I can let my teacher know if I am unsure about something in an email. • I can work independently with my partner to plan our work. • I can tell my partner what I think does and doesn't work. • I can explain some of the dangers of emails and opening email attachments.	different applications. • I can look at data and explain what it shows me. • I can explain how a Google data centre server and the internet collect and deliver data. • I can see how important it is to keep a person's data private. • I can judge my data and see what does and doesn't look right. • I can work independently to collect, present and judge data.

	in a program are linked.				
	• I can explain how I correct the order of dialogue in a program.				
	• I can describe how a 'Pong'-style program works.				
	• I can suggest reasons for the 'bug' in the simulator game's program.				

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Year 4					
We are software developers	We are toy designers	We are musicians	We are HTML editors	We are co-authors	We are meteorologists
• I can design an interactive educational game. • I can develop an interactive educational game. • I can put Scratch blocks in the right order. • I can use the if/then/else block correctly. • I can use the random number block and use variables to work out the score.	• I can design a toy with computer-controlled input and output. • I can write a program to show how my toy would produce output • I can use Scratch to test how input and output would work in my toy. • I can use Scratch to work out why my toy may not work as expected. • I can use Scratch to create a version	• I can explain how technology can be used to create music. • I can use sequencing software to create a piece of music. • I can record my own sound samples. • I can mix sound samples to create a piece of music. • I can export the file of my piece of music in a standard, compressed format.	• I can see how the internet and the web are different. • I can see that web pages are written in HTML. • I can use some HTML tags. • I can edit the HTML for a web page. • I can create web pages that keep another person's details private. • I can explain the parts of a URL. • I can see how important links are for the web.	• I can find and read an article on Wikipedia. • I can create content for a wiki. • I can edit the content on my wiki. • I can edit the HTML for a web page. • I can show where I found information I used in my research. • I can work with others to plan a project. • I can work out if an article is	• I can use weather measurement equipment safely. • I can enter weather data in a spreadsheet. • I can take digital photos. • I can create simple charts. • I can make predictions about the weather. • I can create a presentation for my weather forecast. • I can use weather measurement equipment accurately.

• I can include sound in my game. • I can correct mistakes in my game. • I can plan my own way to program my game. • I can use a countdown timer. • I can use the mouse to control my game. • I can explain how the algorithm of my game works.	of my toy with computer-controlled input and output. • I can use Scratch to create a version of my toy using both mouse and keyboard input. • I can find and correct 'bugs' in my program. • I can explain how I find and correct 'bugs' in my program. • I can work out ways around problems by breaking them into smaller steps.	• I can explain how people listen to and buy music through technology. • I can edit sound samples. • I can work on and make my piece of music better. • I can edit my final piece of music. • I can use software that uses staff notation. • I can compare creating a piece of music to creating a program.	• I can use the ... tag correctly. • I can create a web page by writing HTML. • I can be safe and responsible when I create a web page. • I can show I understand how HTTP works. • I can show I know about the history of the web. • I can use the <img/> and <iframe>...</iframe> tags.	accurate and reliable. • I can edit another person's content. • I can edit content on Wikipedia. • I can plan a project by breaking it into smaller parts. • I can see how important it is that content is fair and balanced. • I can see how important Wikipedia's Five pillars are.	• I can describe the weather. • I can make sensible predictions about the weather. • I can add measurements and descriptions to photos. • I can present an interesting and useful weather forecast to my classmates. • I can spot weather data that looks unusual. • I can make accurate predictions. • I can see what some of the problems are in

		• I can respect other people's copyright.			predicting the weather.

Year 5					
We are game developers	We are Cryptographers	We are artists	We are web developers	We are bloggers	We are architects
• I can create a storyboard or diagram for an algorithm for my game. • I can create sound and graphics in Scratch for my game. • I can put instructions in the right order for my game. • I can find mistakes in my game. • I can create and add music for my game. • I can use selection and	• I can send and receive messages in Morse code and semaphore. • I can create and decode secret messages using the Caesar and substitution ciphers. • I can see how important it is to keep passwords secret. • I can see how secret code needs to be used sometimes when using the web.	• I can create a tessellating pattern. • I can write a program to draw a simple shape. • I can create a pattern using overlapping shapes. • I can create a pattern using different repeated shapes. • I can create a computer-generated image of a landscape. • I can create a tessellating pattern using more complicated	• I can check and comment on others' content. • I can see how Google chooses and shows web pages in a search. • I can name other search engines. • I can create and organise others' content on e-safety and using technology properly. • I can create and organise others' content for sharing worries about information seen and received on the web. • I can create and organise others'	• I can use blogs safely and responsibly. • I can see that the internet makes blogging possible. • I can write a blog post. • I can comment on a blog post. • I can add an image, audio or video to a blog post. • I can see what it takes to create a good blog post. • I can see that blog posts are stored as HTML.	• I can use the web to find out about virtual art galleries. • I can create simple objects using SketchUp. • I can create a simple gallery space in SketchUp. • I can add furniture to my gallery in SketchUp. • I can add my own artwork to my gallery. • I can create a virtual tour of my gallery. • I can find features that all art galleries share using the web.

repetition in my game.	I can send and receive messages in Morse code and semaphore beyond the line-of-sight.	shapes.	content for using the web in the right/wrong way.	I can comment with respect on others' blog posts.	I can create a detailed 3D object using SketchUp.
I can correct mistakes in my game.		I can use repetition in Scratch to draw a complicated geometric shape.	I can credit others' information I use on the shared site.	I can let others know about blog posts or comments I am worried about.	I can add textures and finishing touches to my gallery using SketchUp.
I can listen to my partner's ideas about my game and make it better.	I can decode a message using the Caesar cipher without knowing the letter key shift.	I can use the tile clone tool to create a pattern using different kinds of shapes.	I can decide if web sources are balanced and of a good quality.	I can see what is acceptable and unacceptable when commenting on blog posts.	I can create a virtual tour of my gallery with an audio commentary.
I can add instructions to my game.	I can see how important it is to create secure, hard-to-guess passwords.	I can create a computer-generated image of a landscape that looks good.	I can proofread and correct mistakes in others' content.	I can add an image, audio or video I have created to a blog post.	I can create an attractive detailed 3D object using SketchUp.
I can break my game into smaller parts and work on them separately.			I can use tools to get the best results in my web searches.	I can explain the difference between database-driven sites and static HTML pages.	I can create a detailed series of rooms and spaces in SketchUp.
	I can check to see if a web page is in secret code ('encrypted').	I can write blocks of script in Scratch to create a complicated geometric shape	I can find and use information from different places to present a summary.	I can use others' work in my blog with respect and in the correct way.	I can create furniture for my gallery in SketchUp.
I can animate my characters by creating different graphics for them.	I can explain how Morse	I can explain how computers create realistic landscapes.	I can make useful and large changes to others' content when necessary.		I can use Movie Maker to edit the virtual tour of my gallery.

• I can use variables in my game. • I can explain how my game works. • I can add comments to the script of my game.	code and semaphore are similar and different from the internet. • I can explain the algorithm for the Caesar cipher. • I can decode a message which has used a random substitution cipher. • I can create a secure, hard-to-guess password. • I can check the security certificates for a web page.		• I can explain how Google orders web pages in a search ('Page Rank').	• I can blog about an event as it happens.	

Year 6					
We are app planners	**We are project managers**	**We are market researchers**	**We are interface designers**	**We are app developers**	**We are marketers**
• I can see that a smartphone is a computer. • I can find geotagged photos on a map. • I can come up with interesting problems that I could solve with an app. • I can research apps that already exist that may solve my problem. • I can judge how well apps that already exist work.	• I can make a list of the main steps of my project that need to be completed. • I can make a list of the tasks of my project that need to be completed. • I can make a list of the things I will need to complete the project. • I can create original content for my app. • I can judge how well the	• I can create a survey online. • I can use simple charts to explain what my survey results show. • I can run an interview or a focus group. • I can explain what the information I collect from an interview or focus group shows. • I can present my survey, interview or focus group results. • I can use tables to explain what	• I can sketch my ideas for the design of my app. • I can create screen layouts for my app using a wireframing tool. • I can think about how people will use my app as I design it. • I can see how important it is that everyone should be able to use an app. • I can find media assets (e.g. buttons or backgrounds) for my app. • I can sketch my ideas for a user-friendly design of my app.	• I can create and write an algorithm for my app. • I can convert my algorithm into code. • I can keep testing and improving the algorithm to find the 'bugs' in my code. • I can think through and work out where mistakes are in my algorithm. • I can use sequence, selection, repetition and variables in my code. • I can think through and work out where mistakes are in my code.	• I can create a marketing flyer which includes images and text. • I can create a website for my app which includes images and text. • I can record my own video or find video and content from elsewhere for my app advert. • I can create a persuasive and well-designed marketing flyer for my app. • I can plan and create a well-designed and user-friendly website for my app.

• I can create and present a well-planned presentation for my app. • I can name and describe the inputs and outputs of smartphones. • I can use GPS to find media (e.g. photos) that have been geotagged. • I can show how apps that already exist will solve a problem. • I can explain how search engines order web pages in a search ('Page Rank').	work on my app is going. • I can spot and list the different parts of my app that will need to be created. • I can see how the members of my group have different skills and talents. • I can put the tasks of my project in an order that will work well. • I can find content from other places to use in my app. • I can use and credit content I use from other places correctly.	my survey results show. • I can use an audio recorder or camera to record an interview or focus group. • I can judge the quality of my survey, interview or focus group results. • I can explain what the audio or video I recorded means for my results. • I can follow the rules for carrying out surveys, interviews or focus groups. • I can create questions for my survey that are	• I can try to design my app so that anyone should be able to use it. • I can create my own media assets for my app. • I can explain how different parts of my app will work together. • I can create user-friendly screen layouts for my app using a wireframing tool. • I can create an attractive design to suit the way people will use my app. • I can follow examples of good design to make sure anyone can use my app. • I can find and credit media assets I use	• I can listen to and act on other people's ideas to improve my code. • I can think through and work out how to correct mistakes in my algorithm. • I can use procedures in my code. • I can think through and work out how to correct mistakes in my code. • I can sort and deal with problems and new features for my app in a sensible order.	• I can see how important e-safety is and that I am responsible for content I create. • I can edit my own and others' content for my app advert. • I can choose software that is best suited for making my flyer. • I can choose the best hosting and development platform for my website. • I can follow the rules for creating and presenting content for a website. • I can choose the best software and hardware available to me to create my advert.

• I can answer questions about my app well. • I can explain how smartphones connect to the internet through the phone network. • I can explain how GPS works and how it can be used in practice. • I can use different types of media (e.g. video) in my app presentation.	• I can work with my group to keep track of how well the project is going. • I can see how to keep working on my skills to make the project a success. • I can see how to improve the planning of the tasks in the project.	clear and balanced. • I can use Pivot Table reports to explain what my survey results show. • I can collect information and ideas from different places for my presentation. • I can choose the software for my project and research on my own.	from other places correctly.		