Year Reception

COMPUTING Knowledge Organiser

SAINT JOHN'S

Computing – Reception

Early Learning Goals

Communication & Language Development
- ELG1 - Listening & Understanding

PDED
- ELG3 - follow instructions with several ideas or actions
- ELG3 – Set and work towards simple goals
- ELG4 – Show resilience and perseverance in the face of challenge
- ELG5 – play cooperatively, taking turns

Physical Development
- ELG7 – Use a range of small tools

Mathematics
- ELG12 - Explore and represent patterns

Literacy
- ELG10 – Writing

Understanding the World
- ELG13 - Know some similarities and differences between things in the past and now

Expressive Arts & Design
- ELG16 - Safely use and explore a variety of materials, tools and techniques
- ELG16 - Share their creations, explaining the process they have used;
- ELG17 – Being imaginative & expressive

	Framework Statements	Knowledge and skills	Outcomes
Digital Literacy	• Provide opportunities for children to explore a range of computer applications, e.g. drawing apps, age-appropriate games etc., • Follow shortcuts, favourites or weblinks to explore simple websites • Model using web pages to find things out 8 Play with imaginary technologies in role-play • Get the children to use recording devices to say something about themselves or express their ideas • Listen to stories, music, watch animations using digital devices • Ask the children to choose a website appropriate for an activity • Ask the children to match images to a sound • Supervise the children choosing appropriate images for a specific purpose (e.g. images of trains) • Provide opportunities for children to share their work online (e.g. upload to a website) • Provide opportunities for children to represent/express ideas & feelings using technology • Use passwords to access devices 8 Talk about the images on a website and who they belong to • Use play technology (e.g. toy mobile phones) to role-play speaking nicely to one another • Ask the children what they know about themselves – e.g. names and where they live • Tell and discuss stories with morals and stranger danger	• Understand that the internet can be used to play and learn • Know that the things they create digitally can be shared with others • Recognise purposes for using technology at home and in school (e.g. TV for watching movies; interactive whiteboard for showing work in school) • Can match images to appropriate sounds (e.g. 'duck' to 'quack') • Understand that a password protects a device from someone else using it • Understand that an adult should be present when they access online material • Know who to go to for help if they need it when using the world wide web • Understand to take turns when using technology • Know that care is needed when using equipment iMake Music, iMake Media, iMake Videos, iMake Art, iCan Surf, iCan Report, iCatch Aliens!, iAm Logical, iStay Safe	Creating simple musical compositions using digital tools Creating simple graphs; tracing paths with a mouse; sorting criteria; Make simple searches; sequence simple instructions; programming a toy; Exploring and explaining simple rules for keeping safe online; composing and sending simple emails; Create algorithms; Combine images with text; **Vocabulary** music; sound; audio; record; play; compose; volume, dictionary; picture; alphabet; letters; search, order; steps, sequence; instructions; algorithm; first; next; then; before; after; second; last, program; code; command; input; instruction; forward; backward; turn; go; clear; execute, Internet; online; website; safe, command; program; exactly; measure, image; camera; animation; stop; motion, real; pretend; imaginary; model, instruction; command; program; right; left; pause; clear; debug
Information Technology	• Provide opportunities for children to use a range of devices such as cameras, mobile devices, audio recording devices • Model and enable the use of real and imaginary technologies, including online tools • Enable children interact with computer systems using different inputs – e.g. by using a mouse, voice, speech or touch • Ask the children to use a keyboard to copy or write a title or caption for work • Discuss how technology is used at school and at home • Encourage children to operate devices and equipment in school, sometimes with adult support • Tour the school photographing the various ICT equipment • Encourage children to speculate about why things happen or how things work • Model how to and support the saving	• Know that Information Technology (incl. online tools) can help them do things • Can use a mouse to move objects • Can use a keyboard for basic activities • Can use a camera, sound recorder or mobile device to collect photographs and/or sound • Recognises and can use the common icons for save and print iCan Play, iCan Move, iCan Direct, iCan Model, iCan Report	**Early Learning Goal links** iMake Music – ELG16, ELG17 iMake Media - ELG16, ELG17 iMake Videos - ELG16, ELG17 iCan Play ELG1, ELG7, ELG5 iCan Move ELG1; ELG7; ELG5 iCan Direct ELG1 ; ELG7; ELG5 iFind Patterns ELG1; ELG12 iAm Logical ELG1; ELG11 iOrganise Data ELG1; ELG11 iSearch Online ELG1; ELG9 iCan Sequence ELG1; ELG11 iCan Program ELG1; ELG7 iStay Safe ELG1; ELG4 iMake Art ELG16 iCan Control ELG1; ELG11 iCan Sort ELG15 iCan Turn ELG1; ELG2 iCan Animate ELG1; ELG2; ELG17 iTell Stories ELG1; ELG2; ELG17 iSend Email ELG9; ELG10 iCan Model ELG1 iMake Pictograms ELG1 iCan Surf ELG16 iCan Report ELG16; ELG17 iCatch Aliens! ELG16 iMake Algorithms ELG1; ELG2; ELG9 iGuess Beasts ELG7; ELG11; ELG14 iMake Pixel Art ELG7; ELG11; ELG16; ELG17
Computer Science	• Ask the children to 'program' each other to find hidden objects (programming) • Play Simon Says (algorithms/debugging) • Ask the children to come up with a set of instructions (pictures of arrows) to navigate a partner around a simple obstacle course in PE (algorithms) • Take a simple 'problem' and split it into smaller steps – E.g. to dress a teddy (computational thinking - decomposition) • Record instructions for friends (programming) • Listen to and follow recorded instructions • Explore playing with programmable toys (e.g. Bee bots, remote controlled cars etc.) (programming)	• Identify some of the steps needed to achieve a simple task – E.g. brushing teeth • Understand that people and computers follow instructions • Can follow instructions and correct mistakes • Know that devices and objects on a screen can be controlled • Recognise that a printer is connected to a computers and devices iFind Patterns, iCan Program, iCan Control, iCan Turn, iCan Animate, iCan Model, iMake Algorithms	

	• Use simple software applications to make something happen (e.g. Bee Bot iPad app) • Draw or give simple instructions to a partner to build a simple structure using building blocks (programming) • Look at a set of drawn instructions (e.g. arrows) and predict what will happen if they were entered into a programmable toy (predicting algorithms) • Encourage the children to understand that operations can be predicted and have a cause and effect (e.g. press a button turns on/off) • Encourage the children to develop an understanding that an operation has a predictable result (e.g. clicking a mouse selects an object) (predicting algorithms) • Ask the children to sequence a series of photographs to recount a story (algorithms) • Invite the children to point out simple errors in images or texts (debugging) • If you have them, show the children the cables that connect computers to the school network (networks)			