The iPad in an SEN Environment WEB2SEE

Wandsworth City Learning Centre

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ABSTRACT

This document explores some of the ways that the iPad can be used within the SEN environment with a suggested list of apps that practitioners may find useful for their learners.

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CITY LEARNING CENTRE

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Introduction

This document explores some of the ways that the iPad can be used within the SEN environment with a suggested list of apps that practitioners may find useful.

Firstly, I would like to acknowledge that 'SEN' it is a generic term that covers a vast range of people and learning styles. With that in mind this document attempts to cover wide range of ideas, tips and apps. But will not be comprehensive to all. Further investigation will always be needed to match the iPad, and what it can offer, to specific needs.

One of the greatest benefits of the iPad in the field of SEN is that it is a mainstream generic device, not a specialist piece of equipment. This means that people with learning difficulties can use an everyday product, which everyone else uses, thereby making its use an inclusive activity. Another benefit is cost. Specialist devices such as an AAC device (Augmentative and Alternative Communication) are expensive in comparison to the iPad and in most cases are generally one-purpose devices whereas the iPad has many functions.

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Straight out of the box

One of the excellent features of the iOS (the operating system used by Apple on its mobile devices) is how Apple has taken the accessibility options that they have developed over many years and integrated them into their mobile operating system. They have made a strong commitment to enabling their mobile devices to be as accessible as possible to people with disabilities.

Accessibility Settings

Follow the path below on your iPad to access the built in accessibility functions

Settings > General > Accessibility

Vision

Voiceover - the world's first gesture-based screen reader allows you to enjoy the fun and simplicity of iPad even if you can't see the screen. VoiceOver includes support for 36 languages.

Zoom - While many iPad applications let you zoom in and out specific elements such as images in Mail or web page columns in Safari, Zoom lets you magnify the entire screen of any application you're using to help you see what's on the display.

Large Text – Lets you increase the font size to see up to 56-point text in alerts, Calendar, Contacts, Mail, Messages, and Notes.

White on Black - If you prefer higher contrast, you can change the display on your iPad to white on black. This reverse-video effect works in all applications and on the Home, Lock, and Spotlight screens, and it can be used with Zoom and VoiceOver.

Speak Selection - Want to select text from websites, email, messages, and more? Speak Selection lets you highlight text in any application by double-tapping it. Speak Selection will read you the highlighted text and give you formatting options like cut, copy, and paste.

Hearing

Mono Audio - iPad can route both right- and left-channel audio source material into both ear buds, enabling users with hearing loss in one ear to hear both channels in each ear. You can also adjust the volume balance between the left and right channels.

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Physical and Motor

Assistive Touch - Built-in AssistiveTouch lets you enter Multi-Touch gestures using one finger or a stylus. It also supports the use of adaptive input devices, like headsets and switches, so you can experience the full capability of iPad.

Web Browsing

The built in web browser on the iPad is Safari. Safari has a few neat tricks that increase the accessibility of the iPad.

Reader
When browsing a compatible web page you will see a 'reader' symbol appear in the address bar of your browser. Tapping this symbol filters out menus, advertisements, banner, etc and leaves you with a view the main contents of the page.

Pinch / Reverse Pinch
As in most applications the pinch / reverse pinch gesture will zoom in and out of content. This is great for users with visual impairments as with the flick of their fingers content is larger.

FaceTime

The iPad features FaceTime video calling via Wi-Fi. Thanks to its high-quality video and fast frame rate, FaceTime is ideal for those who communicate using sign language or by lip reading. You can clearly see hand and finger gestures in detail, as well as facial expressions. So you can communicate from afar with the same range of emotion as when you're face to face.

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Applications

Sensory Touch

All of these respond to touch in some way, use a finger, 3 fingers, your hand, your cheek, your nose, your friends nose to make a wonderful myriad of lines, dots and glows respond to the sense of touch. Settings contols on most of them allow you to adjust the colour, longevity, size etc to make it a perfectly adaptable tool for SLD and PMLD pupils.

- Mandala HD- (Yomba Software) Mandala patterns and music that change with touch.
- Anemone- 69p swirly anemone's and touch receptive too.
- Spirogrow- touch to change spiral patterns
- Ooze- blob to touch, push and tilt.
- Fun Fireworks (Matthew Tomlinson) Fireworks!
- Heat Pad- free, leaves heat traces after touching
- Fireworks Arcade- fireworks!
- Laser Light Show (PDJ Apps)- £1.49 very good touch light show.
- Art of Glow- touch to make glowing shapes, lots of settings, especially longevity, very adaptable and bright.
- Retina 1000+ lines- Really good touch lines 69p
- Retina 1000+ Dots- Really good. 69p
- Fire Glow Doodle- touch to make glowing fire.
- Spawn Glo HD- Excellent. Lines attract to touch, can be pushed, lots of different settings.
- Gravitarium 2- Excellent, excellent touch screen graphics and music. GET FULL- 1.49. If you buy one Touch app, this might be it! Pupils favourite for a liney graphic touch screen app.
- Line Art-(PDJ Apps) Super! touch the lines and they attract to you then repell, really organic responses- Free.
- Silks- 69p nice touch visuals, very mellow.
- Fluidity- Organic fluid touch screen. (free)
- Vortex K- touch and sound (free)
- Tesla Toy- Flo Longhorn loves it £1.49.
- I (heart) fireworks- touch fireworks.
- Gloop- blobs to move around screen, touch and push.
- Fire Fingers- does what it says! Free
- Bubble popper- bubble paper to pop.
- Kid Fireworks- touch, then a pause as they fly into sky and explode.
- Snowdrift- move the falling snow with your fingers- Free
- Butterfly- touch to make them appear. Free
- Hatch- touch to crack an egg open. Free
- Pushy Pixels for Everyone!- pixels attract to finger then explode out when let go. FREE
- Particles- Good. touch to attract dots, when you let go they stop. FREE

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- Bloom- 2.49 I've not used but looks good.
- Uzu- same, looks good and recommended but I've not tried it yet.
- Atomic Toy (PDJ Apps) £1.49 Great liney, touchy, lighty whizzness!
- Hot Lights- (PDJ Apps) £1.49
- Particle Pad- (Free) Touch sensitive, multiple 'themes' like meteor, deep blue etc and an ambient soundtrack. Would look good on whiteboard too, but not checked it is compatible yet.
- Fluid Toy 2- (69p) Another Touch liquidy fluidy one, changing viscosity is a good part- if you want to work on swiping and increasing pressure. Has music too, piano, nice on for the darkroom.

Sensory Light

Good for dark room activities.
- Theraplasma- non touchable plasma lights and music
- Direction Light- light colour changes as you turn ipad like compass.
- Glowing Boxes- yup, boxes that glow.
- Jlight- finger tap to bottom to light and darken colour block
- Colorspin- color changes as ipad tilted.
- Candle- really good pretend candle
- Flashlight- scroll through different colour screens. simple.
- iTTflashlight- Bulbs of different sorts and settings
- ohDisco- Disco lights!

Sensory Ambient

Mainly passive experiences with lots of nice graphics, colours and/or music
- Lines and flowers- music with lines and flowers going across screen- subtlety changeable with touch.
- Ambient- thunderstorm, rainforest, paradise sounds
- Asian Sleep HD- set ambient sound effects- waterfall, bells etc.
- Relax melodies- select tabs of birds, underwater sounds.
- Atmospheric- planets that make sounds when rotated.
- Spawnmusic- free, music equalizer, play your music tracks and watch the lines dance!
- Eyegasm II- 69p - Excuse the name, lovely visuals, can play as background to your music or just on its own (it does it's own thing anyhow!) can be pinched to zoom and swiped to move, Eyegasm I is a different colour. Very lovely.

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Sound Reactive

- Bla Bla Bla- faces respond and change according to sounds heard. Free.
- Tiltoria- Fractal type touch app images are sound responsive Free/.69p
- Crazy Face- Different characters move mouths in response to you speaking.

Augmented Reality

One thing which the iPad does that nothing else can is AR- AR merges the real world with the digital, some use markers to print out, and when you point the iPad camera at them wonderful things happen in 3D that you can walk around, move closer to and interact with, some use your face for games, some make bunnies jump around or dragons fly around in the air. Print out the corresponding markers from the makers websites. Great for finding and tracking games or stories, or for being flashy. Also pretty much all free.

- String- Free- really, really good intro to AR, dragon comes out of hole in wall, alien walks around, 3d shoe and a 'draw in the air' part. Get the 4 markers from http://www.poweredbystring.com/files/String_Image_Targets.pdf
- Kudan A.R.- Free, Bit of a waste of time, although a nice 3D chair appears above a carpet marker, which is nice, if you need a 3D AR chair.
- http://www.kudan.eu/markers.pdf
- it5 augmented reality- 6 different models at the moment including a sheep and a globe. Marker from: http://www.it5.at/marker.pdf
- AR Dinosaur- One free t-rex, others to buy. Markers at:http://www.myvirtualuniverse.com/dino_small_img/trex_render08.jpg
- AR Robot- Free- robot that opens up on a moon marker from:
- http://mobile.t-immersion.com/iphone/files/robot_iphone.pdf
- Konstruct- AR app that lets you draw a 3d image above the marker as you move iPad:
- http://apps.augmatic.co.uk/pdf/Konstruct_marker.pdf
- Hour Blue- futuristic robot appears on marker from: http://www.magicleap.com/hourblue
- Karl Knaeur- AR tin can alley game
- Bunnie Fingers! 3D interactive Easter Rabbit Reality- No Marker needed and best used in open space! Turn it on and virtual bunnies run and bounce around your classroom or where ever you are standing, leaving little muddy pawprints! Get pupils to track them or follow them, find the blue one etc. Super!
- AR Dragons- Free- No marker needed- virtual AR dragons fly aournd your head, or you can fly one yourself around the room, land it, make it breath fire. Pay to get the full game but it's great as it is too!
- Skinvaders- No marker needed as it uses your own face as the basis for

the game, aliens pull your skin and are 'stuck' onto you until you squash them off!

- Pocket Jet- Free- Fly an AR plane with your left and right finger touch, it can fly around you, behind you so you've got to turn around to keep it in sight! Again pay for the full game where you shoot other planes but it's fine as it is too!
- Aurasma- This is where YOU come in. You can make your own virtual digital layers over the real world- for making your own AR links to pictures and videos, point iPad at your door and make a picture or video appear of your class working inside! Make AR trails, link a display with photos and videos of the pupils making the display, point it at signs and get a description of what it means- endless possibilities.
- AR- Spaceship- free, simple game with left right and fire touch controls on an AR spaceship game with marker from www.visionaries777.com
- Zappar- AR reader with lots of different markers, although mainly linking to advert/ t shirts etc.
- Morfo- Free- Avatar creator, easy to use, take photo of a face and it turns it into an avatar which can speak recorded sounds and be altered, AR related.
- Action Movie FX- (Free, in-app purchases to extend) Point camera to film a person or scene from a few metres away for a few seconds, save it, then it'll replay it with a layered effect over the top like an action movie- so you can blow up your car, drop a boulder on your PC, fire rockets at the school pets etc. Great attention grabber and intro app to movie making.

Tilt

Put the iPad on a lap, a leg, on an arm in the dark room, lots of ways to use the tilt response of the iPad with PMLD and SLD pupils.

- Music Ball- Free and excellent, touch to make balls, tilt ipad and which ever wall they hit makes different sound, then they bounce off and get a little bit smaller and quieter. Lovely tilting and touching sensory app for all students.
- Anemona- tilting anemone lights- lovely, relaxing.
- Balls Hut- touch to make balls appear and tilt to bounce around screen, immediate cause and effect with touch and tilt.
- Jiggle Balls HD- excellent, touch screen to make a bouncy ball that bounces and makes noise, then tilt away!
- iChunk- draw shapes then play with them- move and tilt
- Jelly Drop- drop blob down a maze
- Mergee Lite- tilt to knock two balls together.
- Woblite- tilt and color changes rapidly
- BiiBall- game for more able.
- Speedy Pigs- more of a game for more able pupils but good.
- Bitter Sam- 69p- Game for more able, tilt to let a depressed character go down a pipe on a rope.

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Water

- Koi Pond- free and paid versions, touch the water and scare the fish.
- Peaceful Pond- its a peaceful pond!
- Fish free- aquarium simulator
- Pocket Pond- fish pond
- Sharks- They bite your fingers!
- Fish Pond- cartoon fish who feed when touched and swim around.
- Fluid. – Nice app- touch and music pool, nice.
- Ocean Blue- 69p. A Hirstwood suggestion, virtual sea/aquarium that you can tilt around, add fishes, look at fishes, get rid of fishes and identify fishes, and sharks and stuff too. Good for sensory water themes and Science explorations.

Glow Drawing

- Glow Draw
- Glow Paint
- Forge of Neon- finger touch patterns, rotate and zoom, good for learning multiple finger strokes.
- Doodle Bright- draw with neon dots- Free
- Glow Lights – draw with neon dots- free

Pre Writing

- Neon Mania- follow set lines to make patterns.

Speech Repeaters

- Songify. Say a short phrase, it records it and makes a song out of it. FREE (buy songs in app) Great fun.
- These all do the same thing- repeat what you say, and you can stroke them, slap them etc. all free with paid versions, I'd get a few paid versions and leave it at that.
- Talking Billy, Talking Tom, Talking Tom2, Talking Ben, Talking Roby, Talking John, Talking Larry, Talking Bunnie, Talking Baby.
- New one- Talking Gugl- Little alien blob that does same as above!

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Sound

- Slow Mo Player- records vocals, replays slow and fast, touchable and tilt.
- Play Button- really simple and easy record and play back button. Free
- Sound Slate- add different noises to different sections of the screens.
- iTalk- Free app from Griffin (that make the indestructable covers) a simple one button that records and plays.

Speech

- Text to Speech- does what it says.
- iSpeech TTS
- Dragon Dictation - needs wifi, converts speech to text, not extremely reliable though!

Cause and Effect

These have 4 or so sound effects. Good for introduction/ easy cause and effect.

- Buzz, Hallelulah, Bleep, Correct, Ka-Ching, Atomic Fart, Horns, Sirens, Bells, Fake a Bell, Jackhammer.
- Do The Roar! free- Shrek cause and effect app, can get annoying!

Numeracy

- Glow burst- tap numbers in numerical order- includes – numbers and tens, hundreds.
- Simple Physics- Okay this might be Science, 69p, drag rods to build bridges, dams, tree houses, then test them. easy to use for NC1/2 students, not easy to master, but it's fun watching constructions fail too!
- Fill the Cup - free, not the best graphics, but exercises in measurements, weights and fractions- filling cups, balancing scales etc.
- Maths vs Zombies- Free. A great example of educational gaming, solve addition, subtraction and times tables questions to shoot zombies! Gets progressively harder with each level.
- Build it up- visual sorting and matching activities. Free and paid version- get full.

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Literacy

Handwriting

- Letterforms- 69p. Practice print and cursive letter forms- not babyish so age appropriate.
- Listening/ Receptive Language
- ABA Nouns- 'Can you find the ball?' type activity with four pictures presented, and the 'good job' reward. Very American, but does a job.
- ABA Class- free- American as above but good until something more British comes along.

General Literacy

- Creative Book Builder- (£2.50 ish) really good for higher learners- make books with text, photos and video. Really easy to use and a standard tool really.
- Puppet Pals- (free) Drag characters into story frame, move them about, talk, and it records the whole thing for playback as a show. Can in-purchase extra characters but comes with dragon, witch, hero etc for free.

Toca Boca

Like Simon says, all of them are superb for cause and effect, matching, sorting, interacting with the pupil and life skills. Make a folder just for them, get them all! Pupils love them.
Toca Doctor, Toca House, Toca Hair Salon etc. (around 1.50 each)

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Music

I've left off all the simple imitation instrument apps, like piano and drums as there are plenty out there. Some good composition apps here for SEN pupils.

- Congas- Two conga drums
- Newtonica Player- Spin ball to make tune, and press the four buttons to add a sound effect.
- Spoke- (1.50) Drum beat machine, easy to use, drop dots into a circle to make beats-
- Idle- compose by filling slots, more advanced.
- Harp Of Innocence- (Free) Excellent touch harp with background music and a little flying thing that eats birds!
- Magic Zither- Touch operated Chinese Zither. FREE and has instrument page and more organic compose page to stroke.
- Falling Stars-Great fun- touch to make lines appear, then touch raindrops that fall, loop and make a tune, very easy to compose a good tune. FREE
- Beatwave- touch screen to fill in dots which make beats that loop and loop. Easy to use composer. FREE
- Alien Beatbox- Activate blocks by touching alien icons to make looped sounds.
- Soundzen HD- Activate blocks by touching to make looped sounds that bounce off each other.
- Soundrop- (1.50) lines to bounce balls around that make sound, similar to falling stars.
- Soundprism- touch boxes to make organ, synth sounds, easy to access.
- Synthtastic- (free) finger strokes make synth sounds, very 80's but interactive.
- PimbaKalimba- (free) 'play' dots with thumbs or fingers to make kalimba sounds, with great graphics.
- Painted Face- (free) organic Chinese opera- finger touches and taps change pitch and notes, interesting exploratory app, bit wierd at times!
- Singing Fingers- (free) Excellent- draw and record sound clips as you speak/draw, touch the lines and it replays sound clips.
- MadPad (smule)- Excellent- records short audio/video clips and saves them automatically onto a 4 by 4 grid, replayed when touched. Create a class sound experience with instruments, everyday objects or vocalisations- very simple to use. FREE
- Music- Wall of Sound- either presents your iPad music content as a grid of tiles- just press a tile to play a track, or streams hundreds of albums through wifi. Excellent for pupils motivated by music as a player for them to access, but will also play explicit tracks so needs supervising. FREE.
- Thicket- £1.49 I love this, age appropriate and addictive- touch screen to alter the song- with graphics, really fluid and organic, made by the guy who's working with Bjork now on her music apps. Inpurchase extra tracks too but they aren't half as good, although 'Cathedral' is worth the 69p.

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- Planetary- Organises your music library in form of solar system- bit more visual and random.
- Squiggle-(1.49) draw lines then play them like a harp.
- Soundythingie (1.49)- draw lines and they play themselves in a loop, bit abstract and wierd sounds but good.
- Aura Flux- (1.49) drag small icons onto board and they spin, play and loop. It does sound a bit tinny and requires good finger control.
- Aquasonic- (1.49) Excellent, highly recommended organic composition app based around water, press to loop sounds, also brush water.
- Harmonizer (free) simple touch and play a note app- arranged in grid and plays chords. nice simple touch and hear app. colourful.
- Shapemix (free- can inbuy tracks) I love this one for older students, takes seperate elements of drum and bass tracks and you can insert them and move them up and down to make them louder/quieter. You can mix different elements of different songs too to make your own mix.
- Slewpi- 69p. Draw lines that make different sounds and build up, bit high pitched at times, good easy to use compostion/ exploration app.
- e-Drops- droplets that make music when they collide with balls you put in their way, more advanced than 'falling stars' and for slightly more able.
- Raindrops- 69p- Touch the screen, droplets fall on background and play notes. Simple yet effective. Slight time delay as the droplets fall which may actually suit some pupils better than an instant reaction.
- Vid Rhythm - free at the moment ! When I bought it it was 1.49 but still well worth money. You select a muSic type, style of video and within a few minutes you can have a very professional looking music video. This is great fun too.

Drawing / Art

Like music, there's lots of free simple drawing ones, these have bit more to them.

- iChunk- draw shapes then play with them- move and tilt
- iDoodle- draw over photographs
- Geom-e-tree- makes lovely tree designs with a few swipes of finger.
- Rainbow Draw- (free) simple drawing with rainbows.
- Hand paint- (free-plus in purchase) uncovers pictures when you rub over them.
- Art Set- £1.49- Has crayons, oils, pastels, different colour backgrounds, brush sizes etc, very good for slightly more able pupils due to lots of menus but could be used by all if set up appropriately first.
- Color Uncovered- Free. Yes American, and more for NC1/2- lots of information and optical illusions and illustrations, lots of them 'playable' all about colours and art.
- Jackson Pollock- £1.49- Bit expensive for a Jackson Pollock imitator, one on-line too does the same job (www.jacksonpollock.com) Kinect Force One in America are also developing a Kinect version.

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Choice

- Choice Board Creator- make choice board, or multiple choice answers to text question- FREE

Tracking

- Plasma Globe- Touch balls as they enter the plasma globe.

Useful Links

www.apple.com/accessibility/ipad/