Curriculum Innovation’s guide to using technology in EYFS v2

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This document was developed at the request of many Early Years practitioners who wanted information about technologies appropriate for use in EYFS and how could they be used for maximum impact on learning outcomes for their children.

The only statement in the DfE Statutory framework for the Early Years Foundation stage is in the Early Learning Goals section within Understanding the World where it states that, ‘children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes’. We understand that technology can be used to support the vast majority of the other ELGs as well and this document outlines a range of suitable technology and suggested activities to help EYFS practitioners achieve this.

We have tried to keep the guidance as concise and easy to access as possible under the following headings: Digital Images & Video, Sound & Audio, Tablet Devices, Remote & Programmable Toys and Computers & Large Touchscreen Technologies.
### Resources

#### Learning Opportunities
- Play with sounds - role-play phones, microphones, tube telephones.
- Explore ways of creating a range of sounds.
- Recognise symbols for play, stop and record.
- Learn how to playback sounds.
- Make listening and recording choices.
- Record sounds and voice on a device.
- Use sound resources to support learning in literacy and music.
- Alter voice to ensure clarity e.g. volume, distance from microphone, background noise, speaking/singing clearly and fluently.

#### Vocabulary
- Play
- Record
- Stop
- Skip
- Track
- Microphone
- Telephone
- CD (compact disc)
- CD player
- iPod / iPad

#### Top Tips
- Listening provision to be organised in a quiet area of the setting with space for children to dance / perform.
- Test the technology before you buy it to ensure the quality of the recording.
- Teach the children to say their names as part of their recording to identify their audio clip.
- Know how to transfer clips off the device and delete clips ready for the next child.

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### Sound & Audio

#### Role of the Practitioner
- Demonstrate and model the use of sound playing / recording devices.
- Observe the children's use of such devices.
- Encourage the children to talk about the sounds they have recorded.
- Provide an audience for the children to share their recordings with others.
- Discuss and provide opportunities to improve their recordings by re-recording.
- Provide purposeful contexts for recording.
- Record, save, download and delete audio.

#### Resources
- CD player
- iPod / iPad
- Easi-ears
- Talking Peg / Postcard / Point Chatter-Box
- Voice changers
- Easi-Speak
- Sonic Explorer
- Walkie Talkie
- Talking Photo Album

#### Suggested Play/Provision/Activity
- **Listening area:**
  - Stories [downloaded and recorded by adults and children].
  - Music and dance tracks.
- Go on a sound walk around the setting.
- Make your own books using a Talking Book or Chatterbox.
- Use Talking Postcards / Pegs on displays with challenges on e.g. can you find...?
- Use QR codes to create interactive audio activities.
**Resources**

**Learning Opportunities**
Share and take turns using the toys with care. Observe others and offer suggestions. Talk about the effects of their commands on the movement of the toys/technology. Give and follow instructions/directions. Develop fine motor control by recognising and using switches and buttons on devices. Help to change batteries. Create and follow sequences of instructions and use this to move toys to specific points. Explore and understand space and direction language using real 3D objects. Create environments for toys to move around.

**Vocabulary**
- **Switch / Power / Battery**
- **Sound**
- **Arrow**
- **Forwards / Backwards / Reverse**
- **Turn left / Turn right**
- **Pause / Clear**
- **Sequence**
- **Actions**
- **Count**
- **Near / Next to / In front of / Behind**

**Top Tips**
Use rechargeable batteries, have a system to charge them and keep spares available. Some programmable toys need a smooth surface in order to move freely across. If children wish to move toys by hand pick them up with care to avoid damage to the motor. If used on a table, use a tray with an edge to stop the toys falling off. Floor mats with grids makes it easier to calculate the distance and direction moved between other objects on the mat. Use remote controlled vehicles if a child has difficulty in using a programmable toy.

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**Remote & Programmable Toys**

**Role of the Practitioner**
Allow experimentation and play with care before directing use of toys. Ensure that all children have opportunities to use the toys. Observe and support children who press buttons randomly and build up their understanding of the relationship between the buttons on the device and how it moves. Introduce basic single movements first, explain the use of the clear button and slowly introduce sequences of actions. Encourage children to count aloud the number of turns and squares moved.

**Resources**
- Remote controlled toys / vehicles
- BeeBots / Constructabots
- Battery charger and rechargeable batteries
- Tray to contain toys on a table
- Gridded mats to move toys / devices around
- Resources for children to create their own environments / obstacles to travel around
- Screwdriver to access batteries on the device

**Suggested Play / Provision / Activity**
Give children opportunities to play / explore remote control toys and programmable devices. Encourage children to create their own paths around objects of their choice. Create step by step or a series of instructions to move devices around printed or wipeable mats with grids on to achieve an outcome. Use the journeys around the mats / objects to tell a familiar story. Use shapes, numbers, letters, targets squares on the mats / grids.
Resources

Learning Opportunities
Mimic adults in play/role play.
Allow children to take photos / video with a camera.
Be able to review pictures / video taken.
Record content / learning with a purpose [child initiated] e.g. photographing / videoing artwork or drama / play activities.
Explore ways of using a camera effectively e.g. blurring caused by moving the camera when taking a photograph.
Know not to look directly into the sun.

Vocabulary
- Camera
- iPod / iPad
- Shutter / Lens
- Play / Rewind / Pause / Stop
- Photograph / Video
- Image
- Zoom
- Battery
- Download / Upload
- Memory card

Top Tips
Where possible use cameras with straps or cameras designed for EYFS to minimise dropping / damaging devices.
If using iPods / iPads invest in suitable rugged protective cases.
Use cameras with large viewing screens and minimal buttons and menus.
Take images and videos with light behind you.
Have clear and easy systems in place for transferring images and videos off the devices for safekeeping and try minimising the number of videos and files actually on the device.

Digital Images & Video

Role of the Practitioner
To display / save / organise the content taken by the children:
- Save, print out and display images.
- Share images / video online for other audiences to access or via QR codes.
- Combine / sequence images to show learning in other apps/software such as Pic Collage or as a slideshow.
Observe children’s choices and model / suggest effective ways to use the technology.

Resources
- Play cameras
- Tuff-Cam / Digital camera
- iPod / iPad / other tablets
- Webcam
- Visualiser / IWB / Plasma screen
- Easi-Scope
- Photostory 3 / Pic Collage / Photo Peach
- Blog
- Digital photo frame

Suggested Play/Provision/Activity
Create a sequence of pictures that instruct e.g. counting or making a sandwich.
Use cameras in role-play.
Go on a shape hunt - search for and take pictures of shapes in their environment.
‘Photographer / film maker of the week’ competition displaying best image / video.
Record images / videos of family, friends, activities, acting out / retelling stories, sequencing activities, creating vocabulary cards, personalised jigsaws, etc.
Resources

Learning Opportunities
Understand basic touchscreen skills including pinch to resize and finger and thumb to rotate. Develop fine motor skills through making marks in apps such as Doodlecast. Create / record sound and make music. Listen, read, watch and create content in apps and interactive stories. Record and share images and video. Develop spatial awareness through a variety of programming apps such as BeeBot. Care for an animal (class pet using Kinectimals). Explore other environments through Green Screen activities.

Vocabulary
Tablet / iPad / Android
Power button / Home button / Volume
Menu
Swipe / Pinch / Drag / Rotate
App
Tap
Icon
Resize / Zoom

Top Tips
Allow children to make choices about their learning. Hide apps you do not want children to use inside folders at the furthest screen from the homepage. Enable restrictions so children do not delete, download, or buy in app purchases, etc. Ensure you have a suitable screen protector and protective case (avoid flip covers). Can the device be easily used by EYFS children? Are apps simple to navigate and can you get back to basic levels in games easily?

Tablet Devices

Role of the Practitioner
Model how to use the device safely / carefully with a minimum number of apps to choose. Support children to choose activities using the tablet e.g. to create a drawing, take a photo. Introduce focused activities using the device e.g. make a picture collage of four friends. Encourage children to share and talk about their work with others on the device or via a larger connected display. Encourage children to sustain their focus in one app or activity independently or collaboratively and talk about their use of the device.

Resources (apps)
iPad / iPod / Android Tablet / Kindle Fire
Doodlecast
i-nigma
Pic Collage
Tellagami
Interactive books
Green Screen by Doink
Camera App
Chatterpix
Puppet Pals / Sock Puppets
Beebot / Busy Things
(Extensive list on the website)

Suggested Play/Provision/Activity
Ask children to role-play short stories or scenarios using Puppet Pals / Sock Puppets and record this as a video. Take pictures and video using the camera app (directed or through free choice) and then share / discuss their recordings. Use children’s pictures or other background images as a Green Screen activity with children role-playing in front. Read, listen to and record their own voices using interactive book apps. Combine pictures in a sequence using Pic Collage.

Web: www.ticbradford.com  Tel: (01274) 434818  Email: admin@theinnovationcentres.com
Resources

Learning Opportunities
Develop awareness and skills using a mouse, trackpad, keyboard and touchscreen.
Develop understanding and ability to logon, save, print, close / shut down.
Talk about safe use of technology and behave in a kind and considerate way to others in the real and virtual world.
Know to talk to a trusted adult if they come across content that makes them feel sad, scared or confused.
Interact with a range of appropriate software purposefully using a mouse, trackpad, keyboard and touchscreen.
Create and edit basic text and painted art.

Vocabulary
- Computer / Mac / PC / Laptop
- Mouse / Trackpad / Keyboard
- Screen / Display / Monitor
- Power button / On button
- Volume / Loudness
- Menu / Drag / Click / Icon
- Program / App / Software
- Folder / Save / Open / Trash / Delete

Top Tips
Allow children to make choices about their learning and ensure there is access to a limited number of apps / software.
Be very familiar with the apps / software and how they work before using with children.
Enable any restrictions on the device so children do not delete or move files.
Use mice and keyboards suitable for EYFS children in terms of size and layout.
Set up the printer to prevent multiple printed copies by children repetitively clicking.
Are heights of IWBS / Plasmas / LCDs appropriate for the children to use?

Computers and Large Touchscreen Technologies

Role of the Practitioner
Model how to use the device safely / carefully with minimum number of programs to choose.
Help children navigate menus and use the mouse / trackpad / touchscreen and keyboard effectively within a specific software.
Introduce focused activities using the device to master the software.
Support children to choose activities using familiar software to express themselves.
Briefly introduce new programs at group times or in small groups.
Encourage children to talk about their use of computers and other technology.

Resources (software / content)
- 2Simple Infant Video Toolkit
- Purple Mash
- Just Grandma and Me
- The Tortoise and the Hare
- Izzy’s Story Skills
- Cat in the Hat / Dr Seuss’s ABC
- Bailey’s Book House
- Millie’s Maths House
- Sammy’s Science House
- Trudy’s Time and Place!
- Charlie Chimp’s Big Modelling Party

Suggested Play / Provision / Activity
Interact purposefully with software around a specific curriculum theme or linked to a role-playing activity.
Paint pictures or trace / colour-in templates of images.
Add images and text to simple templates to create birthday cards, stories, etc. and print them out.
Explore interactive digital environments and discuss / share their interactions with these virtual worlds.