

These projects aim to use various technologies available to children for creating and presenting their work in different e-Book formats in order to raise confidence and demonstrate higher levels of learning to a wider audience.

We want children to be in full control and to understand the complete process from first idea to page-turning presentation. The Process follows the sequence set out in this e-Book and which also forms the structure for the various projects. The Process, like all learning, has to be relevant and contextual and so we have set out a series of ideas linked to age and stage. For this we use a range of software and skills with the intention of enabling children to think computationally and work as independently as they can.

The Process and the ideas here will encourage increasing degrees of sophisticated critical thinking to the level where children will be familiar with a useful range of software, combine programmes for different purposes and work towards understanding how software might be designed to better suit their future needs.

Introducing and learning how to launch e-Book ideas is offered in three ways which can be used separately or combined to suit your CPD programme:

Platform Tutorial: brief starter tips, Train Ticket: twilight or Workshop: full/half day

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# What are e-Books? – Formats – E-Book Software

E-Book; electronic book, is just a term used to describe linked pages of a presentation. Virtually any presentation could be called an e-Book, even a website. The term has become more familiar as digital presentations have started to replace paper versions to the point where most book publishers offer e-Books for the various reader devices available. E-Books are now common for all platforms but are mostly just a passive read: simply digital instead of paper and whereas that is fine as an alternative way to read a good book, there is a lot of potential for creating and learning yet to be exploited.

Now e-Books can be written and published by anyone. Everybody can now access a potential audience of millions. E-Books can be interactive, show movies, play music, display photograph galleries and link to other e-Books and media. All of these provide exciting potential for computer learning in schools; particularly because learners can be involved in the process, understanding how things work and designing new ways to make their creativity known. The writer can be in charge of the whole process.

# **Formats**

Most formats are passive, meaning that the contents can only be read. The formats vary according to the delivery device and audience. Commercial formats for reader devices include Kindle, Kobu and Nook. Kindle e-Books can also be read on PC, Android and Apple. Although familiar as paper equivalents, they are not the most used. DNL for example is actually the most common worldwide, being used more in business, travel and entertainment. This format offers multimedia and interactive features. There are basic formats such as PDF, ePub and Word that can be converted using a number of on-line services to create page-turning e-Books that work like the real thing. These have the advantage of offering a sophisticated reader experience with less technical understanding required and at little or no cost; particularly good for learning incentive and school budgets.

So which format depends on the reader experience required and the platform to be used. Another important consideration is the size of the completed publication. A simple PDF can be easily attached to an email whereas a full multimedia with images and music could, in terms of memory used, be the equivalent of the Encyclopaedia Britannica which would have to be transferred from a memory stick or DVD. Most formats can be kept 'light', using minimal memory, various software or particular features in the programmes used. We cover some of these in the project example and further ideas.

# **Important Point for Schools**

Some formats like DNL require a Reader File to be installed on the system. These are DLL files and cannot carry virus or other malware infection. Filtering of school networks might still prevent certain reader formats so always check first.

# What are e-Books? – Formats – E-Book Software Software

# **Reader Experience**

How do you want the reader to appreciate the work?

A Word document might be a story that can be read just by scrolling the pages down. The format can be read on most machines but it can also be changed; even accidentally and even destroyed unless the file is exported as Reader Only. The file is likely to be quite big, making transfer difficult and although many PCs will have Word, there are various versions and work on older versions might not be readable on newer and vice versa.

PDF files are generally lighter and can be read on most machines and devices on most platforms. Once a Word file is complete, it can be saved as a PDF. There are PDF readers for example that run on Android (EZPDF) which have a page-turning feature. You can also add music and even edit and write notes making this a good format for diaries and calendars.

Completed files can be saved in PDF format and then converted to page turning e-Books using Calameo. You are reading a Calameo. This e-Book and the ones you might make in school can be created on their free version and made private. The e-Books can then be shared from a link address or embedded in a website page with the supplied HTML code. Our training will show just how easy this process is.

Choice of software depends on availability, relevance and desired outcome. A child's story made with page-turning software will enhance reader experience while a journal or instruction manual might be quicker and easier to read in PDF format.

The main point of the options suggested here and the training workshops is to provide the range of relevant skills and software to make informed choices. Most of the available software is easy to use once it is a means to an end and the writer is motivated to raise the quality of their presentation.

See appendix for a list of software currently suggested for use in schools.

# The Process

The sequence we follow from first idea to finished solution.

1

# **Computational Thinking**

A way of looking at the world to find and solve problems

2

# **Problem**

Every project can be seen as a problem to be solved. e.g. How can I create an e-Book presentation of a story? How can I make a greetings card?

3

# **Decomposition**

Break the problem down into parts. What will I need to have, learn and do? What help do I need? How long will I need to do this?

4

# **Analytical Thinking**

Exactly how will the parts come together?

Abstract and concrete thinking about the problem leading to deeper theoretical understanding of how software works.

5

# **Pattern Recognition**

Sorting the sequence out: What do I do first? Who will help me with what? What do I do last? Are there sections I can group together with others?

5

# **Algorithm**

Designing a step by step strategy to solve the problem leading to written instructions using combinations of skills, activities for others to use: a recipe. Understanding that software functions in coding steps that can be repeated to give predictable results.

6

# **Testing**

Has the Process produced the desired result? Can it be improved? Does any part need to be repeated?

# **The Starter Ideas Matrix**

E-Book Project Ideas to introduce the concepts by year with NC reference.

Year	E-Book Project	General 2014 NC Target Area
1	E-Card: make a page-turning greetings card Make a Map: Route picture sequences Talk About e-Book: pictures to talk about	organise, store, manipulate and retrieve data in a range of digital formats - follow a sequence of instructions - recognize the use of IT beyond school – understand that software can be combined to solve computational problems
2	Talking Tales: Talking poems and stories Newspaper: Local events and news Mini-Beast: Identification trees	decomposing problems – sequence selection and repetition - use of digital recording – create, organize and store information – mixed media manipulate and retrieve – logical prediction of digital sequences
3	E-Comic: Cartoon stories & animations Holiday Journal: Travels to other countries Instructions: how-to-make/do e-Book	using search engines effectively – select, combine and use software – use a range of devices and platforms – analysing, evaluating and presenting data – on-line and off-line - decomposition to sequence instructions
4	Week of Weather: record for a week Musical Tale: stories with digital music/fx History Of: Time-lines of people/events etc.	Using on-line resources – recording and storing data – using other devices to gather combined data – creating digital music – research on/off-line – sequencing data – word processing and multimedia manipulation
5	Photographic Portfolio: creative imagery Advertisements: collections on themes Multi-track tales: alternative route stories	Digital photography – manipulation and processing – collaboration – multimedia presentations – DTP/PDF conversions – using on-line processes to create e-Books – Communication – hyperlinks – emails – data collecting
6	Recipe e-Book: healthy eating guide Picture books: Starter words & pictures World Climate: climate change journal	Decomposing problems – multimedia presentation – combining processes into sequences – recording data remotely – analysing and evaluating data

# **The Greetings Card Project**

An example project which can be adapted for any age with suitable sophistication. Here, we have a project for Year 1. Allowing for age and ability, we have broken the (decomposed) the project into sections carried out alone, with support and then by the teacher and TA.

This project takes you through the basic construction explaining what is used, how and by whom. We cover the Process and the software and offer suggestions for extension activities as well as ways the project could be carried out with older children.

Project: Electronic Greetings Card – Year 1 To make page turning digital greetings card and display it on the school website

### Year 1

Suggested Software: Word/other DTP, Draw/Paint/other drawing software, Calameo on-line

Work Sequence: ( See detailed sequence below) Draw pictures – greetings (ch) - create word document of 4 pages (t & ch) – save to PDF (t) – convert with Calameo on-line (t) – share links/embed html (t) – send to Granny/display on web (t & ch) – present to class (ch) – make a class collection e-Book using Calameo in the above sequence (t)

## How will children benefit from this project?

Skills: Digital drawing, recording sounds, typing, linking files, uploading, presenting, the Computational Process Attitudes: confidence, cooperation, respect

### When/ might the project be useful?

Birthdays, Mother's/Father's Day, Christmas/Eid/Easter

# **The Greetings Card Project**

# **Applying the Process**

This idea uses the Process of software giving children the opportunity to;

### **Computational Thinking**

See how they can reach a wider audience with a digital presentation using various technologies

### **Problem**

How can I make a greetings card for Granny/Auntie/Mum etc. on the computer?

# **Decomposition & Pattern Recognition**

How many stages in the process:

Drawing on screen (colours, text, arranging, saving as an image)

Setting up a document page, adding image, text, saving as PDF

Uploading to web eBook maker for conversion

Sharing the result

Time: 2 hours working with small groups or individually with TA over a number of sessions

### **Analytical**

Thinking abstract and concrete: What will the finished card look like? What actual steps do I take to achieve this? What do I need? Who will I work/share with? Will I be able to use the skills alone afterwards?

### **Algorithm Design**

Defining the process children will follow:

Making a work card of instructions for others to follow the stages and to assessable outcome

# **The Greetings Card Project**

# **Suggested Teaching Sequence**

Show a paper greetings card – How can we make this? – Who might the card be for? – What might the card be for? – How can we make a card like this? – How will we give/send the card to Granny in Australia/Timbuktu/Wapping/Somewhere Else? How could we send a card to lots of people without posting it? – How would we make one on the computer? – How would we draw a card picture? – How would we make the card? – How could we make the card turn like a paper card? How could we add sound (Greetings to Granny) and make this a talking card?

### Stage 1

Use Draw or Paint to make pictures on the screen and save

# Stage 2

Open Word page landscape/narrow margins/set page colour – drop and resize saved image - add second page for another picture or leave blank – add third page and type greeting (extension idea- add a photo of their signature/hand print) – add fourth page and add another image/message – save file as PDF in named folder.

### Stage 3

(Optional but adds value and could be an extension idea) Use small mp3 player/recorder or any other mp3 recording device to record greeting. Save mp3 in same folder.

### Stage 4

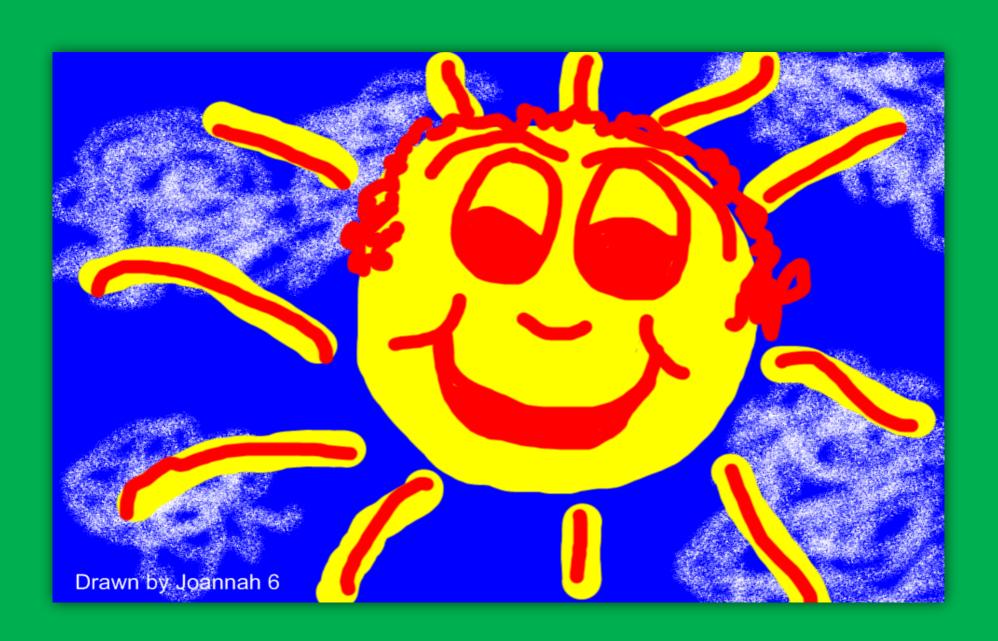
(Teacher/TA do this) Open a free Calameo account in class name and follow instructions to make a page-turning eBook (select Private option – other options include adding background image and cancelling the page-flipping sound (recommended) in section 3 but confirm yes to playing added sound)) – upload and create Calameo – click on Links Editor – draw an insert box and upload the sound file – Save – Go to Share, copy and paste the top link to a Word Document of all the links to the eBooks.

### Stage 5

Show the cards through the IWB – send links by email to Granny etc.

Now for the example.....

# Happy Birthday





These flowers are like the ones in your garden

# Happy Birthday Granny fore from Joannah XXX



A Joannah Greetings Card Made with love and care for special people.

# **Further Ideas**

Once the basic sequence is understood, further ideas for e-Books can be developed. The format and content will grow from the need as we want children to be discerning in their choice software and process in relation to desired outcome.

### **Mobile Platforms - Desktop**

More phones and tablets are being used now than desk top PCs so the reader device is important. Android does not run Flash even though Photon Browser has a Flash workaround but even if your phone can work a page-turning e-Book, is it worth showing one if the screen is so small? There will be similar issues with Apple devices. One of the first questions to consider then is where and how the e-Book will be read/viewed. We cannot assume that it will always be a PC.

Picture Books for sharing in the white board – just collections of themed pictures – day at the market, on the beach etc. These can be presented by children who can turn the pages themselves to their class audience

People Who Work for Us – visits from police, fire, doctors etc. – an e-Book with photos to describe the jobs – maybe recordings of their talks as well

School Guides – A pupil eye view of the school showing a new child around before they start – information they need to know Another from the parents' perspective with the more formal information

Our Town/Area – A guide to the local area with interviews, photographs and even perhaps adverts – to be distributed my PDF with the school brochure – could be a joint project with older children working with local people

Recipe Book – Collected and collated recipes designed around healthy meals giving information about foods and where they come from – cakes and biscuits – possible sponsorship opportunities

Compendiums of stories – Stories and poems with illustrations and photographs – possible collaboration/support from authors

# **Multimedia and Interactive**

### Multimedia - using sound and video

Sound and video can be very annoying. The clips do not change and once viewed they can quickly become boring and even irritating to listen to – think of shops and the TV presentations that role around and around ad-infinitum. Recording takes a long time to organise and takes just as long again to save, convert and then add to the e-Book which the reader will hear once and never again. So is it worth the effort? Consider the outcome. If you are creating an instruction manual, an account of a story or description of a place for example then the clip could be valuable. The media is an intrinsic part of the presentation. If you add just because you can or even just to give children the opportunity to hear their voice as the e-Book goes through, then the certain chances are that it is not.

The 'how' is important here. How you record is chancy because a small mp3/recorder which is cheap and non-intrusive is useful but fiddly and someone has to down load each file. You cannot name the recording files and since nearly every child will have to have about ten goes to make one useful recording, you will spend ages deleting; and probably deleting the one you could use as well. Sound recorders on phones are virtually useless because they will be hard to get off the device in a format you can use.

Once you have decided the value of a recording and have added it to the file, consider how it will be played. Options will vary but always choose the one that keeps the reader in control. Never make the clip play just by opening the page, always have a click link for the reader to use if they wish and sometimes you will have the option to play and pause. This depends on the software.

Mp3 is the best output though you might be recording in different formats on the various devices available so you may need to convert sound files. This is vital if you are using Calameo as that is the only sound formart acceptable.

### Interactive - the reader is involved

Means having editable sections/pages allowing input from readers. Some e-Book software such as Desktop Author has editable pages where a blank template can be made and presented in a way that enables children to resize/position text and images. Having these set up for the class and school is a good quick way to start the e-Book process. Ask the author about this.

# **Working with Images**

sources - copyright - copying - format - optimizing - snipping - cropping - processing

Sources – Many images can be copied free from the Web but some cannot and in some cases, taking images for educational purposes is still a breach so it pays to check first. <a href="http://learningpictures.tk">http://learningpictures.tk</a> is a gallery site for school use and images can be right clicked and copied. The collections are themed and new galleries are being added on request. There are also stock photo sites which tend to come up with great promise on the Google images search only to show as fuzzy thumbnails of watermarked images. One way around this is careful snipping as described below. There are still millions of free images on the web.

# **Camera and Smartphone**

Most contextual and relevant images for use in your teaching will be your own copyright or given by colleagues. The problem is how to grab/save them to the system. The easiest way is to display the images from your camera card straight from the card and then snip as described below. This works for memory sticks with images from home and elsewhere as well. You will need to save everything in JPEG format as that is common and easy to optimize: see below. Without experience of most types of smartphone images, only my own, I have to assume that you know how to link your phone to the PC. I don't know about i-Phone formats but again, as long as you can display these on a screen in full, then the snipper........

Copyright - Assume every image is unless you took the picture and always confirm permission from friends as well as knowing the school policy on children and photographs. This issue is of increasing importance and schools do not have automatic exemption.

Optimizing – a typical jpeg on the camera will be around 4 mb: more with the better spec cameras. You will need to make lots of copies to have images ready for use and so you will quickly fill up storage space and make files and e-Books which will be so big that they would take ages to load and be virtually unmoveable. They would be too memory-heavy. Find a free image optimizing software for your own PC and lap top or have one installed on the school system. I would recommend File Minimizer Free - <a href="http://www.balesio.com/corporate/eng/download.php">http://www.balesio.com/corporate/eng/download.php</a> because it is fast and simple to use. Using this will take a 4.5mb down to 280k with no visible difference to quality for most classroom purposes. All the Learning Pictures images have been reduced in this way. Once optimized, you have images than can be added to make e-Books that even when finished are often no more 4 or 5 mb meaning that they can be converted to PDF etc. and attached to emails easily.

# **Working with Images**

sources - copyright - copying - format - optimizing - snipping - processing - drawing

### Snipping - screen grabbing

Windows 7 has the Snipping Tool with the scissors icon. This is very useful for reasons explained above as well as many others. You may be familiar with PrintKey 2000 which was excellent but now somewhat historical and it does not work well on 7 or 8. Apple users will have their equivalent but whichever one you have, make use of it. Here is how.

You find the image you need on the screen from whatever source. You may want the whole image or just a part of it. Snip the lot or just the section you need and save it as a jpeg. If you are working with Word, you can just copy and paste as an image. The image will be very light and viewable. If you are working in J2E and there is not a Save-to-PDF option, you can snip each page you complete and copy/save/paste it onto a Word screen where you can save to PDF. Some screen grabbers will also offer basic image manipulation as well where you can change features like brightness and contrast or even make into greyscale. PrintKey 200 does that if you can get it to work. You will find others that do.

### Processing - changing/improving images

Using free photograph manipulation software children can make changes to photographs for effects like greyscale, high/low contrast etc. There are apps for i-Pads and Android that will distort/improve/doeverythingelse which you may already be familiar with. These can be fun but they can also be a bit gimmicky and since such changes in this context are a means to end, you need to ask what you are actually gaining by making 'funny' pictures.

This is an opportunity to learn how to crop images and select sections for use as well as to clone and repair or remove parts that are not needed. You may well have your own favourites but if not, try Photo Filter: <a href="http://photofiltre.en.softonic.com/">http://photofiltre.en.softonic.com/</a> There is a good 'Undo' button but always work with a copy of the image to avoid mistakes.

### Drawing - On the screen

The main problem with drawing software is that you cannot easily draw the Mona Lisa with a mouse. The easiest way is to use a cheap usb slate like the <u>GENIUS EasyPen i405 GraphicsX Tablet</u>. Most children will be familiar with touch screen tablets and can draw with a stylus to make good pictures. For an example of i-Pad digital art as an inspiration see <a href="http://ipadart.tk/">http://ipadart.tk/</a> Dave Hendry provides workshops for children through Lexicon Learning.

# **Links and Other Bits**

**Suggested Software for making E-Books** 

The sequence suggested in these workshops uses free software or programmes you are likely to have at school or your own system which for most purposes will be fine.

So you may already have:

Word

PDF Maker (if not, Word saves as PDF anyway)

**Photo Filter** 

Draw

Paint

Others available from the author are:

Seaside Soft eBook maker - simple standard and easy to use with a camera

Flip Book Maker – warning: looks complicated but is actually quite easy once you have made a file because you can copy that and edit it. Not for children really

Others can be researched and reviewed on request

Online - uploading PDFs to be converted to page - turning E-Books

http://www.calameo.com/ We use this in the workshops because it is very easy and the results very useable and effective. <a href="http://issuu.com/">http://issuu.com/</a> For many: as good. We could use Issuu but have gone with Calameo because of the page-turning is better ans the process easier with greater privacy control.

There are others; many good from what I can see but there are only so many hours is a day.

So there we have it: You will see some pages of images to have and you have now looked through a Calameo e-Book. I can make e-Books for you for a small charge and here is are some examples from schools:

Insects from the Wood Insects from Leaves

Thank you for reading through this e-Book. I hope you have found it useful and that you will want to learn more at a train station near you or even in a class workshop where I can run the session with you and then help you make the first e-Books Adrian



from



Ring 01202 657252 or email <a href="mailto:adrian@lexlearn.co.uk">adrian@lexlearn.co.uk</a> to book your workshop today