

Primary Focus on Naace Online Resources

Autumn
2005



low loader



forward



reverse



crane truck



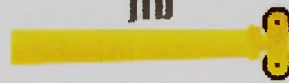
forward



reverse



jib



extend



retract



raise



lower



hook



raise



lower





Naace

Advancing education through ICT

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Introduction

When did you last look in detail at the classroom resources on the Naace site?

A little bit of background information

The MAPE website has been in existence since 1996. In 2000 MAPE was fortunate to retain the services of Mike Matson as web developer. The initial work was carried out thanks to a DfEE grant to subject associations and the result was a website that looked very crisp, clean and professional. Mike continues to develop primary resources for Naace.

How is the content developed?

New ideas are fed through to Mike who works his magic and creates the activities, many of which can be downloaded to run offline. This was particularly important in the early days when few classrooms had Internet access and broadband connections were all but unknown. All of the applications are thoroughly tested by committee members before 'going live'. It is usually at this point that emails begin to circulate saying "wouldn't it be nice if..." This 'wish list stage' inevitably results in complicated tweaking by Mike, in the search for near perfection. Members of the Primary Working Group create sample files for these programs to provide teachers with some material that they can immediately use in the classroom before trying to create their own files. The Classroom Activities section of the website continues to evolve as needs and opportunities are identified.

And there's more...

The Curriculum Support Section provides access to many of the articles from past publications. These are categorised by subject to make browsing easier.

Some teacher resources were developed exclusively for the Naace Primary website. These include photos for geography teaching, a toys photo library to support history and shape bingo for mathematics.

Don't forget to have a look at the treasures hidden away in the Archive section, too.

In this publication

The object of this publication is to bring to your attention the rich and varied collection of resources available from the Naace website. The articles here all refer to resources that can be accessed by following the Naace Primary Resources link from the Naace homepage, www.naace.org, and selecting Classroom Activities.

Some of the articles in this publication are lessons written for Becta's Direct2U scheme by members of the Naace Primary Working and Publications Groups. There are also case studies and a few brief introductions to give just a flavour of what is available. Where appropriate suggested year groups for English and Scottish schools have been provided. All of the articles reflect best practice in delivery of curriculum requirements, but specific references to documentation have been omitted.

Rhona Dick

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These Primary Resources and many more, developed by Mike Matson together with our Primary Working Group, can be accessed by visiting www.naace.org, going to the **Primary Resources** section and choosing **Classroom Activities**.

About the Editor:

Rhona Dick is a member of the Primary Working Group and is a freelance educational writer specialising in History, Mathematics and ICT.

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Naace Weather Project

Alan Rodgers

Independent ICT consultant

Introduction

The Naace Weather Project is an online database enabling users to view, download and upload weather data. After a simple registration process schools can upload weather data collected at their own school. Other web users can then view this data, and even download it and load it into a spreadsheet for analysis.

This activity will give the children an opportunity to monitor environmental conditions for a real purpose. They will be able to share their findings and analyse and compare data. The data collected relates to the weather and can be used to support many geography or ICT units of work. The mathematical nature of the activity gives it value in a real cross curricular context.

This activity can easily be tailored to the ability and age of the children. The number and type of instruments used can be adjusted to suit the requirements of the topic. The period of data collection and entry can also be selected to suit the unit of work. It may happen that certain pupils enjoy the activity so much that they become weather monitors for the year!

What will the children learn?

- That weather data can be graphed to make analysis and checking easier
- That weather varies from location to location
- That information can be easily exchanged and shared using the internet

Previous learning

- The children will benefit from having read data in charts and looked at graphs
- The children may need to revise how to read scales and dials to enable them to use any traditional weather instruments
- A basic understanding that information on the internet has been put there by somebody

Subjects ICT, Geography, Science and Maths

Equipment



- Basic weather instruments as required. These could include thermometer (maximum and minimum), a rain gauge, a barometer, a humidity meter and a weather vane. The instruments should, if possible, be sited in a suitable location. Some or all of these could be digital instruments. See <http://www.amingtonheath.staffs.sch.uk/intro.html> for comprehensive guidance on setting up instruments and collecting data. Remember any data and practice in collecting it is better than none.
- Internet connection to the Naace primary resources
- A link to another school, if possible via email (alternatively compare to the data entered from Amington Heath Community School, UK).
- Article in Naace Primary Geography Focus – Interactive Weather
- Username and password for the Naace Weather Project – acquired from the project manager, Alan Rodgers, at alanrodgers@cirrus.me.uk

The lessons

An initial series of activities will need to be completed to remind or teach how to read the instruments. In the case of the rain gauge and the thermometers the children need to work out the increments on the scale and count on or back. A maximum and minimum thermometer will provide the maximum, minimum and current temperatures for the last 24 hours. With the barometer a similar approach is needed but the numbers tend to be more difficult. A digital instrument can help out here.

To read wind direction the eight points of the compass need to be revised. Remind the children that the weather vane tells us the direction that the wind is coming from. This may mean that it is bringing warm or cold air, dry or wet air. Wind strength is measured using the Beaufort scale, a scale from 0 to 12.

Cloud cover is measured in eighths, known as octas. Imagine the clouds pushed into one part of the sky, how many eighths of the sky would they fill? Cloud type needs to be assessed using pictures for reference.

Spend time working on the skills needed for collecting the data which is to be included in this exercise. Decide on the period of time the daily readings will be taken (ideally around 09.00hrs GMT). Prepare printed sheets and clipboard for the monitors to use.

Discuss with the children the reason for recording weather data. Decide, with your partner school, upon the period that the data will be collected for. Make sure that both schools have their username and password for data entry. Decide which items of data will be entered and compared.

Collect and enter the data on the Naace Weather Project database for the agreed period.

Revise the location of the other school and draw out any relevant geographical observations. Which hemisphere is it in? What continent is it on? Is it part of a large land mass or is it a small island? Monitor the data entry by the other school. From time to time look at the graphs of the data. Draw out the mathematical vocabulary from the children. Identify trends, look for jumps in the data, use terms such as more, less, higher, lower. If entering maximum and minimum temperatures keep an eye out to check that the maximum does not go lower than the minimum. A mistype can always be corrected; a couple of deliberate errors could be planted for the children to spot.

For the final part of the activity compare the two sets of weather data. Use whatever method is best suited to the age and ability of the children. Files can be downloaded and loaded into a spreadsheet. Sections of data can be copied and pasted so that the data to be compared can be graphed together. Graphs can be copied and displayed side by side for comparison. The key skill will be to draw out answers to key questions which demand analysis of the data.

Why was it hotter there than here?

Which location had more rain? How much more?

What season is it in the other location?

Are there any unusual readings which stand out from the rest?

Communicate with the other school via email to ask questions or try out observations. Answer their questions about your weather data.

Yes, Wednesday was unusually cold for this time of year.

No we did not mean that there was 50mm of rain, we meant 5mm.

Our season is summer, but we still can have quite rainy days.

As a final activity work as a group to write a summary of the weather in the other location. Be specific in observations and include references to the data. Compare data on different days and compare with data from the home location.

Why are we using ICT?

ICT allows efficient sharing of data over a considerable distance. It also allows data to be graphed more easily. This can make error checking and comparisons more practical.

ICT can be used to provide an easy way of monitoring the weather enabling younger children to access data without frustration.



Where do we go next?

Use this facility whenever a locality is being studied. Even if it is used to share and graph data from the school locality it will make comparison with data from another locality more interesting.

If you find some children particularly keen, start a regular regime of data collection and entry. This is a useful means of furthering independence and reliability. Try to collect data for some of the more difficult fields such as cloud type.

Differentiating the activity

Use as few or as many weather instruments as suit the ability of the children. Start with easier instruments and add others in as the children increase in confidence. Reassure the children that the key skill is to think carefully and consider whether the reading is reasonable.

Those children who find themselves more able at reading the instruments independently might like to take on a more central role. They can take pairs of children to the weather station and help to train them. They might also like to take on a permanent role as weather monitor.

Reflecting on their work

- Which parts of the world would be more likely to have similar or different weather data to the school? Why is this?
- Where would the children like to see weather data from?
- Who else collects weather data?
- What are their instruments like?
- Why are people interested to know what the weather is like? Is it ever of real importance?

Alan can be contacted on alanrodgers@cirrus.me.uk

Bounce

Year 6/P7

Introduction

This program is essentially about problem solving, relationships between numbers, factors and ratios (through the metaphor of a snooker table.)

Skills involved

What will the children learn?

- To work systematically at solving a problem
- To be able to record their results as they go along
- To look at number relations and to try to discover a pattern.

What prior experience do the children need?

Pupils will need to be familiar with their tables and have an understanding of factors and multiples.

Equipment

- Bounce
- One computer for each pair of children
- A recording sheet.

The lesson

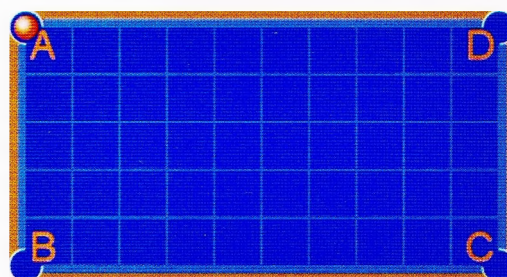
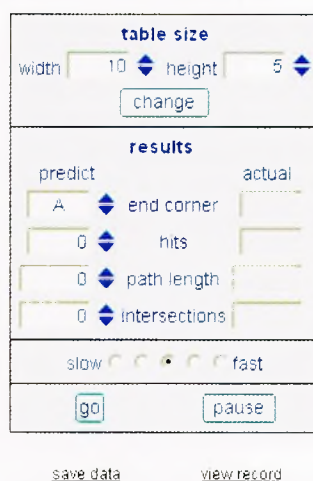
Children can work in pairs. This will enable them to share ideas and to make the recording of different attempts more reliable.

Explain what the program does. Basically a snooker ball is struck at 45 degrees from the top left hand corner and continues on its way until it drops down one of the pockets (note: there are no side pockets in this case). The pupils count the number of bounces, but add 1 for the pocket the ball leaves from and one for the pocket it drops down. Hence on a table measuring 3×6 , the number of bounces is 3 (even on a square table the number of bounces will be 2!)

The object is to predict the number of bounces that the ball makes before it drops down a pocket. **There is one rule that applies to all circumstances.** Children tend to develop a rule that is true in some circumstances and not in others. For example, children might suggest that if both numbers are odd then the number of bounces is the sum of the two numbers. This is true for 5 and 7, and for 7 and 11. The role of the teacher is to suggest circumstances where they might like to reconsider their rule. What if they try 5 and 15?

The maximum size table allowed is 20×20 .

Children have difficulty with this program in working systematically. If they can be encouraged to do so, then they are more likely to discover the rule for the number of bounces. Hence the teacher's role will be in helping pupils



pupils to structure their investigation so that it may lead to a successful outcome. For example, the table below shows a sequence of possible investigations that will guide pupils towards discovering the rule. (Initially they will only complete the column headed 'bounces'; the other columns are for subsequent investigations).

When using the program, children should be encouraged to make an estimate of their answers first. They have to type in their estimates before they can click on 'go'.

Width	Length	Bounces	Pocket	Path	Intersections
4	4				
6	6				
3	6				
4	8				
5	10				
3	9				
4	12				
5	15				
3	7				
5	9				
6	11				
8	12				
9	15				
12	16				
12	24				
21	28				
11	31				
100	150				

Pupils should be encouraged to make a note of whatever rules they find, by completing a table such as Table 2 (partly completed for illustration).

For example, one rule might be: the answer is always 2 when the table is square

Hence the real test of their understanding is whether or not they can provide the correct answer to the number of bounces on these 4 tables:

- a) 12 x 24
- b) 21 x 28
- c) 11 x 31
- d) 100 x 150

Dimensions	Answer	Suggested rule
3x4	7	add them together
3x5	8	still works
3x6	3	snag - don't add them together if one divides into the other - instead add them together and divide by the smallest number
4x12	4	hey, it still works
4x6	5	help! neither rule appears to work here - I now need another rule!! I could add them and halve the result, but why?

Why are we using ICT?

This task could be completed without the use of ICT but it would become a very time consuming activity with most of the time taken drawing snooker tables. By using this program pupils can quickly investigate different sized tables and hence concentrate on the mathematics of the problem.

Where do we go next?

There are 3 other investigations that can be carried out using the same program. In order of difficulty these are:

- Find the length of the path that each ball travels (assume the diagonal of each square is one unit)
- Find the number of intersections
- Predict the pocket that the ball goes down.

Differentiating the activity

The extra investigations listed above provide ample challenge for able upper primary children.

The less able pupils may struggle with the ideas in this program. In this case they should be encouraged to 'reverse' the aim of the program. For example:

- Find all the table sizes that give 3 bounces
- If one side is 5, what length might the other side be if the number of bounces is the sum of the two sides?

Reflecting on their work

Children are reflecting on their work by completing the 'Rules Table' above. This shows how their thinking has progressed as more data becomes available to them. It is quite difficult for some of them to articulate their rules, but it is important that they should be encouraged to do so as this program is about problem solving and developing hypotheses. It is not about trial and error.

This activity was originally published in 2005 under the Becta Direct2U scheme in partnership with Naace Primary. To find out more and to join the scheme refer to the ICT Advice subscription services page at <http://www.ictadvice.org.uk/subscribe>.

Fraction Pairs

Heather Govier

Age 7-11

Introduction

'Pairs' is the traditional pelmanism card game in electronic format. It can be played by one or two players (or teams).

In the two-player game, players take it in turns to click on two cards that are face down trying to match pairs. The cards are displayed and if they make a match, the player wins that pair. If there is not a match, the cards are turned face down again and the other player has a turn. The winner is the player with the most pairs.

In the one player game the player must try to match all of the cards in the minimum possible time.

The beauty of this electronic version is that the cards can be created by teachers or pupils and may thus be used across all areas of the curriculum. We have provided sample games covering:

- Welsh language
- Geography: water features
- Maths: multiplication
- Maths: addition and subtraction
- Christmas
- Fractions

Instructions for creating your own games are provided below.

The following notes apply to the twenty Fractions Pairs games.

What will the children learn?

The games will consolidate and revise knowledge of fractions, decimals and percentages.

Previous learning?

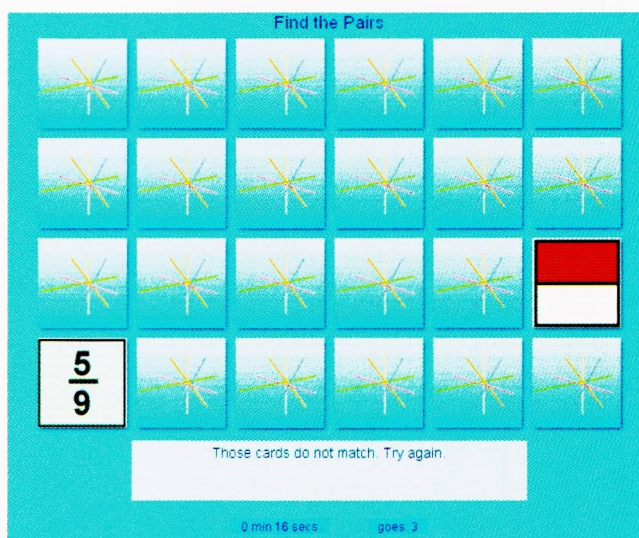
This activity cannot 'teach' fraction recognition, but gives opportunities for practice and consolidation of knowledge. Therefore children should have covered recognition and naming of simple fractions of shapes and numbers.

The lesson

Two sets of ten games are provided. The first set is aimed at children in Years 3 and 4 and covers recognition of fraction names and numbers, fractions of shapes and fractions of numbers.

The Year 3/4 (P4/5) set of games involve the following pairings:

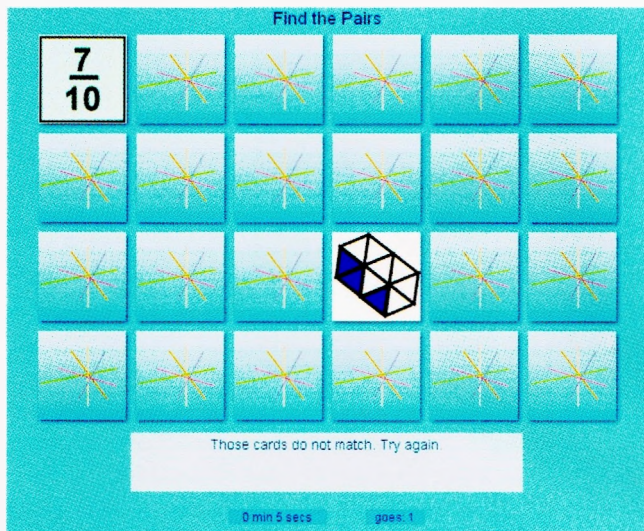
- 1 numbers - fractions of a square
- 2 words - fractions of a square
- 3 words - numbers
- 4 numbers - fractions of a circle
- 5 words - fractions of a circle
- 6 fractions of a square - fractions of a circle
- 7 words - fractions of a number
- 8 numbers - fractions of a number
- 9 fractions of a number - fractions of a circle
- 10 fractions of a number - fractions of a square.



Game 1 for Y3/4 (P4/5)

The Year 5/6 (P6/7) games are based on a different set of fractions and involve the following pairings:

- 1 fractions (numeric) – fractions of a shape
- 2 fractions (numeric) – equivalent fractions
- 3 fractions (numeric) – percentages
- 4 fractions (numeric) – decimals
- 5 fractions of a shape – equivalent fractions
- 6 fractions of a shape – percentages
- 7 fractions of a shape – decimals
- 8 equivalent fractions – percentages
- 9 equivalent fractions – decimals
- 10 percentages - decimals



Game 1 for Y5/6 (P6/7)

Why are we using ICT?

The games give an enjoyable opportunity for practice and consolidation of basic mathematical knowledge.

Where do we go next?

Making your own Pairs Games

The great strength of Pairs is that teachers and pupils can make their own games. This requires some familiarity with file handling and the use of image manipulation software.

Download the Pairs game from the website. It is available for PC and Mac.

You will see that the software consists of a file called 'index' (double click this to start the game), two folders of cards (named "cards1" and "cards2") and one folder marked private (which you should not need to touch).

To make your own game you need simply to replace the twelve cards in each of the folders of cards with cards of your own.

Each card in the "cards1" folder must match its equivalent in the "cards2" folder. They can be the same or different (see the 'Christmas' example provided for a game in which cards are matched to identical partners). If they are to be identical, simply copy all the images from "cards1" to "cards2". If they are to be different – as in the Fractions Pairs games – you will need to make two sets of cards. There must be 12 cards in each folder.

Images for cards can be scanned images, digital photographs, images made with draw or paint packages or images taken from screen dumps.

If you do not have any good image manipulation software, an excellent free package (which allows you to resize and reformat images very easily) is "Irfan View" – available free from <http://www.irfanview.com/>

For example, use the following instructions to create image files from screen dumps. With the image you wish to use on your screen (could be a Word file, a website etc) press the Print Screen key on your keyboard. This saves a copy of the whole screen to the clipboard. Open Irfan view and paste the image (it can be a bit confusing as you may see two sets of toolbars). Select the section of the image you wish to use by dragging the cursor across it – you will need to select a section that is approximately square because the cards are square. Choose the 'Crop selection' option from the Edit menu. You now have an image for your card.

From the Image menu select 'Resize/resample' and set the new size. All cards must be 90x90 pixels. If your selection was not square you may get some distortion as you change the aspect ratio.

Select 'Save as' from the file menu and save the card in the Cards1 or Cards2 folder in place of one of the existing cards. You can choose the file type in the 'Save as Type' box. Cards can be either .gif or .jpg images. By default the images are .gif so it is simpler to use this file type.

(If you use .jpg images you must change the "filetype.txt" file in the "private" folder.

```
Change:
filetype="gif"
to
filetype="jpg"
and save the file.)
```

You can also make your own back for the cards - simply replace the "cardback.gif" image in the "private" folder with one of your own.

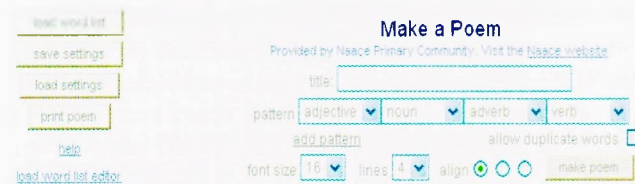
If you or your children make any games that you are willing to share, please send the two sets of cards to me h.govier@btopenworld.com and we will be happy to consider your game for inclusion on the website. All games accepted will be credited with the authors' names and school, so please send these details with your game.

Poem Maker

Angella Streluk

Introduction

Poem Maker does just what it says it does, it produces super poems! It is available as a download and includes everything needed for the activity.

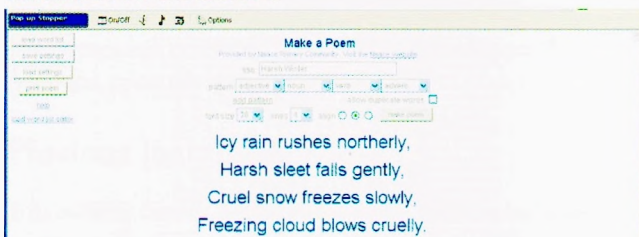


The Case Study

This case study only touches on some aspects of the creative and educational use of Poem Maker. There is much more that could be undertaken and achieved.

In this case study I used Poem Maker to support a literacy aspect of topic work. The children had been asked to enact an earthquake, video the enactment, and use it as a stimulus for writing a report. As the children needed to revise the concept of earthquakes I decided to use Poem Maker as a medium for this. Choosing words for the wordlist would stimulate discussion. At the same time the children would remind themselves of parts of speech and classify words as nouns, adjectives, verbs and adverbs. Being a mixed ability group of Year 5 children, they were all able to contribute words, with the more able supplying the most interesting adverbs.

After introducing the activity we investigated the potential of Poem Maker with the Harsh Winter wordlist. With some experimentation, adjusting word order, clicking on the words and replacing them where the sense was not right the children soon understood.



I suggested that we should do the same on the topic of earthquakes. We listed the words in columns with the headings "adjective," "noun," "verb" and "adverb" on an Interactive White Board so that we could save the lists and refer back to them later. As the children suggested words we checked that the cases and tenses would allow Poem Maker to make sensible sentences. It is not until you try this that you begin to realise the language skills that we often take for granted. The children were old enough to realise that the words needed to agree. With younger children this might be a main teaching point, or this part of the work might be dealt with entirely by the teacher.

Having created the vocabulary I prepared the word list ready for the next lesson. (For an explanation see "how to use PoemMaker" below)

We used the computer suite for the next lesson. Here the children were reminded about the features of Poem Maker that help to produce poems that make sense. Using the digital projector so that everybody could see, children demonstrated that clicking on words that did not make sense, or words that they thought could be improved upon would change them and produce a better poem. We also discussed strategies for saving the poem so that it could be edited later. The consensus was that we would save it in MS Word by highlighting the text, copying and pasting it. The children set to work in pairs using the wordlist on earthquakes. These were both saved and printed out.

Back in the classroom we discussed whether the computer had generated good poetry.

How good was Poem Maker when left to its own devices? Three key thoughts occurred to the children:

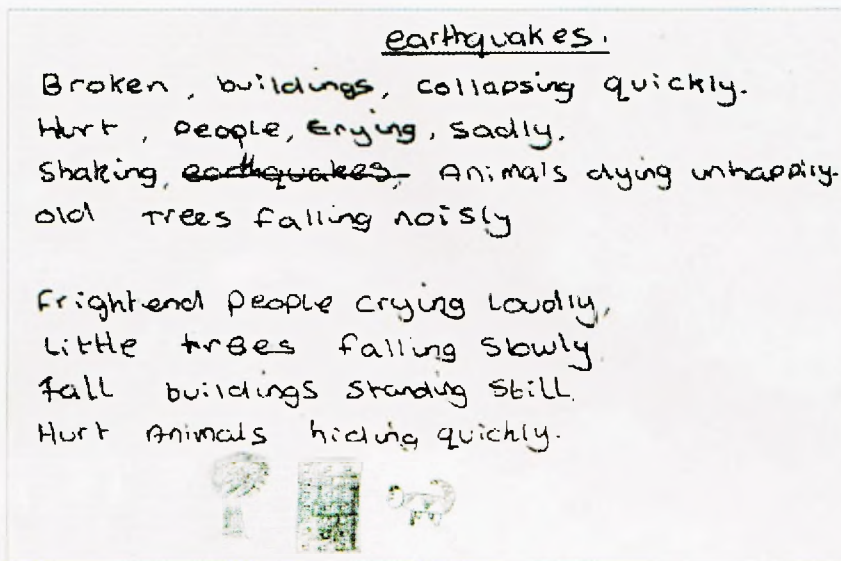
- Something about the Poem Maker program meant that our final poems were very pleasing.
- Poem Maker did not know which combinations of words would make sense.
- The resulting poems were only as good as the words we had included in the wordlist.

A natural progression from this was to ask if we needed Poem Maker at all. Now we understood that careful choice of words and liberal use of adjectives and adverbs greatly improved poems could we achieve similar results ourselves? We decided to try this out. Our original wordlist from the IWB was resurrected. Using one word from each column the children constructed their own poems. They could vary the word order from line to line. During this first draft they felt at ease changing words when they spotted better positions or found flaws in their choices. One example of a first draft is on the next page.

Conclusion

In my experience the children liked the crisp Poem Maker version of the poem. For example one verse of a poem on Earthquakes was:

Old buildings collapsing slowly,
Young animals hiding unhappily,
Frightened people crying sadly,
Shaking trees falling noisily.



Only two children yearned to fill in words such as articles and other words to give a clearer meaning. For example:

Tall, thick trees are collapsing slowly,

Long lost people are dying noisily,

Huge, hurt animals are crying sadly.

The broken buildings are falling quickly.

This proved to be a good opportunity for the children to do what they felt suited their poetic creativity. Few felt the need to change the poem substantially to obtain the desired effect.

Poem Maker can be geared to different ages and used in many different ways, by varying the learning emphasis. It has a particular relevance to developing vocabulary, a key feature of all subject teaching. As far as poetry itself goes, Poem Maker is an ideal way to show that poems do not have to conform to the all rules of prose writing, but that there are some crucial rules that cannot be ignored. The increased awareness of adverbs and adjectives and their value should impact on all forms of writing.

How to use Poem Maker

Poem Maker can be used with any age and any ability. It is sufficiently flexible to be tailored to specific needs. The wordlists that come with the program are simply examples that give some idea of how the words need to be selected to achieve the ideal results. Trying out your own lists will let you find the method that best meets your objectives. Once the files have been downloaded Poem Maker can be used offline. Save the downloaded folder exactly as it is when you unzip it (especially the wordlist folder). It is well worth reading the ReadMe file, which gives details of features of Poem Maker that greatly enhance its use.

The wordlist editor, which enables you to enter specific word lists appropriate for use with topics and teaching objectives, needs to be used online. However, it is possible to edit existing wordlists offline as long as the format of the original wordlists is replicated exactly, and the list is saved in the correct folder. Notepad can be used to edit a list. The example below illustrates the required format:

\$nounlist="house,trees,people,animals,buildings";

\$verblist="collapsing,falling,running,hiding,shouting";

\$adjectivelist="fragile,tall,frightened,scared,hurt";

\$adverblist="slowly,noisily,quickly,hurriedly,unhappily";

Learning objectives

I strongly recommend that you focus on no more than one or two objectives: you can always repeat it again and again with a slightly different emphasis. Trying to achieve too much at once may mean that the learning becomes difficult to control.

You could select from the possible objectives listed below, but these are by no means all that can be achieved.

- That the children can produce real poetry
- That the success of poetry depends largely on selecting appropriate words and word order
- To develop new vocabulary appropriate to a topic
- The role of parts of speech and their names

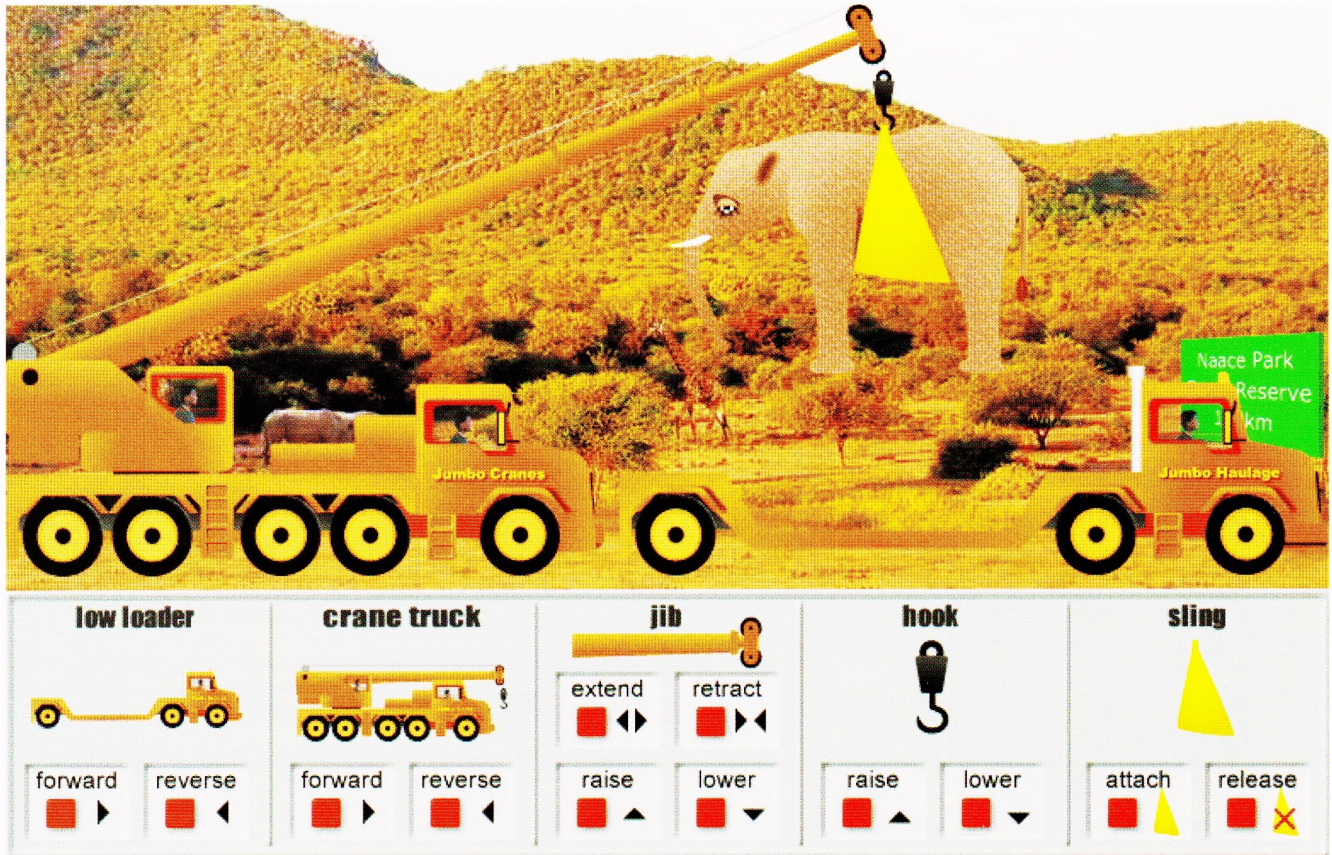
Subjects: ICT, Literacy, any other subject as a theme for the poem and vocabulary

Methodology

There are alternative models of use. The teacher may construct the wordlist and the children's first experience would be the use of Poem Maker. If desired the teacher's list could be used, modified by the children and then reused to produce new, better poems. Alternatively the children could do the preparation, away from the computer, working on lists and trying them out. The actual use of Poem Maker would then be the culmination of the work.

Try Poem Maker yourself. Experiment with making wordlists. Consider cross-curricular links.

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Jumbo

Introduction

This lesson is about sequencing, control and modelling. The children have to rescue an elephant and transport it to a new resort. They also need to understand the consequences of getting the sequence of events wrong.

What will the children learn?

- To carry out a sequence of instructions
- To develop an understanding of cause and effect – “if I do this wrong, what is the consequence?”

What prior experience do the children need?

- The ability to order and sequence
- The ability to use a mouse to control a sequence of on-screen events (by clicking on the relevant buttons).

Equipment

- One PC per two children for group work, or one PC and a data projector for whole class work
- The Jumbo program from the Naace web site
- A copy of the worksheet

The Lesson

In advance of the lesson the Jumbo program will need to be downloaded from the Naace web site.

The teacher tells the story and the children assist by suggesting what it is best to do at any point of time and why. By selecting the appropriate buttons the sequence of events begins to unfold. If the wrong button is selected, events either happen out of sequence or a pop-up message box tells the children why they are not allowed to make that move.

Once the story is complete then the children can try to repeat the sequence for themselves. There is more than one way to rescue the elephant. They can then sit at a PC and work their way through the 4 questions on the worksheet (individually or in pairs). In each case the rescuer is a ‘learner’ and they keep getting something wrong. The children have to decide what is wrong, write a brief sentence to explain what happened and then take over and complete the rescue.

Why are we using ICT?

ICT offers a very visual interpretation of a sequencing task. It provides immediate feedback and the teacher can easily see whether or not the children have been successful. Motivation is also increased.

The program also introduces the basics of ‘control’ and gives the children the ability to determine what happens next.

Where do we go next?

This is a one off activity. It might lead to related activities:

- Some pupils might like to build a crane using a toilet roll inner with string attached, dowel and handle. Attaching a magnet to the end of the string would simulate the elephant's sling.
- Visit a local building site to look at a crane in action (bearing in mind the health and safety issues)
- Look on the web at the photographs etc on www.mokolodi.com/presentations.htm.

This is the actual web site of the game reserve where the background picture in Jumbo was taken and where the man shown on the opening and closing screen actually works. In particular look at the photo sequence entitled 'Elephant Walk'.

Differentiating the activity

Children could be asked to write down three different sequences, all of which lead to a successful rescue. This will illustrate that there is often more than one way to successfully solve a problem.

Reflecting on their work

Children should be asked to think on why we might want to move elephants? Are there any other ways of moving elephants?

Does the rescue get easier on the second or third attempt? Why is this? What strategies do the children have for remembering the order of the events?

Jumbo – Rescuing the Elephant

Press the buttons in the order shown. Is the elephant rescued?

If not, then write a few words to say why not and then carry on to complete the rescue

low loader forward reverse	crane truck forward reverse	jib extend retract raise lower	hook raise lower	sling attach release			
6	1	2	3	4	5		

What happens?

low loader forward reverse	crane truck forward reverse	jib extend retract raise lower	hook raise lower	sling attach release			
6	3	1	4	5	2		

What happens?

low loader forward reverse	crane truck forward reverse	jib extend retract raise lower	hook raise lower	sling attach release			
	6	1	8	2	4	7	

What happens?

low loader forward reverse	crane truck forward reverse	jib extend retract raise lower	hook raise lower	sling attach release				
10	7	3	1	2	6	4	5	8

What happens?

Copy this to make a worksheet

sling attach release	
hook raise lower	
jib extend retract raise lower	
crane truck forward reverse	
low loader forward reverse	

What happens?

This activity was originally published in 2005 under the Becta Direct2U scheme in partnership with Naace Primary. To find out more and to join the scheme refer to the ICT Advice subscription services page at <http://www.ictadvice.org.uk/subscribe>.

Introduction

This lesson is about addition and subtraction of numbers up to 20.

The object of the program is to get four numbers in a row, using a calculator that has just three working keys (chosen randomly).

What will the children learn?

- To perform calculations using an on-screen calculator with only three working keys. The answer should match one of the 16 numbers on a 4 x 4 grid.
- To develop a strategy as to how best to achieve 4 numbers in a row (vertical, horizontal or diagonal).

What prior experience do the children need?

- The ability to add and subtract 3 numbers, generating answers in the range 1 to 20
- A basic familiarity with a calculator.

Equipment

- One PC per two children for group work, or one PC and a data projector for whole class work
- Number Board
- Children may need paper and pencil to help them with their calculations.

The lesson

This lesson is a game between two children (or the class versus the teacher) whereby the children perform addition and subtraction calculations with numbers up to 20 and match the results to one of the numbers on a 4 x 4 number grid.

The game is very effective when run as a whole class activity with an interactive whiteboard – this may be the introduction to the lesson.

Children can then try for themselves, working in pairs. There is a scoring system included, so the target is to see who can complete the game first.

Children should be encouraged to record each calculation on paper so that the teacher can then review their work after the game is completed.

Why are we using ICT?

This task could be completed without the use of ICT by using number grids on paper and using 3 dice to give the three numbers. However, if children are working on paper and with dice there is no check as to whether their work is accurate.

The computer offers a check on accuracy, greater motivation, and greater flexibility and control of the different parameters that can be applied.

Where do we go next?

This is a one off activity; one of a variety of different ways of enabling children to practise work with number bonds.

The strength of the program is that it is easy for the teacher to reset the parameters so as to make the task harder for the children. Simply by ticking radio buttons, the teacher can set:

- The type of calculator to simple or algebraic (note: a simple calculator will give the answer to $6 + 4 \times 3$ to be 30, whilst an algebraic calculator will give an answer of 18 to the same sum)
- The range of numbers on the 4 x 4 grid
- Which operators are to be used (i.e. addition and subtraction only, or all 4 operators)
- Whether or not all 3 digits on the calculator must be used
- Whether or not to allow a two-digit input (for example, if the calculator displays a 5, 3 and 8, is $8 + 35$ to be allowed?)
- Whether or not to display bracket keys
- Whether the lowest value key is to be 0, 1 or 2 (i.e. this is the smallest value working key on the calculator keypad).

Differentiating the activity

In order to play the game, different children will need different levels of support. Some may need counters to help with the calculations and some may need to record their moves.

Other children will be able to play the game straight way without any additional support

By editing the settings the teacher can easily raise the difficulty of the game to match the ability level of the children

More able children could move away from the computer and using the digits 1, 2, 3, and 4 (each once only and all 4 must be used) plus any of the 4 operations, make each of the numbers 1 – 20. For example: $4 / (3+2 -1) = 1$ or $3 \times 2 - 4 - 1 = 1$ or $3 / 1 - 4 / 2 = 1$

Reflecting on their work

Children should be asked to reflect on which part of the activity proved the hardest. If, for example, they were looking to make 24; then how many calculations did they tend to do before finding out how to reach the target number?

The children should also be encouraged to explain what strategy they adopted for winning. Were they content to use the three keys to make any number on the grid or did they select specific numbers to target? How valuable is it to 'capture' one of the corner squares.

This activity was originally published in 2005 under the Becta Direct2U scheme in partnership with Naace Primary. To find out more and to join the scheme refer to the ICT Advice subscription services page at <http://www.ictadvice.org.uk/subscribe>.

Revealing Hidden Text

Introduction

In working to reveal some hidden text, children will make explicit some of their intuitive or informal understanding of the way written text works.

What will the children learn?

Children will develop their ability to use phonological, contextual and grammatical knowledge to work out the meaning of text.

What prior experience do the children need?

No specific ICT experience is required. This activity is more likely to be successful with children who have made some progress in reading.

Equipment

- Discloze
- A digital projector is necessary for the whole class activity, though it could be undertaken with a group using a single computer screen.
- Internet access is required to download the software or to use the on-line version.

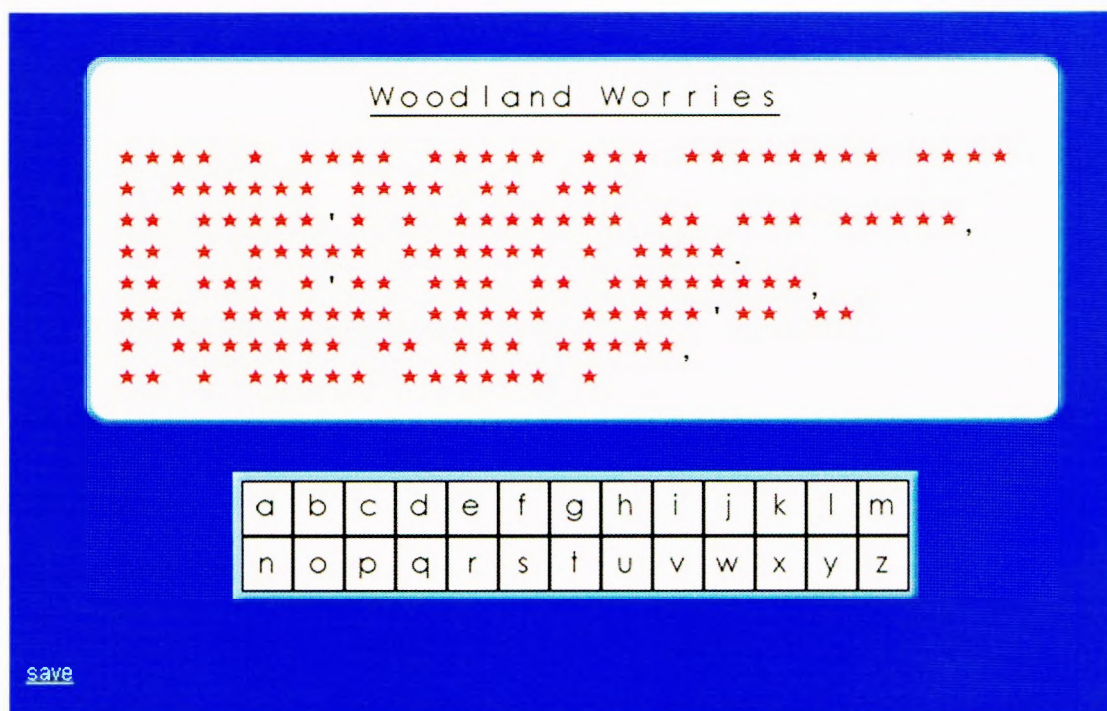
The Lesson

Go to the Naace Primary website, choose Classroom Activities and scroll down to Discloze. Click on the top link, labelled simply 'Discloze' and select the activity called 'Bob' from the Y2 list of texts.

The text consists of an eight-line poem 'Woodland Worries'.

When I walk along the woodland path
I always look to see
If there's a gremlin in the grass,
Or a troll behind a tree.
So far I've had no problems,
But perhaps today there'll be
A gremlin in the grass,
Or a troll behind a

The file that appears has the text completely hidden, with a star representing each letter. You can reveal all instances of a letter by picking it up and dragging it onto the Reveal a Letter area. You can drag letters onto individual stars, and if they are correctly placed they will remain there.



Do this as a whole-class activity. Start by talking about what inferences children can make about the text by looking at the stars. Where are the punctuation marks and the line breaks? What does this suggest about the text? Look at the title – both words start with capital letters (i.e. the stars have black borders). Where are the other capital letters? What about the words with apostrophes – what might they be? Can you identify any other words? (the trick here is to look for plausibility, in terms of phonic knowledge and spelling, syntactic and semantic awareness).

When you have extracted as much information as you can, reveal all examples of a letter – ask children to suggest which letter first, and make them defend their suggestions. E is a good starting-point, followed by T – the most common letters, in order of frequency, are ETAOINSHRDLU. When you have inserted some letters, go through the text, asking for suggestions to fill gaps. As you do so, consider plausibility, and look for evidence that children are using contextual information. For example, _e could be be, he, we or me. Context might help decide which is more likely. The point of the exercise is to give children the opportunity to make explicit some of the principles of written text that they have begun to grasp intuitively, and in doing so to share their understanding with others. As an activity this can be a rich source of informal formative assessment evidence about children's reading progress. If the discussion begins to flag, you can revive it by revealing another letter.

In this particular instance, children should be able to deduce some other textual features, like rhyming sounds, and repetitions of words and phrases. To what extent can children predict what the words will be, based on the structure of the verse? The text will be unfamiliar to the children. If you start with, say, a nursery rhyme, the activity is effectively over as soon as someone realises what it is. The ending of this verse contains a surprise. Make sure children have understood what it is. Ask the children to illustrate the verse – how do they conceptualise its action?

Why are we using ICT?

Texts can be produced or adapted quickly and easily using the Discloze Editor. As the computer validates the correctness of answers, you could use a file you have not previously created or read, and model your own deduction processes alongside the children.

Where do we go next?

Use the Discloze Editor to create some other texts for children to work on in small groups (i.e. more than one, and probably less than six) with some adult oversight. If possible, monitor what they do, and what strategies they employ. The whole class activity gave you the opportunity to scaffold the process, and its success depends on the skill with which you place the questions you ask. When children work in a group, they sometimes employ less effective strategies (blind guessing, trying all the letters, revealing all the letters, looking at their neighbours' solutions). You can control this to an extent by opting for a mode that includes scoring (see the Discloze Editor), but the best approach is a degree of adult surveillance, coupled with some well-placed and well-timed questions.

For more ideas, see Heather Govier's article, *Using Discloze in the Literacy Hour*, on the Naace Primary website.

Differentiating the activity

The options in the Discloze Editor give you the opportunity to differentiate the task for a range of abilities, as you can produce different files based around the same text, but with different ranges of missing letters.

Reflecting on their work

When you are reading, what do you do when you come to a word you don't know? What do you think you have learned about reading from doing this activity?

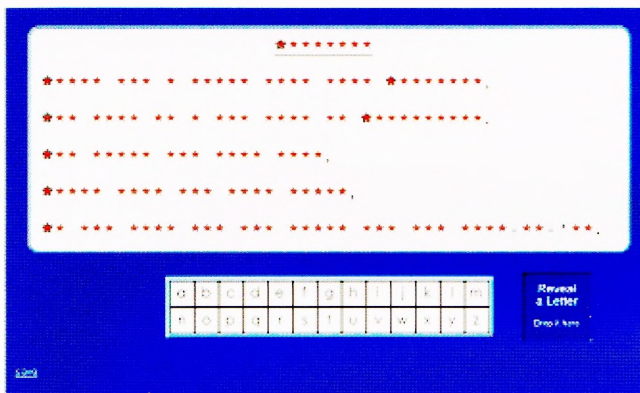
This activity was originally published in 2005 under the Becta Direct2U scheme in partnership with Naace Primary. To find out more and to join the scheme refer to the ICT Advice subscription services page at <http://www.ictadvice.org.uk/subscribe>.

Using Discloze – a mini-case study

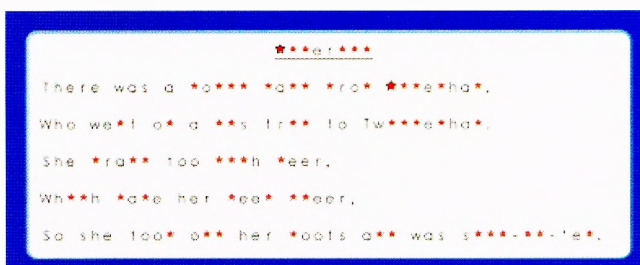
Heather Govier, Chair of Naace Primary Working Group

In the initial stages Discloze is a sort of “hangman” activity, but to describe it thus entirely fails to do justice to its use and potential. A piece of text is stored in the computer but remains hidden from the readers. They are able to bring up the text a little at a time and as it is slowly revealed the readers are called upon to hypothesise about the meaning, initially with inadequate information. Their understanding grows slowly through a series of false starts and blind alleys until a final consensus is reached.

As part of a unit of study on humorous verse, a teacher presented the class with a limerick set up as a Discloze text. The screen display consisted only of a star for each letter and all the punctuation. The children were told that the bold stars represented capital letters and asked what they could deduce about the text. They rapidly agreed that it was a poem because of the layout and that it contained proper nouns/names at the end of the first two lines. Given the context of the work - they had been looking at various forms of humorous verse – someone suggested that it might be a limerick and thus begin, ‘There was a ...’



Based on this prediction, some letters were placed in the text (t,h,e,r,w,a,s) and all other occurrences of the same letter filled in throughout the text. This gave a second line starting with a word ‘wh*’ which was probably ‘who’ so the letter ‘o’ was added throughout. This produced a text that looked like the following.



Much rich discussion took place in trying to decode the rest of the text.

Throughout all of this the teacher’s questions prompted children to analyse the text and make deductions about it. The questions were open rather than closed – prompting explanations as opposed to single word answers. The children were also asked to reflect on the process of their thinking not just the result. For example, at the beginning:

- What can you say about this text? Why do you say that?
- How do you know that it is a poem?
- Where can you see possible rhymes? What clues are you using?
- What could the bold stars in the last words on lines 1 and 2 signify? Why do you think that?
- Can you make a guess at any of the words? What clues are you using?

As they worked, children were also invited to ask their own questions about the text even if there were no quick, easy answers. For example:

- What are all those dashes at the end of the last line?
- What is the third word in the last line – what four-letter words begin with ‘too’?
- What part of speech is that word?
- What could the title be?

What is the value of this work?

A group of children working on Discloze with their teacher are in an environment:

- where errors become profitable learning experiences
- where a trial and error approach is possible
- where discussion and hypothesis testing are possible at all levels from the simple spotting of words to the complex analysis of deep meaning
- where the final understanding results from combined analysis and synthesis using elemental building blocks.

Discloze allows children to build upon what they already know about language and about reading in order to read in a new way that is magical and powerful. It links reading with thinking, talking and listening. And it makes reading a communal activity in an atmosphere in which it is recognised that everyone has a valuable contribution to make. Perhaps it is this last point which most of all makes Discloze a significant teaching resource.

Footnote

Discloze is based upon a program called TRAY created by Bob Moy in the late 1970s. He was, at that time, an advisory teacher with ILEA, and the software was developed for his work with older children who had reading difficulties. From this beginning he experimented with using it with other age groups and it was found to be equally effective with children of all ages and abilities (and indeed with adults).

Several publishers have produced variations on the theme (including 2Simple who have worked with Bob himself to create ‘Developing Tray’) but Discloze, from Naace, is the only one freely available on the web. This text is available on the website – look under ‘Uses for Footwear’ in the Y6 collection.

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Big Books

Year: 1/P2 Science: Exploring Sounds

Introduction

Children explore sounds using web based resources and datalogging equipment.

What will the children learn?

Children will learn to recognise and describe sounds. They will understand that sounds travel away from a source and get fainter as the distance from the source increases.

What prior experiences do the children need?

Children should understand that hearing is one of the five senses and that we hear things through our ears.

Equipment

- Access to the **Big Book** called 'Sounds' which can be found on the Naace Primary website. Look under Classroom Activities – Big Books. This should be downloaded to your computer in advance of the lesson.
- A datalogging device with a sounds sensor, connected to a computer with appropriate display software (for example the Ecolog XL from Economatics)
- An electronic whiteboard or projector would be useful for whole class display.

The Lesson

Begin by using the Sounds big book with the whole class to carry out a sounds quiz. Play the sound on each page and ask the children to identify it and explain what information it might carry. For example, it might be best to stay clear of the growling dog.

Set up the sound sensor. Use the form of display that best shows the differences between loud and quiet sounds. Make various noises and ask children to describe the differences in the display: clap loudly or quietly; use a variety of musical instruments; whisper and shout. How does the display show a loud sound? How does it show a quiet sound?

What happens when the sound is made nearer to or further from the sound sensor? Ask the children to relate this to their own perception. They should be able to observe that sounds get fainter as they travel away from the source and louder sounds can be heard from a greater distance than quiet sounds.

Allow children to devise and carry out experiments to test this.

Why are we using ICT?

The Sounds big book provides a convenient way of presenting a sounds quiz as sounds and pictures are stored together with appropriate prompts.

The datalogger allows children to use a visual display to compare sounds.

Where do we go next?

The on-line activity 'Sound and Hearing' from the BBC Science Clips website provides a good follow up to this work (see below for URL). This could be used with the whole group as a plenary demonstration, or by pairs of children to consolidate understanding.

Differentiating the activity

Some children could go further with their experiments, investigating, for example, what difference it makes if the sound sensor is covered in fabric or the sound source is muffled by putting it inside a box or under a cloth.

Reflecting on their work

In a plenary session ask children to articulate some of their discoveries.

How do we hear sounds?

Which part of the datalogger detects sounds?

What words can we use to describe sounds?

What happens to a sound as it gets further from the source?

How can sounds be muffled?

Supporting resources

- BBC Science Clips – Sound and Hearing
http://www.bbc.co.uk/schools/scienceclips/ages/5_6/sound_hearing.shtml
- The EcologXL Datalogger is available from Economatics (Education Ltd)
<http://www.economatics-education.co.uk/>

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Listen to the sound
before you look at
the picture.

Do you know what
it is?



Big Book Maker

Year 3/P4

Introduction

Children work in small groups to create illustrated big books for use with younger children.

What will the children learn?

Children will develop their ability to plot a sequence of episodes as a storyboard. They will learn to use different pieces of software in conjunction to create a single artefact. As they do so they will work collaboratively with others, and will reflect on their understanding and expectations of the reading process.

What prior experience do the children need?

Children will need some experience as readers, in order to make judgements about what is suitable for younger children. They will need basic keyboard familiarity, and it would help if some had previous experience of using a digital camera.

Equipment

- Big Book Maker: <http://www.naace.org/>
- Software to enable pictures to be re-sized, rotated or cropped. There are various ways of doing this. IrfanView is freely downloadable for non-commercial purposes, and is relatively straightforward to operate – see below.
- Digital camera/s
- A digital projector to display the finished books.

The Lesson

You are strongly advised to familiarise yourself with Big Book Maker (see below) before commencing the task. It is fairly intuitive to use, and the help pages (accessed via the help on-screen button) provide the necessary additional detail.

Children work in groups of about three or four. They decide on a target audience (say, Foundation Stage or Year 1 children); they select a story they already know, and between them they create a storyboard, sequencing the episodes of the story. When they have done this they work together to draft the text to convey each episode in language that would be appropriate for reading with or to their audience. All group members should contribute to decisions about how to phrase the text. They assemble a 'cast' for their story, using dolls, toy figures, finger puppets, figures they draw and cut out themselves, figures made from modelling clay, or anything else. They also contrive suitable backdrops for each episode, using any means available.

They then use the Big Book Maker. You will probably need to provide some assistance and instructions in setting the page parameters. Depending on the circumstances in which the book will be used, set the page width and height appropriately – you may want to experiment beforehand. You will probably want to set the text width to 50% - this will give you screens on which the left half will hold the text and the right half will hold the picture. You have a choice of three fonts; specify the font size so that it is appropriate for the page with the most text (you can't change it from page to page). Choose colours for the background, text font and title. You can also choose a picture type, either jpeg or gif. The choice is yours, but once made you will need to ensure that all pictures used are saved in that format. For most purposes it is safe to leave this option in its default setting (.jpg).

Enter a title, and then the text, leaving blank lines to signify page breaks. At any point, clicking on preview will provide an opportunity to see how the layout is working. When this is done, click the Save button. This saves your working file to the Naace Primary website temporarily, and enables you to recover it to extend or modify the story. Click the Make Book button. From the resulting window, choose File > Save As, and save the book to a suitable location with a suitable filename. Note that if several groups are using the same computer you will need to set up a different folder for each book – you will probably wish to do that beforehand. Within each folder, create a new folder called 'images' – that is where the pictures will be placed.

Children then pose their 'cast' appropriately for each illustration. Use a backdrop or diorama, and try to ensure that no extraneous material gets into the picture. If possible, place the digital camera on a solid surface like a tabletop, to keep it steady. Experiment with variations in camera angle. Consider light and shadow – how might you create effects? One or two powerful torches could be useful here, but don't over-expose the shot. Take three or four different shots for each illustration, and upload them all to the computer. Groups should discuss each shot, to decide on the most suitable. Use picture-editing software to resize, rotate or crop the picture – children will initially need help with this. When the group is satisfied, save the picture into the images folder with the filename pic1, pic2 etc. according to the page number. Remember that the file type must match what you set the book to (e.g. jpeg by default).

Clicking on the book's file should start it up. Note that if your machine is set to block popups, you will either need to turn that option off or else hold down the Ctrl key as you click on the file.

Note that the book file is entirely standalone, as long as it is accompanied by its images folder and as long as the computer on which it is used has a web browser – you do not need to be online to use it.

When everyone has completed their book, hold a plenary session to display them all, and discuss their best features, and also what you would do differently next time.

Why are we using ICT?

ICT provides the matrix on which children can work in collaboration to develop their ideas without sacrificing the uniformity and style of the final product. It enables children to experiment and make choices in relation to the illustrations.

Where do we go next?

If possible, arrange for your children to use their books with children of the age for which they were intended, as a shared reading activity, or simply to be read to them.

If anyone completes a book of publishable quality, Naace Primary will consider adding it to its website as a resource for others to use. Please e-mail Heather Govier h.govier@btopenworld.com in the first instance.

Differentiating the activity

The activity is basically the same for children of all abilities. Differentiation will be apparent in the amount each group manages to write, and in the extent to which groups need assistance with aspects of the task.

Reflecting on their work

What does writing for a younger audience teach you about your own reading?

Resources

Big Book Maker: <http://www.naace.org>

IrfanView: <http://www.irfanview.com/>

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Sir Henry Unton

Rhona Dick

Ages 7-11

The portrait of Sir Henry Unton on the Naace primary resources site is by courtesy of the National Portrait Gallery, London and is covered by their copyright restrictions.

Sir Henry who?

Sir Henry Unton was a Tudor who had quite an eventful life. This is recorded in a memorial portrait commissioned by his widow in about 1598 some two years after his death, and detailed in writing alongside the portrait.

QCA Schemes of work for History at Year 3 and 4 suggest that children use portraits as sources of information about Henry VIII. This is good history teaching. We can learn so much about the past from works of art, although as the portraits of Anne of Cleves bear witness artists don't always paint the truth. Using the Unton picture not only helps us to learn about Tudor times (Knowledge and understanding of events, people and changes in the past) but it also allows us to critically evaluate information (Historical interpretation) and provides a source of evidence (Historical enquiry).

So what can this picture tell us about life in Tudor times? A surprising amount of detail is recorded. Naturally some of it will be apocryphal. Sir Henry was dead when it was painted, so unless the artist knew him personally in his lifetime the large portrait that dominates the panel may not be a true representation. In simple terms we can see that Henry was from a noble family and eventually studied at Oxford. We can see that he travelled in Italy and fought in the Netherlands as well as being in France. The fact that his body had to be brought back to England shows that he died abroad, and his funeral procession is a long and dignified one. The congregation at his funeral is large and the preacher is clearly displayed indicating some importance. His tomb is quite magnificent.

Even quite young children can draw conclusions about Sir Henry from these images when asked the right questions.

Five small sections of the picture towards the centre right show life inside Wadley. Sir Henry is shown in his study, there is a music ensemble and he is engaged in earnest discussion with other gentlemen. The banquet and masque scenes provide rich pickings. Can you see the silver or pewter plate at the back? Look at the napkins over the shoulders. How are the ladies and gentlemen dressed? How many servants are there? What do all these little facts suggest to you?

Interestingly one part of his life that is not depicted is the time he spent as an MP. Of course being an MP in those days was very different from now. The sole purpose of Parliament was to raise taxes for the monarch. Sir Henry Unton opposed this on one occasion; perhaps it was felt more diplomatic to ignore the fact that he had angered Queen Elizabeth. Ask the children what interpretation they put on this notable absence.

Older children can be taught to question the veracity of the picture. Quite clearly many of the scenes are caricatures, why? Which parts of the picture are most detailed? Does this tell us that the artist was there at the time, or that he had experience of similar situations, for example Sir Henry's deathbed scene? Compare the meticulously painted parts with others; try to explain this lack of detail.

The Unton Inventories

Download the copies of both the Wadley and Farringdon inventories. These were legal documents compiled after Sir Henry's death, and as far as I am aware were first made available on the Internet on this site.

If you use these, you'll probably need the glossary as well, in conjunction with the portrait you will build up quite a broad picture of the life of wealthy people in general and Sir Henry and Lady Unton in particular.

Sir Henry was clearly a cultured man; his study was well stocked with books and he also owned musical instruments. Are there any possessions that are surprising? Are there any possessions you would expect to find that aren't there? Can you explain?

Children might be surprised to learn after looking at these that Sir Henry died in comparative poverty.

Additional resources include some that are general to Tudor times, for example match the treatment to the disease, a drag and drop activity, and a herbal database.

Ailment	Treatment
Headaches	
Sweating sickness	
'Bad' chest	
Headlice	
Plague	
High blood pressure	Bloodletting using leeches
Baldness	
Scrophula	

Drink an infusion made from thyme, campanula and hyssop

Rub crushed garlic into the head and wash in vinegar

The affected area is touched by the mouth

Use a shampoo made of tobacco juice

Drink an infusion made from lavender, bay, rose petals, sage and marjoram

Place the herb rue on your windowsill

Bleed the patient between the thumb and forefinger

Herbal medicine was all that most people had in Tudor times, and using this database the children can find out what cures would have been available for everyday problems. Another option is to find the plague cures!

Using the Databases in Primary Classroom Activities

Doug Dickinson

Leicester University School of Education has a PGCE Primary course in which ICT is embedded in the subjects so that the contexts are, as far as possible, curriculum related. Sessions within core subjects are sometimes given over to building up students' confidence and competence in the various applications that they need to become familiar with.

In one particular science session we look at the variety of databases available and needed to span the work in this core subject. During the workshop part of the session the students are encouraged to devise and investigate activities which use online curriculum resources as well as software curriculum resources.

In the section where we discuss and experiment with branching databases a number of proprietary programs are introduced and their pros and cons deliberated upon. The online resource investigated is 'Sorting Games'. These prove to be very useful in continuing to develop the idea of 'Yes'/'No' answering essential to this type of database and in tying the ideas in with games such as 'Guess who?'

There are 9 'games' in the set and can all be run online or can be downloaded as files for both PC and Mac for installation on any computer.

The games themselves exploit the 'yes/no' answering genre applicable to branching databases and are aimed at uniquely identifying the objects built into the 'games'. Users quickly realise that they are expected to be able to answer questions in a straightforward, non-ambiguous manner and although most of the games offer simple questions which require little background knowledge the 'Planets' game might test some (or be used as an assessment activity).

The preliminary activity to this block is a practical workshop in which the students become involved with building a paper model of a branching database. At the outset I explain to the students that the questions that they use in their database need to be closed questions where the answer is either 'yes' or 'no'. Often this is exemplified using the game 'Guess Who?'. I have even played the whole thing through using the 30+ students in each group as the objects and then sorted them by asking specific identifying questions. This is fun at any age!! It is essential, at this point, that they understand that the objective of the questioning is unique identification.

For the practical work each group starts with a box containing 10 related items to uniquely identify by asking yes/no questions. To begin with one item is removed from the set and placed to one side and the other nine are placed in a circle drawn at the top of a piece of sugar paper. The students are asked to look at the objects and then to think of a question to which the answer will be 'yes' for some items

and 'no' for the rest. For example if it were a set of mixed objects the question could be 'Is it man made?'

The question is then written down under the main object box and 'yes' and 'no' lines are drawn to the sides. The objects are then physically moved into the correct places.

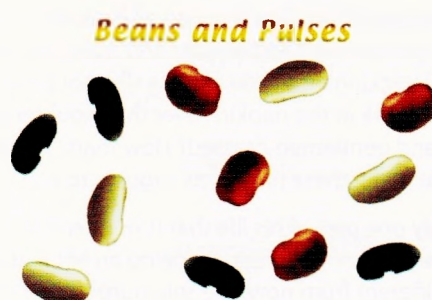
For one of the sorted sets now another 'yes'/'no' question is asked and the process repeated. This continues until all of the objects are isolated at the bottom of the sheet of paper. They have been uniquely identified by the questions.

The tenth object is now brought out and placed at the top of the paper. It is gradually moved down through the questions until it is left at the bottom of the page with one of the original nine objects. A further question splits these two and the concept is cemented.

At this point the students split into groups of 4 and then pair off. One pair goes to work on the online resources and the other pair goes to the 'software' programs. After about 20 minutes they swap over and after a further 20 minutes they meet to compare notes. These notes are brought back to the main group of students so that by the end of the session all have a working appreciation of the range of resources available to them.

Using Sorting Game

The 'Beans and Pulses' is a good demonstration starter and when used on an interactive whiteboard it allows for discussion about appropriate materials for this sort of interaction and gets the students to think about the range of ideas that they develop for their own classroom practice. All too often we find the students concentrate on the software delivered with the boards and forget about its simple interactive power.

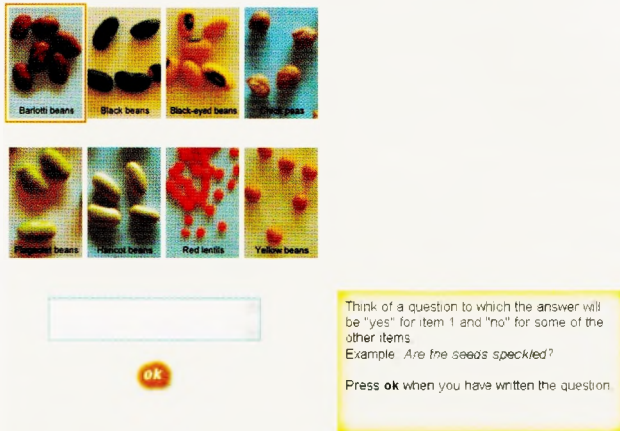


In this game you must teach the computer to recognise various beans and pulses.

make a game

play a game

Once the game has been played as a demonstration the students go to the machines and investigate some of the other contexts. They quickly realise that as often as not, they don't have enough background information to answer the questions and this opens the discussion about going to secondary sources as part of the datahandling exercise.



- In a school/class context we feel that the sequence would best begin with 'Play a game' from the Sorting Games set, probably as a whole class on an interactive whiteboard to focus on the language needed for successful sorting i.e. closed questions and objective questions (no 'is it big?' etc).
- Then go on to do a practical task as above. The children would by now have a better understanding of the closed question idea.
- Use commercial software for a specific curriculum focus or 'Make a game'. After all this is not really about the concept of branching databases it is about using a system to sort and classify.

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The next stage is for this group to build a game of their own. I always suggest using 'Beans and Pulses' as it is potentially the simplest to get the ideas over with. Discussions here centre on accurate formulation of unambiguous questions and open up literacy concepts of 'writing for an audience' and 'writing using an appropriate vocabulary'.

In this context, we look at QCA ICT 4C 'Branching Databases' <http://www.standards.dfes.gov.uk/schemes2/it/itx4c/?view=get>

and discuss the variety of contexts across the curriculum where this application can be applied. Some inventive ideas have come from identification of characters in a book or book scheme, coins, metric and imperial measures, shapes, (would you believe?) parts of speech etc.

The students who follow through this pattern have the opportunity to develop (amongst other things):

- An appreciation of the concept of closed questioning to determine uniqueness
- A look at the way QCA structure the Schemes of Work
- A regard for the difference between software and content
- Another web site to add to their growing set of resources
- Access to, and practice in, using a web based activity
- Personal views on the use of such resources

ICT acts as a catalyst here giving the students the opportunity discuss organisation and management of ICT in the large variety of school situations that they have met.

Whodunnit? – We Did!

Geoff Davies

As any teacher will recognise, when you have pupils asking if they can continue, during wet playtimes, an activity which you have introduced previously in class and, in the case of an Internet resource, they choose to carry on with at home, you have a good indicator of the level to which the children are engaged and motivated. In addition to this, if as a teacher you are confident that a particular resource will help you achieve a range of learning outcomes, the choice of an activity is doubly endorsed. This was certainly the case when I used *Whodunnit (Playing Detective)* with my Year 5 recently. I would like to describe how I went about incorporating this program into my teaching.

By the time children have passed through our school they will have experienced data handling in the forms of branching databases, spreadsheets and flat file record databases; *Whodunnit* is an example of a flat file record database. This type of database is the electronic equivalent of the now less common paper-based card index. Data is organised in separate records, which are in turn subdivided into categories known as fields.

The school's ICT scheme of work provides a progressive approach to the use of this type of database. In the Early Years (Foundation Stage) children will have opportunities to use *1st Find IT*, a pictorial version of a flat file record database. They will enter, sort and search data on themes such as 'Teddies' and 'Fairy Tales'. By Year 2/3 the children will have moved on to the text-based version of this kind of database called *FindIT* and will be expected to enter data into a database prepared by the teacher before carrying out sorting and simple searches of the data. 'Ourselves', 'Animals' and 'Homes' are amongst the themes popular with this age group. This experience culminates in the children creating their own database by the top end of Key Stage 2,

when they enter data in the form of text and number before carrying out sorting and more complex searches.

So with this requirement for my Year 5 children in mind, I decided to use *Whodunnit* as a model on which the children could base their own databases at a later point and carry out the necessary searches. I began the work by introducing the program on the interactive whiteboard. The large image and interactivity it provides have, along with other resources such as 'big books', contributed in recent years to teachers adopting more class exposition. I thought this would be a sensible approach when I was looking to both introduce *Whodunnit* and to revise the mechanics of a database and the associated terminology such as 'records', 'fields' and 'interrogation'.

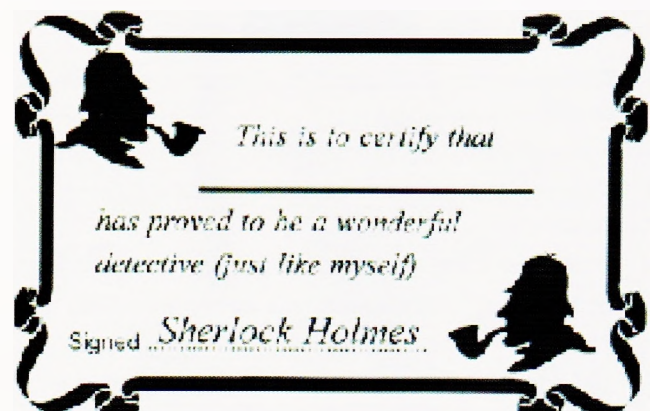
In the case of *Whodunnit* there is a record for each of 50 criminals. The record is then categorised into fields including 'name', 'age' and 'height' with the appropriate data for each

criminal entered in each field. The children are required to become detectives and extract clues embedded in various crime scenarios in order to find the guilty party from amongst the 50 potential culprits. The clues direct the children to various fields for interrogating the database and narrowing down their search. As the clues are not always explicit, the children have to use deduction and inference before selecting the search criteria. (The Teacher Notes accompanying the program provide more detailed information.)

With the assistance of some of the children at the interactive whiteboard, we went through Case 1 – The Stolen Statue. It was not long before the majority of the class had understood the process sufficiently to be able to work through other cases independently. The children were organised into pairs and given a 'Crime Report' sheet on which to record the information they collected as they worked through the various crimes.

Crime Data		Arrest Report	
Investigating Officers:	1 _____ 2 _____ 3 _____ 4 _____	Witness List:	1 _____ 2 _____ 3 _____ 4 _____
Name of the Crime:	_____	Suspect's name:	_____
Where did the crime take place and at what time of the day?	_____ _____ _____	Reasons for the arrest:	_____ _____ _____
Chief Inspector Signature:	_____	Arresting Officer Date:	_____

When each child had completed an appropriate number of cases they were awarded a 'Sherlock Holmes' certificate.



The children found it fairly straightforward working through those cases where the clues were more obvious. However, when clues had to be discovered through deduction or inference, or when the number of searchable fields was restricted, they found those cases more challenging.

With this part of the work completed, I was confident that the children were now sufficiently versed in the data-handling process to move on to the next part of the activity. Here the children were going to create their own database by adapting data they had collected previously for a science topic on 'Ourselves'. For the work in science this data had been incorporated into a spreadsheet and formulae had been applied to determine such things as the average height and the fastest runner in the class. With the need for the children to record data more quantitatively as they progress through Science at Key Stage 2, it meant that a variety of data in text and numerical form relating to such fields as 'Age', 'Height', 'Weight', 'Gender' was available to be incorporated into the database. The availability of numerical data offered another dimension to the work by providing an opportunity for the children to create and interpret graphs in a more meaningful way. Having undertaken the work on *Whodunnit*, I wanted to encourage a creative element by asking the children to invent characters who they could later include in their own crime scenarios. They had to attribute to these characters some of the actual data the children had collected during their science work. The spreadsheet (which had now become a data capture sheet for the purposes of creating the database) was duly adjusted and the data transferred from it into the database, *FindIT*. (See below)

	1	2	3	4	5	6	7	8	9	10
	Name	Sex	Age	Height (m)	3 legged rugby field (goals)	Passport	Footwear	Head	Weight (kg)	
2	Shashanka	male	31	1.7	60	American	umbrella	O	34	
3	Jim Barton	male	20	1.68	50	British	band	A	30	
4	Anna Wilson	female	25	1.51	40	German	glasses	B	37	
5	Bob Skewton	male	45	1.61	55	Spanish	hatbox	B	28	
6	Karla Davies	female	33	1.72	50	Swiss	umbrella	A	44	
7	Edwardson	female	25	1.55	60	American	glasses	O	34	

Next each group had to compile a set of questions based on their own database. These questions and the database were exchanged with another group for them to carry out a search. Below is an example of the questions set by one group:

1. How many males are British?
2. How many people have tattoos?
3. Who is the person with glasses and a German passport?
4. Who is the American with a moustache and is older than 60years?
5. Who is the British gambler with ginger hair?

Immediately, there was evidence here of the children understanding the principle of searching on the basis of more than one criteria. Again, this activity was well received by the children and so it was time to introduce the last task. This required the children to create a crime scenario (à la Whodunnit) in which data relating to the culprit of the crime was embedded within the details of the story. The relevant information would then have to be extracted by the reader before the database could be searched to narrow down the suspects. Here's one example:

The Mystery of the Stolen Crystal

Mr. Johnson: Height 1.32m Age 45

Sherlock Holmes: What happened Mr. Johnson?

Mr. Johnson: I was just unlocking my front door when I saw this man jump out of a ground floor window. I chased him across the lawn and he dropped this umbrella.

Sherlock Holmes: That could help us. Did you notice anything else about him?

Mr. Johnson: He was younger than me and I would say about 40 cm taller than me. In fact, he was quite thin for his height.

Sherlock Holmes: That's very helpful. We should have no problem in tracking down the culprit.

I felt we all got a lot out of this work. The children remained focused and enthusiastic throughout and I found their responses gratifying and stimulating. Clearly, the work enhanced their ICT capability but there were a number of other benefits. It provided a meaningful context for developing the children's reading and comprehension skills. Collaborative working was essential to the successful completion of the tasks, with decisions having to be justified and supported by the facts of each scenario. The work provided opportunities for creativity with the children developing their ideas within the parameters of the data they had established for their databases. The open-ended nature of the tasks meant that the children could develop their questioning and their searches to a level appropriate to their ability. Through careful questioning of the children, their written evidence, and completed databases, I was able to make assessments of the children's learning. What more could I ask for? Oh yes, there was one more thing – the resource is free!

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<http://www.grangeschool.co.uk>

Greenfield Road Database

Rhona Dick

Age: Upper primary

Introduction

In this activity children will use a database to answer questions about the residents of a road in Birmingham between 1841 and 1891.

Answers found from the database don't cast any light on the real person, so you should use it just as a starting point. Answers can be displayed in a variety of ways, and many of them will give a number in brackets afterwards. This is the record number in the database, and by going to that record the children can put more flesh on the skeleton, so to speak.

What will the children learn?

The children will learn about people living in a city during Victorian times.

Previous learning?

Children should know when the Victorians lived. They should understand what a census is and it would be helpful if they have looked at original census records.

They should have used a database to search for information.

They should be familiar with the symbols > and <.

Equipment

Computers for teacher and children's use.

A copy of the freely downloadable Greenfield Road database

An interactive whiteboard is useful for whole class work

The lesson

Open up the program and click on level 1

Explain the screen to the children. The fields correspond to those on a census record. In particular point out the categories Occupation and Class of work. Sometimes these are used interchangeably. Similarly point out the Place of birth and County/Country of birth; these might cause confusion.

Look at the first question in this case "What are the surnames of the people who lived alone?"

Pull down the menu and ask the children to tell you what they want to find out (surnames) and the field in which to search (No in household)

Type in the answer they give you and ask how the answer should be displayed.

Click on "Search".

Before clicking on "Answer" explore these records in greater detail.

Do the children think these people were young or old?

Were they married?

Were they men or women?

Displaying answers in different forms will sometimes throw up some interesting facts, and it is always worth doing.

You can display the individual records by clicking on "view records"

Assignment 1

What is the surname of the family with the largest number of people in the household?

Type in the record number and click "go"

In many cases the members of a household will be displayed on preceding and subsequent records and children should explore these as well.

Click "Answer" to get the next question.

Note that you cannot type in the answer and get it marked right you have to work through the database.

Continue like this until you feel sure that the children can use the database effectively. Ask them to continue working through level one. When they find a question or answer that is particularly intriguing them (for example what on earth was a screw nicker?) ask them examine the record sheets and write a brief report of the people who lived at that house.

Why are we using ICT?

The database consists of over 800 records; it would be impractical to search in any other way.

Where do we go next?

Compare the information obtained from the records of the Greenfield Road database with life in Victorian times in your own area.

Look at all the records for 1841 and a random sample of the records for 1891. Can the children suggest some ways that life changed in the area?

Differentiating the activity

There are three levels of difficulty and experienced and confident children could use levels 2 or 3.

Where to Site a Nesting Box for Owls

Yvette Blake

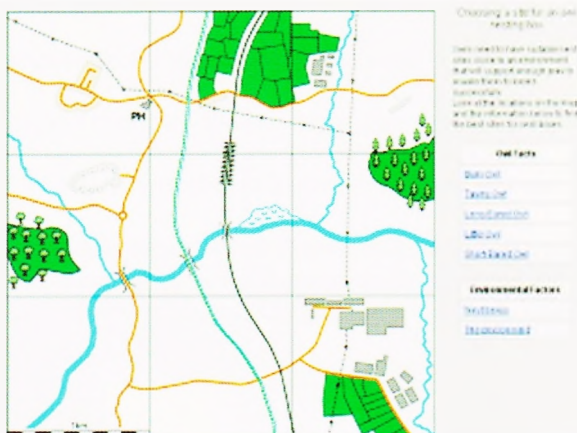
Age: Upper primary

Background/Context

Earlier this year I began working with small groups of Year Five children, during their lunchtimes, on a local environmental project called 'Our Wood'. This is a small piece of land close to the school, which as part of a new housing development was initially scheduled to house an electricity substation. However, due to the efforts of the local schools and residents, this land use was changed and 'Our Wood' has now been designated as a natural area.

The children's task therefore, was to consider how the land could be used and what changes would be needed to make it a place of natural beauty for both people and wildlife to enjoy. At quite an early stage the children made a dream tree and on the leaves of that tree they each specified what their dream for this area would be. For some it was to plant a wild flower meadow, for others it was to make hedgehog nests and for another group it was to see a range of birds living there, particularly owls. So we were drawn to exploring this activity on the Naace website, quite simply because we needed to know about owls and their nesting habits in order to change this dream into a reality!

This activity encourages children to research five different types of owls, with a particular focus on their habitat and nesting habits, in order to select suitable places to locate nesting boxes for them, on the map provided.



Working independently, the children in the 'Our Wood' group used it initially, purely as a research tool to produce a PowerPoint presentation about owls, complete with pictures from the Internet, for the rest of the class. However, inspired by the activity, their opening slide began with the question, "Which owl will be the one that flies around the wood?" And included a hyper link to the owl of their choice!

Reviewing this work showed that the children had drawn heavily on the text provided so I then worked with them to explore the activity in greater detail and compare the land represented by the map with our particular site. It was at this point that I found the glossary activity very helpful. By talking through it together, I discovered that there were several key words such as 'densely', 'arable' and 'coniferous', which the children didn't really understand. Rather than heading straight for the dictionary we tried to read the map, infer a meaning based on the contextual information and only then check our prediction. We were greatly intrigued by the difference between the broad-leafed woodland liked by the tawny owl and deciduous woodland, which is how we described our own woodland area.

Some clues were easier, only the long-eared owl likes coniferous woodlands and there is only one coniferous wood on the map. Once we had established what coniferous trees were and that there were no coniferous trees in 'Our Wood' we could definitely rule out this owl as a possible visitor! To help with organising their research we drew a 3x3 Owl Research Grid (similar to the map) for the children to record literal information gained from the map, think about what could be inferred about the habitat and then match this to the owls' requirements. This certainly made sure we researched the key vocabulary. Also included as part of this activity, is a report template for the children to write about their decisions and reasons for and against siting nesting boxes at particular points on the map. Again this was very useful to help the children not only to expand their thinking and reasoning but also to approach the task in a systematic and organised way.



Owls Research Grid

At the end of our research the class agreed with Emma and Sabrina that we should place a nesting box for the little owl in the 'Our Wood' site, although the tawny owl was a close contender and we are taking advice from the local nature wardens on this! In their words, "We think the little owl will be the one which will come into "Our Wood," because there is some woodland and some large fields nearby to provide the insects, worms and vegetation it likes, although it might not like being near all the houses when they are built." Tawny owls do live in towns, also breed in nesting boxes and eat similar food but I have a feeling that the little owl is more rare (it's picked on by other owls) so we want to try and support this breed of owl, even if the one we carved on our special 'Our Wood' sign looks more like the traditional wide eyed barn owl!

Having used 'Where to site a nesting box for owls,' with pairs of children, I would certainly recommend it as either a useful map reading or literacy activity. It offers the potential to both assess and/or teach non-fiction skills in a very interesting, purposeful and motivating way, particularly if the focus is comprehension and the enrichment of technical vocabulary. The children loved using it and were eager to both share and demonstrate how to use it to other children in the school.

<p>Information</p> <p>Modern housing estate, No mature planting Newsagent Pub - food Children's playground</p>	<p>This tells me</p> <p>No holes for an owl to build a nest in No trees that have been there for a long time only saplings, A busy environment with lots of people and noise</p>	<p>Information</p> <p>Farmer's fields Old hedges, Working farm Arable land</p> <p>Barn Owl</p>	<p>This tells me</p> <p>A home for mice and insects and birds – food for owls, A bit noisy from tractors but not a lot of people, Homes for owls in barns</p>	<p>Information</p> <p>Ruined cottages overgrown gardens, Damaged stone walls, Fruit trees Unused track</p> <p>Little Owl</p>	<p>This tells me</p> <p>Good for holes in walls for owls to nest in Fruit and insects to eat Quiet Lots of wildlife</p>
<p>Information</p> <p>Working quarry Broadleaved woodland</p> <p>Tawny Owl</p>	<p>This tells me</p> <p>Noisy, dusty, drills and machinery Many thick leaves</p>	<p>Information</p> <p>Un-used land between canal and railway, No big trees, Natural vegetation, Marshland Riverbank Water voles</p>	<p>This tells me</p> <p>Peaceful, No homes in trees, Food to eat – water voles</p> <p>Short-eared Owl</p>	<p>Information</p> <p>Coniferous wood dense</p>	<p>This tells me</p> <p>Lots of fir trees</p> <p>Long-eared Owl</p>
<p>Information</p> <p>River Road</p>	<p>This tells me</p> <p>Road is busy, River might have some food and be peaceful</p>	<p>Information</p> <p>Canal Railway line Road and fields</p>	<p>This tells me</p> <p>Peaceful because there is no housing, a quiet road, vegetation near the railway line, good for wildlife</p>	<p>Information</p> <p>Fence between field and road, small industrial units, Lots of buildings, Large complex</p>	<p>This tells me</p> <p>Lots of factories, noisy, lots of people work there, in and out with cars all day and night, not much wildlife</p>

The Plan v The Reality

Roger Keeling

Introduction

This case study is based upon one of the Direct2U maths activities and uses the **Random Number Generator** on the Naace website.

To access the software go to: <http://www.naace.org/> select **Primary Resources** and choose **Classroom Activities**.

To access the lesson plan and worksheet go to: <http://forum.ngfl.gov.uk/WebX?230@105.CbgaaXXNwI9.0@.efa705d> and select Year 2 "Now where shall we put that?"

The lesson itself is about practising addition and subtraction in conjunction with a random number generator. The worksheet was designed for pupils to work through in pairs. In theory the lesson was written for a year 2 class with the intention that the children would learn:

- to add and subtract numbers up to 20 and beyond
- to decide where to position numbers based upon their relative size
- to begin to think strategically about the best location for the numbers generated

Ideally the program should be run on an interactive whiteboard to facilitate whole class work. There is no need to download the program; just run it on-line. Set the minimum number to 3 and the maximum to 20. Set the font size to 200 and ask for one number at a time.

The idea behind the lesson is outlined below

Essentially the children work in pairs to complete the question sheet (shown in part below). Every time a number appears on the whiteboard, they have to decide which cell to copy it into to. If they don't want to use it then they can put it in one of the 'dustbin' cells. They have free use of the numbers 0, 1 and 2 – these can be used any time and

as often as they want. They will need to discuss amongst themselves which cell it is best to position a particular number in. There will usually be several possibilities. The children should be allowed sufficient time to discuss alternative options. There is an element of strategy involved in this lesson; it is not a race against the clock. The aim is to complete the worksheet first; similar to a game of bingo. The teacher may want to make a note of the random numbers generated for checking purposes.

Now where shall we put that?

You have to make all of these statements true. You can only use each random number once. You can put it in whichever box you think it most suitable. The random numbers will only be between 3 and 20. You have 3 free numbers which you can use whenever you want and as often as you want. These are

0 1 and 2

If you can't use one of the random numbers than please throw it into one of the dustbin cells at the bottom of the page. One of these questions can be answered without even waiting for the first random number!

Q1	24	-	9	+	3	=	
Q2	12	+	8	-		=	14
Q3	6	+		+		=	20
Q4		-	7	-		=	
Q5	12	+		-		=	18

However it is one thing to plan a lesson in theory, but what happens in practice?

- How did the children decide where to position a number?
- Was it useful to have access to 0, 1 and 2 and why?
- Which were the hardest questions?
- Some questions needed a specific number, whilst others didn't. Which were the easiest questions to answer?
- Did the 'dustbin' cells get full?
- At the end of the worksheet, are the children waiting for one particular number?

With this in mind I ventured into Castlefort JMI School in Walsall Wood in search of some of these answers.

STEP 1: Type in the minimum and maximum numbers; these can be positive/negative and/or contain decimals (to more places than is required at primary level)

STEP 2: Type in the number you want to create. It could be up to 999, but do you really want so many?

STEP 3: Decide whether you want to allow numbers to be duplicated or if each must be unique.

STEP 4: Type in the font size - see the table for guidance on display. Now click GO!

The reality

I am writing this article in two halves; the optimism of the first half (planning) and the reality of the second (delivery). What have I now learned after visiting the school?

- Was the age range right? No
- Are the learning objectives right? No
- Can this idea be taught in a single lesson? No

However, on a more positive note, it is a good idea and can be made to work.

The class we tried this with was a year 2 class at the end of the school year. We tried some warm up exercises. Number bonds to 10. The random number generator gave one number and the children had to write on their individual whiteboards the corresponding number that made 10.

The next stage was questions of the form $8 + ? = 15$. This time they had to work out the answer but keep it to themselves and watch the white board. When the right number came up they could shout out 'rhubarb'. This worked fine. We tried the same with subtraction and then progressed on to questions of the form $12 + ? + ? = 20$ or $21 - ? + ? = 19$. They could write down any two different numbers that gave a correct sum. This took more time. Once one of their numbers came up they could shout out 'rhubarb' and when the second came up they could go for 'double rhubarb'. This is a good warm up activity and if time was not a premium we should have stopped there. Lesson one complete. These children hadn't got the mental facility with addition and subtraction to do these latter sums quickly, but they would get there given more practice. On reflection, I think that the lesson is more suited to year 3, or in some schools, even year 4.

We then moved on to the worksheet, but really this should have been the subject of a second or even third lesson. The children need a few practice questions before tackling the worksheet. They need to be shown examples of how they might complete the missing squares and why. In some cases children did not realise that they could tackle the questions in any order – despite being clearly told this. Similarly they did not realise how to use the free 0, 1 and 2 to their advantage. Hence in future I would use the first lesson to go over number bonds, plus addition and subtraction number sentences. The second lesson needs to focus on strategy; the pupils need to be shown some of the choices that they might make with each number that comes up.

Then by the time of the third lesson they may be ready for the worksheet. The questions on the sheet are fine although it could be adapted so that in each empty cell there is a small box in the corner.

This will enable the children to make a note of 'wanted' numbers. For example, if they are faced with:

$$18 + \square - \square = 23$$

and they put 10 in the first box, they need to make a note in the second box that they are now 'wanting' a 5

Some children managed to complete some of the questions,

although as the lesson was rapidly drawing to a close we didn't do justification to the worksheet, but they did grasp the idea that they had to use every number or put it in the dustbin (and they could take it out later if needed). They hadn't grasped the idea of the free numbers so some children had, for example,

$$15 + 15 + \square = 32 \quad \text{without realising that the sum could be completed}$$

So what have we learnt?

The planning didn't match the reality but the concept was fine.

Year 2 pupils are probably a year too young. They don't quite have the facility with number to operate fast enough to enable the pace of the lesson to be maintained.

This is not one lesson, but probably three; rehearsing number bonds etc, developing strategies and then following the worksheet.

The learning objectives could be redrafted:

- Add/subtract mentally 3 or more small numbers in the range 1 to 50
- Record mental additions/subtractions in a number sentence using the +, - and = signs
- Look at different calculations, using addition and subtraction, say which is the hardest to do and justify why
- Choose and use appropriate number operations and ways of calculating to solve problems

Moreover the lesson is as much about problem solving and strategy as it is about 'doing calculations'. Yet it also brings home another point. When I taught D&T to students we talked about the cyclical nature of the design and make process; design, make, evaluate and then (given that the artefact rarely works out right the first time round) revisit the design stage (and possibly more than once). Lesson planning is no different. The set of Direct2U activities contain some great ideas but the majority of them may need some element of redesign in the light of pupil feedback. However the finished result will be very worthwhile. If we had more time, with the right age range children, I am sure that we could have had a great atmosphere going in the classroom with mathematics coming alive.

My thanks to Castlefort JMI School and teachers Chris Harper and Mandy Palmer

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History Photo Quiz

Rhona Dick

Years: Primary

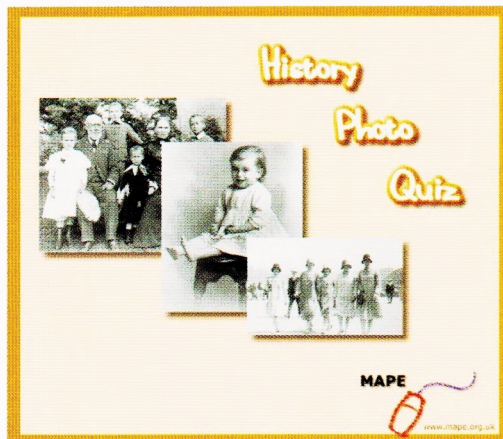
Introduction

This activity is in two parts.

Begin by downloading, unzipping and saving the **History Photo Quiz**.

Open your graphics program and save each of the individual photos (they can be found in history_quiz, private, photos) to a different location and with a different name.

Use these photos for the first activity.



What will the children learn?

The children will develop their sense of chronology by sequencing photographs using visual evidence.

Previous learning?

Children should have used artefacts and photographs as sources of historical information and should have a developing sense of chronology that goes beyond living memory, and some awareness that the convention of recording the past using dates.

Equipment

An IWB is useful but not essential for the first activity and for the plenary.

Folder of renamed photographs for the first activity.

Print outs of these photos are useful reminders for the children.

A timeline on the wall marked in decades from 1890 to 2000 will help.

History Photo Quiz downloaded to the computer for the second activity and the plenary.

A computer for the second activity, which should be adult-led.

The lesson

Remind children of the sorts of historical clues that can be gleaned from artefacts and photographs. Explain that you have some photographs that are not in the right order and you need the children's help to sort them.

Select some or all of the photos depending on your class and display them on the whiteboard. Ask the children if they think the photos were all taken at about the same time. Ask for reasons. Focus on such things as style of clothes and

the size of school classes in the older pictures and modern equipment (TV and aeroplane) in the more recent pictures.

Choose a child to come and move the picture they think is oldest to the left of the screen. Discuss the decision with the class and ask for reasons.

Continue like this until all the pictures have been sequenced correctly.

If you don't have access to an IWB children could use print outs of some of the pictures and stick them on a sheet of paper. Older children could write the reasons for their decisions underneath.

Oldest		Most Recent		
I think this picture is the oldest because	I think this picture comes here because	I think this picture comes here because	I think this picture comes here because	I think this picture is the most modern because

In the second activity, which can be repeated as a plenary drawing together everyone's opinions, children should work with an adult to complete the quiz itself.

Display the timeline and ask the children to come and point out roughly when they were born. Point out other dates, for example roughly when their parents were born, or when their grandparents were born. At the same time emphasize the dates of these. Check that the children understand how these dates are recorded.

In the quiz ten photographs are displayed in random order and brief information is given. Four alternative dates are offered. Children should be encouraged to discuss their ideas and explain their reasons rather than blindly guessing, and adults might want to point out details that will help.

This activity can be expanded in the plenary session to develop children's understanding of what we can learn from photographs by focusing their attention on details that are clues to dates.

Why are we using ICT?

The Internet provides an extensive resource base of historical photographs that can be sorted chronologically. The History Photo Quiz, apart from being fun, takes this one stage further by developing children's awareness of the conventions of dates.

Differentiating the activity

Differentiate this activity by selecting appropriate photographs for different groups of children.

Lost Owls

Alan Rodgers and Angella Streluk

Year : Reception & Y1 P1/2



Introduction

Lost Owls is an interactive adventure game written especially for younger children. The user is required to move around a countryside location in search of three baby owls, bringing them safely back to their mother.

The locality is based on a three by four grid and is navigated by use of a compass rose. (see below)

The owls, and other assorted animals are located by moving the mouse over the screen until one appears. The baby owls are reunited with their mother by dragging them. Sounds are included on the screen, and the activity can be repeated as there is a degree of randomness about the location of animals and owls.

There are several supporting materials included with the adventure. These are well worth investigating for even more useful ideas. If you were a member of the former MAPE in 2002 look out the pack that came with the initial issue. This includes worksheets, cross-curricular teaching ideas and a CD of owl resources for all age ranges.

Although this is strictly speaking a fictional activity, the actual progress round the location in the adventure is an event. Thus it can be used to report on a non-fiction experience.

What will the children learn?

- That it is possible to recall three events from memory.
- That events can be sequenced to form a chronological report.
- That words can be obtained from a dictionary source.

Previous learning?

The children need to be aware that text conveys meaning.

If possible they should have experience of using a picture dictionary to locate words.

It would be best if the children had already used the Lost Owls program, either in a free context or using different materials.

Subject: ICT, Literacy

Equipment

Lost Owls Adventure downloadable from the Naace website

The Lost Owls location diagram and Animals Dictionary Sheet (Print and laminate, if required, places on one side, animals on the other.)

Recount scaffolding sheet

Introduction

Using an IWB or digital projector revise how to use the Lost Owls program. Remind the children of the objectives. Point out the compass rose. Demonstrate practically that if they go one way and come back again they will come back to the same location. Explain or show that they will not always find the same animal in the same location.

Show the lost owls Worksheet.

Name _____

The Lost Owls Adventure

I looked for the baby owls.

The first owl was _____

I saw a _____ there.

The second owl was _____

It was near the _____

It was night time. The last owl was _____

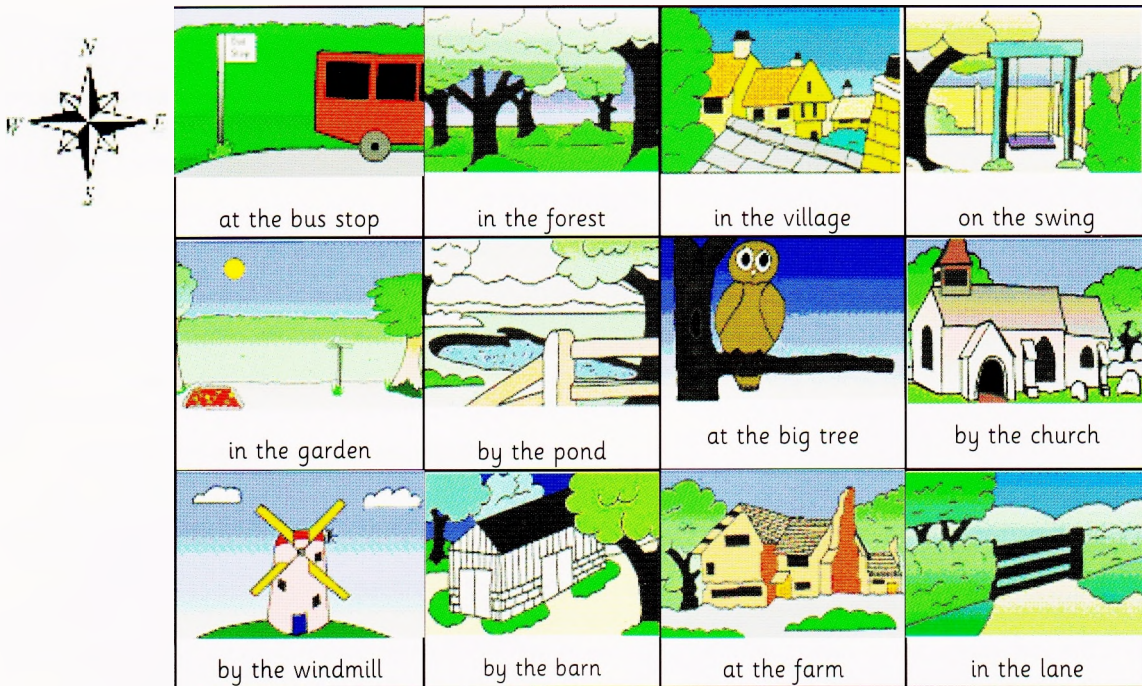
Mummy Owl said, "Thank you!"

Explain that the children are going to keep a record of where they found the baby owls. Point out that their answers may not be the same as other children's. Read the writing together.

Use the IWB to show how the dictionary sheets can be used to find the words they want. Read the words as a group.

 the owl	 the cockerel	 the duck	 the fox
 the frog	 the hedgehog	 the mouse	 the rabbit

They will particularly need help with the second owl sighting. Demonstrate how to find the word 'church', 'swing' etc



Give out the dictionary sheets. Navigate the locations being searched for the baby owls. Point out the correlation between the locations on the dictionary sheet and the places visited in the program. Show how the compass rose helps them remember the direction.

If they go east from the forest on the dictionary sheet where will they come to?

If they go east from the forest in the Lost Owls program where will they come to?

They are the same. The dictionary sheet might help them find their way around the countryside.

Main part of the lesson

Set the children working on the Lost Owls program with their worksheet beside them to fill in. Make sure there is a copy of both of the dictionary sheets next to each computer.

Working in pairs will encourage the discussion that is crucial to the activity. Have as many adults as possible supporting the children and encouraging use of words, such as next, later, then, indicating a sequence of events. The adults can also point out the words under the pictures on the dictionary sheets.

If the children are struggling to navigate the locations reinforce the link between the pictures on the sheet and the locations in the adventure.

"If you want to get to the church go east from the big tree."

Plenary

At the end of the session gather feedback about where the three owls were. Set up the IWB with the numbers one to three and the names of the locations as on the dictionary sheet.

Ask several children to come up to the IWB and match where they found their baby owls to the number one, two and

three. Are they all the same? Why not? Point out that their adventures were all different.

Why are we using ICT?

ICT can allow the children to explore a virtual environment. It can also make the experience interactive and unique.

The IWB enables all children to see clearly what is being demonstrated. It also allows them to take part in an interactive activity.

Where do we go next?

Using both the completed worksheet and the dictionary cards the children may be able to write about where they saw other animals. They may be able to write sentences such as;

- I saw a duck near the church.
- I met a hedgehog in the garden.

Differentiating the activity

There could be two versions of the worksheet. One requires words, the other could allow for recording using pictures. These will fulfil different objectives, but both will get over the beginnings of understanding of sequencing events.

Reflecting on their work

What has happened recently which had a series of linked events that could be described? Could they use their speaking and listening skills to describe three events that happened in a school holiday. The teacher can scribe for them on the IWB.

Are there other times when a dictionary could be used in a similar way? After a school visit could a dictionary sheet assist in writing a few simple sentences to form a chronological report?

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