

# THE HISTORY OF PRINTING

Primary Teachers Pack



NATIONAL  
PRINT MUSEUM  
Músaem Náisiúnta Cló





## Welcome to the National Print Museum

In order for you and your pupils to gain the most from your visit to the National Print Museum, this pack has been designed to provide you with extra information to support the new ideas presented during the tour. Along with this pack is a copy of the primary school workbook, *The History of Printing*, which pupils receive on arrival and which has been designed to complement the tour.

### Contents

#### *New Terms*

During the tour at the National Print Museum your pupils will encounter new terms relevant to the history of printing. These key terms have been highlighted in bold in the workbook, *The History of Printing*. A list of these terms with a brief explanation of each has been included below.

#### *In Class Activities*

A list of activities and two activity worksheets have been included which can be photocopied and used in class. These activities relate to a number of curricular subjects including History, English, Art, Media Studies, etc and will allow your students to build on their experience at the Museum.

#### *Further Reading and Resources*

A list of books, websites and other educational resources has also been included. They cover topics such as the history of printing, academic theories of printing and practical printing projects that can be used in the classroom. The books that have been listed are available in the Museum's library, which can be accessed by appointment.





## New Terms

### *Composing Area*

Originally a printer's workshop would have been divided into three separate areas - the composing area, the printing area and the finishing area. The composing area was where text was composed either by hand or mechanically.

### *Compositor*

The person who hand-composed type.

### *Finishing Area*

The area where final touches were added to texts. For example the Gold Blocking Press, which was used to produce titles on the cover of books. Another example is the Treadle Numbering machine, which was used to number tickets or pages.

### *Hand Composing*

Composing means to produce type in preparation for printing. In this case it was done by hand, but it could also be done by machine. Hand Composing includes the practical knowledge of picking up letters, spacing and justifying lines. The man who did this was called a Compositor.

### *Hell Box*

The bucket in which scrap metal was melted. Pieces of scrap metal were collected from the printing room floor by an apprentice. They were then melted down in the Hell Box, so-called due to the extreme heat required to melt the metal.

### *Intertype*

A machine operated by means of a keyboard for setting and casting lines or slugs of type. Developed after the Linotype, it worked in the same manner but contained more matrices, which meant that it had a broader range of typefaces from which to choose.



### ***Linotype***

A machine operated by means of a keyboard and used for setting and casting lines or slugs of type, instead of setting moveable type by hand. Ottmar Mergenthaler invented the Linotype machine in 1886 and it was first used by the New York Tribune.

### ***Monotype***

A machine comprised of a separate keyboard and caster, for casting and composing single letters of type. Tolbert Lanston developed the Monotype in the 1890s.

### ***Perforating Machine***

A machine that had a dotted rule, which when forced onto paper made an impression for tearing purposes. Often used to produce stamps.

### ***Printer***

A person who operated printing machines.

### ***Printing Area***

The area where printing occurred. Contained machines such as the Columbian Press and the Albion Press.

### ***Reproduction***

A copy of something.

### ***Set***

To compose type.

### ***Type***

Pieces of metal that had a letter or character in high relief for their face, used in letterpress printing. The word typography, meaning the design of printed matter, comes from the term type.

# In Class Activities

## Coat of Arms

During the tour your pupils learned about one of the Museum's central exhibits, the Bookbinders Fellowship Society Banner (1887). The rich symbolism used in this exhibit often fascinates visitors and this activity allows you to respond to your pupils' curiosity. Explain to them what a symbol is and invite them to create their own coat of arms, using symbols and colours that they deem appropriate. A website has been listed in the Further Reading and Resources section below, that provides information about the symbols and colours used in heraldry. You could use a selection of these symbols, which already have established meanings, or you could allow the pupils to create their own.

## Famous Irish Writers

On the back of the Bookbinders Fellowship Society Banner (1887) there are the names and images of 6 famous Irish writers, as listed below. Activity Sheet 1: Irish Writers relating to these writers can be photocopied and given to pupils.

<i>Edmund Burke (1729-97)</i>	<i>Reflections on the Revolution in France (1790)</i>
<i>Thomas Davis (1814-45)</i>	<i>A Nation Once Again (1840s)</i>
<i>Oliver Goldsmith (1730-74)</i>	<i>The Good Natured Man (1768)</i>
<i>Gerald Griffin (1803-40)</i>	<i>The Collegians (1829)</i>
<i>Thomas Moore (1779-1852)</i>	<i>Irish Melodies (1808)</i>
<i>Jonathan Swift (1667-1745)</i>	<i>Gulliver's Travels (1726)</i>

## Postcards

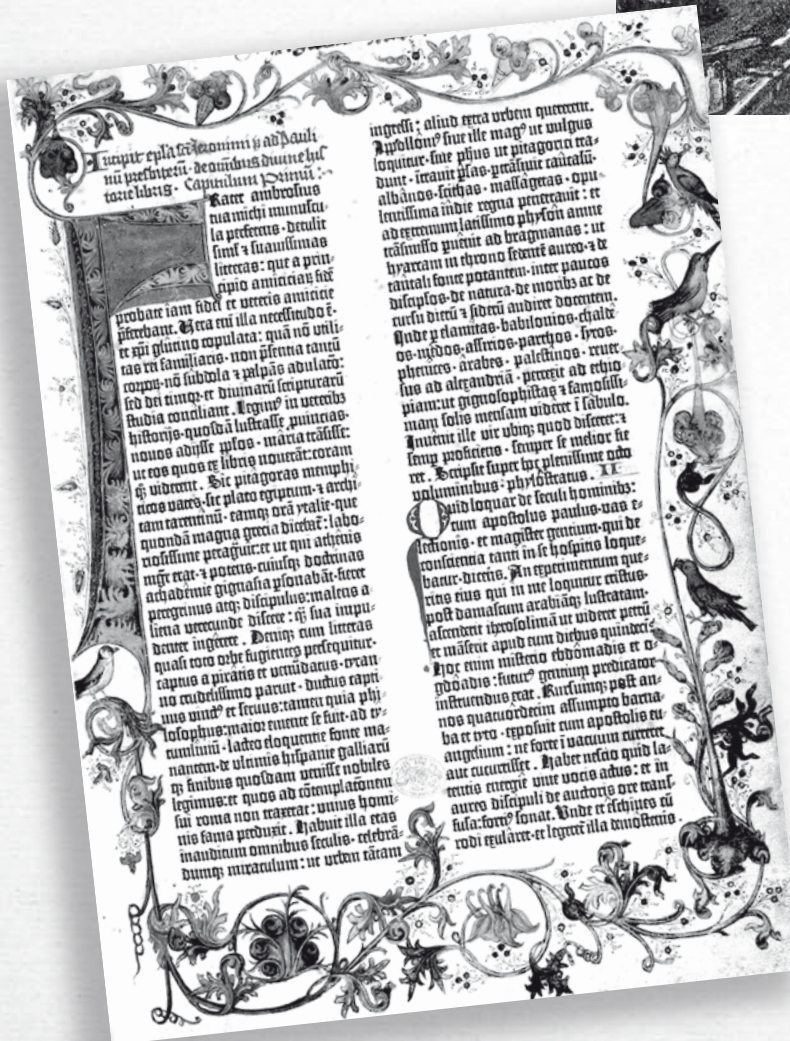
During the tour your pupils were invited to create their own stamps using the Perforating Machine. Give each pupil a piece of blank card the size of a postcard. Ask them to draw a line down the centre, as per an average postcard, and stick their stamp in the appropriate place. The pupils must design the postcard, write a message to the recipient and write the recipient's address. The pupils will have to think carefully about each word they want to include as space is limited. Also, by designing the postcard, pupils will be actively engaging their visual literacy skills. This activity is especially suitable for use in English class. If a number of classes from the school have visited the Museum, you could swap postcards between them.





## The 42-Line Story

As was mentioned on the tour, the first book to be printed on Gutenberg's printing press was the 42-Line Bible. Ask your pupils to create a 42-Line Story, which includes a beginning, a middle and an end. You will thus introduce them to the idea of structure in relation to writing. If this activity is successful and you want to build on it, you could try a 42-Word Story. This is a fun way to explore vocabulary, grammar and punctuation. With a limit of 42 words, the pupils will have to think carefully about each word that they want to include.





# Printmaking

During the tour your pupils learned about various aspects of typographical printing and auxiliary processes. Another important aspect of printing is printmaking. There are a few examples of printmaking activities outlined below which could be introduced during art class.

## *Hand-printing*

This fun and messy method of printmaking is suitable for all ages. It requires only finger-paint and paper. Tell the pupils that they are going to make very simple prints with their hands. Explain that everyone has their very own unique fingerprint and handprint. Perhaps mention to older groups that this method of printing was used in ancient cave paintings. Begin the activity by demonstrating to the pupils how to cover their hands in paint and press it down on the paper to create a print of their hands. This activity can be developed into a class project by using everyone's handprints to create a large sun or flower to display on the walls of the classroom.

## *Fruit and Vegetable Printmaking*

An inexpensive method of introducing the concept of printmaking is to use fruit and vegetables. The materials needed are various fruit and vegetables (in particular potatoes, broccoli, carrots, apples, etc), paper, paint and trays to hold the paint. The fruit and vegetables should be cut in half or have a simple relief image cut into them. The basic idea is to dip the cut fruit and vegetables into paint and stamp them in ordered or random patterns on the paper. During this activity you can introduce the pupils to the idea of patterns and how they are created. This method can be adapted for use with sponges, dried leaves, jigsaw pieces, cardboard shapes, etc.

## *Polystyrene Relief Printmaking*

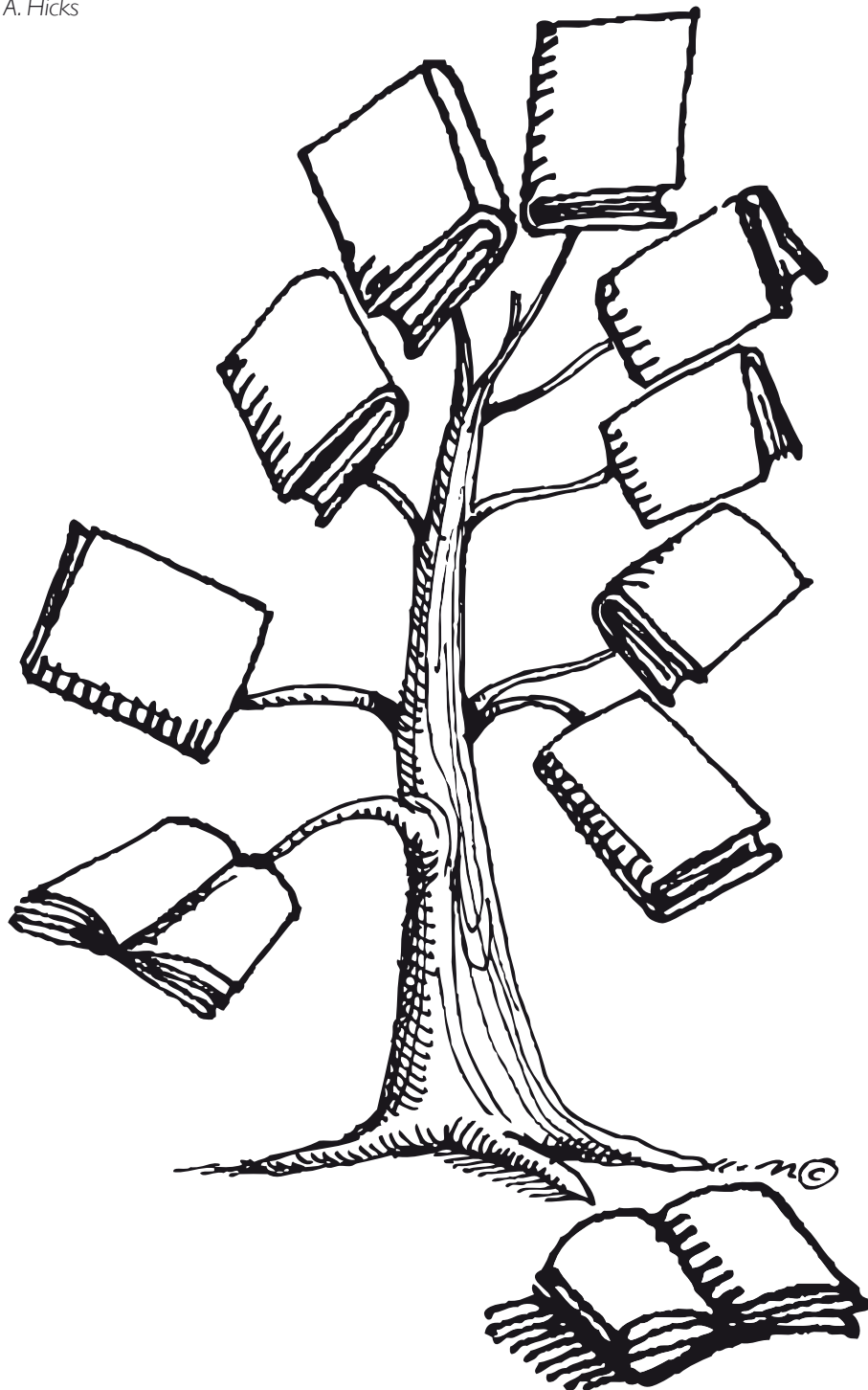
This method is slightly more complicated and therefore more suitable for older age groups. The materials required are polystyrene trays (in which meat or vegetables are sold in the supermarket), paint, trays for the paint, pencils, paper, scissors, soft printing rollers (which can be sourced in an art supply shop). To begin, get the pupils to cut the edges off the trays so that they have a flat surface to work with. Next explain to the pupils that they will be creating a relief print, which means that the parts that they do not cut away will be covered in paint and printed onto the paper. Also explain that the image they cut out will print in reverse and that this is an important principal of printing. Ask the pupils to cut a simple image into the polystyrene plate using a pencil. The next step is to apply some paint to the polystyrene plate; this may require a demonstration before allowing the pupils to try it out. Place a small amount of paint on the paint tray and roll the roller both ways to evenly pick up the paint. Then roll the roller onto the polystyrene plate, repeating this action a few times. Next, place paper on top of the polystyrene plate and using either your hand or a wooden spoon rub lightly over the surface of the paper. Remove the paper and the print is then complete. Repeat the process to produce more prints.



## Activity Sheet 1: Irish Writers

On the back of the Bookbinders Fellowship Banner (1887) there are the names and images of 6 famous Irish writers. Fill in their names and the names of their texts in the books below. There will be 4 books left blank. Fill in the names of 4 Irish writers that you think should be remembered. Discuss why you think they should be remembered.

*Image © Mark A. Hicks*





## Activity Sheet 2: Printing Wordsearch

Can you find the 10 printing related words hidden in the grid below?

Remember, they may be horizontal, vertical, diagonal or even backwards!

J	I	Q	M	S	R	J	A	G	T	F	Z	I	H	H
W	G	R	E	R	L	I	N	O	T	Y	P	E	E	I
B	L	T	G	E	G	H	D	Y	G	I	C	L	P	T
Y	J	P	A	P	E	R	O	W	U	N	L	R	Q	P
R	R	F	E	R	P	V	O	W	G	B	I	G	U	C
B	H	X	G	O	E	P	Y	T	O	N	O	M	Y	F
R	V	N	N	D	Z	K	N	X	T	M	Y	P	X	B
S	X	U	I	U	Q	C	Y	E	P	Y	T	D	N	V
I	X	L	S	C	J	S	R	I	Z	U	X	U	R	Q
D	U	H	O	T	D	X	P	S	O	S	J	N	O	J
Z	B	P	P	I	K	M	B	Z	W	C	S	P	X	Q
I	N	F	M	O	W	M	W	J	F	U	F	N	E	G
K	K	K	O	N	K	Q	I	S	X	P	W	A	D	N
R	H	Z	C	J	A	H	Q	D	M	H	S	F	U	J
V	V	P	X	C	O	M	P	O	S	I	T	O	R	B

COMPOSING  
HELLBOX  
MONOTYPE  
PRINTER  
SET

COMPOSITOR  
LINOTYPE  
PAPER  
REPRODUCTION  
TYPE

## Further Reading and Resources

### Books

**Dictionary of Printing Terms.** (London; Linotype & Machinery Ltd., 1962). A concise reference tool that allows you to access definitions relating to the printing trade.

**Eisenstien, Elizabeth L, *The Printing Revolution in Modern Europe*.** (Cambridge; Cambridge University Press, 2000). Critically assesses the cultural impact created by the introduction of print.

**Kinane, Vincent, *A Brief History of Printing and Publishing in Ireland*.** Dublin; National Print Museum, 2002). Each chapter is dedicated to the history of printing in Ireland during a particular century, spanning from the 16th century to the 20th century.

**Leinster Printmaking Studio; *Information Leaflet*.** Information leaflet providing detailed definitions of techniques employed by artistic printmakers. Available from the Leinster Printmaking Studio, Marrons Court, Main Street, Clane, Co. Kildare. Tel: 045 868168.

**McLuhan, Marshall, *The Gutenberg Galaxy: The Making of Typographical Man*.** (Toronto; University of Toronto Press, 1962). Mosaic of citations drawn from diverse texts designed to stimulate thought about the effects of printing.

**McMahon, Sean & O'Donoghue, Jo, *The Mercier Companion to Irish Literature*.** (Cork; Mercier Press, 1998). Gives information about famous Irish and English writers, major works of literature and major places, institutions and events involved in Irish literary heritage. Dictionary format.

**Ong, Walter, J, *Orality and Literacy*.** (London; Routledge, 1982). A collection of essays concerned with literacy and the effects of printing on the Western mind.

### Audio-Visuals

**The National Print Museum Video/DVD** Educational video produced by the National Print Museum. Printers explain and demonstrate how the printing machines on display in the Museum work.

**I Am An Artist** DVD produced by the National Centre for Technology in Education (N.C.T.E.) and RTÉ in support of the primary schools art curriculum. Available from the N.C.T.E., Dublin City University, Dublin 9. Tel: 01 7008200

### Websites

**www.iamanartist.ie** - Multimedia resource in support of the primary school art curriculum. Gives step-by-step instructions for printing projects and also provides a short film and slide show.

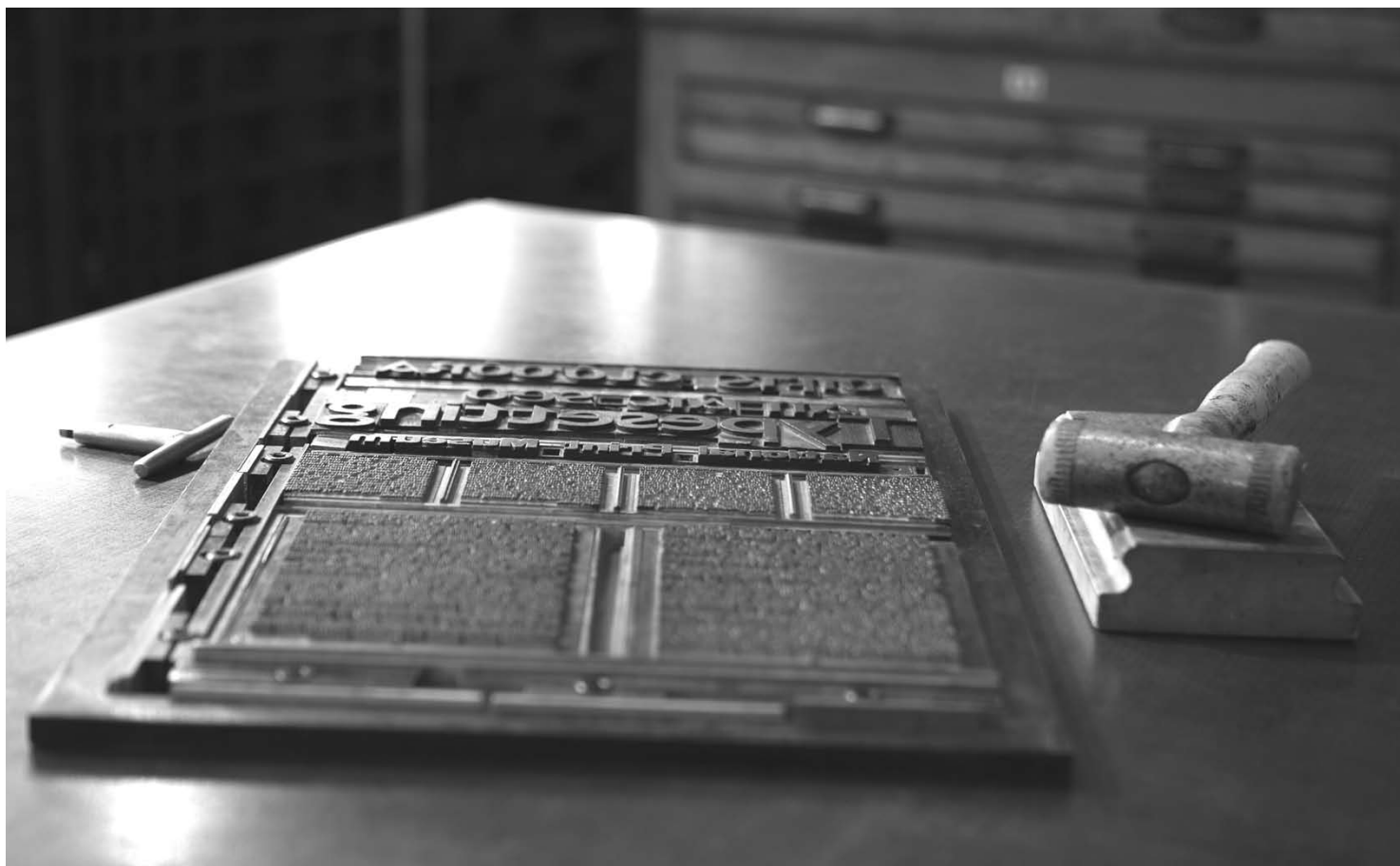
**www.graphicstudiodublin.com** - View images of past and present exhibitions, created by fine art printers.

**www.originalprint.ie** - View portfolio of work from a collection of artists, including biographical details and actual images.

**www.bl.uk/treasures/gutenberg/basics.html** - Brief description of who Johann Gutenberg was, what the 42-Line Bible was and why both were so important.

**www.heraldry.ws** - Gives examples of symbols used in heraldry and their meanings. This is an excellent resource to support the 'Coat of Arms' activity.





### *Other Organisations of Interest*

Antiquarian Book Crafts, Craft Courtyard, Marlay Park,  
Rathfarnham, Dublin 16. Tel: 01 4942834.

Website: [www.antiquarianbookcrafts.com](http://www.antiquarianbookcrafts.com)

Belfast Print Workshop, Cotton Court, 30-42 Waring St,  
Belfast, Co. Antrim, BT1 2ED. Tel: 048 90231323.

Website: [www.belfastprintworkshop.org.uk](http://www.belfastprintworkshop.org.uk)

Black Church Print Studio, 4 Temple Bar, Dublin 2.  
Tel: 01 6773629. Website: [www.print.ie](http://www.print.ie)

Chester Beatty Library, Dublin Castle, Dublin 2.  
Tel: 01 4070750. Website: [www.cbl.ie](http://www.cbl.ie)

Graphic Studio Gallery, Through the Arch, Cope St,  
Temple Bar, Dublin 2. Tel: 01 6798021.  
Website: [www.graphicstudiodublin.com](http://www.graphicstudiodublin.com)

Gray Printers Museum, 49 Main Street, Strabane,  
Co. Tyrone BT82 8AU. Tel: 048 71880055.

Leinster Printmaking Studio, Marrons Court,  
Main Street, Clane, Co. Kildare. Tel: 045 868168.

National Gallery of Ireland, Merrion Square West,  
Dublin 2. Tel: 01 6615133. Website: [www.nationalgallery.ie](http://www.nationalgallery.ie)

National Library of Ireland, Kildare St, Dublin 2.  
Tel: 01 6030200. Website: [www.nli.ie](http://www.nli.ie)

Original Print Gallery, 4 Temple Bar, Dublin 2.  
Tel: 01 6773657. Website: [www.originalprint.ie](http://www.originalprint.ie)

Ulster American Folk Park, Castletown, Omagh,  
Co. Tyrone, BT78 5QY. Tel: 048 82243292.  
Website: [www.folkpark.com](http://www.folkpark.com)



Thank you for visiting the National Print Museum, we hope to see you again soon!

The National Print Museum offers a range of activities including tours, workshops, lectures and open days. See **[www.nationalprintmuseum.ie](http://www.nationalprintmuseum.ie)** for further details.



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