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Project Presentation

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Printing Technology

The Evolution of Printing Technology:

From Woodblock to Xerox

Agenda

Printing in History, Culture, and Everyday life.

- Birth of Printing - Relief Printing
- Introduction to Vibrant Image - Lithography
- Printing in Office and House - Xerography and Digital Printing

Early Human Printing Efforts

Mesopotamian cylinder seals, Egyptian papyrus.

Mostly for records and decoration, not mass communication.

Limitations: scale, labor, accessibility.



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Relief Printing Origins

First efficient, repeatable method.

Prepared carved or engraved surface - Ink applied to raised surfaces - pressed onto paper.

East Asian origins: Woodblock printing in Tang/Song China

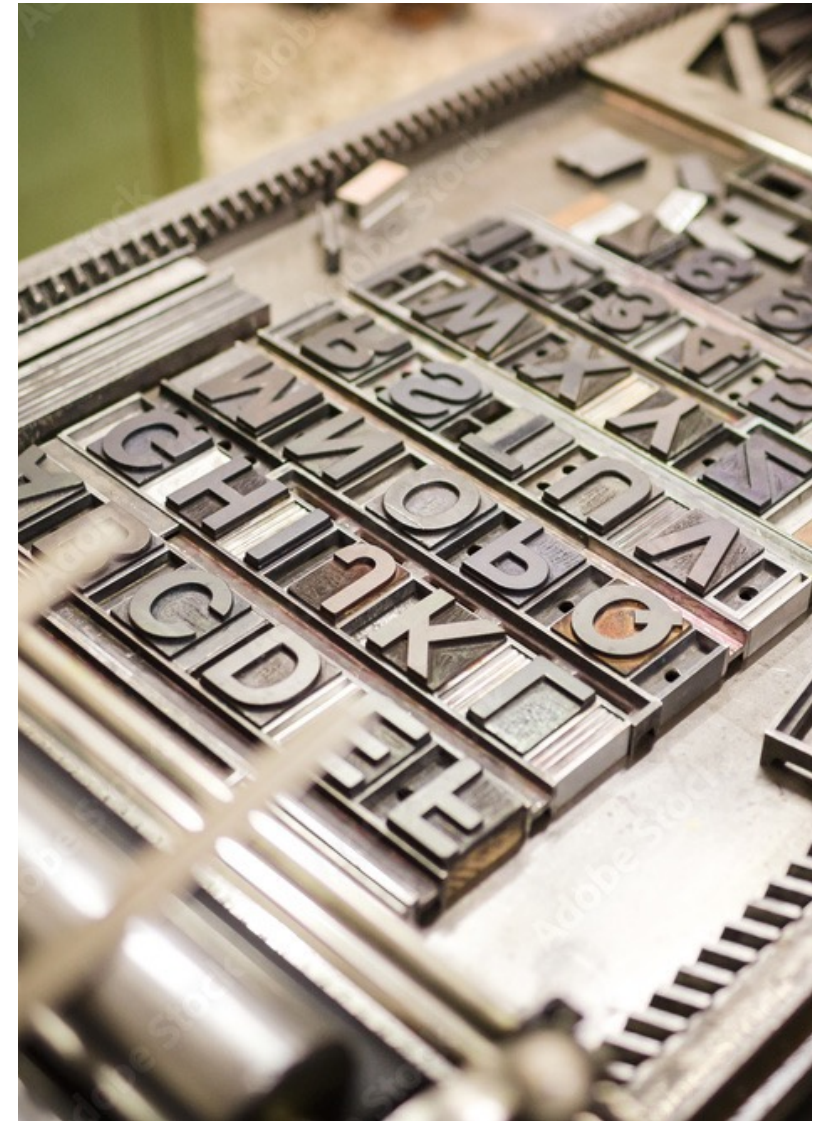


Image Source: Adobe Stock

Movable Type & Gutenberg

Bi Shen invented movable type (1040s)

Gutenberg (1450s) developed metal movable type and screw press.

Big shift in book production and literacy in Europe

Made books more accessible, fueled Reformation & Renaissance



Image Source: Adobe Stock

Impact of Relief Printing

- Democratized knowledge, supported literacy.
- Foundation for Modern Publishing
- Declined with the emergence of lithography
- Still used today in artisanal and artistic works. [Letterpress](#)

Invention of Lithography

Alois Senefelder (1796) created lithography

Based on oil and water repulsion.
No raised or engraved surfaces need

Detailed printing with simpler preparation than letterpress.



Image Source: Adobe Stock

Offset Lithography

Evolved from traditional lithography

Uses aluminum plates – rubber blanket – final surface

Advantages: durable, high quality, fast, full color

Widely used for magazines, books, packaging, and posters.



Image Source: Adobe Stock

Impact of Lithography

- Replaced slower, less efficient relief methods.
- Boosted print quality and production volume.
- Essential for mass media, advertising, and commercial use

[Lithography at home](#)

Xerography and Everyday Printing

Chster Carlson's invention (1930s)
that uses static electricity and dry
toner.

No wet ink or plates needed

Made office/home copying and
printing accessible.

Set the foundation for laser and
digital printing.



Image Source: Adobe Stock

Digital Printing: Laser vs. Inkjet

- Laser: fast, crisp, best for high-volume documents.
- Inkjet: slower, vivid color, ideal for photos and detailed graphics.
- Both are digital, convenient, and dominant in homes and workplaces today.

Conclusion

- Relief, lithographic, and xerographic technologies transformed communication, culture, and education.
- Each leap brought printing closer and more accessible to people
- Printing is still evolving, continuing to shape how we live and learn.

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