

# What Is Printing?

A young person's guide





There are a lot of books that look just like this one. Each is a copy with the same words and the same pictures. So everyone can read the same story whenever they want to. Did you ever think about how all these copies are made? Do people write and draw them by hand using pencils and crayons?

That can't be the way! Imagine how long it would take. Then how is it done? This book and the many copies just like it were printed by a machine called a printing press. A printing press makes copies of words and pictures by putting ink on paper, and it does so very quickly.





Before the printing press was invented, the only way people could copy words and pictures was by hand. One time it took 55 people almost two years to make just 200 copies of one book.

After the press was invented, it took only a few months to print 24,000 copies of a book. Today, many more copies than that can be printed in just one day.

"What Is Printing?" will show you some important things about the printing press. Who invented it. What printing presses look like. How they work. And some of the many things they print. Once you read this book, you will know what printing is and how important it is to you and to everyone in the world.

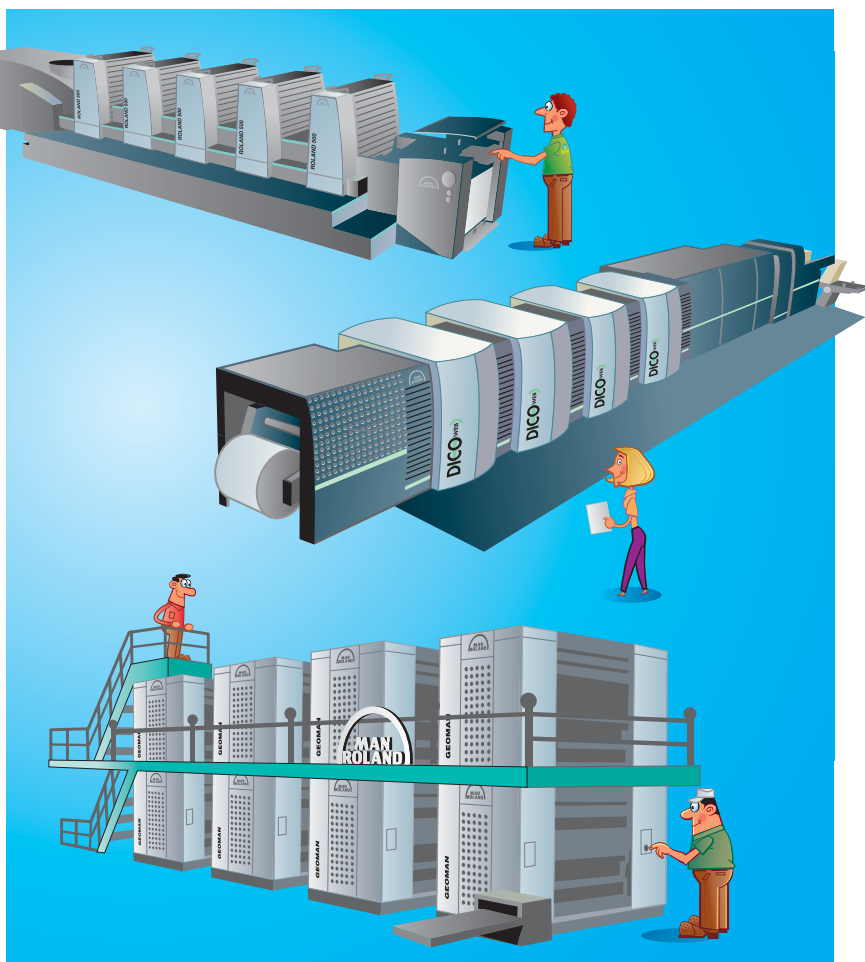




## Who invented printing?

About 550 years ago, a man named Johann Gutenberg (Yó-han Goó-ton-berg) invented the first printing press with movable type. It made it easier to change what was being printed. Gutenberg was born and lived in Germany. One of the very first books he printed was the Bible. The first press in America was set up in Cambridge, Massachusetts, about 20 years after the Pilgrims landed.





Today's printing presses can do many more things much faster than the early presses. The long ones print lots of colors all at once. Some of the smaller ones print black only. The biggest, tallest presses make the newspapers, magazines and comic books you read. Some presses can print on both sides of the page at the same time. And many can connect to a computer to make printing easier.





## Where do we get all that paper?

**Most paper** is made from wood pulp. Trees are ground up and mixed with water. It is then squeezed between rollers and dried into sheets. Today, a lot of the paper you use is mashed up into pulp to make new paper. This is called recycling. When used paper is recycled, fewer trees are cut down.



The person who runs the press is called the press operator. He or she turns all the knobs and handles and pushes all the buttons to work the press. The press operator makes sure that the words and pictures look perfect when they are printed. Today's presses use computers to help press operators do their jobs faster.







## How can the press print so many colors?

The press uses ink to put words and pictures on paper. Maybe you have seen black or red or blue ink in pens. Printing inks come in hundreds of different colors. But by mixing different color inks on the sheet, presses can print hundreds of colors using just four different inks. On most presses, the press operator adds the ink to the press from cans.







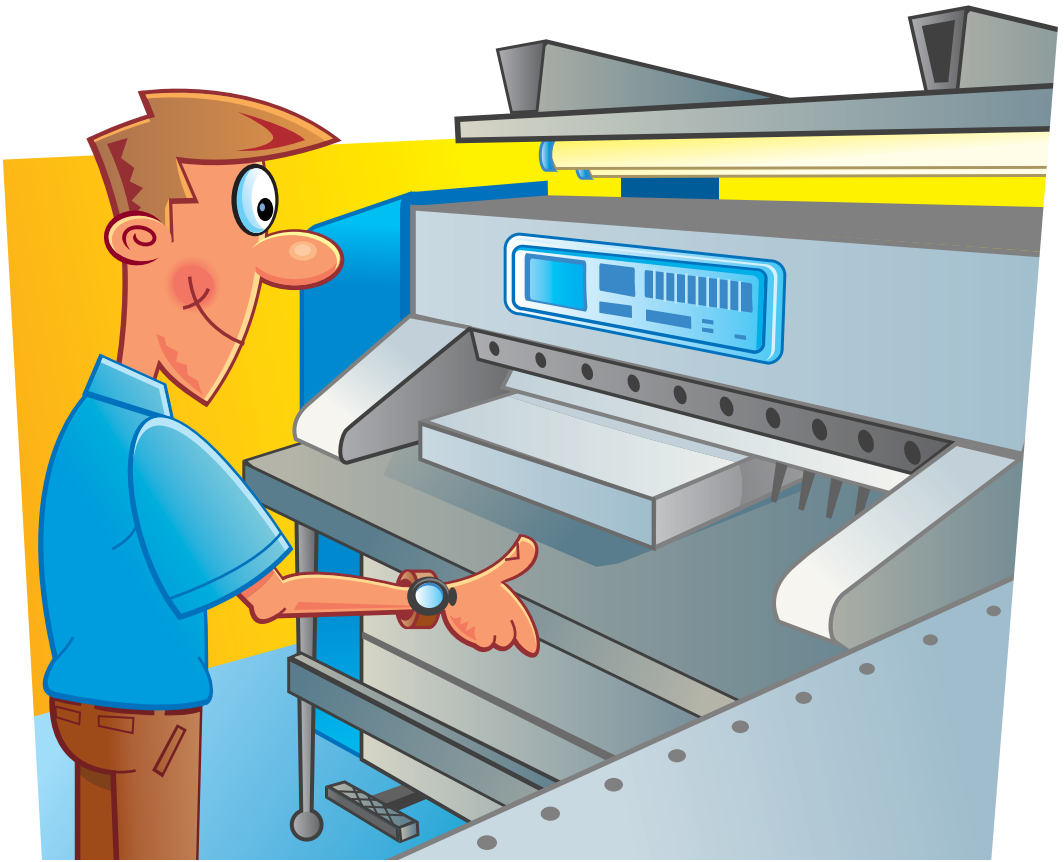
Before you can print, you need words or pictures or both. The pictures can be photographs, drawings or graphics from a computer. The words can be stories or facts. These words and pictures are called the content. They are put on a thin sheet of metal called a printing plate, which goes on the press. Some newer presses get their content right from a computer. They are called digital presses.





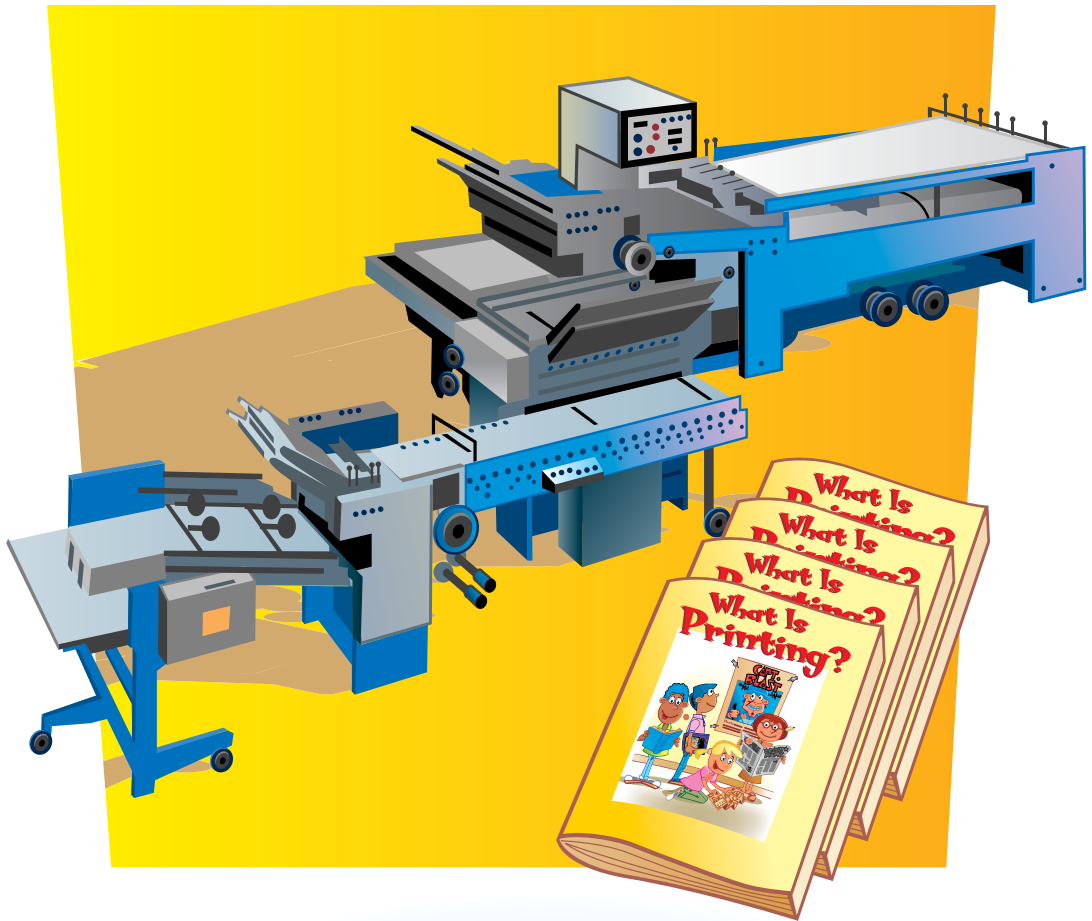
**Now we're ready to print!** The paper goes into one end of the press. The printing plate puts the ink on the paper to make a copy of the content. Then the printed paper comes out the other end. This all happens very fast. Printing presses can make thousands and thousands of copies every hour.





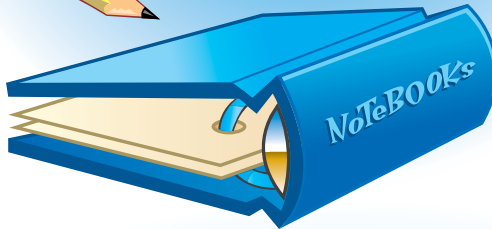
After printing, the paper goes to another machine called a cutter. It uses a big blade to cut the paper into smaller pieces. That makes things easier to hold and to read. The cutter can cut through hundreds of sheets of paper at one time. It also trims the rough edges off the paper.





Usually the paper needs to be folded to turn it into books, magazines or other things that you can read and enjoy. The machine that folds the paper is called a folder. This book was folded from one piece of paper and then trimmed on three sides. New folders are fast and can turn printed paper into many kinds of things.





Printing comes in all shapes and sizes. Presses can print comic books, newspapers, school books, notebooks, posters, calendars and many other things. What would the world be like without printing? Would people be as smart as they are today? Would people be as happy?

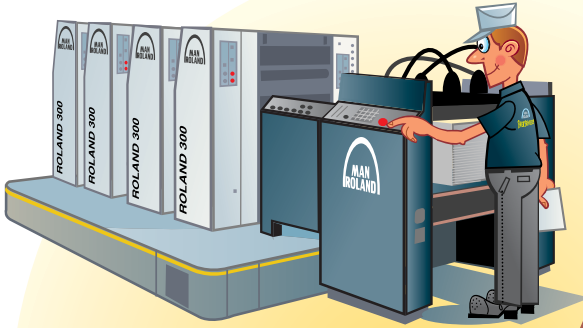


Come  
with

**What is printed?** These are drawings of some other things printed on printing presses. Can you name them? What are some of the printed things in your classroom. In your house? In a store?

Answers: 1. Booklet ("What Is Printing") 2. Video game box 3. Postage stamp 4. Birthday card 5. Trading cards 6. Map 7. Milk container 8. Cereal box





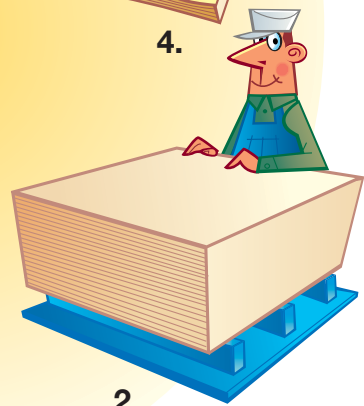
1.



4.



3.



2.

Play  
us

**The printer's tools.** Now you know what printing is. Can you name the things you need to print with? What types of subjects would you have to be good at to become a printer?

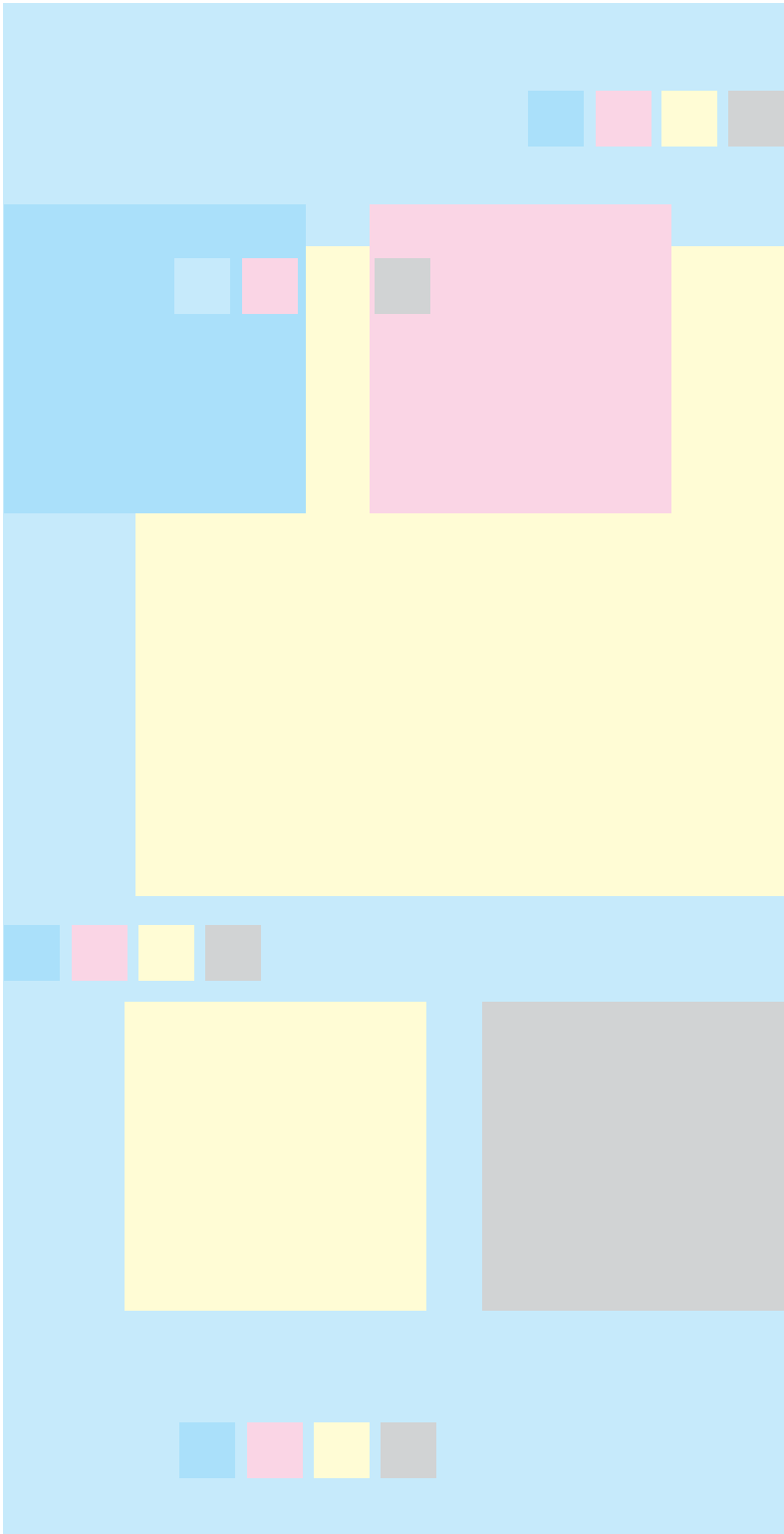
Answers: 1. Printing Press. 2. Paper. 3. Ink. 4. Content.







As you can see, printing is everywhere. But what really makes it so important is what you are doing right now. Reading. Every time you open up a book, it's like going on a field trip. You see new things. You meet new people. You have fun. You learn a lot. Printing is what makes your journey possible.



NOTES



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POWER PRINTERS

