

The barcode has been around for 50 years, but will the QR code now take over?

Louise Eccles, April 26, 2023 6:30PM Kids News

TECHNOLOGY

Reading level: **Green**

You have probably seen adults getting grumpy at barcodes as they stand at a supermarket self-checkout trying and failing to scan groceries in a hurry.

Yet in their hands is one of the most underrated* inventions of all time: a linear* representation of Morse code* first dreamt up in the sand on a US beach, which has revolutionised everything from shopping to healthcare.

The barcode celebrated its 50th birthday on April 3.

Millions of times a day, shop scanners send out a laser to detect the black-and-white parallel lines in the barcode.

The standard 13-number system can create a thousand billion different variations, used to retrieve* information such as the price and description of the product. Every consumer sees a barcode about 20 times a day on average.

“The barcode is an iconic, beautiful piece of work,” said Ben Clarke, 44, a training manager for GS1, the global non-profit barcodes regulator.

“The fact that it hasn’t changed in 50 years shows how absolutely amazing they are.”

Inspired by his training in the Boy Scouts of America, the barcode’s inventor, Joe Woodland, drew dots and dashes in the sand of a Miami beach in 1949. He pulled them downwards with his fingers to produce thin lines from the dots and thicker lines from the dashes.

The aim was to find a code that could be printed on groceries and scanned to allow supermarket checkout queues to move faster. It would be decades before technology would catch up with his idea.

On April 3, 1973, a variation of Woodland’s original design was agreed upon by industry leaders. A year later, in Ohio, a pack of Wrigley’s chewing gum became the first product in the world to be scanned at the cash register.

Only GS1 is authorised* to produce the unique numbers powering most barcodes to ensure a jar of Vegemite sold in one supermarket will have the same barcode “fingerprint” as an identical product sold in another.

Beyond the checkout, barcodes play a crucial* – and often overlooked – role in medicines and hospital equipment. They even appear on patients’ wristbands to ensure doctors perform the right operation on the right person.

“Now there are barcodes on medical devices and medical equipment. We’re even putting barcodes on beds so you can track where patients have been, which is really handy during a pandemic,” Mr Clarke said.

But the barcode is unlikely to survive another 50 years in its current form. Trials are underway to merge barcode technology with its trendier friend, the QR code, which stands for quick response.

The two data codes currently fulfil different roles. While a barcode is one-dimensional and ensures customers are sold the right product for the right amount of money, a QR code takes smartphone users to a website or app for more information.

For example, a can of beans has a barcode for sales and stock checks but customers scan a QR code on the label to read about dietary information and ingredients.

However, trials are now looking into whether GS1's bank of barcodes could be incorporated into the QR square. The technology to scan QR codes at the checkout already exists in shops because many loyalty cards are using the format.

In October 2021, in the Brazilian city of Recife, an up-market delicatessen became the first retailer in the world to use the new dual-purpose QR codes by scanning a tray of mozzarella cheese at the checkout.

American stores believe the technology will be in use by 2027.

Mr Clarke said the integration* of the barcode into a QR code will be a bittersweet* moment.

“It will be with a pang of regret if it gets replaced but it would have done its job. Time cannot stand still,” he said.

This article was published by The Sunday Times and is reproduced here with permission.

What other inventions made 50 or more years ago are exciting?

TV remote control meant you didn't have to leave your seat

The bank ATM (automated teller machine)

DNA testing to check for genetic diseases

The electric car

Cast your vote

GLOSSARY

- **underrated:** rated or evaluated too low
- **linear:** relating to, or resembling a straight line
- **Morse code:** a code used for sending messages
- **retrieve:** to go and get back
- **authorised:** having official permission or approval

- **crucial:** extremely important
- **integration:** to form, co-ordinate, or blend into a whole
- **bittersweet:** pleasure mixed with the feeling of being sad

EXTRA READING

[The mind-blowing future of travel\(https://www.kidsnews.com.au/technology/experts-mindblowing-predictions-for-future-of-travel-in-2070/news-story/3fd267c8fb48953acb7b084c6d501454 \)](https://www.kidsnews.com.au/technology/experts-mindblowing-predictions-for-future-of-travel-in-2070/news-story/3fd267c8fb48953acb7b084c6d501454)

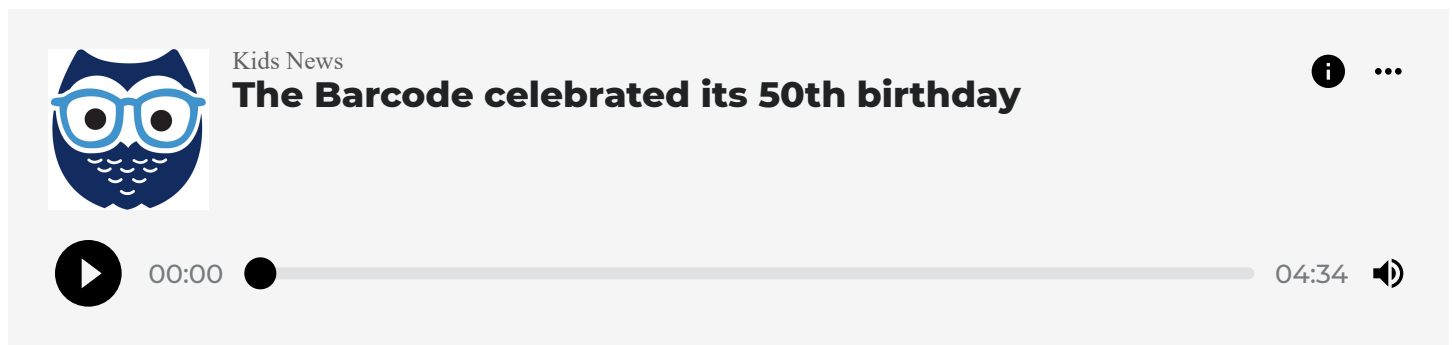
[Would you try this 3D-printed cheesecake?\(https://www.kidsnews.com.au/technology/3d-printers-used-seven-ingredients-to-create-cheesecakes/news-story/b3bf573697543cf72838f207468b5abd \)](https://www.kidsnews.com.au/technology/3d-printers-used-seven-ingredients-to-create-cheesecakes/news-story/b3bf573697543cf72838f207468b5abd)

[Humans versus AI in photo comp\(https://www.kidsnews.com.au/arts/a-major-win-for-humans-against-ai/news-story/c585844b4523296753a7765bfff4ffd4 \)](https://www.kidsnews.com.au/arts/a-major-win-for-humans-against-ai/news-story/c585844b4523296753a7765bfff4ffd4)

QUICK QUIZ

1. When did the barcode celebrate its birthday?
2. Who invented the barcode?
3. On average, how many barcodes does the average consumer see per day?
4. What was the first product scanned with a barcode?
5. What was the first product scanned with a QR code?

LISTEN TO THIS STORY



Kids News
The Barcode celebrated its 50th birthday

00:00 04:34

CLASSROOM ACTIVITIES

1. Happy birthday!

Design a special Happy 50th birthday card or write a special Happy Birthday poem or song for the barcode.

Time: allow 30 minutes to complete this activity

Curriculum Links: English, Visual Communication Design

2. Extension

Can you think of a way to combine the QR code and the barcode into one single code? Create a design or write a plan.

Time: allow 30 minutes to complete this activity

Curriculum Links: English, Science, Information Technology

VCOP ACTIVITY

Openers

Let's focus on improving your knowledge of sentence openers by using the news article about the barcode's 50th birthday. Here's what you need to do:

- Read the news article carefully.
- Highlight all the different sentence openers in the article in blue, (they are the starting word or phrase of each sentence).
- Copy down at least five different sentence openers used in the article.
- Create your own sentences using those sentence openers. Your sentences should be related to the article's topic (eg barcodes, supermarket self-checkout, healthcare, QR codes etc).
- Share your sentences with the class and see if your classmates can identify which sentence opener you used.