

Written zero 500 years older than scientists thought

17th September, 2017



Scientists from Oxford University in England have discovered that the written use of the zero is 500 years older than previously thought. The scientists used carbon dating to trace the symbol's origins to a famous ancient Indian scroll

called the Bakhshali Manuscript. Scientists found the scroll dates back to the third century, which makes it the oldest script using the symbol. Before the carbon dating of the scroll, scientists believed the manuscript was created in the eighth century. It was found in the village of Bakhshali in 1881. The zero symbol that we use today evolved from a round dot frequently used in India. This symbol can be seen several times on the manuscript.

Marcus Du Santoy, a mathematics professor at Oxford University, explained the significance of the zero in our lives. He told Britain's 'Guardian' newspaper that: "Today, we take it for granted that the concept of zero is used across the globe and is a key building block of the digital world. But the creation of zero as a number in its own right, which evolved from the placeholder dot symbol found in the Bakhshali manuscript, was one of the greatest breakthroughs in the history of mathematics." Zero has many names in English, including nought, nil (in football) and love (in tennis). It is often said as "oh" in the context of telephone numbers. Informal or slang terms for zero include nowt, nada, zilch and zip.

Sources: metro.co.uk / phys.org / theguardian.com

Writing

Zero is the most important number. Discuss.

Chat

Talk about these words from the article.

Oxford University / zero / 500 years / ancient / century / manuscript / village / symbol / mathematics / professor / significance / concept / breakthroughs / football / zip

True / False

- Scientists from Cambridge University made a discovery. T / F
- Scientists used carbon dating to find out how old a manuscript was. T / F
- Scientists originally thought a manuscript was from the eighth century. T / F
- The manuscript was found in the 19th century. T / F
- A physics professor explained the significance of the zero. T / F
- A professor said the zero is the greatest breakthrough in mathematics. T / F
- In football, zero is also known as 'nil'. T / F
- When we read out telephone numbers, we pronounce zero as 'oh'. T / F

Synonym Match

(The words in **bold** are from the news article.)

- | | |
|-------------------------|------------------|
| 1. discovered | a. developed |
| 2. origins | b. importance |
| 3. ancient | c. expressions |
| 4. evolved | d. found |
| 5. several | e. advances |
| 6. significance | f. beginnings |
| 7. key | g. circumstances |
| 8. breakthroughs | h. a number of |
| 9. context | i. crucial |
| 10. terms | j. very old |

Discussion – Student A

- What do you think about what you read?
- How good are you at maths?
- Why are zeroes so important in the digital world?
- Why was the zero such a historical breakthrough?
- Why does English use 'love' to mean zero in tennis?
- Who invented numbers?
- What different names are there for zero in your country?
- What questions would you like to ask the scientists?

Phrase Match

- | | |
|---|------------------------------|
| 1. The scientists used carbon | a. block |
| 2. dates | b. dot |
| 3. the manuscript was created | c. of the zero in our lives |
| 4. evolved from a round | d. telephone numbers |
| 5. This symbol can be seen several | e. in the eighth century |
| 6. explained the significance | f. dating |
| 7. a key building | g. breakthroughs |
| 8. one of the greatest | h. times on the manuscript |
| 9. It is often said as "oh" in the context of | i. terms for zero |
| 10. Informal or slang | j. back to the third century |

Discussion – Student B

- What do you know about the history of the zero?
- How important is the zero?
- Does the zero have a good design?
- Who do you think first used a zero?
- What do you think of the word 'zero'?
- In what contexts are zeroes important?
- What symbol could we use instead of a zero?
- What does the phrase, 'from hero to zero' mean?

Spelling

- use of the zero is 500 years older than roipveuyls thought
- a famous canetni Indian scroll
- created in the eighth cyurnte
- The zero oblmsy that we use today evolved
- a round dot qternlyeuf used in India
- This lyombs can be seen several times
- a mathematics reofrsop at Oxford University
- explained the iicafngscein of the zero
- the necotpc of zero
- one of the reegstat breakthroughs
- in the eoxtcnt of telephone numbers
- Informal or sgnal terms

Answers – Synonym Match

1. d	2. f	3. j	4. a	5. h
6. b	7. i	8. e	9. g	10. c

Role Play

Role A – 0

You think **0** is the most important symbol in the world. Tell the others three reasons why. Tell them what is wrong with their symbols. Also, tell the others which is the least important of these (and why): **\$, #** or ☺.

Role B – \$

You think **\$** is the most important symbol in the world. Tell the others three reasons why. Tell them what is wrong with their symbols. Also, tell the others which is the least important of these (and why): **0, #** or ☺.

Role C –

You think **#** is the most important symbol in the world. Tell the others three reasons why. Tell them what is wrong with their symbols. Also, tell the others which is the least important of these (and why): **\$, 0** or ☺.

Role D – ☺

You think **☺** is the most important symbol in the world. Tell the others three reasons why. Tell them what is wrong with their symbols. Also, tell the others which is the least important of these (and why): **\$, #** or **0**.

Speaking – Symbols

Rank these with your partner. Put the most important symbols at the top. Change partners often and share your rankings.

- | | |
|------|-----|
| • 0 | • x |
| • \$ | • # |
| • % | • ☺ |
| • @ | • ☹ |

Answers – True False

a	F	b	T	c	T	d	T	e	F	f	F	g	T	h	T
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Answers to Phrase Match and Spelling are in the text.