Scientists create living robots that can have babies

2nd December, 2021

Scientists say that a new kind of robot can reproduce - it can create baby robots. This is an example of science fiction becoming science fact. The scientists, from the Universities of Vermont, Tufts and Harvard, created the world's first "living" robots. They are called "xenobots". Scientists created them in 2020 from the stem cells of an African frog. Its scientific name - "xenopus laevis" - gave the xenobot its name. The xenobots are less than a millimetre wide. They can move, work together in groups and self-heal. Although they are not what we imagine robots to be, scientists say they are technically robots. They are a machine-animal hybrid. The scientists say xenobots are "an entirely new life-form".

The scientists explained that the bots reproduce because of their shape. Researchers used artificial intelligence (AI) to test billions of body shapes. The result was a C-shaped robot. It was able to find tiny stem cells in a petri dish. It gathered the cells in its mouth. A few days later, the cells became a new, "baby" xenobot. The xenobots are very early technology. However, they could change science, medicine, technology and the way we live. They could carry out tasks inside our body to repair damage to organs. They could also help the environment by attacking micro-plastics in our oceans, or by cleaning up oil spills. Despite the possible benefits, some people are worried about robots that can reproduce.

Sources: cnn.com / *inews.co.uk* / *gizmodo.com*

Writing

Robots that can reproduce are dangerous. Discuss.

Chat

Talk about these words from the article.

scientists / robot / reproduce / baby / robot / science fiction / stem cell / imagine / life / shape / artificial intelligence / body shapes / cell / medicine / organs / oceans / oil spill

True / False

1) The article says science fact has become science fiction. T / F
2) Scientists made the first living robots in 2020. T / F
3) The xenobots got their name from an African frog. T / F
4) The xenobots are less than a hundredth of a millimetre wide. T / F
5) Scientists tested hundreds of thousands of xenobot shapes. T / F
6) The xenobots create babies by gathering cells in their mouth. T / F
7) Xenobots could increase the risk of oil spills in our oceans. T / F
8) Some people are worried about robots that can have babies. T / F

Synonym Match

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

1.	**reproduce**	a.	collected
2.	**fact**	b.	totally
3.	**created**	c.	visualize
4.	**imagine**	d.	fix
5.	**entirely**	e.	give birth
6.	**shape**	f.	do
7.	**gathered**	g.	made
8.	**carry out**	h.	advantages
9.	**repair**	i.	reality
10.	**benefits**	j.	form

Discussion – Student A

a) What do you think about what you read?
b) What do you think of artificial intelligence?
c) Is it good that xenobots could change science and medicine?
d) How could the xenobots help the environment?
e) What could this technology be like in 50 years from now?
f) Could xenobots help to fight viruses?
g) Why might people be worried about the xenobots?
h) What questions would you like to ask the researchers?

Phrase Match

1. a new kind of robot
2. science
3. stem
4. work together
5. an entirely new life
6. the bots reproduce because
7. artificial
8. the way we
9. repair damage to
10. help the environment by attacking

a. intelligence
b. cells
c. of their shape
d. live
e. can reproduce
f. organs
g. form
h. micro-plastics
i. in groups
j. fiction

Discussion – Student B

a) What do you think of robots?
b) Would you like a robot?
c) Are robots dangerous?
d) What do you think of the idea of baby robots?
e) What do you think of 'living robots'?
f) Do you think these xenobots are really robots?
g) What do you think of machine-animal hybrids?
h) Is it good we have created an 'entirely new life-form'?

Spelling

1. a new kind of robot can uoedrperc
2. This is an example of ciesenc fiction
3. what we mnagiei robots to be
4. scientists say they are nhcitllycae robots
5. They are a machine-animal bihyrd
6. an itylnere new life-form
7. ciltariafi intelligence (AI)
8. It etdrgeha the cells in its mouth
9. goconlthey and the way we live
10. repair damage to sgraon
11. attacking micro-plastics in our onceas
12. cleaning up oil isslpl

Answers – Synonym Match

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

Role Play

Role A – Food
You think food is the thing that robots can improve most. Tell the others three reasons why. Tell them what is wrong with their things. Also, tell the others which of these robots could change least (and why): education, housework or loneliness.

Role B – Education
You think education is the thing that robots can improve most. Tell the others three reasons why. Tell them what is wrong with their things. Also, tell the others which of these robots could change least (and why): food, housework or loneliness.

Role C – Housework
You think housework is the thing that robots can improve most. Tell the others three reasons why. Tell them what is wrong with their things. Also, tell the others which of these robots could change least (and why): education, food or loneliness.

Role D – Loneliness
You think loneliness is the thing that robots can improve most. Tell the others three reasons why. Tell them what is wrong with their things. Also, tell the others which of these robots could change least (and why): education, housework or food.

Speaking – Benefits

Rank these with your partner. Put the things robots could change most at the top. Change partners often and share your rankings.

- Medicine
- Food
- Education
- Entertainment
- Housework
- Loneliness
- Transport
- Learning languages

Answers – True False

1	F	2	T	3	T	4	F	5	F	6	T	7	F	8	T

Answers to Phrase Match and Spelling are in the text.

