

Dutch couple become Europe's first inhabitants of a 3D-printed house

Level: Elementary / Pre-Intermediate

1 Warmer

- What are these houses called?
- Put these types of accommodation in order from 1 (the one that you would most like to live in) to 6 (the one that you would least like to live in). Give reasons for your choice.



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2 Key words

a. Fill the gaps in the sentences using these key words from the text.

alternative bricklayer bungalow nozzle squirt

1. A / An _____ is a house that is all on one level.
2. A / An _____ is the narrow part at the end of a tube through which a liquid flows.
3. To _____ means to make a liquid move with a lot of force.
4. A / An _____ is something you can choose or use instead of something else.
5. A / An _____ is someone whose job is to build walls using bricks.

benefit foundation property rent site

6. A / An _____ is the part of a building that is below the ground and supports the rest of the building.
7. A building _____ is a place where people are building a house or houses.
8. A / An _____ is something positive you get from a situation.
9. A / An _____ is land and the building or buildings on it.
10. _____ is the money you pay each month to live in a flat or a house that belongs to someone else.

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Daniel Boffey

- 1 Elize Lutz and Harrie Dekkers from Amsterdam have become the first people in Europe to live in a 3D-printed house. They recently received their digital key and opened the front door of their two-bedroom bungalow. "It is beautiful," said Lutz. The house is the first of five homes planned on a piece of land in the Dutch city of Eindhoven.
- 2 The 3D-printing method uses a huge robotic arm with a nozzle that squirts out a special cement. The printer adds layer after layer to build a wall and increase its strength.
- 3 Many people in the building industry believe that the 3D-printing method is a way to cut costs and environmental damage by using less cement. In the Netherlands, it is also an alternative at a time when there are not enough skilled bricklayers.
- 4 The new house consists of 24 concrete elements. A plant in Eindhoven printed the elements and then transported them by lorry to the building site and placed them on a foundation. Builders then fitted the roof and window frames.
- 5 The construction company is planning to build five homes and hope that they can complete all the construction at the building site. They will also produce other parts of the building using 3D printing, and this will reduce costs even more.
- 6 "It only took 120 hours to print this house," construction company manager Bas Huysmans said. "To print all the elements in one go would take us less than five days because the big benefit is that the printer does not need to eat, sleep or rest. So, if we started tomorrow, we could print the next house five days from now."
- 7 Lutz and Dekkers are paying €800 a month to live in the property for six months after seeing an advertisement on the Internet. The market rent would normally be twice the rent the couple are paying. "Did we earn money with this first house? No," said Huysmans. "Do we expect to lose money on house number two, three, four and five? No," he said. "3D printing is very creative," he added. "You can make any shape you want to make."
- 8 Yasin Torunoglu, who is responsible for housing in Eindhoven, said: "With the 3D-printed home, we can see the future of house building: cheaper homes and you can control the shape of your house."

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3 Comprehension check

a. Answer the questions using information from the article.

1. How many bedrooms does the 3D printed house have?
2. Where is it?
3. What does the 3D printer's nozzle squeeze out?
4. How will 3D printing cut costs and environmental damage?
5. How many concrete elements are there in the new house?
6. How many 3D-printed homes is the construction company planning to build?
7. How long did it take to print the house?
8. How much are Lutz and Dekkers paying to rent the house?
9. How long will they live there for?
10. Why is 3D printing creative?

4 Key language

a. Match the words in the left-hand column with those in the right-hand column to make phrases from the text.

- | | |
|------------------|-------------|
| 1. digital | a. frame |
| 2. environmental | b. printing |
| 3. building | c. key |
| 4. window | d. rent |
| 5. market | e. damage |
| 6. 3D | f. site |

5 Discussion

a. Answer these questions.

1. Do you think 3D-printed houses are a good idea? Why? Why not?
2. What other things could 3D printers produce?

6 In your own words

a. Write a short report on the pluses and minuses of a 3D-printed house. Use the ideas from the class.