

# THE ARTICLE

From <https://breakingnewsenglish.com/2016/210619-wooden-satellite.html>

Cutting-edge technology is getting back to nature. A company has tested a new satellite that is predominantly made from plywood. The satellite is called Woodsat. It is the brainchild of engineer Jari Makinen, co-founder of a Finnish company called Arctic Astronautics. It is just 10cm cubed in size. He has already successfully tested his DIY, but high-tech, device in the stratosphere. He attached it to a weather balloon, which took it to an altitude of 30km above Earth - just before the endless expanse of space itself. The balloon exploded (as planned) and Woodsat safely parachuted back to Earth. Mr Makinen happily reported that all communications equipment survived the harsh conditions.

Makinen plans to launch Woodsat into space later this year. He said it was the realisation of a dream. He started a company to produce fully functional wooden replicas of orbit-ready miniature satellites called CubeSats. These are used for space research, education and hobby purposes. Makinen explained: "I've always enjoyed making model planes that involve a lot of wooden parts. Having worked in the space education field, this got me wondering why we don't fly any wooden materials into space." He came up with the idea for Woodsat in 2017 and "the project just snowballed". He said: "We found commercial backing, and secured a berth on an Electron launcher from Rocket Lab in New Zealand."

Sources: <https://www.cnet.com/news/first-wooden-satellite-in-the-world-aims-to-prove-plywood-can-survive-space/>  
<https://scitechdaily.com/worlds-first-wooden-satellite-set-to-launch-can-plywood-survive-in-space/>  
<https://www.woodworkingnetwork.com/news/woodworking-industry-news/worlds-first-wooden-satellite-passes-test-flight>  
<https://www.wisaplywood.com/wisaWoodsat/>

# VOCABULARY MATCHING

## Paragraph 1

- |                  |  |
|------------------|--|
| 1. cutting edge  | a. Increased by an amount to form a 3D (three-dimensional) shape.                          |
| 2. predominantly | b. The layer of the earth's atmosphere extending to about 50 km above the earth's surface. |
| 3. brainchild    | c. The latest or most advanced stage in the development of something.                      |
| 4. cubed         | d. Of a climate or conditions that are difficult to survive in.                            |
| 5. stratosphere  | e. Mainly; for the most part.  |
| 6. expanse       | f. An idea or invention which is considered to be a particular person's creation.          |
| 7. harsh         | g. An area of something.   |

## Paragraph 2

- |                |  |
|----------------|--|
| 8. realisation | h. A place on a ship, train, plane or other means of transport.            |
| 9. replica     | i. The fulfillment or achievement of something desired or hoped for.       |
| 10. miniature  | j. An exact copy or model of something, especially one on a smaller scale. |
| 11. involve    | k. Increase quickly in size, intensity, or importance.                     |
| 12. snowball   | l. Include something as a necessary part or result.                        |
| 13. secured    | m. Of a much smaller size than normal; very small.                         |
| 14. berth      | n. Succeeded in getting something, especially with difficulty.             |

# BEFORE READING / LISTENING

From <https://breakingnewsenglish.com/2016/210619-wooden-satellite.html>

## 1. TRUE / FALSE: Read the headline. Guess if a-h below are true (T) or false (F).

1. The article says nature is becoming cutting edge. **T / F**
2. A new satellite is made entirely from wood. **T / F**
3. The satellite is one metre in width, depth and length. **T / F**
4. The balloon that took the satellite to the stratosphere exploded. **T / F**
5. The satellite's creator will launch it into space for the first time in 2023. **T / F**
6. The satellite's creator used to make model airplanes. **T / F**
7. The satellite's creator got the idea for the satellite from a snowball. **T / F**
8. The creator found a place on a rocket launcher in New Zealand. **T / F**

## 2. SYNONYM MATCH: (The words in **bold** are from the news article.)

- |                        |                |
|------------------------|----------------|
| 1. <b>cutting edge</b> | a. escalated   |
| 2. <b>tested</b>       | b. height      |
| 3. <b>brainchild</b>   | c. blew up     |
| 4. <b>altitude</b>     | d. copies      |
| 5. <b>exploded</b>     | e. trialled    |
| 6. <b>realisation</b>  | f. pondering   |
| 7. <b>replicas</b>     | g. advanced    |
| 8. <b>wondering</b>    | h. place       |
| 9. <b>snowballed</b>   | i. idea        |
| 10. <b>berth</b>       | j. fulfillment |

## 3. PHRASE MATCH: (Sometimes more than one choice is possible.)

- |  |                         |
|--|-------------------------|
| 1. Cutting-edge technology is getting    | a. snowballed           |
| 2. a new satellite that is predominantly | b. the harsh conditions |
| 3. an altitude of                        | c. of a dream           |
| 4. safely parachuted                     | d. made from plywood    |
| 5. all communications equipment survived | e. backing              |
| 6. He said it was the realisation        | f. why                  |
| 7. produce fully functional              | g. back to nature       |
| 8. this got me wondering                 | h. wooden replicas      |
| 9. the project just                      | i. back to Earth        |
| 10. We found commercial                  | j. 30km above Earth     |



# COMPREHENSION QUESTIONS

From <https://breakingnewsenglish.com/2016/210619-wooden-satellite.html>

1. What does the article say cutting-edge technology is getting back to?
2. What kind of wood is the satellite made from?
3. How big is the satellite?
4. How high up did the satellite go?
5. What happened to the balloon that the satellite was attached to?
6. When does the engineer hope to launch the satellite into space?
7. What are CubeSats used for besides education and hobbies?
8. What did the engineer used to enjoy making?
9. When did the engineer come up with the idea for Woodsat?
10. Where has the engineer secured a berth for launching his satellite?

# SATELLITES DISCUSSION

STUDENT A's QUESTIONS (Do not show these to student B)

1. What did you think when you read the headline?
2. What images are in your mind when you hear the word 'wood'?
3. What do you think of cutting-edge technology?
4. What do you know about satellites?
5. What do you think of wooden satellites?
6. What do you know about the stratosphere?
7. What could the wooden satellite be used for?
8. How might wood change space technology?
9. Should more, everyday things be made from wood?
10. Was the world better before satellites and going into space?

*World's first wooden satellite tested – 19th June, 2021*  
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# SATELLITES DISCUSSION

STUDENT B's QUESTIONS (Do not show these to student A)

11. Did you like reading this article? Why/not?
12. What do you think of when you hear the word 'satellite'?
13. What do you think about what you read?
14. What are your dreams?
15. What do we need to research about space?
16. What things do you enjoy making?
17. Would you like to go into space?
18. Should we protect trees from being used for satellites?
19. What will technology look like in 100 years from now?
20. What questions would you like to ask the designer?