

## World's first wooden satellite tested

19th June, 2021



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:  
cnet.com / scitechdaily.com / woodworkingnetwork.com

## Writing

Cars, TVs and satellites should be made from sustainable wood sources. Discuss.

## Chat

Talk about these words from the article.

nature / satellite / plywood / brainchild / engineer / device / stratosphere / equipment / plans / dream / replica / research / hobby / model planes / education / idea / space

## True / False

- 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

## 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 |

## Discussion – Student A

- a) What do you think of cutting-edge technology?
- b) What do you know about satellites?
- c) What do you think of wooden satellites?
- d) What do you know about the stratosphere?
- e) What could the wooden satellite be used for?
- f) How might wood change space technology?
- g) Should more, everyday things be made from wood?
- h) Was the world better before satellites and going into space?

## Phrase Match

- |  |                         |
|--|-------------------------|
| 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     |

## Discussion – Student B

- What do you think about what you read?
- What are your dreams?
- What do we need to research about space?
- What things do you enjoy making?
- Would you like to go into space?
- Should we protect trees from being used for satellites?
- What will technology look like in 100 years from now?
- What questions would you like to ask the designer?

## Spelling

- It is just 10cm cdebu in size
- in the reattorsehs
- the endless spaexn of space
- safely tarduacpeh back to Earth
- all communications mntqeeipu
- survived the hhsra conditions
- the etrlanasoii of a dream
- fully functional wooden eicarlps
- orbit-ready uanmtrie satellites
- planes that noilevv a lot of wooden parts
- macocremi backing
- secured a ebhrt

### Answers – Synonym Match

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

## Role Play

### Role A – Satellites

You think satellites are the best examples of cutting-edge technology. Tell the others three reasons why. Tell them why their things aren't as good. Also, tell the others which is the least useful of these (and why): smart fridges, driverless cars or Zoom.

### Role B – Smart Fridges

You think smart fridges are the best examples of cutting-edge technology. Tell the others three reasons why. Tell them why their things aren't as good. Also, tell the others which is the least useful of these (and why): satellites, driverless cars or Zoom.

### Role C – Driverless Cars

You think driverless cars are the best examples of cutting-edge technology. Tell the others three reasons why. Tell them why their things aren't as good. Also, tell the others which is the least useful of these (and why): smart fridges, satellites or Zoom.

### Role D – Zoom

You think Zoom is the best example of cutting-edge technology. Tell the others three reasons why. Tell them why their things aren't as good. Also, tell the others which is the least useful of these (and why): smart fridges, driverless cars or satellites.

## Speaking – Cutting Edge

Rank these with your partner. Put the best things at the top. Change partners often and share your rankings.

- |                      |                   |
|----------------------|-------------------|
| • Satellites         | • Driverless cars |
| • Smart watches      | • Health apps     |
| • Fingerprint log-in | • Zoom            |
| • Smart fridges      | • Cashless stores |

### Answers – True False

1 F	2 F	3 F	4 T	5 F	6 T	7 F	8 T
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Answers to Phrase Match and Spelling are in the text.