SASTA OLIPHANT SCIENCE AWARDS

SOUTH AUSTRALIAN SCIENCE TEACHERS ASSOCIATION

Prize Winner

Science Writing

Year R-2

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Space Junk
By Lukas Porter

What is space junk?

Space junk is millions of bits of old rockets and satellites that are orbiting earth. If they crash into working satellites, it could destroy them.

Junk should be recycled!

Recycling is important because we don’t want to pollute the earth and space with waste.

What special materials are satellites made of?

- Aluminium: to make the satellite body light and strong.
- Gold: to protect the satellite from the deadly space environment and radiation.
- Silver: used for electrical contacts in circuit boards because it doesn't rust.
- Platinum: used in engines to prevent rusting.
- Silicon: solar panels for energy from sunlight.

These metals are very rare and expensive and hard to find underground on Earth. So let's try and reuse them!

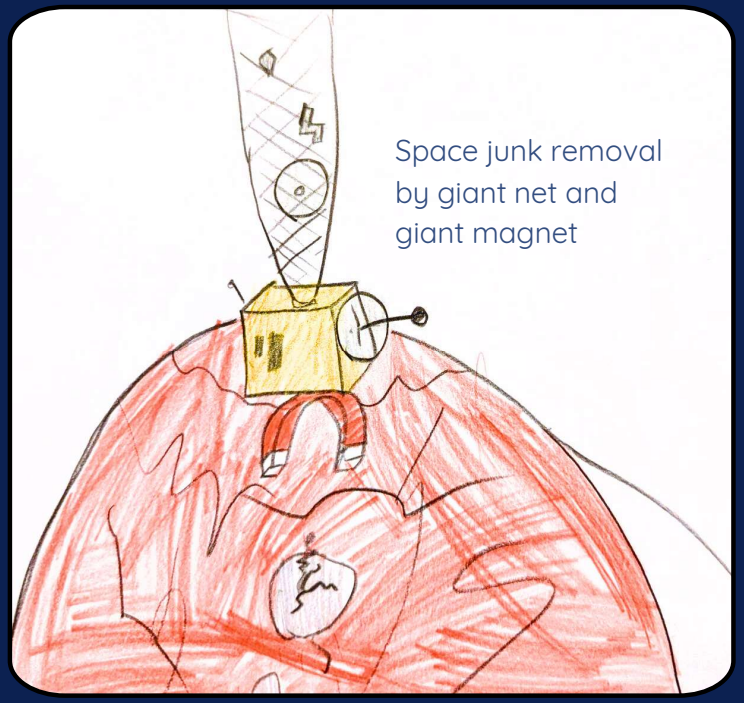
Clearspace-1

Scientists are already building a satellite to capture space junk, called Clearspace-1. It will capture a 112 kg piece of space junk, then send it back to earth to be recycled.

Robotic arms can't do all the work!

Clearspace-1 has four robotic arms at least 2m long. In the future, scientists could also add:

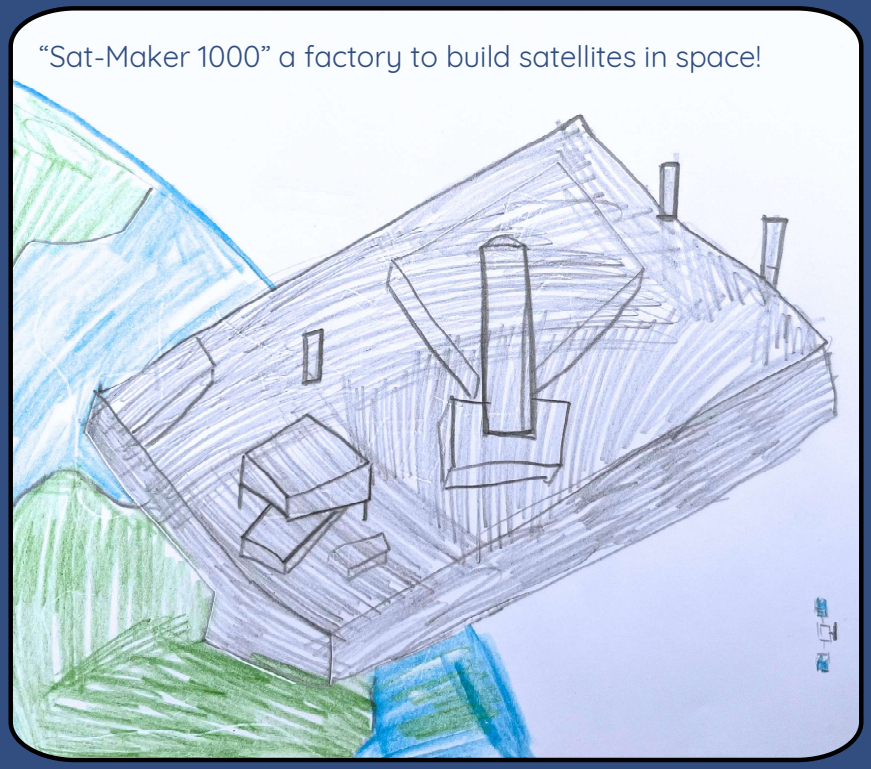
- Longer and more arms
- Giant magnet
- Giant net



But what will you do with that space junk?

You could build a factory like my “Sat-Maker 1000” to recycle satellites. It should be in space and not Earth to save fuel and rockets because you don’t need to fly all the way to Earth and back. All the materials to build a satellite are already in space!

“Sat-Maker 1000” a factory to build satellites in space!



All words and pictures are written and illustrated by Lukas Porter. My parents helped me scan the pictures, use Canva and write the references.
Word count: 217

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