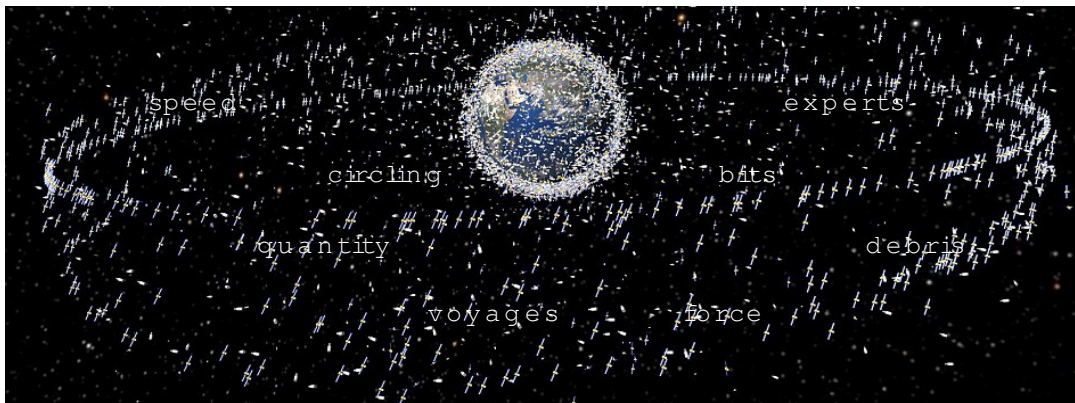


EXERCISE 1

Replace the word in bold.



1. In near space, just above our atmosphere, tens of millions of man-made objects and assorted trash and junk are orbiting circling at high velocity speed.
2. Analysts Experts suggest that most of these particles bits collide with an impact force of 36,000km per hour.
3. The sheer volume quantity of flotsam, jetsam and detritus debris in space is now threatening the future safety of space missions voyages of any kind.

EXERCISE 2

Join to form compound words.

1. high		•	•	fetcher
2. junk		•	•	craft
3. man		•	•	speed
4. far		•	•	up
5. space		•	•	mail
6. tax		•	•	made
7. clean		•	•	payer

Rewrite these words: high-speed, junk mail, man-made, far-fetched, spacecraft, taxpayer, clean-up

GROUP ACTIVITY

Since space debris comes from man-made objects (defunct spacecraft, spent rocket parts and broken satellites left up in space) their presence orbiting space threatens future space missions and even space tourism. Although the chances of space junk falling back to Earth's surface is remote as the Earth contains 70 % water and the space junk is supposedly destroyed in the atmosphere or burnt up before reaching the Earth's surface, it however does happen. In 1997, Lottie Williams of Tulsa, Oklahoma in US was in a park at 4am when she saw a ball of fire shooting across the sky at high speed. Shortly after, she felt a tap on her shoulder only to discover no one was there but a small piece of burnt mesh that resembled a returning Delta II rocket - the space junk which she had mistaken for a shooting star in the sky.



Bigger pieces of junk have fallen from the sky and landed in Woomera in South Australia. A collection of it can be seen in the other photo. As there is no sign of man slowing down in going to space or setting apparatus there, junk falling from the sky is likely to continue. Discuss: Does the accumulation of "space debris" in Earth's orbit pose a significant threat to humans in space and on the ground?

YES:

- The probability of collisions between operational spacecrafts and satellites or between spacecraft and existing debris is increasing
- According to NASA, the chances of collision increase with the size of the object and the longer it stays in orbit
- The presence of nuclear-powered spacecraft makes any collision potentially disastrous. And re-entry of these debris to Earth would be catastrophic
- According to one report: "The village of Ploskoye, in Siberia, is directly under the flight path of Russian launch vehicles, and has been so for 40 years. When the first stage of the rockets separates, a large amount of unused rocket fuel explodes and rains down on the village. The fuel used in some of these rockets contains a substance known to cause liver and blood problems. The fuel coats crops and contaminates the water supply. Ploskoye and its neighbours report cancer rates 15 times higher than the national average. There is also an extremely high rate of birth defects in the area. The village doctor reports a spate of new patients after each launch, and schoolteachers report that children complain of various ailments in the days following launches. In the past five years, there hasn't been a healthy newborn in the village. In addition, the traditional space debris-fragments from the rockets-has killed cattle in the area."
- Some people have become immune to these facts and in some ways have developed a sense of apathy to the whole issue

NO:

- No one has ever been reported killed (except one cow) or sustained injuries by space debris
- Satellites and space vessels have very rarely sustained serious damage from impacts in orbit
- Space debris seems insignificant compared to the vastness of space, immensity of the sea and the entirety of the sky
- People are confident of the ability of the atmosphere to burn up objects before reaching the Earth's surface
- People are confident of scientists coming up with technology to capture or minimise the danger of space debris