



# Satellites

## The Problem of Space Junk

Read the article below from the NASA website.

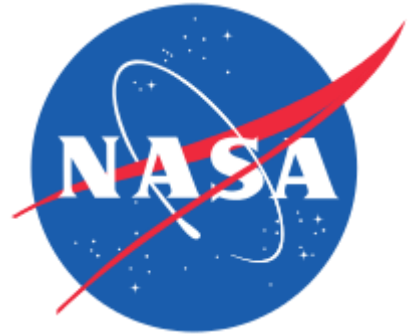
More than 500,000 pieces of debris, or “space junk,” are tracked as they orbit the Earth. They all travel at speeds up to 17,500 mph, fast enough for a relatively small piece of orbital debris to damage a satellite or a spacecraft.

The rising population of space debris increases the potential danger to all space vehicles, but especially to the International Space Station, space shuttles and other spacecraft with humans aboard.

Orbital debris is any man-made object in orbit about the Earth which no longer serves a useful function. Such debris includes non-functional spacecraft, abandoned launch vehicle stages, mission-related debris and pieces which have broken off spacecraft.

There are more than 20,000 pieces of debris larger than a softball orbiting the Earth. They travel at speeds up to 17,500 mph, fast enough for a relatively small piece of orbital debris to damage a satellite or a spacecraft. There are 500,000 pieces of debris the size of a marble or larger. There are many millions of pieces of debris that are so small they can’t be tracked.

Even tiny paint flecks can damage a spacecraft when traveling at these velocities. In fact a number of space shuttle windows have been replaced because of damage caused by material that was analysed and shown to be paint flecks.



### Task

Working in small groups (or on your own if you’d prefer), your mission is to come up with a plan to clear space of all this ‘space junk’.

You need to present your mission plan as either a poster or a presentation.

There are already some plans on how to deal with the problem of space junk, so you may want to do some research using the internet to give you some ideas.