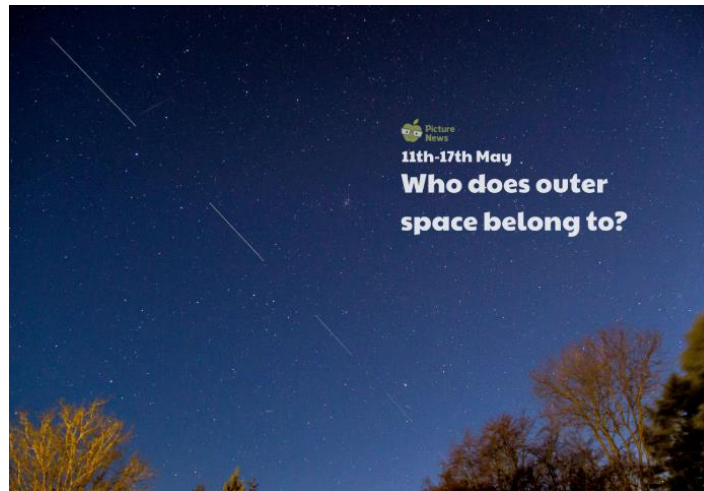


## Picture News w/b 18.5.20



SpaceX founder, Elon Musk, has a dream of providing the whole world with high speed internet using satellites in the sky. Mr Musk recently announced on Twitter that the firm's Starlink service will be available to certain locations in six months. The project aims to have the devices form a constellation around the planet from a distance of 200 miles to 700 miles above the surface and transmit data to stations and customers on the ground.

Assembly Resource

Read through the information below, which provides an overview of what SpaceX do. Do you think the project is a good idea?

### **What is Starlink?**

Starlink is a satellite constellation, being constructed by a company called SpaceX, to provide satellite internet access for the whole world. The constellation will consist of thousands of mass-produced small satellites in low Earth orbit.

Not everyone is happy about the Starlink project, including some astronomers at the Rubin Observatory in Chile, who have said that the satellites are affecting between 30% and 50% of observations. SpaceX have said that they are looking to reduce the brightness of the satellites over time.



An illustration of what the Starlink satellites will look like, showing 4,400 satellites from the project's first phase.

**Once fully deployed, the SpaceX system will pass over virtually all parts of the Earth's surface and therefore have the ability to provide a global service.**

A representative from SpaceX

### **Interesting Facts about Starlink:**

- It is expected to cost around £7 billion to complete the project.
- Elon Musk, the founder of SpaceX, wants to use any money that is made from the project to help fund his ambition of creating the first city in Mars!
- It is hoped that the project will provide access to 3 billion people, who currently do not have internet access.

### Listen, Think, Share

- Did you see the Starlink satellites in the last week of April? Imagine you saw them but didn't know what they were, what might you have thought they could be?
- Do you think having satellites around the world to enable internet access everywhere is a good idea?
- Do you think that anyone should be allowed to send things like satellites into space? Talk about why.

## Stars

Stars are huge balls made of gas. They are luminous, meaning they give off light.

- Stars are found in huge groups called galaxies
- There are approximately 200-400 billion stars in our Milky Way galaxy alone
- Stars are usually between 1 and 10 billion years old



Stars in the night sky.

### Did you know?

The Sun is a star!  
It is the closest star to Earth.

When stars, that we can see from Earth, group together to create a pattern that may form a shape of an animal, person or object we call it a constellation.

Have you heard of the constellations: Orion, Taurus, Gemini, the Plough?

Next time you look at the stars, see if you can see any shapes!

What else would you like to find out about stars?

The Outer Space Treaty forms the basis of international space law. It was put in force on 10<sup>th</sup> October 1967. As of June 2019, 109 countries had signed the treaty.

### What is the Outer Space Treaty?

The main points are as follows:

- No placing of nuclear weapons in space
- The Moon and other celestial bodies are to be used for peaceful purposes only
- Space is free for exploration by all nations
- No nation can claim or try to rule any part of outer space or any celestial body.



This image shows Hubble's Space Telescope Imaging Spectrograph, which astronauts installed in February 1997. Credit: NASA Goddard Flight Space Center.

The Outer Space Treaty was written in 1967, over 50 years ago! Some people believe that the treaty does not provide enough regulation, or the regulation is not clear enough for newer space activities such as space tourism, lunar and asteroid mining.

Do you think the 1967 Outer Space Treaty is enough? Should there be a regulatory body?

### Glossary

**Celestial body** – any natural body outside of the Earth's atmosphere such as the Moon, Sun, other planets, asteroids etc.

**Lunar** – anything relating to the Moon.

**Asteroid mining** – mining raw materials from asteroids and minor planets. These could include minerals, precious metals, iron.