

Are we alone in the universe?



Created by Veve
from Noun Project

Blurb

Do aliens exist? Are we likely to be able to communicate with them? What might they be like?

Timeframe and Practicalities

This unit can easily take a few days if you properly explore all the information and ideas here.

You could do this on your own or working with a friend or small group.

You need access to the internet, although you could replace some of the online resources with access to a good library.

Outcomes

This project builds a deeper awareness of human engagement with the mysteries of space travel and the possibility of life in the wider universe. As an outcome you will consider your own response to the question: Is there anyone out there?

Content

Step one: Searching for aliens!

Start with a look at the [SETI website](#).

The Search for Extraterrestrial Intelligence Institute is dedicated to searching for life in the universe, as their website states:

The mission of the SETI Institute is to explore, understand and explain the origin and nature of life in the universe and the evolution of intelligence.

Have a look through their website to get a flavour of how much is tied up in this project. You will find podcasts and talks and research articles, so see what interests you. Ultimately you are attempting to fathom the breadth of the task involved in searching for aliens. For example, what would communication with an alien civilisation be like? How different could the communication be?

Watch this film on whalesong and SETI that looks at a totally different communication system: [Humpback Whale Songs & the Search for Alien Intelligence](#)

Step two: Alien life.

Read this page on astrobiology:

[Astrobiology](#)

It will get you thinking about the idea of what alien life could be like.

Now read these articles:

[What Do Aliens Look Like? - Experts Reveal What Aliens Look Like](#)

<https://www.nationalgeographic.com/science/2019/11/if-alien-life-exists-in-solar-system-may-look-like-this-aurora-hydrothermal-vent/>

And have a look at this video:

[What could alien life look like?](#)

Make some preliminary notes on what you think an alien might be like.

Step three: How have we explored space and tried to contact aliens?

Have a look at this amazing website that recreates the (failed) Apollo 13 or successful Apollo 11 missions.

[Apollo 11 in Real Time](#)

[Apollo 13 in Real Time](#)

Now have a look at the messages that humans have sent out. On the Voyager probes there is a record that shares information about humans.

[Voyager - What's on the Golden Record](#)

Check out where the spacecraft are now:

[NASA's Voyager 1](#)

Now you have benefited from all the amazing work scientists do- give a little back.

Check out this site to contribute to a project:

Zooniverse citizen science project

[Projects — Zooniverse](#)

Step four: Get out and explore.

Two options:

Get outside one night.

Try and learn a few constellations if you can get to a place with a clear, unpolluted view of the night sky. This website has a lot of resources you can use.

[Astronomy for Beginners: How to Get Started in Backyard Astronomy - Sky & Telescope](#)

Explore this free software allows you to explore virtually:

[Stellarium Astronomy Software](#)

Step five: Paradox

We will now think about the **Fermi Paradox** starting with this video:

[The Fermi Paradox — Where Are All The Aliens? \(1/2\)](#)

You can also try this calculator for the Drake Equation which tells you how many alien civilisations there might be in our galaxy or the whole universe.

[The Drake Equation – What are the Chances of Extraterrestrial Life? — Information is Beautiful](#)

Think about your answer to the Fermi Paradox.

Why have aliens not visited us or made themselves clear? Why have we not heard from another civilisation?

Here are some answers:

[Fermi paradox](#)

Here is a dark and scary answer from one of my favourite sci-fi writers:

[Dark Forest theory: Why aliens haven't contacted us](#)

Step six: Answer the Fermi Paradox or Design an alien

For your final bit of thinking to bring everything together, you have two choices:

Design an alien.

Think about all you have learned about how they might communicate, what their bodies might be like, do they have cities or technologies?

All of this you can draw or design using an online drawing package and give a short explanation so we know what we are looking at.

The Fermi Paradox

Why are aliens not in contact? Or are they secretly here or on their way?!

What answer to the Fermi Paradox do you favour and why?

Help & Submission

TEACHERS: use this space to tell students how they can get help and how to share work they want to celebrate and highlight.

If you find this helpful or have Flexible Learning suggestions, get in touch:

[linkedin.com/in/douglaskidd67](https://www.linkedin.com/in/douglaskidd67)