Extraterrestrial (ET) Search



Are we alone in our solar system?

Sharon Parsons

Nelson Literacy Directions

EXTRATERRESTRIAL (ET) Search

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Dear Reader

What comes to your mind when someone mentions the possibility of extraterrestrial, or ET, life?

You may be reminded of the movie, *ET: The Extraterrestrial.* Or you may think of the many scientists who search the solar system for Earth-like planets where extraterrestrial life forms may exist.

> **OUR UFO (UNIDENTIFIED FLYING OBJECT) ELIMINATION CHECKLIST IS ON PAGE 28.**

In this book, you will meet three knowledgeable people involved in the search for extraterrestrial life: an astrobiology educator (on page 16), a planet hunter (on page 19) and an educator at the Alien Earths Exhibition (on page 25).

By the end of the book, ask yourself the question: "Are we really alone?"

My sincere thanks to the following people for their time, information, images and enthusiasm for this book:

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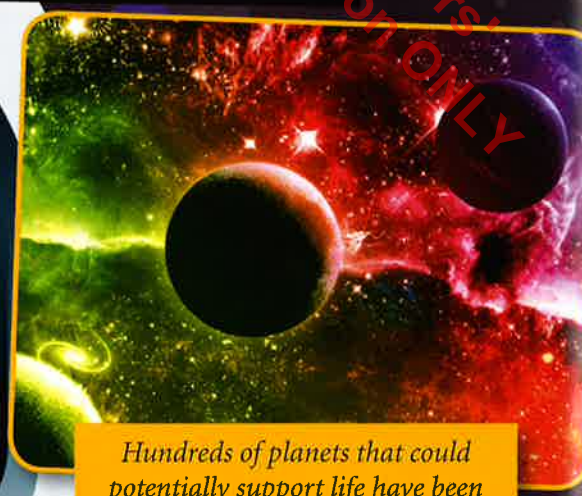
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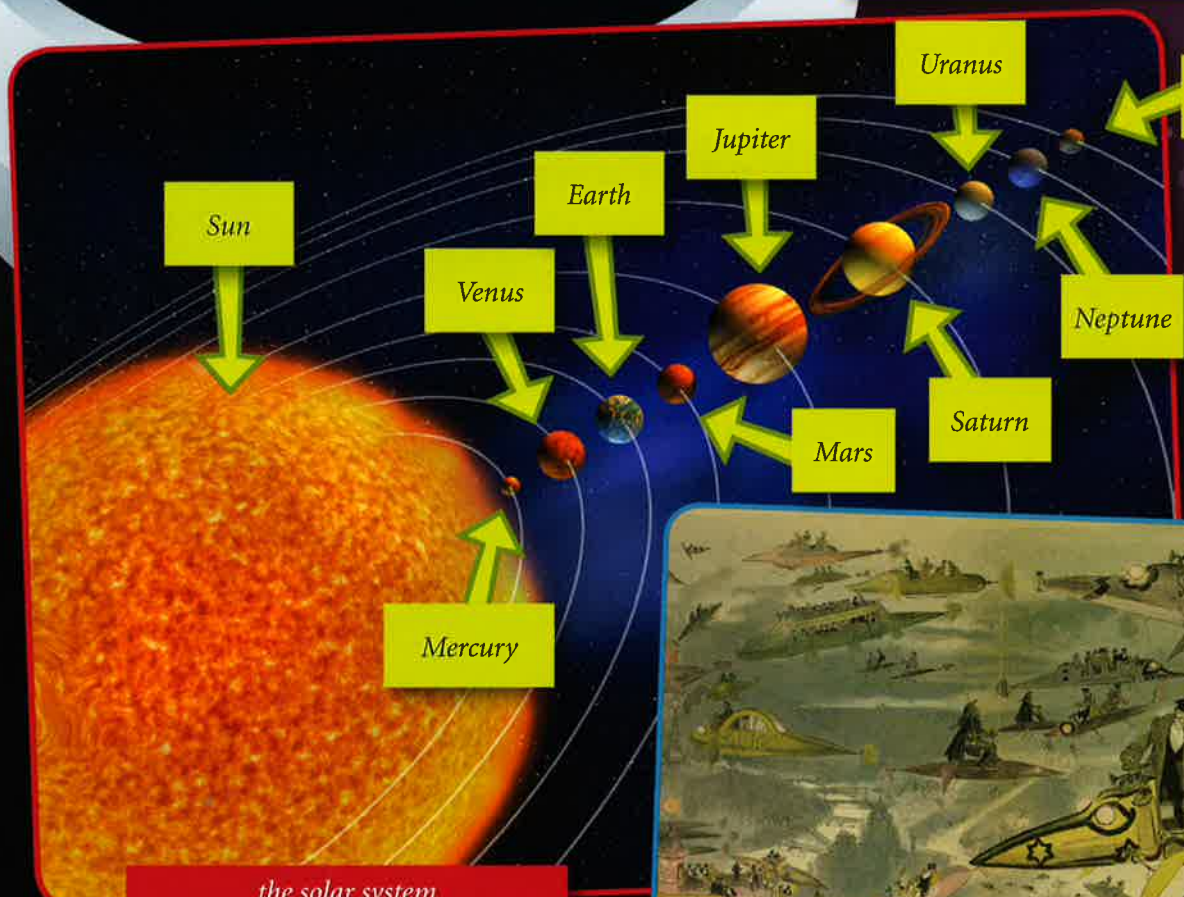
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1 Extraterrestrial (ET) Science Fiction

We earthlings have long been fascinated by the possibility of extraterrestrial life inhabiting neighbouring planets, solar systems or galaxies. One way we have expressed this fascination is through science-fiction stories in books, comics, animation and film. Some of our most successful movies feature fictional extraterrestrial life forms. In many science-fiction movies, new technology creates special effects that draw us into amazing and highly imaginative ET worlds.



Hundreds of planets that could potentially support life have been discovered in our own galaxy.



the solar system (distances and sizes are not to scale)

As this illustration from 1882 shows, space travel has fascinated humans for hundreds of years.

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1977: The first *Star Wars* movie (originally released as *Star Wars* but renamed *Star Wars IV: A New Hope*) is the most successful in the series. *Star Wars* is a space opera set in a fictional galaxy from another time. It features space-age heroes, and robotic and humanoid alien characters that fight some amazing intergalactic battles as good pitches against evil.

SPACECRAFT LAUNCHED IN 1977, TOO!

Voyager 1 (September) and *Voyager 2* (August) were launched in 1977. See page 13 for more!



1982: *ET: The Extraterrestrial* is a science-fiction movie about a boy who meets an alien, ET, that is stranded on Earth. The boy and his siblings hide the friendly alien until they aid ET's return to his own planet.

2009: *Avatar* is a science-fiction movie about extraterrestrials on the fictional planet of Pandora, real-life characters on Earth and genetically modified characters created on Earth.



Arts

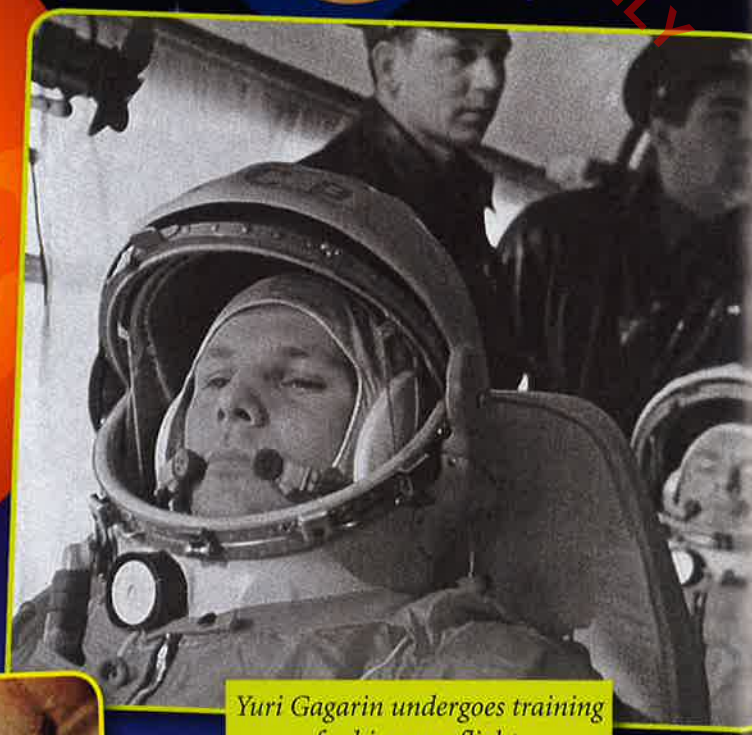
Space Opera

Space opera is a highly imaginative fictional genre that includes science fiction. Stories are set in space and usually involve battles between powerful opponents.

2 Race to Space

Beyond science fiction, space science teams use their knowledge and technology to explore space and planetary systems for themselves.

Since the 1950s, Russia and the USA have had active space exploration programs that spend billions of dollars to employ people and to build spacecraft and space support resources, such as mission-control centres.



Yuri Gagarin undergoes training for his space flight.



Yuri Gagarin prepares for lift-off.

First Man in Space

The first person to travel into space, aboard *Vostok 1*, was Russian cosmonaut Yuri Gagarin in April 1961. After completing one orbit of Earth, Russian ground crew landed Gagarin's re-entry spacecraft by using remote controls. The flight lasted one hour and 48 minutes.

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Valentina Tereshkova in her spacesuit

First Woman in Space

Two years later, in August 1963, Russian cosmonaut Valentina Tereshkova became the first woman to travel to space. Aboard *Vostok 6*, Tereshkova's flight lasted for almost three days. She was a parachutist before she trained as a cosmonaut.

COSMONAUT OR ASTRONAUT?

These job titles both relate to people trained to travel into space, but Russia refers to cosmonauts and the USA refers to astronauts.



Yuri Gagarin and Valentina Tereshkova

Social Studies

Space Jobs

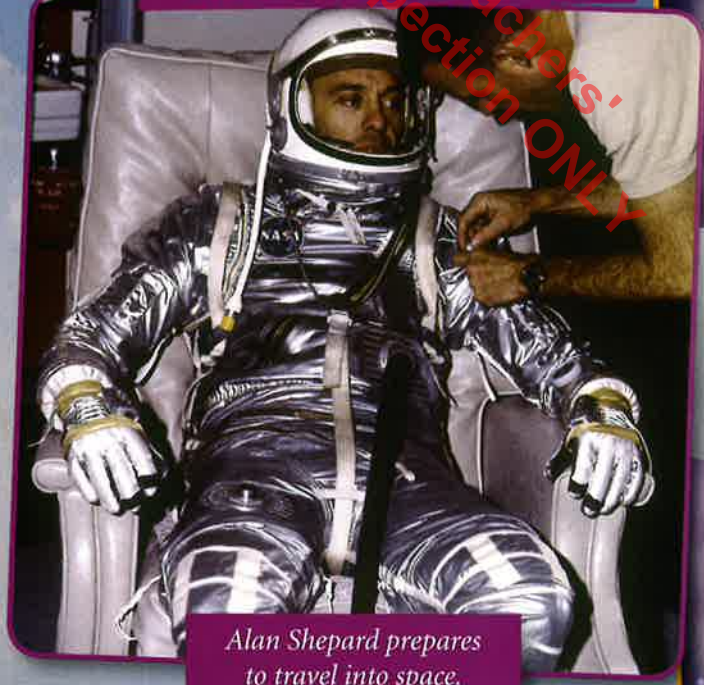
There are many specialised jobs in space exploration organisations, such as astronauts, space scientists, engineers, technologists and technicians.

First US Citizen in Space

One month after Gagarin travelled into space (1961), astronaut Alan Shepard became the USA's first man to travel into space, on board the spacecraft *Freedom 7*.

In 1971, he was the spacecraft commander for his second flight into space, aboard *Apollo 14*.

About to Leave Earth



Alan Shepard prepares to travel into space.

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Spacecraft velocity = about 8 300 kilometres an hour

Spacecraft mass = about 1 800 kilograms

the launch of Freedom 7

Oldest Man in Space

In 1962, John Glenn aboard spacecraft *Friendship 7* became the first US citizen and the third person in the world to orbit Earth.

In 1998, he also became the oldest astronaut to fly on a space shuttle – he was 77 years old.

About to Orbit Earth



John Glenn enters Friendship 7 *just before it is launched.*

Spacecraft velocity = about 28 000 kilometres an hour

Spacecraft mass = about 1 220 kilograms

APOLLO 11

Apollo 11 was the first spacecraft to land on the Moon and its maximum velocity was almost 40 000 kilometres an hour.

the launch of Friendship 7

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