

PART 3

You are going to read an article about the existence of aliens. Eight paragraphs have been removed from the article. Choose from the paragraphs (A-I) the one which fits each gap (14-20). There is one extra paragraph which you do not need to use. There is an example at the beginning (0).

Are we Alone?

Are we alone? Do we, on our little blue planet, occupy a unique position in the cosmos? Is life an experiment that has only been conducted once, right here on earth?

0 C

He believes that this discovery would raise fundamental questions about the nature of the universe and of life itself. Others hold different views.

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It is clear to Savage that the search for alien life is useless. The search for extraterrestrial life, often known as SETI, is an example of the experimenter's dilemma: we haven't found alien life, but is that because there isn't any, or because we aren't looking in the right place?

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SETI's second assumption is that if life has evolved elsewhere, it will seek to communicate with other life forms, and that alien races are as interested in finding us as we are in finding them. So SETI had a mission which it was determined to carry out.

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Frank Drake, a young radio astronomer, had come to the same conclusion. He began the search by pointing a radio telescope at the nearby stars to look for signals of artificial origin.

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For two decades radio astronomers explored large areas of the sky. They found nothing. And though the search has continued, and technological advances have been made, nothing has been found yet. The evolution of life is based mainly on chance. In fact, no one knows how life began on earth, or how the first single-celled amoeba developed into human beings.

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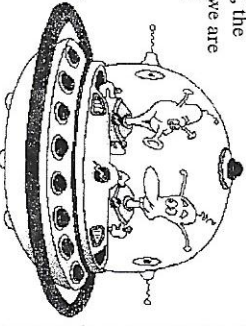
The lottery of life may be still harder to win but, as SETI supporters argue, they're looking for just one other winner. There is another argument to support SETI's search. Life is adaptable.

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The other side of this argument is that life forms so different from our own may not bother to try to communicate with other life forms using a particular range of radio waves, or may not wish to communicate at all. There is no doubt that discovering definite evidence of alien life would have a great effect on the human race.

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Even if aliens don't offer us free energy or free drives around the stars, the knowledge that we are not alone would change all our lives, and the way we think about our lives, for ever.



A But SETI's supporters believe that, with 400 billion stars in our galaxy alone, there must be other planets on which life has evolved. It's something like winning the National Lottery. Even with the chances of winning being 14 million to one, about 50 people will win every year.

B SETI began its mission in earnest in 1959. Two physicists at Cornell University published a paper in the scientific journal *Nature*. They suggested that microwave radio would be ideal for communicating between star systems.

C These are big questions. Paul Davies - who investigated them in detail in his new book - believes that the discovery of alien life would be the single greatest scientific breakthrough ever made.

D The basic assumption of SETI is that the Earth isn't a special place. It's a typical planet of an average star in a common type of galaxy. If life can evolve here, it can also evolve in similar environments scattered across the cosmos.

E New evidence that other life forms do exist has been found, not with radio waves, but in satellite photographs. Unfortunately this evidence is not clear. In fact, some scientists argue that it can not be called evidence at all.

F At the very least the discovery would begin to answer questions like: how common is life, and under what conditions can it appear? We would also find ourselves asking questions about the very nature of life itself.

G The radio frequency Drake chose to observe at is the same frequency at which hydrogen, the most common atom in the universe, radiates radio energy. Drake decided that it was this frequency an alien would guess other races could also recognise and tune in to.

H Marshall Savage, author of the Millennium Project, is convinced that we are alone. He dreams that humans will colonise the galaxy and spread the seed of life to lifeless parts of the universe.

I Some believe that life is a kind of organising force, bringing more and more order to the universe. This principle should apply to a far wider range of conditions than those on earth and similar planets which are being investigated, so that life could have developed in almost any type of environment.