



Student's name _____ code _____

READING TEST 10th FORM Variant 3

part 1

Read the text. Decide whether each statement (1-7) below on this page is true (T) or false (F). Mark one letter (T or F) next to each of the statements. Transfer answers to the answer sheet (the form on a separate page).

- | | T | F |
|--|--------------------------|--------------------------|
| 1 In recent years scientists have discovered millions of planets around other stars. | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 The examples of 'hot Saturn' and 'hot Jupiter' show that distant planets are not so different. | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 Up until now scientists have not discovered any planets that could have life on them. | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 Dwarf stars offer the best conditions for planets to support life. | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 It is unlikely that if scientists find life on other planets, it will have a similar form to life on Earth. | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 The way life develops is predictable. | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 The reality of life on other planets may be stranger than anything we could imagine. | <input type="checkbox"/> | <input type="checkbox"/> |

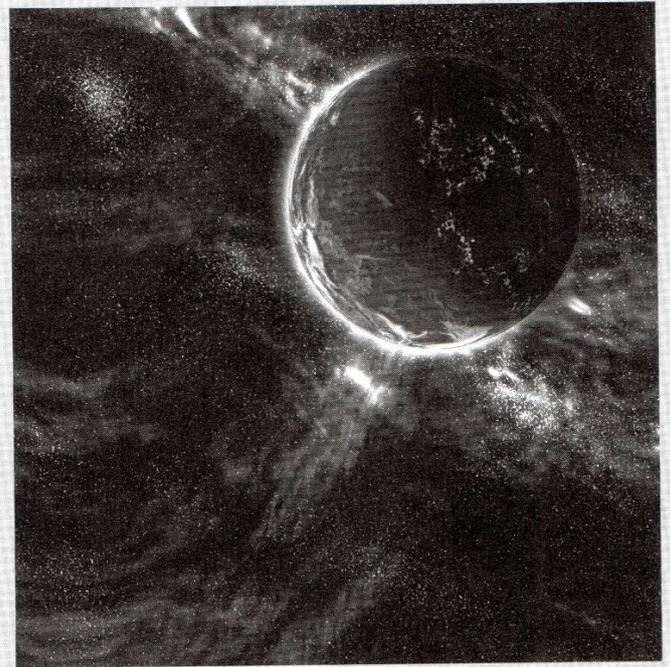
Seeking new Earths

It took humans thousands of years to explore our own planet and centuries to comprehend neighbouring planets, but nowadays new worlds are being discovered every week. Since the first was found in 1995, astronomers have identified more than 370 'exoplanets', worlds orbiting stars other than the sun. Many confirm the biologist J.B.S. Haldane's famous remark that 'the universe is not only stranger than we suppose, but stranger than we can suppose.' There's a 'hot Saturn' 260 light-years from Earth, orbiting its parent star so rapidly that a year there lasts less than three days. Circling another star 150 light-years out is a 'hot Jupiter', whose upper atmosphere is being blasted off to form a gigantic, comet-like tail.

Scientists are keen to find more planets like Earth, which are neither too hot nor too cold to support life as we know it. None has yet been found because to see a planet as small and dim as ours next to the glare of its star is like trying to see a firefly in a fireworks display. Only eleven exoplanets, all of them big and bright and conveniently far away from their stars, have as yet had their pictures taken. Yet by pushing technology to the limits, astronomers are rapidly approaching the day when they can find another Earth and investigate it for signs of life. If they manage to discover a rocky planet roughly the size of Earth orbiting in the habitable zone – not so close to the star that the planet's water has evaporated away, nor so far out that it has frozen into ice – they will have found what biologists believe could be a promising home for life.

The best hunting grounds may be dwarf stars, smaller than the sun. Such stars are plentiful and they enjoy long, stable careers, providing a steady supply of sunlight to any life-bearing planets that might occupy their habitable zones.

But scientists searching for extraterrestrial life must keep in mind that it may be very different from life here at home. Life thrived on Earth for billions of years before land plants appeared and populated the continents. Biological evolution is so unpredictable that even if life originated on a planet identical to Earth at the same time as it did here, it would almost certainly be very different from terrestrial life.



As the biologist Jacques Monod once put it, life evolves not only through necessity, but also through chance, the unpredictable intervention of countless accidents, like the asteroid impact 65 million years ago that killed off the dinosaurs on Earth. Therefore scientists look not just for exoplanets identical to the modern Earth, but for planets resembling the Earth as it used to be or might have been.

It was not easy for explorers to plumb the depths of the oceans or map the far side of the moon, and it will not be easy to find life on the planets of other stars. But we now have reason to believe that billions of such planets exist and that they hold the promise of expanding the scope of human knowledge.

For thousands of years we humans knew so little about the universe that we tended to prefer our imaginations to reality. Now, with advances in science, it has become evident that nature's creativity may be greater than our own. We are about to discover countless new worlds with stories to tell.