

## READING TEST 1

### READING PASSAGE 1

#### Life on Earth

Life on Earth started around 3.8 billion years ago and has since evolved and diversified through the process of natural selection to be adapted to almost every environment possible. There are currently an estimated 1.9 million animals, plants, and other forms of life on Earth.

Life can be found in every nook and cranny/niche of the globe, from the extreme environments of deep sea hydrothermal vents and the freezing conditions of the Polar Regions to the lush habitats found at the equator.

Looking back through time, by means of the fossil and phylogenetic record, we can see that the Earth has been home to many more species than are alive today. Taking a historical perspective shows that life is constantly evolving, with the success and dominance of different groups waxing and waning over time.

The diversity of life is truly amazing, but all living organisms do share certain similarities. All living organisms can replicate, and the replicator molecule is DNA. As well, all living organisms contain some means of converting the information stored in DNA into products used to build cellular machinery from fats, proteins, and carbohydrates.

#### Questions 1-4

Complete the sentences. Choose **NO MORE THAN THREE WORDS AND / OR A NUMBER** from the passage for each answer.

1. The world developed changed by \_\_\_\_\_ for over 3.8 billion years.
2. The past history of the species that used to exist on earth can be found through the \_\_\_\_\_ record.
3. The coming and going of specific groups and species can illustrate to us that life is forever \_\_\_\_\_.
4. Without \_\_\_\_\_, life forms would not be able to replicate.

## READING PASSAGE 2

### Dolphins

Dolphins are regarded as the friendliest creatures in the sea and stories of them helping drowning sailors have been common since Roman times. The more we learn about dolphins, the more we realize that their society is more complex than people previously imagined. They look after other dolphins when they are ill, care for pregnant mothers and protect the weakest in the community, as we do. Some scientists have suggested that dolphins have a language but it is much more probable that they communicate with each other without needing words. Could any of these mammals be more intelligent than man? Certainly the most common argument in favor of man's superiority over them that we can kill them more easily than they can kill us is the least satisfactory. On the contrary, the more we discover about these remarkable creatures, the less we appear superior when we destroy them.

#### Question 1-3

Complete the sentences. Choose **NO MORE THAN TWO WORDS/ OR A NUMBER** from the passage for each other.

1. It is clear that dolphins have a reputation for being the \_\_\_\_\_ to humans.
2. We can kill dolphins more easily than they can kill us does not mean that we are \_\_\_\_\_ to them.
3. Dolphins have some social traits that are more \_\_\_\_\_ than people.

## READING PASSAGE 3

### Weird States of Matter

There are three states of matter that people commonly encounter in their everyday lives. The air we breathe is a gas, where the particles are spaced relatively far apart. In liquids like water, particles are much more tightly packed, but are still able to move and flow past one another. Thus, liquids assume the shape of their container. Wood, metal and brick are all solids where the atoms are very close together such that they retain their own shape and volume.

As nature reveals more of itself to people, more states of matter are observed. Many of these states exist in such extreme conditions that they can be seen only in the laboratory or from vast cosmic distances. Plasma is a readily visible state of matter. In the first three states of matter, electrons, or negatively charged particles, are bound up with the positively charged nucleus. In plasmas, these electrons are stripped away and mingle about freely with other particles. All visible stars are made of plasma, which is continuously excreted out into space. One can also see plasmas in lit neon signs and fluorescent light bulbs.

Another example of an extreme state of matter is a superfluid. One such superfluid is helium, which is normally a gas. At temperatures close to absolute zero, the lowest temperature possible, helium turns into a superfluid and exhibits very unusual properties. In such a state, it has zero viscosity [no fluid friction], which means that up to a certain point, the superfluid will remain absolutely still within a rotating container. Superfluids also exhibit infinite thermal conductivity, meaning that any change in temperature in one part of the superfluid will instantly spread out to the whole volume.

## Questions 1-6

Complete the summary below. Choose your answers from the box at the bottom of the page and write them in boxes 1-6 on your answer sheet.

**NB** There are more words than spaces, so you will not use them all. You may use any of the words more than once.

### EXTREME MATTER

Those states of matter we (1) \_\_\_\_\_ with include: oxygen molecules, which are part of the air we breathe; (2) \_\_\_\_\_ that we drink in liquid form; and solids like the food we eat and like other objects we use in life. Other extreme forms of matter also (3) \_\_\_\_\_

Plasmas are a kind of gaseous soup where the (4) \_\_\_\_\_ and nuclei move about individually. (5) \_\_\_\_\_ are a very strange kind of liquid. Their (6) \_\_\_\_\_ are still being studied.

### Word list

carbon dioxide	water	orbit
interact	absolute zero	container
unusual	dust	properties
superfluids	visuals	stars
infinite	exist	electrons
different		

