



Part 1 (READING).

Task 1

You are going to read a magazine article about global warming. Eight paragraphs have been removed from the article. Choose from paragraphs **A-I** the one which fits each gap (**1-6**). There is one extra paragraph which you do not need to use. There is an example at the beginning (**0**).

What's up with the weather?

The world climate is in chaos. Freak weather conditions have been so common recently that even the most hard-bitten cynics suspect that something odd is going on.

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In December 1995, climatologists from the United Nations' Intergovernmental Panel on Climate Change (IPCC) all agreed that global warming is an undeniable fact.

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Optimists foresee milder winters and record harvests for farmers. They believe that the severity of storms will reduce due to the stabilizing of differences between the equator and the poles.

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In a warmer world, extremes of wet and dry will intensify. In very dry regions where there is little water anyway, an increase in temperatures would worsen droughts and increase desertification - especially in the interiors of continents where rainfall will become very rare. In areas where high levels of rainfall are normal, such as in coastal and mountainous regions, increased water vapour, and hence fiercer rainfall, should be expected.

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As a result of this, insurance companies are panicking. Many are trying to persuade governments to regulate emissions of greenhouse gases.

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Professor Parry, a member of the IPCC, states that there really isn't very much we can do to stop global warming happening. "Even if we could dramatically reduce industrial emissions, the atmosphere would continue to heat up for another 50 years – because the oceans act like a vast storage heater, holding on to heat and delaying the warming of the air about us."

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Some scientists, however, fear that the Flood Barrier may be overwhelmed because the geological structure of Britain means that the south east of England is actually tilting into the sea. This, with the



rising sea levels, means that the high-tide level of the River Thames in central London is set to rise by a rate of 75 centimeters a century.

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The rest of us won't get off lightly though. Warmer weather is likely to increase the amount of algae in reservoirs and lakes. This will make water treatment and purification more difficult and there will probably be an increase in stomach-and intestine-related illnesses. Fierce storms could also bring about health problems.

Missing paragraphs

A It seems as though these serious and urgent predictions are already coming true. Recently, Hurricane Andrew cost American insurance companies \$16.5 billion and insurers worldwide have concluded that the greenhouse effect could bankrupt them.

B World temperatures are forecast to rise by 1.8 to 6.3°C by the year 2100 but no one is certain what its eventual effects will be. Consequently, a number of theories have been developed.

C Most scientists' fears are focused on the heavily populated south coast of England. Increased coastal development means that flooding would be catastrophic. The value of the coastal land between Bognor Regis and Bournemouth was recently estimated at £5,745 million.

D In old urban areas, most storm drainage systems are combined with the sewage system. "Flash flood" storms are therefore likely to send waves of untreated sewage into the watercourse. "We have to face the fact" - says Professor Parry - "that climate change is inevitable - and possibly it will be very unpleasant."

E The most innovative country in this respect is Spain. In the last three years it has been at the forefront in promoting the use of alternative energy forms - including tidal and hydro-electric power.

F On New Year's Day of this year, for example, Mexico City had its first snowfall in twenty years; monsoons in India, Bangladesh and Nepal stranded nearly two million people in June, and last year's Caribbean storms were the worst for sixty years. Scientists are now convinced that the world's climate has been changed by mankind.

G Pessimists on the other hand predict a rise in sea levels of 15 to 96 centimeters - meaning that many low-lying islands like those in the Pacific and Caribbean will be totally submerged.

H At the 1992 Earth Summit in Rio, nations promised to cut their carbon dioxide emissions drastically by the year 2000, although the only country that looks on target is Sweden. The other nations seem to be counting on solutions like solar power to come to the rescue.

I In Britain, the threat of flooding is being taken very seriously. The Thames Flood Barrier was built to protect London from the rising sea level.

TASK 2

You are going to read a newspaper article about exploring the oceans. Choose the most suitable heading from the list (A-H) for each part (1-6) of the article. There is



one extra heading which you do not need to use. There is an example at the beginning (0).

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|---|------------------------|
| A | Know your own planet. |
| B | Robot close-ups. |
| C | A very special ship. |
| D | Solo exploration. |
| E | We'll never get there. |
| F | Living under water. |
| G | Solution to a problem. |
| H | The ocean floor on TV. |

Exploring the Depths of the Ocean

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Doctor Bob Ballard is an aquanaut -an explorer of the world's seas and oceans. He has visited the bottom of oceans in a mini-submarine and explored such things as the *Titanic* and the German battleship *the Bismark*. Most recently he has discovered the ship *Lusitania*, which sank off the coast of Ireland in 1915. Ballard has made these visits alone since he joined the Deep Submergence Laboratory in 1967.

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But making these visits was very difficult. The mini-submarines which only seat one man take over two hours to reach the sea-bed, and then can only stay there for three hours. Because of these problems, Ballard has developed two robot submarines which send him information 24 hours a day. These robots are known as the Argo-Jason system. The Argo is lowered by cable from a ship on the surface of the ocean and can follow the floor of the ocean, sending back new information which enables Ballard and his team to make maps.

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The Jason, however, is smaller and is a true robot. It can move completely independently across the ocean floor. Although it was still attached to the surface ship, it actually went inside the *Titanic*. Jason has two control systems. It can be directed from the surface ship, or it can be programmed by computer before it goes down. Either way, it is small enough to get within a centimetre of its target.

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At one time, the quality of the pictures Jason sent back to the ship was not very good. New technology, however, has enabled Jason to send back clear, full colour television pictures to the surface ship. An operator can sit in the ship, surrounded by television screens, and see everything Jason is filming. Ballard says it is almost the same as being in the submarine himself. At his home by the sea in America, Ballard has built an electronic centre. By using satellite links he can send other robots, just like Jason, to various underwater spots all over the world - without ever leaving his house!

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But Ballard says that only a tiny part of the ocean floor has been explored. For example, the Mid-Atlantic Ridge, a huge underwater mountain range, is the earth's largest geographical feature. But man had already walked on the moon before it was even discovered under the ocean.

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Ballard also dreams of people living under the sea in the 21st century. He believes that problems such as the energy shortage and overcrowding can be resolved by man making use of parts of the ocean. He believes that people think that Mars is a friendlier place to live than under the sea, and that many are afraid of the idea. But he says that people have always been afraid of the unknown, and that we must rise above these fears.

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The first step towards living under water would be in something called the flip-ship. It floats vertically so that the walls become floor and ceilings. It is easy to move, but when it is placed on its side it is also a very stable vessel. The waves just roll past and do not cause any disturbance to the ship. A model of this ship has already been tried out successfully in America.

TASK 3

You are going to read some information about sunken vessels. For questions 1-15, choose from the types A-E. Some of the types may be chosen more than once. When more than one answer required, these may be given in any order. There is an example at the beginning.

Which vessel(s) :

sank on its way to Liverpool?

0	A
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were destroyed by submarines?

1		2	
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sank carrying gold coins or jewellery?

3		4	
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ran onto rocks and subsequently sank?

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didn't provide enough lifeboats?

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had its crew rescued over eighty hours after it sank?

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would, according to its builders, never sink?

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experienced two great explosions?

9		10	
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sank in less than three hours?

11		12	
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lost all their crew members?

13		14		15	
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Lusitania

Nine months into World War I, the 32,000-ton RMS Lusitania was sunk, to world-wide **outrage**. On 7 May 1915, en route to Liverpool, the liner was **torpedoed** by a U-boat off the southwest coast of Ireland, and sank in just 18 minutes. All her 1,200 passengers were drowned. At that time, it was considered unthinkable that an **unarmed** ship should be the victim of such an unprovoked attack. One hundred and twenty four of those drowned were Americans which was a major factor in the U.S's decision to enter the war two years later. In 1993, Robert Ballard used a mini-sub and three **remote-controlled** camera vehicles to survey and film the wreck under powerful lights. Ballard concluded that the reason the Lusitania sank so quickly was that after the torpedo struck, there was a second, huge explosion caused by coal dust and oxygen being set on fire.

Titanic

The sinking of the Titanic on its **maiden voyage** from Liverpool to New York City in 1912 is considered one of the worst maritime disasters ever. Although the ship had been pronounced unsinkable, it took less than three hours to go under after striking an iceberg. Only about 700 of the estimated 2200 people aboard survived due to an insufficient number of lifeboats. In July 1986, US researchers used the Alvin 3-person **submersible** to explore the sunken Titanic and take pictures. An exhibition was held in Paris in September the following year showing jewels and other **artifacts** taking from the wreck.

U.S.S. Indianapolis

The U.S.S. Indianapolis was a U.S. heavy cruiser which delivered one of the **detonators** for the nuclear bombs dropped on Japan in 1945. Since it had helped cause such terrible destruction, some people believed that the **fate** of the ship and its crew was "God's punishment". On 29 July, just a week before the **obliteration** of Hiroshima, the Indianapolis became the last warship to be sunk in World War II, when she was torpedoed by a Japanese submarine while returning to San Francisco. U.S. Navy officers had been expecting no more Japanese **naval** aggression. Of the 1,199 crew members, 850 swam free - only to be left in the water for more than three days. When they were finally spotted by an aircraft, 84 hours later, only 316 remained.

HMS Association



The worst peacetime disaster in the Royal Navy's history occurred on 22 October 1707, when HMS Association, the **flagship** of Admiral Sir Cloudisley Shovell, and three other vessels of his **fleet**, broke up and disappeared beneath the waves after running on to the Bishop and Clerks rocks off the Scilly Isles. The full crews of all four ships – over 800 men in total, including the admiral, drowned. The Association had been returning from the Mediterranean carrying a **consignment** of gold coins. The **hoard** represents a fortune today, and there have been many successful dives to the Association's last resting place to recover the **loot**.

U.S.S. Thresher

The sinking of one of the first true nuclear attack submarines, the U.S.S. Thresher, is a mystery to this day. Thresher sailed from New Hampshire on 9 April 1963, with 129 people on board, including 13 civilians. It was during the second day of sea trials in 8,500 feet of water, when Thresher was 240 miles east of Cape Cod, that disaster struck. At 7.47 am during a slow dive to deep water, Thresher signaled that she had reached 400 feet and was "checking for leaks". At 9.13 am, she said that she was "experiencing minor difficulty". Four minutes later, **incomprehensible** transmissions came over on her escort's hydroplane, followed by two explosions and the sound of the sub breaking up. Investigations showed that the Thresher had **sprung a major leak**, and that the sub had clearly **imploded** under tremendous pressure on her way to the bottom. But whether the U.S. Navy has re-examined the wreck, or formed any conclusion as to the cause of the incident, nobody knows.