Extra Training

Use of English
Task 869

Read the text and for each gap A-E, choose from the sentences 1-6 the one that best fits each gap. One sentence is extra.

SPACE EXPLORATION – FUTURE OR FANTASY?

Stephen Hawking,
English physicist & cosmologist

Since Neil Armstrong stepped foot on the Moon on 20th July, 1969 and declared "One small step for man, one giant leap for mankind", people have been dreaming about creating futuristic communities in space. Science-fiction films such as *2001: A Space Odyssey* and *Star Wars* have filled our minds with images of spacecraft travelling at the speed of light to colonies on other planets in other sola- system. Until now, these ideas have just been fantasy, but now leading scientists such as Stephen Hawking say that colonising space is the only answer for the future survival of mankind otherwise, we will die out **A**_____.

But is space colonisation really possible? One solution would be for us to move to space stations orbiting near Earth. After all, astronauts have already been living on NASA's segment of the International Space Station (ISS) continuously since 2004). The ISS gets its power from solar panels, it generates its own oxygen and even recycles water, but there's still a huge problem; all of its food and other supplies have to be sent from Earth. **B** _____. So, maybe colonising the Moon would be a better solution! The Moon has rich resources which could be used to construct a colony. Also, in 2009, scientists found water on the moon, which could be used to extract oxygen for breathing, **C** _____. There is no atmosphere on the Moon and it is boiling hot during 13 days of sunlight and then freezing cold during 13 days of darkness. So, any human colony there would have to live in a huge indoor *biosphere**.

Mars would be another option, but the problems there would be similar to those on the moon, Scientists have suggested creating a more Earth-like atmosphere there by releasing carbon dioxide and warming it up, but this could take about 1,000 years! Stephen Hawking believes that the best solution is to look for Earth-like planets to colonise. "If only 1 % of the 1,000 or so stars within 30 light years of Earth had an Earth-sized rocky planet in just the right place for life, there would still be 10 planets for colonisation in our 'neighbourhood'," Hawking said.

However, even if we found the perfect planet, we wouldn't be able to get there at the moment! Travelling on Voyager 1, the fastest spacecraft we've ever sent into space, it would take over 700,000 years to get to Alpha Centauri, the closest star system. Hawking, though, believes that new technologies could soon help us to travel just below the speed of light, reaching the next star to Earth in only 6 years. If we had endless amounts of money for space exploration, we would have already overcome these problems and built the first space colonies. The fact is, it costs about £6,000 to put half a kilo of anything into near-Earth orbit. **D** _____. Just imagine - if people hadn't given Columbus money for his voyage to America in 1492, NASA probably wouldn't even exist today!

So, although there are many challenges to overcome. Professor Hawking still believes it will only be a matter of time before we are living in space. **E** _____. What do you think? Is space truly the final frontier'?

** an environment that supports life spread*

1. Nevertheless, Professor Hawking believes that we can afford to give 0.25% of the world's financial resources to colonise space.
2. Life there would be very harsh, though.
3. Humans would need to be self-sufficient to survive in space long-term.
4. He believes that sooner or later we will be wiped out by a catastrophe such as a meteor or nuclear war.
5. The only question is whether this happens in years, centuries or millennia.
6. Exploring space, however, is not without risk.

A	B	C	D	E

LIVEWORKSHEETS