

*It is incredible to think that (6) ..... (LIVE) beings could be standing on Proxima b now, looking up at our own distant sun in their sky and wondering what's out there.*

On the 6th of February The Falcon heavy rocket with a Tesla Roadster on board was launched by Elon Musk's company. Elon commented on it, "It is kind of silly and fun, but silly and fun things are important." What does it mean? What would you launch into space and what music would you choose to "accompany" the travel? (Elon has chosen "Space Oddity" by David Bowie) Why?

[illegible]

**Стремись быть ПЕРВЫМ во всем, и ты станешь ПЕРВЫМ!**

## 8 класс

Задания	1	2	3	4	5	6	7	Сумма
Количество баллов								

ФИО учителя

1	2	3	4	5

*The daring mission involved sending a spacecraft to meet up with Comet 67P/Churyumov-Gerasimenko and then to send a lander, Philae, from the spacecraft to touch down on the surface. Researchers hoped to get information about the early solar system, since comets act as a kind of time capsule. The material that the Earth formed from has undergone so many*

chemical processes that it has changed beyond recognition. Comets, which have done nothing but orbit the Sun for millennia, offer an insight into the way planetary systems evolve.

Churryumov-Gerasimenko is far from unknown to ground-based telescopes and passes between the orbits of Mars and Earth. It is used to orbit the Sun from a greater distance, but passing relatively near the Earth has influenced its orbit and led to more activity on the surface as it passes closer to the Sun. This made it an ideal target for Rosetta, although not the first as delays to the project meant that an alternative target had to be selected.

Rosetta's amazing journey to the comet was long and complicated. Mission controllers sent the spacecraft on a trajectory that involved passing the Earth three times and Mars once to use gravity to gain speed. Meanwhile, the spacecraft hibernated to save power for the mission ahead. This involved loss of radio contact with the Earth as the spacecraft was placed in a position that allowed its solar panels to absorb power from the rays of the sun.

When Rosetta arrived at the comet, its instruments began to analyze the object, while controllers on the ground began the painstaking task of identifying a suitable site for the lander, Philae, to aim for. The criteria for selection included the fact that Philae needed to be exposed to the sun's rays for just the right amount to recharge its batteries but to avoid overheating. Finally, an area was chosen that would allow the lander's equipment, including drills which would bring a sample of the comet on board the lander for analysis, to work most effectively.

Had Philae's landing equipment been working perfectly, it would have gently touched down on the comet and hooks would have held it in place. As it was, the lander bounced and settled in an area that provided less than ideal exposure to the sun. With reduced energy, and lying on its side, the lander nonetheless sent very useful data back to the spacecraft, which then sent the information on to the Earth.

The data indicated that a considerable amount of water ice existed below a surface of dust and fine material. For some, that might lend support to the idea that the Earth's oceans were formed by the impact of comets, although most experts tend to think that asteroids played a far greater role in this than comets. Even so, Rosetta has established that visiting a comet is not the impossibility it might once have seemed.

1) Which of the following statements is TRUE, according to the author?

- |   |  |
|---|--|
| A) Comets are often seen from the Earth.    | C) Scientists wonder why we can't see comets.        |
| B) Comets are not rare in our solar system. | D) Researchers are afraid a comet may hit the Earth. |

2) One of the aims of the Rosetta mission was to ...

- |  |  |
|--|--|
| A) see how long a comet can last for.      | C) answer questions about Earth's early history. |
| B) time a comet as it goes around the Sun. | D) send a sealed message to leave on the comet.  |

3) According to the author, Churryumov-Gerasimenko ...

- |   |   |
|---|---|
| A) now passes the Erath more often than it used to. | C) was the original destination of Rosetta.     |
| B) cannot be seen through telescopes on the Earth.  | D) orbits the Sun more closely that it used to. |

4) On its journey, Rosetta passed close by planets in our solar system to ...

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|-----------------------------------|--|
| A) keep in touch with the Earth.  | C) gain energy from the Sun.               |
| B) make the spacecraft go faster. | D) preserve battery power for the mission. |

5) The author says that the landing site for the Philae lander needed to ...

- |  |  |
|--|--|
| A) be permanently in sunlight to provide energy.   | C) avoid allowing sunlight to fall on the lander.  |
| B) be in an area that had previously been drilled. | D) take into account the science that was planned. |

6) What happened when Philae attempted to land on the comet?

- |   |   |
|---|---|
| A) It successfully landed at the chosen landing site. | C) It landed in an area that didn't provide enough power. |
| B) It hit the side of the comet and was destroyed.    | D) It lost contact with the Earth and became useless.     |

7) The attitude of the author towards the Rosetta mission may be described as ...

- |              |                    |
|--------------|--------------------|
| A) positive. | C) unenthusiastic. |
| B) critical. | D) pessimistic.    |

USE OF ENGLISH

3. Find ten mistakes in this passage and correct them

Newsflash

"We interrupt your usual schedule to bring an imortant news. We are recieving informations about a spaceship that has landed outside the Kremlin. The large ship semms to be made of glasses. Reports say that a short time ago aliens came out of the craft. Eye-witnesses described them as short and said their clothes was made of metal and their hairs was bright green. Strangely, one of them appeared to be wearing a jean. Much people said that they seemed to be friendly. The president of the Russian Federation is currently holding a meeting with the visitors in the hope that we can exchange knowledges. Police advice are to stay indoors and under no circumstances approach the spaceship. We will be back with another news as soon as we can. And now, back to your usual programme, Gardening For Beginners."

4. Choose the correct option – A, B or C

At the moment we ...(1)... travel between planets, but we ...(2)... travel between stars. Stars are very far away from each other and our spaceships ...(3)... go fast enough to get there. The nearest star to the Sun is Proxima Centauri but a spaceship ...(4)... only get there in a few thousand years. But why ...(5)... we go to other stars? Well, stars are very important, so we ...(6)... know more about them. For example, our nearest star is the Sun – you can see it from your window, but you ...(7)... look too long because it can be bad for your eyes. We ...(8)... live without the Sun because it gives our planet energy.

We ...(9)... visit other stars to know about them because we have very good telescopes, but if you really want to see "life" on stars you ...(10)... watch films or read books.

- |               |                   |              |                      |                  |                  |
|---------------|-------------------|--------------|----------------------|------------------|------------------|
| 1) A) must    | B) should         | C) can       | 6) A) can            | B) could         | C) ought to      |
| 2) A) can't   | B) don't have to  | C) mustn't   | 7) A) have not to    | B) mustn't       | C) don't have to |
| 3) A) mustn't | B) aren't able to | C) shouldn't | 8) A) couldn't       | B) shouldn't     | C) mustn't       |
| 4) A) can     | B) could          | C) has to    | 9) A) mustn't        | B) don't have to | C) shouldn't     |
| 5) A) should  | B) ought          | C) can       | 10) A) don't have to | B) had to        | C) will have to  |

5. Complete the text, using the words in brackets in an appropriate form of the passive

Today, aluminium (1)\_\_\_\_\_so widely \_\_\_\_\_(use) that is hard to imagine a world without it. It is a strong but light metal which (2)\_\_\_\_\_ (can/shape) into drinks cans and window frames. It is a common metal for building cars and airplanes. NASA's space shuttles (3)\_\_\_\_\_ (could not/build) without it-each space shuttle is 90% aluminium.

Large amounts of aluminium (4)\_\_\_\_\_ (only/produce) for around 100 years, but the metal (5)\_\_\_\_\_ (discover) a long time before that, possibly as much as 2000 years before. Aluminium comes from bauxite, a rock which (6)\_\_\_\_\_ (find) in hot places such as rainforests. The bauxite (7)\_\_\_\_\_ (take) to a factory where it (8)\_\_\_\_\_ (heat) to produce aluminium. It took many years to find a process for getting the metal out of the bauxite. As a result, when aluminium (9)\_\_\_\_\_ (first/produce), the price of the metal was higher than that of gold. It is an expensive process because large amounts of electricity (10)\_\_\_\_\_ (need). For this reason, a lot of aluminium (11)\_\_\_\_\_ (reuse). Never throw a drinks can away – it (12)\_\_\_\_\_ (can/recycle) easily.

6. Read the text and fill in with the words given in the right form

PROXIMA b

A planet that could support life orbits Proxima Centauri, the closest star to the Earth. Called Proxima b, it is (1) ..... (ROCK), like the Earth, and scientists are hopeful it has liquid water on the surface.

That is important, because, as far as we know, liquid water is absolutely essential for the (2) ..... (EXIST) of life. It doesn't prove that there is life, but it raises the possibility.