Required to write 150-225 words. Writing 250+ words is safe.

Note: Template is in purple.

TPO 52

Both the reading passage and the lecturer explore the issue of asteroid colonization. However, the lecturer thinks that sending people to live on an asteroid is not practical, which contradicts what the writer states. He uses three specific points to support his idea.

First of all, even though the writer claims that in low gravity environment it is easier for spacecrafts to land and take off, thus reducing the fuel consumption, the lecturer holds an opposite opinion. He argues that there are risks in low gravity environment. This is because people suffer from muscle and bone density loss when they are exposed to low gravity environment even for a short period of time. The side effects would be worse if people live in low gravity environment for a long time.

In addition, the reading passage maintains that mining valuable metals on asteroids is profitable. Contrary to this statement, the lecturer contends that even if we do find lots of valuable metals on asteroids, transporting them to Earth may cost a lot. Besides, the price of metals may drop as supply increases in the market.

Finally, the lecturer casts doubt on the writer’s assumption that it is easy to reach some asteroids, arguing that it may not be easy to return back to Earth. For example, some asteroids have unusual orbits. At some points the asteroid is close to Earth, while at other points it is far away, which makes the round trip difficult.

TPO 50

Both the reading passage and the lecturer explore the issue of sending humans to Mars. However, the lecturer thinks that many problems of this issue can be solved with technologies nowadays, which contradicts what the writer states. She uses three specific points to support her idea.

First of all, even though the writer claims that it is difficult to prepare enough supplies of food, water and oxygen for two years' round-trip to Mars, the lecturer holds an opposite opinion. She argues that there is a new technology that allows people to grow plants without soil. Further, these plants grown in the spaceships can provide oxygen for the astronauts.

In addition, the reading passage maintains that human body suffers from decreased muscle mass and lower bone density if humans are exposed to zero-gravity environment for a long time, thus astronauts would face medical problems. Contrary to this statement, the lecturer contends that there are several techniques to solve this problem. For one thing, astronauts can exercise regularly to prevent muscle mass decreasing. For another, they can take in vitamins to avoid lower bone density.

Finally, the lecturer casts doubt on the writer’s assumption that the space radiation is too dangerous to astronauts and there would be too much weight if we add protective shield to the ship. She argues that high-level radiation occurs occasionally, only when the Sun is active. We can just set up radiation detecting device and a small shell in the ship so the ship won't be too heavy. When high-level radiation is detected, astronauts can hide in the shell. After the radiation becomes normal, astronauts can go back to their work.

TPO 49

Both the reading passage and the lecturer analyze the issue of how humpback whales manage to migrate long distances. However, the lecturer thinks that humpback whales do not navigate by the stars, which contradicts what the reading passage states. He uses three specific points to support his idea.

First of all, even though the reading passage claims that whales have high intelligence, which suggests they are able to navigate by the stars, the lecturer holds an opposite opinion. He argues that brain power of the whales does not necessarily have connections with the ability of navigating by the stars. He then gives the example of ducks, which are dumb but still able to use stars to navigate. According to his opinion, this behavior is just an instinct.

In addition, the reading passage maintains that whales can only rely on stars to migrate in straight lines. Contrary to this statement, the lecturer contends that there is an organ in whales' brain which is sensitive to magnetic field of the Earth. Therefore, whales can use magnetic field as reference to migrate in straight lines.

Finally, the lecturer casts doubt on the writer's assumption that whales spy-hop in order to look for stars which guide them to navigate. He argues that sky-hopping does not mean the whales are looking for stars. For instance, other creatures like sharks also spy-hop, but they do it in order to look for animals to hunt. Moreover, whales spy-hop during the day as well, when there are no stars in the sky to look for.

Based on the arguments above, the lecturer finds the statements in the reading passage not convincing.