2022年度

総合型選抜Ⅲ　世界人材志向型

適　性　検　査

第１問　次の英文を読み、400字以内の**日本語に**要約しなさい。解答用紙(1)に記入すること。

Students from New Zealand have developed sustainable materials made from the leaves of a tree local to New Zealand, the cabbage tree, and a plant whose seeds are often eaten, flax. Sustainable materials are products that are made that limit their harm to the environment and the amount of resources they take. They support a long-term ecological balance. The sustainable material the New Zealand students developed could soon be used to make high-performance outdoor sporting equipment like skis, kayaks, and skateboards. Their plan is to replace the traditional materials that are used like fiberglass and carbon fiber. Skateboards need to be strong. Ben Scales and William Murrell are two students at New Zealand's University of Canterbury. They believe they can make them even stronger by using fiber from plants. After experimenting in their at-home workshops, they created new, natural composite material, or material made up of different items. Scales is 21 and studies product design. He said their first attempt is looking good. Scales said their first experimental product is a skateboard. It is made up of 25 percent fiber from a plant called harakeke and 75 percent recycled polylactic acid, which is plastic made from corn starch. He said the material is good to make a skateboard because it can take the force and shocks skateboards receive better than what skateboards are now made from: wood or carbon-fiber. The fiber is taken from the Harakeke plant, which is a native flax plant in New Zealand. The fiber is mixed with different resins, which is a product that comes from some trees that can be used to cover a surface or hold objects together. Leaves from the cabbage tree are also an important part in their material. The plan is to use these sustainable materials to make skis, snowboards, and kayaks. These outdoor sporting items are currently made from nonnatural materials like fiberglass and carbon fiber. The university students have found interest from possible business partners in other countries. Scales said some of the companies include businesses in Europe that make boats to skis and a few overseas startups that are looking to shape the personal transport industry. He said, "… they are looking to use sustainable materials that just are not offered in industries like that. So, they are wanting to use our material once we have gotten it ready, which will hopefully be soon." If they are successful, the students could bring new life to New Zealand's flax fiber industry. They could also bring back practices used by the native people, the Māori, before European colonization.

Reference

Phil Mercer, “New Zealand Students to Build Sporting Equipment Using Plants” VOA Learning English EDUCATION, 20 July, 2021.

Retrieved from https:// learningenglish.voanews.com/a/new-zealand-students-to-build-high-performance-sporting-equipment-using-plants/5967304.html

第２問　次の英文を読み、その要旨とあなたの意見を解答用紙(2)に**英語で**書きなさい。
（語数は問いません）

Since at least 500 B.C., animal testing has been carried out, and every year in the United States, about 26 million animals are used in research ("Should Animals Be Used", 2020). While it may be true that animal testing has led to improvements in human health, it is also a fact that many of these experiments cause pain and suffering to the animals, so it should be banned altogether.

Proponents of animal testing contend that animal testing is regulated by laws to protect animals from mistreatment such as the Animal Welfare Act (AWA). Since 1966, this law requires that veterinarians check the living conditions of animals in zoos and laboratories; for example, to check how they are treated and if they have enough clean water and food (Animal Welfare Act, n.d.). However, 95% of animals such as birds, fish, rats, and mice used in experiments are not protected by the AWA (Favre, 1970). Furthermore, most animals like rabbits which are specifically bred for testing are not even covered by the law (Galanes, 2010). To give one example, the Draize test is often used by cosmetic companies. With this test, the eyelids of rabbits are forced to remain open, sometimes for many days. It is so terrible to imagine such a cruel situation, and based on these facts, animal testing should be prohibited.

Furthermore, proponents of animal testing would contend that animal testing has contributed to a lot of medical improvements for both humans and animals. The British Royal Society released a statement saying that almost every 20th century medical achievement resulted from the use of animal testing (Royal Society, n.d.). One example of medical improvements is the polio vaccine tested on animals. It reduced the global incident of disease from 35,000 cases in 1988 to only 27 cases in 2016 ("History of Animal Testing", 2021). It is true that animal testing has led to improvements for human lives. However, it is also true that there are some mistakes because of animal testing. Although animals and humans have similar DNA, it is not a 100% match. The reaction of drugs in animal bodies would not necessarily be similar in human bodies. For example, in the 1950’s, thalidomide was developed as a medicine to help people sleep better. This medicine was tested on animals before being released, and no animals were born with defects. However, it was later discovered that the medicine caused serious harm to the fetal development of the arms and legs of human babies which resulted in more than 10,000 babies being born with serious birth defects ("The Tragedy of Thalidomide", n.d.). Therefore, we should not rely on animal testing to develop new products and to prove the safety of products.

In conclusion, many animals used in animal testing are not protected by the AWA and there is a possibility that they are treated badly in laboratories. Animals are quite different from humans, so sometimes animal testing misleads researchers and may actually cause harm to human bodies. While it is true that animal testing has the potential to improve life for humans, we should not rely on it. These days, alternative ways to develop new cures and to check the safety of products are being developed without the need to use animals, so we do not need to rely on animal testing anymore.

References

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Galanes, K. C. (2010). Overview of Animal Testing in Commercial Products. Retrieved from https://www.animallaw.info/article/overview-animal-testing-commercial-products

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