

Lesson 4	Paving the Way to a More Inclusive Society	クラス	番号	名前	/50
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**Read the passage and answer the questions.**

“Thanks to these blocks, I can walk around freely and safely in the city.” This is a comment from a visually impaired person in Japan about *tenji* blocks, known as tactile paving in English. This system helps people with a visual impairment to travel around in public. There are two types of tactile paving. One has raised stripes which indicate directions. The other has raised dots which act as a warning sign in front of stairs, at crossings, or near the edge of platforms. Visually impaired people can understand the direction or notice any danger by stepping on these blocks or touching them with a \*white stick.

It may surprise some people to learn that tactile paving originated in Japan. It was invented by Miyake Seiichi in his hometown of Okayama. Miyake had a friend who was losing his eyesight, and wanted to help him get around safely in public. One day, Miyake saw a person with a white stick almost hit by a car at an intersection. This experience inspired him to invent a system of blocks to warn visually impaired people of possible danger on the street. Miyake realized if some patterns like \*braille were put on the ground, people might be able to “read” them with their feet or a stick. After spending a lot of time and money, Miyake completed the first tactile paving tiles in 1965. He provided some blocks for free to various organizations in Okayama, Osaka, and other cities. He hoped that his invention would spread throughout Japan, but unfortunately, at that time, it received little interest.

The situation changed significantly in 1970, when a school for visually impaired children in Osaka made a request to Japanese National Railways (JNR). For the students’ safety, the school asked JNR to lay tactile paving on the platform of the nearby station. The organization agreed to its request, and other facilities also began to install tactile paving. From that time, tactile paving began to spread nationwide.

In 1976, the United Nations proclaimed 1981 as \*the International Year of Disabled Persons. It called for action to support disabled people, such as creating employment opportunities and promoting rehabilitation programs. In Japan, tactile paving was already helping visually impaired people participate in society. Based on this success, Japanese tactile paving became the international standard in 2012. Today, tactile paving is assisting visually impaired people in more than 70 countries around the world. They say, “In the past, we had to rely on others when going out, but now, tactile paving allows us to be independent.”

Recently, tactile paving with various functions has been tested. In one project, tactile paving

in certain locations is equipped with \*radio transmitters. This means that smartphone app users can catch signals automatically when they are near these spots. If this system is put into practical use, people will be able to get information about directions or nearby public facilities. In another project, people can also use an app on their smartphones to read patterns painted on blocks. That AI technology can provide huge amounts of both audible and visual information on nearby restrooms, restaurants, and tourist facilities. Therefore, this system can be easily used by domestic and overseas visitors. Even in natural disasters, tactile paving can give useful information about nearby emergency shelters.

In recent years, there has been a growing public movement toward accepting diversity. This has encouraged people with disabilities to participate more independently in society. As tactile paving offers possibilities for everyone, it will certainly continue to play an important role in creating a more inclusive society.

\*white stick 白杖 (視覚障がい者が歩行の際に使用する白い杖), braille 点字, the International Year of Disabled Persons 国際障害者年, radio transmitter 無線送信機

問1 What do the two types of *tenji* blocks look like, and what is the purpose of each one? Explain in Japanese. (4点×2)

- \_\_\_\_\_
- \_\_\_\_\_

問2 Seeing a person almost hit by a car, what was Miyake inspired to do? Explain in English. (4点)

\_\_\_\_\_

問3 Getting a hint from braille, what did Miyake realize? Explain in English. (4点)

\_\_\_\_\_

問4 Fill in the blanks to explain how the situation of Miyake's invention significantly changed. (3点×5)

In 1965, Miyake completed his first tactile paving tiles. At first, his invention received \_\_\_\_\_. However, later, in 1970, JNR installed tactile paving on \_\_\_\_\_ of a station. Then, it began to spread nationwide. In 1976, \_\_\_\_\_ proclaimed 1981 as the International Year of Disabled Persons. It called for action to \_\_\_\_\_. In 2012, based on its success, Japanese tactile paving became \_\_\_\_\_. Today, tactile paving spread to more

than 70 countries around the world.

問5 If tactile paving equipped with radio transmitters is put into practical use, what will people be able to do? Explain in English. (4点)

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問6 What can tactile paving with AI technology do? Explain two points in Japanese.

(5点×2)

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問7 With a growing public movement toward accepting diversity, how have people with disabilities been influenced? Explain in English. (5点)

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