

#### 生徒とのやり取り例

- T: Look at the pictures. What is the problem in each picture? First, look at Picture 1. What do you see?  
S1: A person in a wheelchair.  
T: What's the problem?  
S1: The person wants to go up the stairs but cannot.  
T: Good job. How about Picture 2, S2?  
S2: A little boy wants to wash his hands but cannot do it easily.  
T: That's right. He's not tall enough to do it. What about the final picture, S3?  
S3: There's a woman with a baby stroller. No one helps her and she has to open the door by herself.  
T: Correct! So, what do you think is needed to solve each problem?  
S1: In Picture 1, the person needs a way to get up the stairs.  
T: Like a wheelchair ramp? Good answer.  
S2: In Picture 2, the boy needs a step to reach the faucet.  
T: Yes, that would work!  
S3: In Picture 3, I think automatic doors are needed.  
T: Absolutely! Thanks everyone for your answers.



CD II-44

## Lesson 4



# Paving the Way to a More Inclusive Society

さらなる共生社会への道を切り開く



◀ Picture 2



Picture 3 ▶

## 導入 Q と訳例・解答例

1. 写真を見てください。それぞれの写真において何が問題ですか。  
 In Picture 1, a person in a wheelchair cannot go up the stairs.  
 In Picture 2, a little boy cannot wash his hands easily.  
 In Picture 3, a woman with a baby stroller has to open the door by herself.
2. それぞれの問題を解決するために何が必要だと思いますか。  
 In Picture 1, a wheelchair ramp is needed.  
 In Picture 2, a step [low faucet] for children is needed.  
 In Picture 3, automatic doors are needed.



◀ Picture 1



1. Look at the pictures. What is the problem in each picture?
2. What do you think is needed to solve each problem?

## Goals



I can understand the history and growth of tactile paving.



I can introduce an example of universal design.



I can exchange ideas about what we can do to create a more inclusive society.

# Lesson 4

単語

◎CD II-45~50

本文 通常/フレーズ/ファスター

◎CD II-51~56/57~62/63~68



※本文和訳例、スクリプト等は p.47 の次ページを参照

- 1 “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. 5
- 2 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. 15 20
- 3 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. 25

New Words ⇨ p.114  
Reading Plus ⇨ p.48

## Check Your Speed!

596 words	× 60	(       )
(       ) seconds		
		<b>WPM</b>



4 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.”

5 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.

6 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.

(596 words)

\*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

CD II-69,70

## Listening Quiz Listen and answer true or false.



- (1) T / F (2) T / F (3) T / F (4) T / F (5) T / F

# Post-reading Activities

※解答例, 和訳例, スクリプト等は p.47 の次ページを参照

## Logic Flow

Fill in the blanks below to complete the outline.

Intro	1	tactile paving ... helps people with a (a visual) impairment to travel around														
	1. raised stripes ... indicate directions 2. raised dots ... act as a (b warning) sign															
Body	2 3 4	<the history of tactile paving>														
		<table border="1"> <thead> <tr> <th>Time</th> <th>Event</th> </tr> </thead> <tbody> <tr> <td></td> <td> <ul style="list-style-type: none"> <li>· Miyake Seiichi came up with <u>the system of tactile paving</u> → people might be able to “read” with their (c feet) or a stick</li> </ul> </td> </tr> <tr> <td>1965</td> <td> <ul style="list-style-type: none"> <li>· Miyake completed <u>the first tactile paving tiles</u> → received little (d interest)</li> </ul> </td> </tr> <tr> <td>1970</td> <td> <ul style="list-style-type: none"> <li>· JNR agreed to a request to lay tactile paving on the platform of the station → tactile paving began to spread (e nationwide)</li> </ul> </td> </tr> <tr> <td>1976</td> <td> <ul style="list-style-type: none"> <li>· the UN proclaimed 1981 as the International Year of Disabled Persons</li> </ul> </td> </tr> <tr> <td>2012</td> <td> <ul style="list-style-type: none"> <li>· Japanese tactile paving became the international (f standard)</li> </ul> </td> </tr> <tr> <td>today</td> <td> <ul style="list-style-type: none"> <li>· tactile paving is used in more than 70 countries</li> </ul> </td> </tr> </tbody> </table>	Time	Event		<ul style="list-style-type: none"> <li>· Miyake Seiichi came up with <u>the system of tactile paving</u> → people might be able to “read” with their (c feet) or a stick</li> </ul>	1965	<ul style="list-style-type: none"> <li>· Miyake completed <u>the first tactile paving tiles</u> → received little (d interest)</li> </ul>	1970	<ul style="list-style-type: none"> <li>· JNR agreed to a request to lay tactile paving on the platform of the station → tactile paving began to spread (e nationwide)</li> </ul>	1976	<ul style="list-style-type: none"> <li>· the UN proclaimed 1981 as the International Year of Disabled Persons</li> </ul>	2012	<ul style="list-style-type: none"> <li>· Japanese tactile paving became the international (f standard)</li> </ul>	today	<ul style="list-style-type: none"> <li>· tactile paving is used in more than 70 countries</li> </ul>
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	5	<tactile paving under development>														
	<ul style="list-style-type: none"> <li>equipped with radio transmitters → get information [Ex.] directions / public facilities</li> <li>AI technology → provide huge amounts of <u>both audible and visual information</u></li> <li>[Ex.] restrooms / restaurants / tourist facilities / emergency (g shelters)</li> </ul>															
Concl	6	a growing public movement toward accepting diversity → tactile paving ... play an important role in creating a more (h inclusive) society														

## Reading Quiz

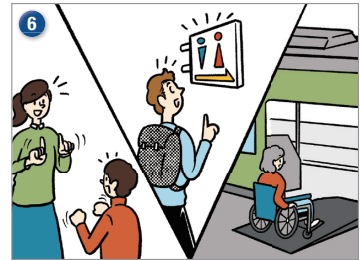
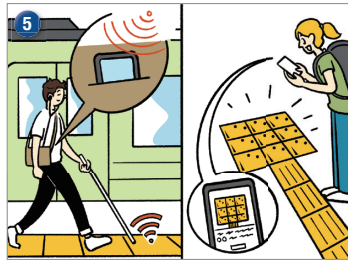
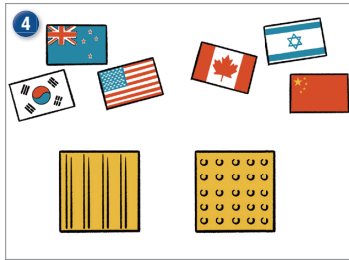
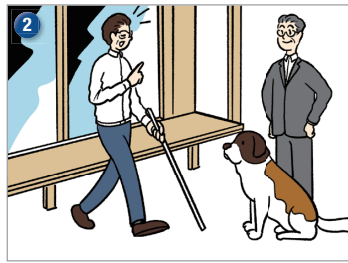
Choose the correct answer.

- Why did Miyake want to do something for visually impaired people?
  - Because tactile paving was difficult for them to use at that time.
  - Because he wanted to help his friend get around safely in public.
  - Because Japanese National Railways requested him to increase their safety.
- Why did Japanese tactile paving become the international standard?
  - Because it was based on braille, which had helped many people in different languages.
  - Because it supported the UN plan to get more visually impaired people to join society.
  - Because it featured several functions which were developed with the latest technology.
- Which of the following matches the passage best?
  - Tactile paving spread rapidly throughout Japan as soon as Miyake invented it.
  - The latest tactile paving is specialized in entertaining domestic and overseas visitors.
  - Tactile paving promotes a more inclusive society where everyone can participate independently.



# Retelling

Retell the lesson's passage to your partner.



Intro	1	tactile paving, visual, travel around
Body	2~5	Miyake Seiichi, friend, safely, time and money, little interest, request, JNR, nationwide, standard, 70 countries, function, information, disaster
Concl	6	create, inclusive

# Your Opinion

What can you do in your daily life to create a more inclusive society?



CD II-71.72

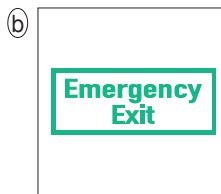
# Listening Activity

Listen to the lecture and answer the questions.



**Q1.** Choose the two signs discussed in the lecture.

Sign 1 : (a) (b) (c) (d) Sign 2 : (a) (b) (c) (d)



**Q2.** Choose the correct sentence about the first pictograms.

- (1) They were invented by an Austrian economist to use in statistical data.
- (2) They were made to overcome the language barrier of foreign tourists.
- (3) They were created based on Japanese traditional *kamon*, or family emblems.

**Q3.** Introduce some examples of pictograms.



pictogram ピクトグラム barrier 障壁 emblem 紋章 Otto Neurath オットー・ノイラート (政治経済学者)

## Lesson 4

教科書 pp.44-45

### 本文和訳例

① 「これらのブロックのおかげで、街中を自由に、そして安全に歩き回ることができます。」これは、英語では **tactile paving** として知られる点字ブロックに関する、日本の視覚障がい者からのコメントだ。このシステムは、視覚障がい者が公共の場で移動するのを手助けする。点字ブロックには二種類ある。一つは、方向を示す、縞状の突起のあるものだ。もう一つは、階段の前や、横断歩道、駅のプラットフォームの端の近くで警告サインの役割を果たす、点状の突起のあるものだ。視覚障がい者は、これらのブロックを踏んだり、はくじょう 白杖で触れたりすることで、方向を理解したり、危険に気づいたりすることができる。

② 点字ブロックが日本で生まれたと知ると驚く人もいるかもしれない。点字ブロックは三宅精一によって彼の故郷である岡山で考案された。三宅には、視力を失いつつある友人がおり、彼が公共の場で安全に移動する手助けをしたいと考えていた。ある日三宅は、白杖を持った人が、交差点で車に轢かれかけるのを目撃した。この経験から、彼は視覚障がい者に路上で起こりうる危険を警告するためのブロックのシステムを考案するという着想を得た。三宅は、点字のような模様が地面に取り付けられていれば、人々は足や杖でそれらを「読む」ことができるかもしれないと気づいたのだ。多大な時間と費用を費やして、三宅は 1965 年に最初の点字ブロックのタイルを完成させた。彼はそのブロックを岡山や大阪、その他の都市のさまざまな団体に無償で提供した。彼は自分の発明が日本中に広まることを願っていたが、残念ながら当時はほとんど関心を持たれなかった。

③ 状況が大きく変わったのは 1970 年で、そのとき、大阪にある視覚障がいのある子どもたちのための学校が日本国有鉄道(国鉄)に要請を出した。学校は、生徒たちの安全のために、近くの駅のプラットフォームに点字ブロックを敷くように国鉄に頼んだ。機関(国鉄)はその要請を受け入れ、他の施設でも点字ブロックを設置し始めた。それ以降、点字ブロックは全国的に普及し始めた。

④ 1976 年に、国際連合は 1981 年を国際障害者年だと宣言した。障がい者を手助けするために、雇用機会の創出やリハビリテーションプログラムの推進などを実行するように呼びかけた。日本ではすでに、点字ブロックが視覚障がい者の社会参加を助けていた。その成果を踏まえ、2012 年に日本の点字ブロックが国際規格となった。現在では、点字ブロックは世界中の 70 を超える国々で視覚障がい者をサポートしている。彼らは「昔は外出の際、他の人に頼らざるを得ませんでしたが、今は点字ブロックのおかげで自立できます。」と語る。

⑤ 最近では、さまざまな機能を持つ点字ブロックが検証されている。あるプロジェクトでは、特定の

場所の点字ブロックは無線送信機を備えている。これは、その場所にスマートフォンアプリの使用者が近づくと、自動的に電波を受信できることを意味する。もしこのシステムが実用化されれば、人々は道順や近くの公共施設についての情報を得ることができるようになるだろう。また別のプロジェクトでは、スマートフォンのアプリを使ってブロックに描かれた模様を読み取ることもできる。その AI 技術は、近くのトイレやレストラン、観光施設に関する膨大な音声と映像の両方の情報を提供することができる。そのため、このシステムは国内や海外からの来訪者に手軽に利用してもらうことができる。自然災害時でさえも、点字ブロックが近くの緊急避難所に関する有用な情報を伝えることができるのだ。

⑥ 近年、多様性を受け入れようとする社会運動が高まってきている。これは障がい者がより自立して社会に参加することを促してきた。点字ブロックはすべての人に可能性を提供するので、さらなる共生社会を築く上で、重要な役割を確実に果たし続けるだろう。

### Listening Quiz スクリプト・和訳例・解答

- (1) Tactile paving indicates directions and provides warnings with a single raised pattern. **F**  
点字ブロックは、1 種類の突起のパターンで、方向を示し、警告してくれる。
- (2) Tactile paving was imported to Japan by Miyake Seiichi. **F**  
点字ブロックは、三宅精一によって、日本に輸入された。
- (3) Japanese tactile paving has become the international standard. **T**  
日本の点字ブロックは国際規格となっている。
- (4) Some tactile paving automatically delivers signals to smartphone app users. **T**  
点字ブロックの中には、スマートフォンアプリの使用者に自動的に電波を送るものもある。
- (5) Tactile paving will continue to help us create a more inclusive society. **T**  
点字ブロックは、私たちがさらなる共生社会を築く手助けとなり続けるだろう。

### Word Checker

※TEACHER'S MANUAL p.84 の「Word Checker」を参照。

### New Phrases 例文

※TEACHER'S MANUAL p.83 の「語句・構文・解説」を参照。

## Logic Flow 和訳例

- Intro
- ①点字ブロック…視覚障がい者が移動するのを手助けする
1. 縞状の突起 … 方向を示す
2. 点状の突起 … 警告サインの役割を果たす

## ②③④〈点字ブロックの歴史〉

時	出来事
1965	・ 三宅精一が点字ブロックのシステムを思い付いた → 人々は足や杖で「読む」ことができるかもしれない
1970	・ 三宅は最初の点字ブロックのタイルを完成させた→ほとんど関心を持たなかった
1976	・ 国鉄が駅のプラットフォームに点字ブロックを敷いてほしいという要請を受け入れた → 点字ブロックは全国的に普及し始めた
1976	・ 国連が 1981 年を国際障害者年だと宣言した
2012	・ 日本の点字ブロックが国際規格となった
今日	・ 点字ブロックが 70 を超える国々で使用されている

## ⑤〈開発中の点字ブロック〉

- 無線送信機を備えている→情報を得る  
例 道順／公共施設
- AI 技術  
→ 膨大な音声と映像の両方の情報を提供する  
例 トイレ／レストラン／観光施設／緊急避難所

- Concl
- ⑥多様性を受け入れようとする社会運動の高まり  
→ 点字ブロック…さらなる共生社会を築く上で重要な役割を果たす

## Reading Quiz 和訳例・解答

- (1) 三宅はなぜ視覚障がい者のために何かをしたかったのですか。
- ① 点字ブロックは当時、彼らが使うのは難しかったから。
- ② 彼は友人が公共の場で安全に移動する手助けをしたかったから。
- ③ 日本国有鉄道が、彼らの安全性を高めるよう彼に要請したから。
- (2) なぜ日本の点字ブロックが国際規格になったのですか。
- ① さまざまな言語で多くの人々を助けてきた点字に基づいていたから。
- ② より多くの視覚障がい者を社会参加させようとする国連の計画を支持したから。
- ③ 最新の技術で開発されたいくつかの機能の特徴としていたから。

- (3) 次のうちどれが、この文章に最もよく当てはまりますか。

- ① 点字ブロックは三宅が発明するやいなや日本中に急速に広まった。
- ② 最新の点字ブロックは国内外の訪問者を楽しませることに特化している。
- ③ 点字ブロックは誰もが自立して参加できるさらなる共生社会を促進する。

## 補充 Quiz

## T or F

- (1) Miyake gave tactile paving blocks to various organizations without receiving money. **T**
- (2) A school in Osaka asked JNR to lay tactile paving on the platforms of stations nationwide. **F**
- (3) The technology used in tactile paving is helpful to both Japanese people and overseas visitors. **T**

## Q&amp;A

- (1) How can visually impaired people understand the direction or notice any danger?  
— By stepping on tactile paving blocks or touching them with a white stick.
- (2) What did Miyake want to do for a friend who was losing his eyesight?  
— He wanted to help him get around safely in public.
- (3) What happened after JNR agreed to the school's request?  
— Other facilities also began to install tactile paving. (From that time, tactile paving began to spread nationwide.)
- (4) When did Japanese tactile paving become the international standard?  
— (It became the international standard) In 2012.
- (5) With a smartphone app, how can tactile paving help people in natural disasters?  
— By giving useful information about nearby emergency shelters.
- (6) With a growing public movement toward accepting diversity, what have people with disabilities been encouraged to do?  
— (They have been encouraged) To participate more independently in society.

※他の形式(タイトル選択問題 / 自由回答問題 / 要約問題)は **TEACHER'S MANUAL pp.85-86** を参照。

## Retelling 解答例

- ① **Tactile paving** helps people with a **visual** impairment to **travel around** in public.
- ② Tactile paving originated in Japan and was invented by **Miyake Seiichi**. He had a **friend**



who was losing his eyesight, and wanted to help him get around **safely** in public. After spending a lot of **time and money**, Miyake completed the first tactile paving tiles in 1965. He hoped that his invention would spread throughout Japan, but unfortunately, at that time, it received **little interest**.

③ In 1970, a school for visually impaired children made a **request** to **JNR** to lay tactile paving on the platform of the nearby station. JNR agreed to its request. From that time, tactile paving began to spread **nationwide**.

④ In 2012, Japanese tactile paving became the international **standard**. Today, it assists visually impaired people in more than **70 countries** around the world.

⑤ Recently, tactile paving with various **functions** has been tested. In one project, people will be able to get **information** about directions or nearby public facilities. In another project, tactile paving can be used by domestic and overseas visitors, and even in natural **disasters**.

⑥ Tactile paving will certainly continue to play an important role in **creating** a more **inclusive** society.

#### Your Opinion 和訳例・解答例

さらなる共生社会を築くために、日常生活の中であなたは何かができますか。

I'd like to help people who may have difficulties on the streets, such as elderly people, pregnant women, and parents with small children. For example, I can talk to them, or help carry their bags if necessary. Such small steps will lead to a more inclusive society. (47 words)

#### ヒント

- ・ elderly people (お年寄り)
- ・ pregnant woman (妊婦)
- ・ keep the door open for  
(～のためにドアを開けておいてあげる)
- ・ join in a volunteer activity  
(ボランティア活動に参加する)

#### Listening Activity スクリプト・和訳例

<sup>1</sup>You may not have heard the word "pictogram," but you have probably seen one. <sup>2</sup>Suppose an English speaker were in Japan, and he didn't understand the Japanese language at all. <sup>3</sup>Then, if he saw Sign 1, what would he think? <sup>4</sup>He wouldn't understand the meaning. <sup>5</sup>However, when he saw Sign 2, he would easily understand the meaning, even though it has no language on it. <sup>6</sup>Yes, it means "emergency exit." <sup>7</sup>This is an example of a pictogram, which represents information using simple symbols.

<sup>8</sup>Pictograms were first developed by Otto

Neurath, an Austrian economist, in the 1920s.

<sup>9</sup>He created a set of symbols of humans or animals to use in statistical data, instead of text.

<sup>10</sup>These symbols helped people read data more easily.

<sup>11</sup>One of the major events where pictograms attracted public attention in Japan was the Tokyo Olympics in 1964. <sup>12</sup>Japan welcomed a great number of people from all around the world.

<sup>13</sup>To overcome the language barrier, the artistic director came up with the idea of creating original pictograms. <sup>14</sup>They represented public facilities or sporting events. <sup>15</sup>It is said that he was inspired by Japanese traditional *kamon*, or family emblems.

<sup>16</sup>Today, pictograms are widely used to provide information in public places. <sup>17</sup>They are easier for everyone to understand than messages in text. (212 words)

<sup>1</sup>「ピクトグラム」ということばを聞いたことがなくても、おそらくそれを見たことはあるでしょう。<sup>2</sup>英語話者が日本にいて、その人は日本語をまったく理解できないとしましょう。<sup>3</sup>では、標識 1 を見たとき、その人は何を考えるのでしょうか。<sup>4</sup>その意味がわからないでしょう。<sup>5</sup>しかし、標識 2 を見れば、ことばがないのに、その意味が容易にわかるでしょう。<sup>6</sup>そうです、それは「非常口」を意味します。<sup>7</sup>これはピクトグラムの一例で、単純なシンボルを使って情報を表します。

<sup>8</sup>ピクトグラムは最初、1920 年代にオーストリア人経済学者オットー・ノイラートによって開発されました。<sup>9</sup>彼は、統計データで文字の代わりに使用するために、人間や動物のシンボルの一式を生み出しました。<sup>10</sup>これらのシンボルは人々がデータをより簡単に読むのに役立ちました。

<sup>11</sup>日本でピクトグラムが大衆の注目を集めた主要なイベントのひとつは、1964 年の東京オリンピックでした。<sup>12</sup>日本は世界中から多くの人々を迎えました。<sup>13</sup>ことばの障壁を克服するのに、芸術監督は独自のピクトグラムを生み出すというアイディアを思いつきました。<sup>14</sup>それらは公共施設やスポーツイベントを表しました。<sup>15</sup>彼は日本の伝統的な家紋、つまり一族の紋章に着想を得たと言われています。

<sup>16</sup>今日、ピクトグラムは公共の場所で情報を提供するために広く使用されています。<sup>17</sup>それらは文字のメッセージと比べて誰にとっても理解しやすいのです。

#### Q 和訳例・解答(例)

Q1. Sign 1 : ㉠ Sign 2 : ㉡

Q2. 最初のピクトグラムに関して正しい文を選びなさい。

- ① それらは統計データで使うためにオーストリア人経済学者によって発明された。
- ② それらは外国人旅行者のことばの障壁を克服するために作られた。
- ③ それらは一族の紋章である日本の伝統的な家紋

に基づいて生み出された。

**Q3.** One common pictogram is a sign for priority seats on public transportation. The sign usually includes images that represent different types of people such as pregnant women, senior citizens, or disabled people. The sign makes passengers realize there may be people around them who need a seat. (47 words)

**ヒント**

- ・ No Smoking (禁煙)
- ・ escalator (エスカレーター)
- ・ parking lot (駐車場)
- ・ common in a mall (ショッピングモールでよくある)
- ・ often seen at the station (駅でよく見られる)

### Additional Lesson 4

教科書 p.48

Reading Plus

#### 本文和訳例

**ユニバーサルデザインに向けて障壁を取り除く**

「バリアフリー」という言葉におそらくなじみがあるだろう。これは、建物や設備が、障がいをもつ人々のために設計されている場所のことを意味する。例えば、広い改札口やエレベーター、スロープがある駅では、車いす使用者が自由に移動することができる。

しかし、社会の誰もが困難にぶつかることがある。そのような人々にはベビーカーを押す親、子どもたち、高齢者、そして荷物やカートを持った配達員が含まれる。「ユニバーサルデザイン」はバリアフリーの概念をさらに進めたものだ。ユニバーサルデザインは、年齢やジェンダー、あるいは母国語に関係なく、誰もが使いやすい製品を提供することを目指している。

1985年、環境やコミュニケーション、そして製品のユニバーサルデザインのためのガイドラインを示す一連の原則が制定された。それは次のように記している。まず、デザインは多様な能力の人々にとって有用であるべきだ。例えば、手すりのついた階段は、高齢者にとっても、けがをしている人にとっても有用である。次に、デザインは柔軟でなければならない。例えば、美術館の多言語音声ガイドは、さまざまな国の人々が利用できる。また、ピクトグラムのように、物も知識や言語能力に関係なく理解しやすくあるべきだ。最後に、大きなスイッチや自動改札機のように、その物を使うときに必要な身体的負担は最小限であるべきだ。

あらゆるタイプの人々が製品やサービスをどのように使うかを考慮に入れることで、すべての人々が助けられる。ユニバーサルデザインは、すべての人々の共生を確かなものにするために欠かせない概念だ。

#### Word Checker

※TEACHER'S MANUAL p.91 の「Word Checker」を参照。

#### New Phrases 例文

※TEACHER'S MANUAL p.91 の「語句・構文・解説」を参照。

#### Q 和訳例・解答

- ① バリアフリーの建物は、上手く動き回れない人たちにとって有用だ。
- ② バリアフリーデザインはユニバーサルデザインの概念がさらに発展したものだ。
- ③ ユニバーサルデザインは障がいをもつ人がより容易に動き回る手助けとなることだけに焦点を当てている。
- ④ 1980年代に、ユニバーサルデザインのための基本理念が制定された。
- ⑤ 重いドアは安全上の理由からのユニバーサルデザインの一例である。

#### 補充 Quiz

##### Reading Quiz

- ① What does "universal design" aim to do?
  - ① To design products for disabled people.
  - ② To make products that are useful for everyone.
  - ③ To provide products for more people.
- ② What do the guidelines state?
  - ① How we can communicate the benefits of universal design.
  - ② What environments are suitable for universal design.
  - ③ How products should be designed.
- ③ Why can large switches be seen as an example of universal design?
  - ① Because how they are used is easy to understand.
  - ② Because they are flexible.
  - ③ Because they can be used with little effort.

※本文和訳例、設問の和訳例等は前ページ参照

## Reading Plus

Read the following article and answer the question.



### Check Your Speed!

232 words	(	)
( ) seconds	× 60	WPM



## Removing the Barriers to Universal Design

You are probably familiar with the term “barrier-free.” // It means places // where buildings and facilities are designed // for those who have disabilities. // For example, // a station with a wide ticket gate, an elevator, and a ramp // enables wheelchair users to travel independently. //

However, // all members of society // can sometimes encounter difficulties. // Such people include // parents with strollers, children, elderly people, // and delivery staff with boxes and carts. // “Universal design” takes the concept of barrier-free further. // It aims to provide products // that are easy for everyone to use, // regardless of age, gender, or native language. //

In 1985, // a set of principles that provide guidelines // for the universal design of environments, communications, and products // was established. // It states the following: // Firstly, // the design should be useful // to people with diverse abilities. // For example, // stairs with handrails are helpful // for elderly people, // and people with an injury as well. // Next, // designs should be flexible. // Audio guides with multiple languages at museums, // for instance, // can be used by people from different countries. // Additionally, // like pictograms, // items should also be easy to understand // regardless of knowledge or language skills. // Finally, // only minimal physical effort should be required // while using the items, // such as large switches or automatic ticket gates. //

By taking into account // how all kinds of people use products and services, // everyone can be assisted. // Universal design is an essential concept // to ensure inclusiveness for everyone. //

(232 words)

### Q. Choose the two correct sentences.

- ① Barrier-free buildings are useful for people who cannot get around very well.
- ② Barrier-free design is a further development of the concept of universal design.
- ③ Universal design focuses on only helping disabled people to get around more easily.
- ④ The guiding principles for universal design were established in the 1980s.
- ⑤ A heavy door is an example of universal design for security reasons.



## Activity

Share your opinion on the following topic.

## Topic

ユニバーサルデザインの例にはどのようなものがありますか。

What are some examples of universal design?

## STEP 1

## Preparing

Write down your ideas.

Universal Design	Details
• bottles of shampoo and conditioner	• only the bottles of shampoo have bumps on them
sensor taps, automatic taps	water runs when a user just places their hand under the tap
<b>ヒント</b> <ul style="list-style-type: none"> <li>• user-friendly (使いやすい)</li> <li>• automatic (自動の)</li> <li>• hands-free (手を使わずに操作できる)</li> </ul>	<ul style="list-style-type: none"> <li>• reach (～に手が届く)</li> <li>• hold a handrail (手すりをつかむ)</li> <li>• public transportation (公共交通機関)</li> <li>• when you get injured (けがをしたとき)</li> </ul>

## STEP 2

## Discussing

Make a group and share your ideas.



## STEP 3

## Expressing

Express your opinion to the class in more than 70 words.

Next, ask and answer questions together.



## Topic Sentence

## Supporting Sentences

Sensor taps are one example of universal design. When you place your hand under a sensor tap, without touching it, water runs from the tap. For some people, such as small children and disabled people, opening and closing a normal tap may be hard. They do not have enough power because of age or physical problems. Moreover, when you wash your hands with soap, your hands feel slippery and you cannot open the tap easily. I believe sensor taps are a user-friendly invention for everyone.

(85 words)

## Concluding Sentence

## Model

I would like to introduce an example of universal design at home: bottles of shampoo and conditioner. Many shampoo bottles have bumps on the top and sides, but conditioner bottles do not. These bumps enable visually impaired people to distinguish between shampoo and conditioner bottles just by touching them. It is also useful for people who keep their eyes closed while washing their hair. In this way, universal design can help a lot of people to live a more convenient life. (81 words)