

授業展開例

4技能統合型の授業スタイル

番号①～⑥の順番に指導していただくことで、それぞれの単元を効果的にお使いいただけます。⑥の指導後は次の Skill に進みます。

1 Skill

読解 Skill を学びます。全ての Skill にペア/グループワーク型の活動ができる問題も用意しております。

2 Before Reading

リスニング音声で Lesson 本文の導入を行います。

3 本文 Questions

①で学んだ Skill を活用して本文を読み、側注の問題で内容確認を行います。脚注には W(新出単語)・E(重要表現)・G(重要文法事項)がまとめられています。

6 順序立てて述べる

Use the Skills

1 You may often see the word "Stop" in long letters on the road. The long letters make it easy for drivers to read them while driving. This is called an optical illusion. Illusions like the Ponzo Illusion and the Ebbinghaus Illusion are a couple of the most famous.

However, there are other illusions too. For example, let's look at the auditory illusion. If you watch someone's mouth making the "p" sound, but listen to the "m" sound when they pronounce it, it may sound like "da." This is called the McGurk Effect. Your auditory sense is being influenced by visual information. Another is the tactile illusion. If you rub a hard material like tennis racket strings between your hands, it may feel soft, like velvet. This is called the Velvet Hand Illusion.

These illusions are used often in real life. The "Stop" road signs are one. They are used in many other ways, such as information signs in train stations. They are interesting and have the potential to improve our lives.

① Put the appropriate answers from a. to e. in each blank to explain how to create the Ebbinghaus Illusion.

First, draw (1). Then, around one of them, draw (2). Finally, around the other circle, draw (3).

This picture is called the Ebbinghaus Illusion. The first two circles are drawn on the same size, but one appears to be larger.

a. two circles of the same size
b. larger circles
c. smaller circles

② Choose one of the following optical illusions and write an English explanation using Q1 as a guide. Then explain it to your group members in English while drawing the picture.

a. Müller-Lyer Illusion
b. Delbois Illusion
c. Optical-Kaest Illusion

③ More than 8,000 volunteers picked up over 89 tons of litter from Hawaii's beaches yesterday. What kinds of litter did they find?

To begin with, cigarette butts were the most common on the beaches—about 126,200 butts were removed. Secondly, plastic litter, which nature cannot break down, is also a problem. For example, hats, newspapers, shoes, cups, and cups made of plastic are everywhere. Thirdly, glass bottles were also common. When broken, they are dangerous. Moreover, unusual items such as small wooden staircases and a sewing machine were also found.

④ Answer the questions.

① What is the main idea of the passage?
a. Optical illusions are interesting to tell your friends about.
b. Optical illusions have a large variety of practical uses.
c. Optical illusions are not effective because people seldom notice them.

② Answer the following questions from Q1 to Q3 below.
③ Choose one that mentioned in the passage.
a. A room which uses an optical illusion looks better than it really is.
b. Optical illusions have been used in structural designs.

④ What is the correct order of events for the way an optical illusion is used in a train station?
① First, []. ② Second, []. ③ Finally, [].
a. people found a guiding optical illusion painted on the floor.
b. those looking for an elevator were sent in the right direction.
c. people often couldn't find an elevator located in a blind spot.

⑤ Which of the following is a limitation of optical illusions used in the passage?
a. They become less effective when people adapt to them.
b. They depend on the angle from which they are viewed.
c. They are interpreted in different ways by different people.

⑥ The purposes of using optical illusions in the passage can be put into two categories. Choose the appropriate option for the purposes of the first type. []

The Korean garden at Ryōanji
A house with an extremely high ceiling

a. Three-dimensional sign
b. Three-dimensional crosswalk design

⑦ Make space bigger
⑧ Show something important, or to be careful
⑨ Surprise people
⑩ Make something easy to find
⑪ Attract people's attention

1

Potential Uses of Optical Illusions

Before Reading

Listen to the conversation and answer the questions.

1 Which line does Josh think is longer?
A. The horizontal line.
B. The vertical line.
C. He thinks they're the same length.

2 According to the conversation, what is one way optical illusions are used in daily life?
A. Restaurants use them to make their food look bigger.
B. Fashion designers use them to make their clothes look smaller.
C. City planners use them to make drivers drive faster.

Potential Uses of Optical Illusions

① Look at the illustration below. What do you see? Some people might see a rabbit facing to the right, while others might see a duck facing to the left. This illustration shows how our eyes can be tricked, what is called an optical illusion. Such illusions have been used in various ways which we can see in our daily lives.

② Look at the illustration below. What do you see? Some people might see a rabbit facing to the right, while others might see a duck facing to the left. This illustration shows how our eyes can be tricked, what is called an optical illusion. Such illusions have been used in various ways which we can see in our daily lives.

③ First, one example is the manner in which they have historically been incorporated into structural design. The horizontal (dry landscape) garden at the Zen temple Ryōanji in Kyoto illustrates such a use. Its surface may look completely level, but actually, it inclines towards the garden's south-east corner. Also, the west-side earthen wall is slightly higher at its northern end. These factors create an optical illusion that makes this surface look deeper. This effect is the same as the one seen in the Ponzo Illusion (Figure 1), in which the horizontal line closer to the top looks longer than the line below it, even though the two are exactly the same length.

④ Second, another optical illusion can be seen in the picture below, which shows the interior of a house that appears to have an extremely high ceiling. The effect is caused by the Fick Illusion (Figure 2), in which the vertical line seems longer than the horizontal line despite their lengths being precisely the same. Using this effect can make a room look more spacious than it actually is.

⑤ Third, another technique employed recently is to create, on a two-dimensional surface, the appearance of a three-dimensional object. In one train station, for instance, people are frequently unable to find an elevator located in a blind spot. To assist them, a sign that appears to be three-dimensional is painted on the floor. The sign is of significant help in sending people in the right direction.

Last, they can be used at an intersection with no traffic lights. Crosswalk designs that look three-dimensional have been painted on some roads to prevent traffic accidents. From the viewpoint of approaching drivers, it looks like large concrete blocks are in the road. Hopefully, drivers will slow down when they see them, before reaching the crosswalk.

⑥ What is the name of the optical illusion that makes this surface look deeper?
a. Müller-Lyer Illusion
b. Delbois Illusion
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4技能5領域をバランスよく用いた、FLEX シリーズの一貫した授業スタイル。

4 Overview Comprehension

段落ごとの内容を整理した後は、まとめの問題に取り組みます。内容確認の問題ながら、入試を意識した実践的な問題形式になっています。

5 Topic Task Final Task

Topic Task では本文内容に関する資料の読み取り/聞き取りを行います。英作文や意見の交換、発表などの問題も設けてあります。Final Task ではさらに広い視野で物事を考え、活動に取り組むことができます。

6 Rapid Reading

本文を見開き1ページでまとめ、速読や音読が行えます。また、QR 音声でリスニングの練習にもお使いいただけます。最後に TRUE OR FALSE で内容を振り返ります。

次の Skill へ

Overview Comprehension

1 Choose the most appropriate word from the list below to fill in each blank. Write the letter in your daily lives.

Structure	Topics	Options
Introduction	① Optical Illusions	optical illusions: how our eyes can be tricked in our daily lives
Body	② one example: the Ponzo Illusion	the garden at Ryōanji the Ponzo Illusion: the horizontal line closer to the top looks longer than the bottom line the Ponzo Illusion: the horizontal line closer to the top looks longer than the bottom line
	③ another example: the Fick Illusion	a house with a high ceiling a room look more spacious
	④ a three-dimensional sign in a station	an elevator in a blind spot in a train station people can't often find it
	⑤ a three-dimensional crosswalk design	an intersection with no traffic lights three-dimensional crosswalk design to assist them
Conclusion	⑥ some (Q1) of optical illusions	the power of optical illusions limited it might be possible to find useful (Q2) of optical illusions

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Topic Task Final Task

1 Choose the best explanation for each picture. (You may choose two.)

1. The vertical line appears to be longer than the horizontal line.
2. 3D painting.
3. The horizontal line closer to the top looks longer than the line below it.

2 Choose one of the above examples of optical illusion and explain how it is used.

3 Read the following article and make a list of its advantages and disadvantages. Then write down and share your opinion with your partner.

Does 3D Crosswalks Designs Work to Car Accidents?

Three-dimensional crosswalks are an optical illusion that could save your life. To the driver approaching, they will appear as though the blocks are suspended above the road and pedestrians are walking on floating blocks. They give the driver attention and slow down.

On the other hand, however, as drivers get used to it, they don't pay much attention to the warning and the roads appear to increase. Some people who are not used to the design will still be able to drive, potentially increasing the risk of a crash.

advantage: []
disadvantage: []
opinion: []

3 These are examples of optical illusions that we can see in our daily lives. In groups, each choose a different picture and explain how the optical illusion is used.

1. The vertical line appears to be longer than the horizontal line.
2. 3D painting.
3. The horizontal line closer to the top looks longer than the line below it.

4 Find another example of the illusion on the Internet and explain the example to your group. After each student has explained the example, decide which example your group will introduce to the class. Also, think about why you chose that example.

5 Give a presentation about the example your group chose.

Rapid Reading

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TRUE OR FALSE

1. The Korean garden uses the same type of optical illusion as the Ponzo Illusion.
2. In the Fick Illusion, the upper line looks longer than the lower line, even though they are the same length.
3. Drivers behind without a sign that three-dimensional crosswalks on roads are not excited blocks.
4. Optical illusions can make gardens larger and also ceilings higher.
5. In spite of their limitations, optical illusions have the potential to be effectively used in wider ways.