

Lesson 1 Potential Uses of Optical Illusions

Class: _____ Number: _____ Name: _____

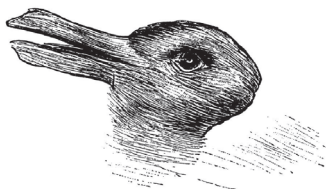
○ 音声を聴いて空所に英語を書き取りましょう。

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1 Look at (1. _____). What do you see? Some people might see (2. _____), while others might see (3. _____).

This illustration shows how our eyes can be tricked, what is called (4. _____).

Such illusions have been used in various ways which we can see in our daily lives.



2 First, one example is the manner in which they have (5. _____) been incorporated into structural designs. The *karesansui* (dry landscape) garden at the Zen temple Ryōanji in Kyoto illustrates such a use. Its surface may look (6. _____), but actually, it inclines towards the garden's south-east corner. Also, the west-side earthen wall is (7. _____) 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 (8. _____).

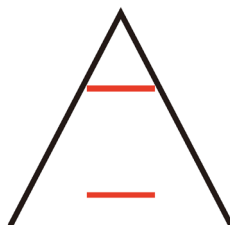


Figure 1: An example of the Ponzo Illusion

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③ Second, another optical illusion can be seen in the picture below, which shows the interior of a house that appears to have (1. _____). The effect is caused by the Fick Illusion (Figure 2), in which the vertical line seems longer than the horizontal line (2. _____) their lengths being precisely the same. Using this effect can make a room look (3. _____) than it actually is.

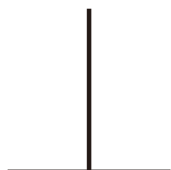


Figure 2: An example of the Fick Illusion

④ Third, another technique (4. _____) is to create, on a two-dimensional surface, the appearance of a three-dimensional object. In one train station, (5. _____), people are frequently unable to find an elevator located in a blind spot. (6. _____), a sign that appears to be three-dimensional is painted on the floor. The sign is of significant help in sending people (7. _____).

⑤ Last, they can be used (8. _____) with no traffic lights. Crosswalk designs that look three-dimensional have been painted on some roads (9. _____). 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, (10. _____).

⑥ Of course, the power of optical illusions is limited. (11. _____) a garden larger, nor can it make a ceiling higher. Over time, a crosswalk painted to appear three-dimensional will lose its effectiveness in preventing accidents. Drivers will come to realize that what they are seeing is just an illusion. Nonetheless, (12. _____), it should be possible to find an even wider variety of useful applications of optical illusions.