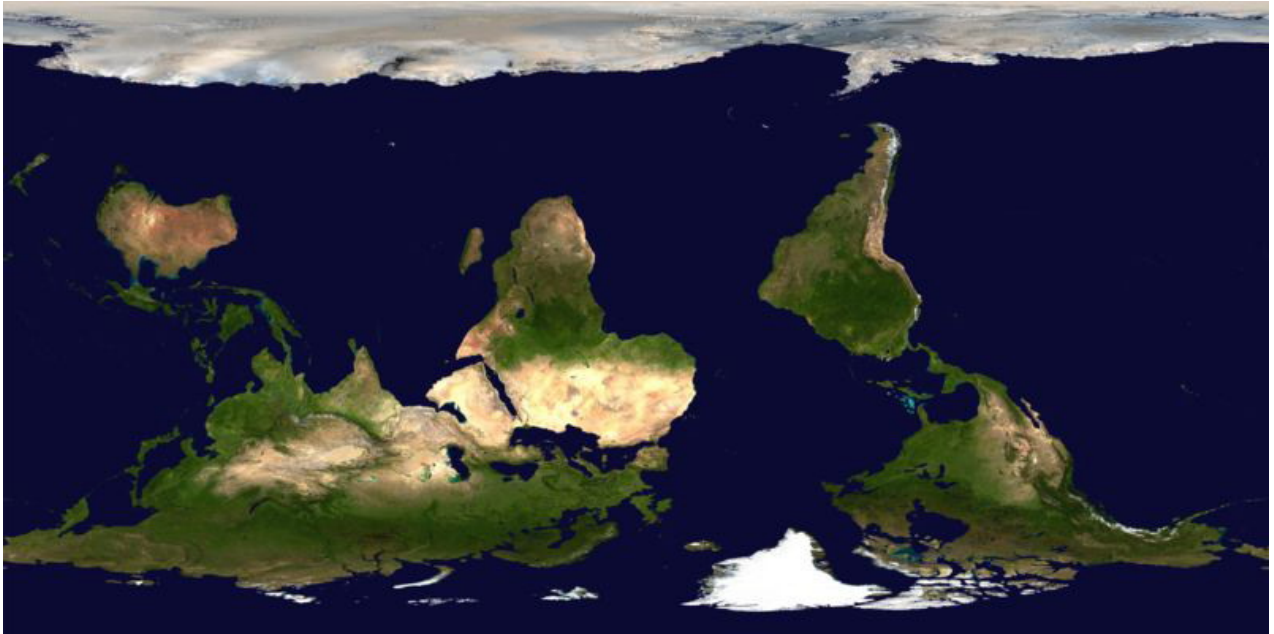


# Solutions

## Perceptual Set - Visual and Taste Perception - Synaesthesia



1)

This upside down map of the world is likely to make the task of finding countries harder, since long experience has led most people to anticipate viewing the world "right way up". While this enhances our ability to read and interpret a map on most occasions, an upside down map interferes with our expectancies and renders our perception less effortless and automatic.

## Perceptual Set

Which answers below refer to the concept of perceptual set? (tick 3)

- a.  A readiness to perceive stimuli in a specific way
- b.  A tendency to notice some aspects of the available sense data and ignore others
- c.  the reception, transduction and transmission of sensory information
- d.  the inability to perceive something correctly because of deceptive depth cues
- e.  A perceptual bias, predisposition or readiness to perceive particular features of a stimulus

## 2) **Perceptual Set/Expectancy - Example**

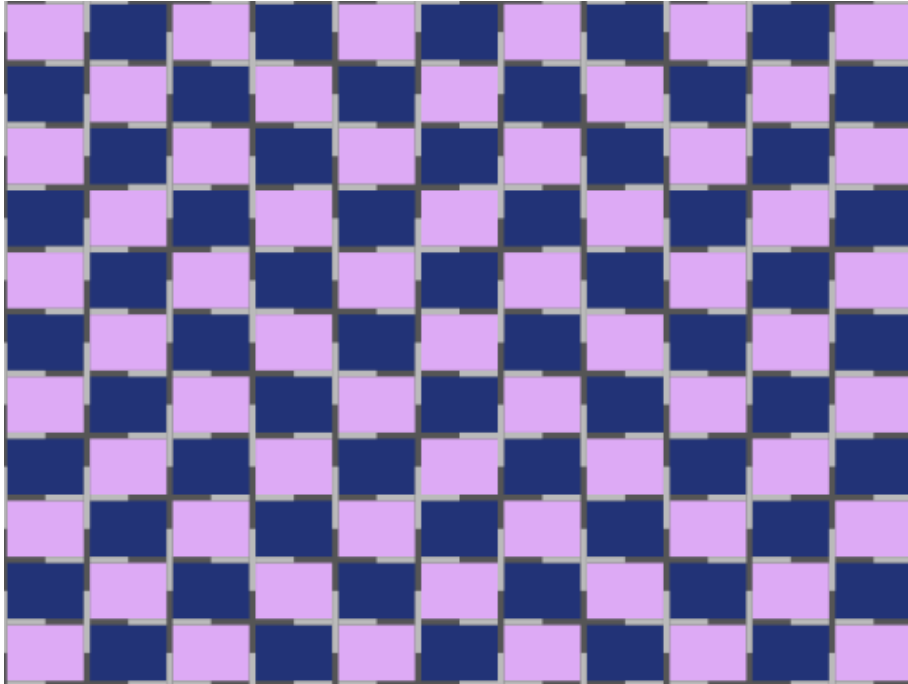
Fill the blanks in the passage below, using the words provided.



### **Gap fillers**

trained | hypotheses | interpret | experience | motivation |  
enhanced | set | attention | sensory

A primary school teacher who has long experience in teaching children to write, and therefore in observing how they hold a pencil or pen, might be expected to have a perceptual set allowing the rapid identification of problems in posture or in grasping the writing implement. He/she has the necessary training to pay close visual attention to the most relevant sensory information: for instance, which fingers are holding the pen, the angle of the forearm and the position of the torso. As he/she has been trained to observe specific features of these sensory data, he/she is likely to have an enhanced perception for this kind of visual information. Since the teacher is also eager for the child to learn, he/she also has a perceptual set that is influenced, not just by experience and training, but also by motivation. The teacher knows exactly what visual cues to focus on and wants to respond to those cues effectively, which means that he/she can rapidly form perceptual hypotheses and so efficiently interpret the sensory data before him/her.



3)

## Visual Illusions

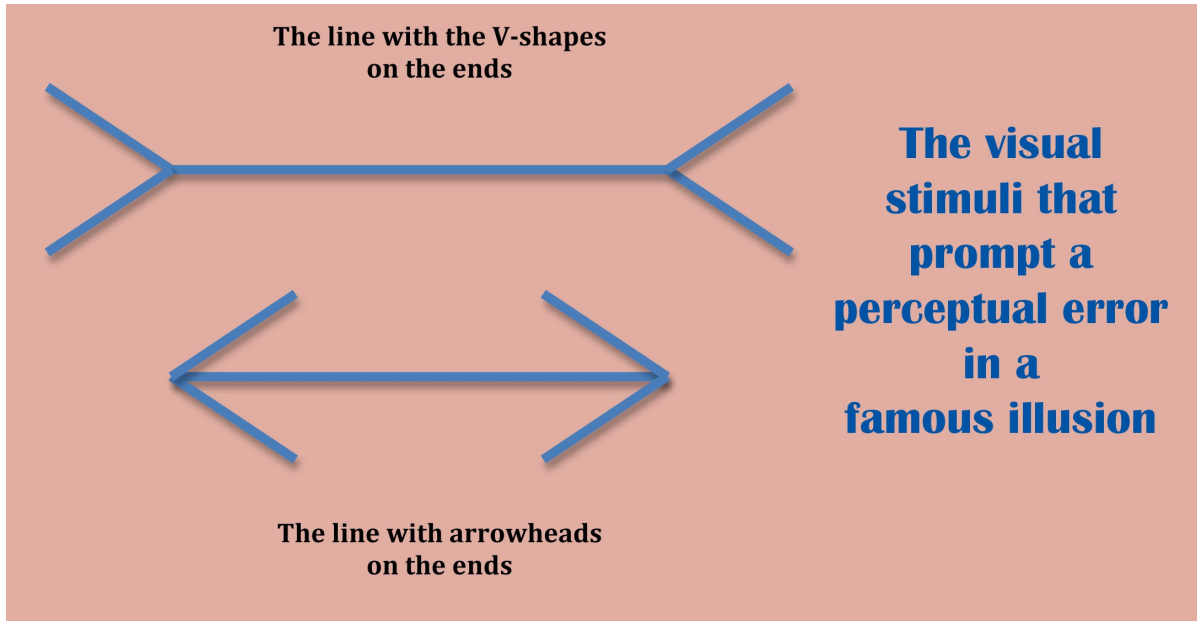
Which answers below correctly describe the concept of a visual illusion?  
(tick 3)

- a.  A consistent misinterpretation of visual sensory information
- b.  The illusory effects can be overcome once the perceiver is informed about them.
- c.  Learning about visual illusions provides insights into day-to-day perceptual processes.
- d.  Cultural experience appears to influence the degree to which people perceive some illusions, such as the Müller-Lyer illusion.
- e.  The Ames room illustrates our inability to maintain shape constancy.

**⚠️ Explanation:** The Ames Room actually illustrates our inability to maintain size constancy when accurate cues for depth are not present. In effect, we assume the room to be rectangular despite conflicting information that ought to lead us to the opposite conclusion.

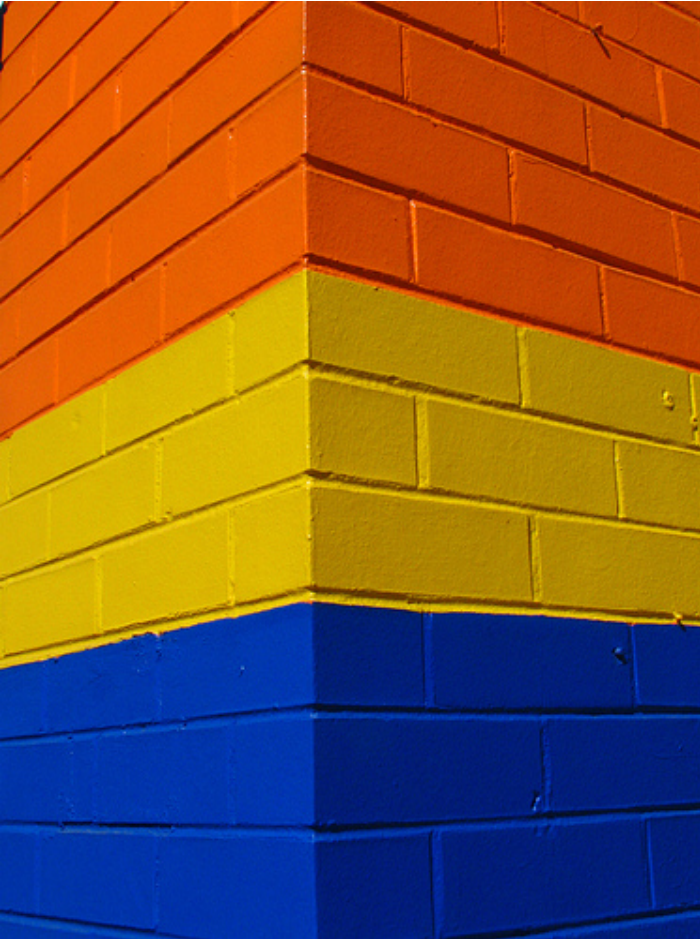
#### 4) Famous Illusions

Which statements accurately refer to the visual stimuli in the picture? (tick 3)



- a.  This is called the Ames Room illusion.
- b.  This is known as the Müller-Lyer illusion.
- c.  An appropriate hypothesis would be: Participants will perceive the line with the V-shaped ends as longer.
- d.  An appropriate hypothesis would be: Participants will perceive the line with the arrowheads as longer.
- e.  One explanation for the Müller-Lyer illusion is that we receive depth cues that lead us to perceive the line with V-shaped ends as longer.
- f.  People who have lived only in rounded settings, such as African villages or rural surroundings, perceive the Müller-Lyer just as strongly.

5)



## Müller-Lyer Illusion

Image provided by [mimi\\_k, flickr.com](#)

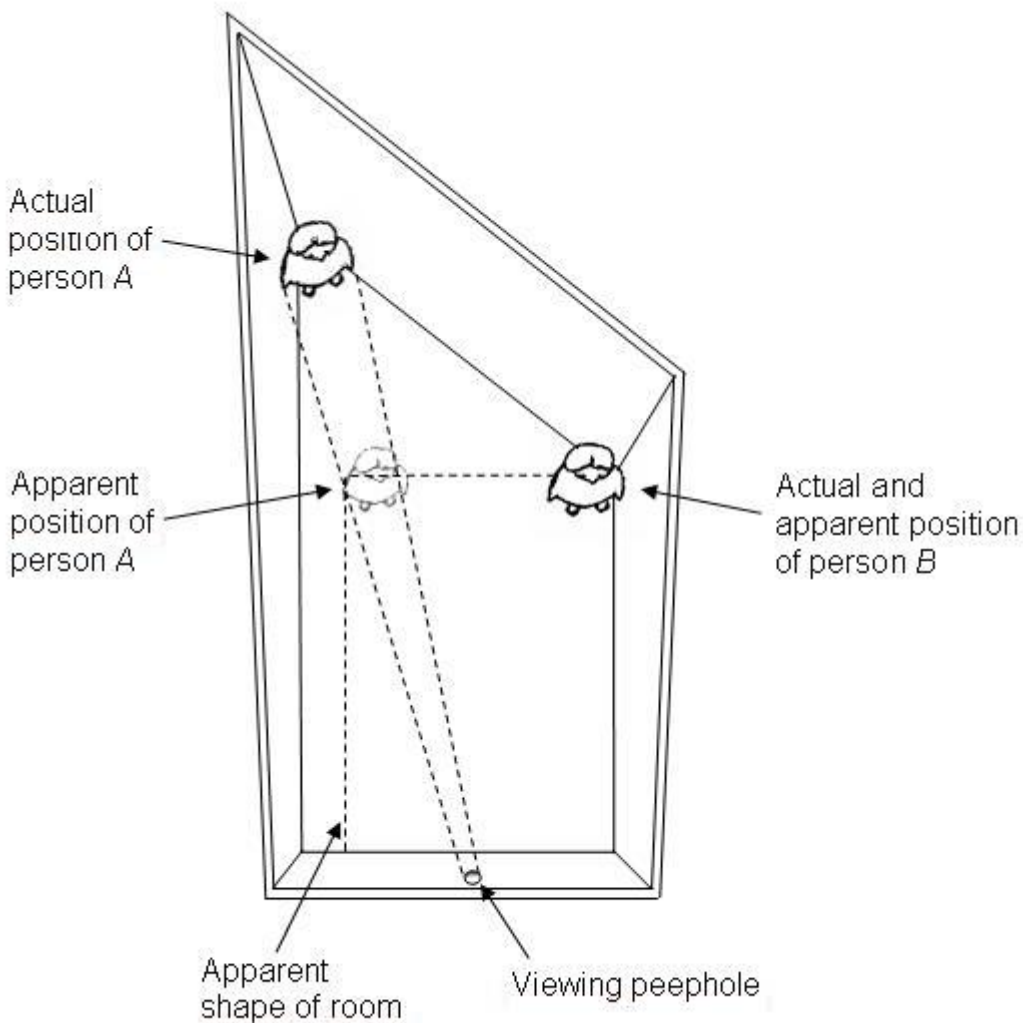
[Orange, yellow, blue](#)

People who frequently see angles like the ones shown on the left are...than people who live in societies without these kinds of architectural angles.

- a.  less likely to be tricked by the Müller-Lyer illusion
- b.  more likely to be tricked by the Müller-Lyer illusion**
- c.  neither more nor less likely to be tricked by the Müller-Lyer illusion

6)

The Ames Room



As this diagram of the Ames Room shows, this illusion is based on the provision of deceptive depth cues, which trick us into believing that two people are equally distant from us. Since one of these people is actually much further away, the image cast on our retina by this figure is far smaller. Robbed of binocular depth cues and assuming that the room is rectangular, we therefore perceive the person in the "far corner" (which appears just as close to us) as dwarfed in comparison with the seemingly gigantic figure in the "near corner". In this illusion, we preserve shape constancy, since we assume that the room, like all rooms that we have ever encountered, has corners that are right-angled. As a result of the bizarre shape of the room and the distorted depth cues, however, we are unable to maintain size constancy.





Photo

from <https://edinburghcameraobscura.files.wordpress.com/2015/02/ames-room-blog-post-small.jpg>

7)



Would the tomatoes taste the same to us if someone coloured them blue?

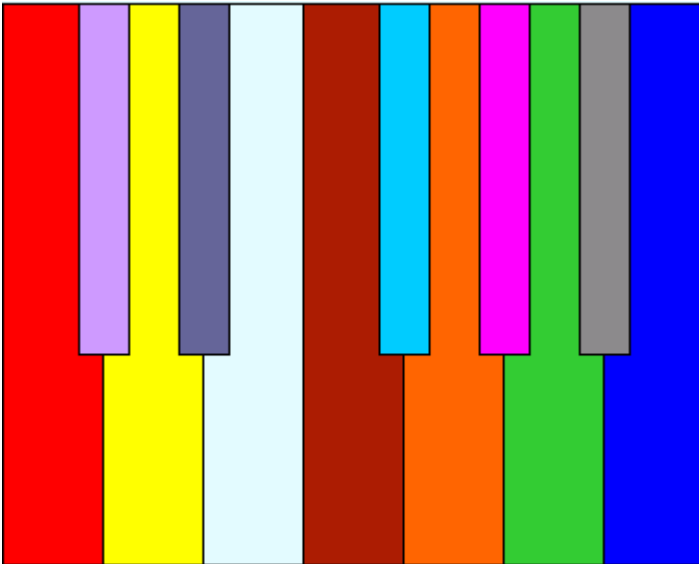
## Taste Perception

Which statements below accurately describe taste perception? (tick 3)

- a.  Our perceptions about what we eat are affected by our cultural experiences.
- b.  Psychologists believe that other senses have no impact on our perception of food tastes.
- c.  Our preconceived ideas about how a food should taste are likely to influence our perception of its flavour.
- d.  Participants who are presented with food of a radically different colour from normal are likely to be unaffected in their enjoyment.
- e.  Colour intensity generally has no impact on the perception of flavour.
- f.  Texture is another factor that contributes to our pleasure (or lack of pleasure) in eating.



8)



## Synaesthesia

Synaesthesia is an experience in which people...

(tick 3)

- a.  constantly experience illusions or distortions of perception.
- b.  experience not just perceptions relating to the sensory system that has been stimulated, but also other perceptual responses
- c.  The synaesthesia experience adds to the original experience without replacing it.  
The synaesthesia experience replaces the initial perceptual experience
- d.  relating to the actual sensory experience with another sensory experience.
- e.  Synaesthesia is involuntary and the perceiver cannot easily suppress it.

9) [Video Link](#)

## What colour is Tuesday? - Synaesthesia from Ted-Ed

Watch the video and use it to fill the blanks below:

### **Gap-fillers**

couples | disorder | trait | joined | enhanced | propensity | voice | neurological

Synaesthesia is the neurological phenomenon that couples two or more senses.

The word synaesthesia means joined sensation.

This means that a person who experiences synaesthesia might be able not just to hear a voice, but also to taste it, feel it or see it.

Synaesthesia is a trait rather than a disorder because it actually allows people to have an enhanced memory. People with this trait inherit a biological propensity for hyperconnecting brain neurons, but their environment also influences how the trait plays out in everyday life.