



词汇: *sight* 视力

Have you ever wondered if you see the same colours as other people? Most people know what blue is when they see it. It's the colour of sea, sky and sapphires. They see the colour and call it 'blue' because they were taught the word and **associated** it with what they saw. But how do you know what you see as blue isn't someone else's red, and vice versa?

The ability to **perceive** different colours **is down to receptors** in our eyes known as **cones**. **Light waves** hit these receptors and they react depending on which colour the light is, sending signals to the brain. The brain then **decodes** these signals to **determine** which colour light the eyes are receiving.

Some people's receptors are more developed than others. People with weaker receptors usually have **colour blindness**. The **inability** of the receptor to interpret the light waves correctly means that some people cannot distinguish between different shades of a colour.

Those with more **enhanced** receptors can see more shades of one colour, which is the first way in which people may see colours differently from each other. We sometimes hear people having an argument about whether something is dark blue or black. It might be because one person has stronger receptors to **interpret** the light than another.

In the past, most scientists would argue that everyone saw colours in the same way. However, research was conducted on monkeys, in which they were injected with a virus affecting their receptors. This enabled them to distinguish more colours than usual and brought an **intriguing revelation**. Normally monkeys can only see in blue and green, but the virus allowed monkeys to see red.

The **neurons** in their brains **spontaneously** adapted to be able to understand new colours, which might mean the neurons in our brains are not **hardwired** to automatically understand which colour is which. This **implies** that our brains and neurons may adapt depending on our **stimulus** during the **developmental** phase. Colour could be a very personal experience, unique to everyone.

So, the next time you talk about your favourite colour, just remember if yours is blue and your friend says red, you might actually be thinking about the same colour. What if everyone in the world has the same favourite colour, but just calls it different names?

词汇表

associate	与……联系起来
perceive	看待, 认知
to be down to	是……责任, 取决于
receptor	感受器
cone	晶状体, 锥形体
light wave	光波
decode	解码
determine	决定
colour blindness	先天性色觉障碍, 色盲
inability	无能力
enhanced	增强的, 提高的
interpret	理解, 阐释
intriguing	引人入胜的
revelation	被揭露的真相
neuron	神经细胞
spontaneously	自发地
hard-wired	本能的
imply	暗示, 意味
stimulus	刺激
developmental	成长的, 发展的

测验与练习

1. 阅读课文并回答问题。

1. How many colours can monkeys normally see?
2. Why do people have colour blindness?
3. True or false? *We all see the same colour.*
4. Why do we 'know something is blue'?
5. What is it possible that the experiment on monkeys showed in relation to humans?

2. 选择意思恰当的单词或词组来完成下列句子。

1. You need to be a bit more _____ and innovative.

spontaneous	spontaneity	spontaneously	spontaneous
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2. The _____ of this decision are huge.

imply	implied	implies	implications
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3. I don't enjoy _____ myself with them.

associate	association	associates	associating
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4. We need to give some toys to _____ the dog or she'll destroy the house.

stimulate	stimulating	stimulation	stimulates
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5. This is an _____ of what I saw.

interpret	interprets	interpreted	interpretation
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答案

1. 阅读课文并回答问题。

1. How many colours can monkeys normally see?

They can normally only see two colours – green and blue.

2. Why do people have colour blindness?

The receptors in their eyes may be weaker or not as well formed.

3. True or false? *We all see the same colour.*

False. While people still aren't sure if we see totally different colours, the level of shades we can see depends on the cones in our eyes.

4. Why do we 'know something is blue'?

Because we learnt to associate what we saw with a word.

5. What is it possible that the experiment on monkeys showed in relation to humans?

That our eyes are not hard-wired to automatically know colours.

2. 选择意思恰当的单词或词组来完成下列句子。

1. You need to be a bit more **spontaneous** and innovative.

2. The **implications** of this decision are huge.

3. I don't enjoy **associating** myself with them.

4. We need to give some toys to **stimulate** the dog or she'll destroy the house.

5. This is an **interpretation** of what I saw.