What Triggers a Blink?

Trace how a neutral signal becomes a learned trigger.

SS24.P.11a "Identify and describe unconditioned stimuli, conditioned stimuli, unconditioned responses, and conditioned responses."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB In paragraphs 2 and 3, underline the stimulus that causes a blink without learning and circle the signal that causes a blink after learning. Write UR beside the blink caused by air before pairing and CR beside the blink caused by the click alone after pairing.

The Click Before the Puff

1. Some reactions happen without practice. In classical conditioning, an unconditioned stimulus brings about an unconditioned response automatically. A different signal may be neutral at first: it does not cause that particular response. When the neutral signal repeatedly occurs just before the unconditioned stimulus, a person may begin to respond to the signal alone. The signal has become a conditioned stimulus, and the learned reaction to it is a conditioned response. Both reactions may look the same. To tell them apart, ask what brought about each reaction and whether the link between that trigger and reaction had to be learned.

2. In a classroom demonstration, Maya volunteers to watch a small device on a desk. It plays a quiet click and can send a gentle puff of air toward her eye. Before any pairing, the click makes her look toward the device, but it does not make her blink. A puff of air near her eye makes her blink right away, even when the device makes no click. Next, the device plays the click just before each puff of air. Maya hears the click and then feels the puff several times. The sequence stays the same on each trial.

3. After several pairings, the device plays the click without sending any air. Maya blinks when she hears it. Her blink now follows a sound that did not make her blink before the repeated pairings. If the device keeps clicking without any puffs, her sound-triggered blink may eventually fade. That fading does not change what happened during the demonstration: the puff brought about a blink without learning, while the click brought about a blink after learning. Even though both blinks look similar, the source of each blink tells you which response is automatic and which was learned.

2 ANSWER WITH EVIDENCE

Use the passage

1. What is the unconditioned stimulus in Maya's demonstration? Explain why it fits that name.

2. What is the unconditioned response, and what brings it about?

3. What becomes the conditioned stimulus? Describe how its effect changes.

4. What is the conditioned response? How is it different from the unconditioned response?

3 YOUR TURN

Your own words

Invent a realistic situation with a neutral signal that comes before a natural trigger. Do not use a click or a puff of air. In four or five sentences, describe what happens before and after repeated pairings and identify all four parts by name.

ANSWER KEY

What Triggers a Blink?

PART 1 · READ AND MARK

In paragraphs 2 and 3, underline the stimulus that causes a blink without learning and circle the signal that causes a blink after learning. Write UR beside the blink caused by air before pairing and CR beside the blink caused by the click alone after pairing. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	What is the unconditioned stimulus in Maya's demonstration? Explain why it fits that name.	**The puff of air is the unconditioned stimulus because it makes Maya blink without learning.**
2	What is the unconditioned response, and what brings it about?	**Maya's blink in response to the puff of air is the unconditioned response.**
3	What becomes the conditioned stimulus? Describe how its effect changes.	**The click becomes the conditioned stimulus. At first it does not make Maya blink, but after repeated pairings it does.**
4	What is the conditioned response? How is it different from the unconditioned response?	**The blink caused by the click alone is the conditioned response. Unlike the blink caused by air, it depends on a learned link.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

A few drops of lemon juice on Priya's tongue make her salivate without training, so the juice is the unconditioned stimulus and salivation to the juice is the unconditioned response. At first, a purple light does not make her salivate. During repeated tastings, the light comes on just before the lemon juice touches her tongue. Eventually, the light alone makes her salivate, so the light is the conditioned stimulus and salivation to the light is the conditioned response.

Accept responses that distinguish the two blinks by their triggers, even if students describe both simply as blinking. For Your Turn, the neutral signal must initially lack the target effect and produce it only after pairing.