Teacher's Key

Why Songs Get Stuck in Your Head: The Science of Earworms (Level B2)

Vocabulary Matching

1 jingle = **N**
2 lodged = **A**
3 involuntary = **H**
4 cue = **L**
5 idle = **G**
6 catchy = **M**
7 contour = **I**
8 predict = **E**
9 haunt = **D**
10 settled = **O**
11 interfere with = **J**
12 absorbing = **K**
13 nuisance = **B**
14 linger = **C**
15 hallucination = **F**

Fill in the Blank

1 jingle
2 lodged
3 involuntary
4 cue
5 idle
6 catchy
7 predict
8 haunt
9 settled
10 interfere with
11 absorbing
12 nuisance
13 linger
14 hallucination

True or False

1 **True.** The reading says it is a word borrowed from the German Ohrwurm.
2 **False.** More than nine in ten people reported having one at least once a week.
3 **True.** An idle mind is described as another way in for an earworm.
4 **False.** The reading says it may simply reflect how much music they hear.
5 **True.** The writer says popularity mattered too, probably for that reason.
6 **False.** They could predict only to some extent, and earworms are very personal.
7 **False.** The writer says nobody fully understands it and neither idea is settled.
8 **True.** Gum chewers heard the tune less often than people who did nothing or tapped their fingers.
9 **False.** Puzzles that were too hard seemed to make earworms more likely.
10 **True.** The writer says hallucinations are rare.

Language Focus: Gerunds as the Subject of a Sentence

Example answer: **Taking** a short walk can help when a tune will not go away.

Comprehension Questions: Model Answers

1 An earworm is a tune that gets stuck in your head and repeats without your control. Scientists call it involuntary musical imagery.

2 A large Finnish survey found that more than nine in ten people reported having one at least once a week. They can start when you hear the music, when a cue such as a word, a few notes, or a feeling brings a song back, or when your mind is idle.

3 It may simply reflect how much music they hear. The reading says this is a possibility, not something proved.

4 Researchers compared tunes that many people named as earworms with similar songs that nobody named. The sticky tunes tended to have a fairly fast tempo, a familiar overall melodic contour, and a few surprises such as an unexpected leap or an extra repeated note. The team could predict, to some extent, which songs would stick.

5 It means a song that can haunt one person may leave another untouched. Lists of sticky songs therefore cannot predict what any one person will hear in their head.

6 One idea is that an earworm is an unwanted memory that returns on its own. Another is that the system behind silent inner speech helps keep a tune going. Neither idea is settled, and nobody fully understands it yet.

7 Volunteers who chewed gum reported hearing a tune in their heads less often than people who did nothing or tapped their fingers. The researchers think chewing may interfere with the system that handles silent speech.

8 A puzzle of medium difficulty, such as an anagram, seemed to help, but puzzles that were too hard seemed to make earworms more likely. The lead researcher recommends an absorbing task that is neither too easy nor too hard. Most of this evidence comes from short laboratory tests.

9 In a hallucination, a person seems to hear real music with no source. Hallucinations are rare and are worth discussing with a doctor. One neurologist advises contacting a doctor if an earworm lasts more than 24 hours or comes with other worrying symptoms, such as confusion or changes in vision.

10 Not Given. The reading says nothing about differences between women and men.

11 No. The writer says that none of the remedies is guaranteed and that researchers do not yet know whether they work for every kind of earworm.

12 Best answer: to encourage readers to test the ideas themselves, because the evidence is limited and no remedy is guaranteed. The writer does not claim that any remedy is proved. Accept a reasoned answer that refers to the limits of the evidence.

Notes on the Evidence

- Prevalence: Liikkanen, 2012, Psychology of Music 40(2), a questionnaire among Finnish internet users. The journal abstract gives N = 12,519; other accounts give 12,420 or “over 11,000”. About 91.7 percent reported an earworm at least once a week. The sample was self-selected and online, so the figure may overstate the rate in the whole population. Jakubowski gives “about 90 percent” for weekly earworms. A 2020 survey of American college students (cited in the WebMD article) found that 97 percent had one in the past month, with a typical length of 10 to 30 minutes and 8.5 percent reporting more than three hours.
- Triggers: Williamson and colleagues, 2012, Psychology of Music 40(3), sorted reports from BBC 6 Music listeners and an online survey into four categories: music exposure, memory triggers (such as a word, a few notes, or an emotion), affective states, and low-attention states. Hyman and colleagues, 2013, Applied Cognitive Psychology 27(2) (a survey of 299 students, a diary study of 16, and three laboratory experiments), found that enjoyable, recently heard songs were more likely to become earworms and that musicians reported more earworms. The reading's phrase “may simply reflect how much music they hear” follows press summaries of that study; it is an interpretation, not a tested result. The Hyman group also found that earworms can return both in low-demand activities such as walking and in very demanding ones.
- Melody: Jakubowski, Finkel, Stewart, and Mullensiefen, Psychology of Aesthetics, Creativity, and the Arts 11(2), 122-135 (online November 2016; some listings give 2016 and others 2017). About 3,000 survey participants named tunes. The researchers matched 100 frequently named tunes with 100 never named, compared 83 melodic features, and found more common global melodic contours, less common average gradients between turning points, and faster average tempo. The “unexpected leap or extra repeated note” wording and the two example songs come from the lead author's own press summary. Songs that did well in the charts were named more often; the reading's “probably because more people hear a hit” is the writer's inference.
- Mechanisms and remedies: no agreed mechanism exists. The involuntary-memory idea follows Williamson et al.; the inner-speech idea follows Beaman and Rapley. Gum: Beaman and Rapley, 2015, Quarterly Journal of Experimental Psychology 68(6), three experiments; gum chewing reduced both voluntary and involuntary musical thoughts compared with no activity and finger tapping (the university's press release says by about one third). These were short laboratory tests, and Beaman notes that some earworms last two or three days, so the result may not transfer to those. Puzzles: press accounts of the Hyman study say that five-letter anagrams gave the best results and that overly hard puzzles increased earworms; the reading uses the cautious wording “medium difficulty”. The advice to choose an absorbing task and to avoid tasks that are too easy or too hard is the lead researcher's, as reported by the British Psychological Society and others. Trying to suppress a tune: the Dutch researchers quoted in the WebMD article describe a backfire effect, though the gum study suggests that an active alternative can still help. Listening to the whole song: advice from Jakubowski and from psychiatrist David Silbersweig, based on people's reports; the Hyman group's own experiment found that playing only part of a song did not raise earworm risk, so the idea is not supported by that experiment.
- Health: the reading follows mainstream summaries that earworms are usually harmless. The advice to contact a doctor after 24 hours or with other symptoms is one neurologist's (Elaine Jones, quoted in WebMD, March 2023), not an official guideline; the symptoms she lists include confusion, loss of consciousness, visual changes, speech arrest, and tremors. Musical hallucinations are described as uncommon and most often reported by older people with hearing difficulties (a JAMA clinical article seen in search results, and the Cleveland Clinic page on musical ear syndrome). Links opened: the British Psychological Society page and the WebMD article. The other three links were seen in search results only; the Sage and Goldsmiths pages may show only an abstract.