

Name: _____

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Weekly Reading HW

HW Wk _____

Directions: Read and annotate the passage below. Then answer the questions.

A Multitasking Video Game Makes Old Brains Act Younger

There may be a new market for video games: octogenarians. Brain scientists have discovered that a video game can improve the short-term memory and long-term focus of older adults. Some people as old as 80 begin to show brain patterns of people in their 20s. The findings are a significant development in understanding how to strengthen older brains. That is because the improvements in brain performance did not come just within the game but also outside the game in other tasks.

The study highlights an emerging field in neuroscience that focuses on how attention affects performance, memory, and intelligence. In the study, the researchers were able to measure and show changes in brain wave activity. This could help researchers understand what brain mechanisms could be altered to improve memory and attention.

The study reinforced just how challenging it is to multitask successfully, particularly as people age. The researchers created a simple video game in which players drive and try to identify road signs that pop up on the screen, while ignoring other signs. People in their 20s experienced a 26% drop in performance when they were asked to try to drive and identify signs at the same time, rather than just identify the signs without driving. For people in their 80s, the performance drop was 64%. But after the older adults trained at the game, they became more proficient than untrained people in their 20s. Also, the older adults performed better at memory and attention tests outside the game. The most significant finding is that the benefit from inside the game was transferred to different cognitive abilities. But scientists warned the findings do not suggest that any video game would improve brain function.

Scientists cautioned that brain training could have negative side effects. “We know we can rewire the brain, but the challenge is how to do it properly,” said one scientist. They also warned that there is no proof that interacting with computers would cause someone to get smarter. Furthermore, these developments might offer a solution to a problem often made worse by technology: limited focus because of constant stimulation and multitasking.

1. (RST.9-10.4) As it is used in the passage, the term *octogenarian* refers to a(n):
 - a. Child
 - b. Teenager
 - c. Adult
 - d. Senior citizen

2. (RST.9-10.1) According to the passage, which of the following is not one of the things researchers are interested in learning about:
 - a. Memory
 - b. Reaction time
 - c. Intelligence
 - d. Performance

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3. (RST.9-10.1) It can reasonably be inferred from the passage that in the experiment:
- a. Test subjects only identified signs without driving
 - b. Test subjects only identified signs while driving
 - c. Test subjects first identified signs without driving, then identified signs while driving.
 - d. Test subjects first ignored signs without driving, then ignored signs while driving.
4. (RST.9-10.2) Which of the following statements best captures a main point of the fourth paragraph?
- a. Scientists are still learning about how the brain works and there is no foolproof way to become smarter.
 - b. Scientists now know that certain kinds of video games can make brains act younger and therefore make people more intelligent.
 - c. Scientists have learned that video games only help older people by making their brains act like younger people's brains.
 - d. Scientists have discovered a new method to train people to effectively multitask and constantly stay focused on things.

5. (RST.9-10.1) Aside from the 64% drop in performance, what were the other results of the experiment for older people?

6. (RST.9-10.1) What does the author mean by the last sentence, "Furthermore, these developments might offer a solution to a problem often made worse by technology: limited focus because of constant stimulation and multitasking."

Adapted from the article, "A Multitasking Video Game Makes Old Brains Act Younger" by Matt Richtel for the New York Times, on September 4, 2013.