



## Game of Neurons: Winning Strategies in Neuropathology Education

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### Case-Based Questions (please see page 3 for answers)

1.	An 80-year-old woman starts to develop short-term memory loss that is typical for early Alzheimer disease. Which of the following aspects of learning is likely to be impacted the most?
a.	Consolidation
b.	Encoding
c.	Retrieval

  

2.	You decide to play a game to teach your small group neuropathology, and your medical students give you great evaluations. The dean of the curriculum decides to sit in on one of your small group sessions. What is one of the rationales that you can give the dean as to why you are playing games as part of your teaching?
a.	Games decrease student engagement because there is nothing to prepare which makes students happy
b.	Games create a positive learning environment that is fun and enjoyable which makes students happy
c.	Games decrease students' motivation to study because they know that answers to exam questions will be provided during the games

  

3.	What is one of the differences in playing games with hospital residents/fellows as compared to medical students?
a.	Residents and fellows all show up on time to play the game
b.	Residents and fellows are all usually present for the entire game
c.	Residents and fellows have variable knowledge bases
d.	Residents and fellows are highly-motivated to do well in the game

**Scroll to Page 3 for answers**

## Correct Answers and Rationales

### Question 1 Correct Answer and Rationale: B. Encoding

Rationale: Encoding (of short-term memory traces) takes place in the hippocampus, one of the first structures affected by Alzheimer disease (AD). Long-term memory is relatively intact until late in the AD course.

### Question 2 Correct Answer and Rationale: B. Games create a positive learning environment that is fun and enjoyable which makes students happy

Rationale: Most students like playing games during small groups and lectures, so it creates a positive learning environment that's fun and enjoyable. Because the students are actively involved, their engagement increases, not decreases. Wanting to do well in the game motivates students to study even if they don't get exam question answers directly during the game.

### Question 3 Correct Answer and Rationale: C. Residents and fellows have variable knowledge bases

Rationale: In the conference room at any one time are residents and fellows from any number of postgraduate years and thus they have variable knowledge bases which could impact their ability to compete well in a game. They show up to the conference room at various times depending on their clinical responsibilities and how fast they can get lunch. They may get paged out of the game at any time. They usually have little motivation to do well because a poor performance will not have much impact on their careers.