

**AUDIO SCRIPT**

**[M1: Male Student and F1: Female Student]**

F1: Hi, Martin. Shall we go over Section B of our notes? I missed a few things.

M1: Sure, Beth. I have some questions, too.

F1: Okay, so the topic was creativity and the brain. Dr. Flynn started by saying that the left brain/right brain theory is a myth and that the brain doesn't work that way, right?

M1: Right. The theory used to be that the left side of the brain was responsible for realistic, analytical, practical, organized, and logical thinking and the right side was responsible for creative and imaginative thinking. I wrote down that neuroscientists have conducted studies on the brain and creativity, and concluded that the theory is untrue.

F1: She also said that creativity is not just associated with artistic ability such as being able to paint or compose music, but with every aspect of life. What did she mean by that?

M1: I think she meant that creativity is crucial in other fields too, such as mathematics, computer programming, and business.

F1: OK. So, Dr. Flynn said that creativity involves more than one region of the brain. We use different parts of our brain in the creative process. We know this because scientists have looked at brain scans and observed that different regions work as a team during creative thinking. Dr. Flynn explained that the brain is comprised of networks of neurons across the left and right hemispheres of the brain.

M1: Right. She listed three networks, but I only wrote down two. One: the Executive Attention Network; two: the Imagination Network. Did you get the other one?

F1: Um, I think the third one is the Salience Network. I looked it up because I didn't really understand it. It's ...

M1: Wait a second. Can we compare our notes on the first two networks? The Executive Attention Network is our working memory and is activated when we need to pay attention and focus on a task. What's an example of the Executive Attention Network?

F1: For example, paying attention during a neuroscience lecture.

M1: Right. The Executive Attention Network requires communication between two parts of the brain: the *lateral*, or outer, regions of the prefrontal cortex and the *posterior*, or back, region of the parietal lobe. The second network is the Imagination Network. This network is activated when we think about the future or imagine alternative scenarios. This network is also involved during social interactions when we consider other people's thoughts or perspectives. Several regions of the brain are involved, including the region deep inside the prefrontal cortex and temporal lobe, and the inner and outer regions of the parietal cortex. Okay, so read me your notes on the third one, the Salience Network.

F1: Okay, so the Salience Network monitors external events and internal consciousness. It gathers the information happening around us and prioritizes it. It directs our attention to what's most important. Did you understand what she was saying about "ah-ha" moments?

M1: I think she meant those moments when an idea, insight, or solution to a problem suddenly pops into our head. She said a crucial factor is *distraction*. When we distract ourselves from a demanding task and go for a walk or take a shower, a chemical called *dopamine* is released in the brain. We are relaxed and happy, and the brain's Imagination Network is activated. That's when "ah-ha" moments are most likely to occur. They can come out of nowhere, like magic.

F1: Dr. Flynn didn't say *like magic*, did she?

M1: No, I wrote that down because I have "ah-ha" moments all the time. I get my best ideas in the shower. I won't even be thinking about a problem when *boom* suddenly the solution comes to me.

F1: I guess that's why many writers like to take long walks—for inspiration.

M1: Right. Finally, some people have a dominant network. For example, kids who have Attention Deficit Hyperactivity Disorder, or ADHD, have less activity in the Executive Attention Network and more activity in the Imagination Network, and they're usually more creative as a result.

F1: So, let's think of some questions for Section A and then write a summary for Section C ...