**INSTRUCTOR GUIDE**

**ACTIVITY TITLE: Memory and the Brain (6th-8th grade)**

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| \***Theme**: | Learning and Memory |
| \***Objective**(s):  *(What key learning do you want students to come away with?)* | The goal of this lesson is to provide both content and critical thinking activities and exercises to foster a curiosity for the study of memory. |

**LESSON OUTLINE:**

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| **1. Introduction:**  *Plan a script of what you will say to start.*  *- What will this be about? Why’s it interesting?*  *(Hook)* | Your brain is a veritable library of different types of information. Memory is the total of what we remember, and gives us the capacity to learn from previous experiences and to build relationships. Its arguably the most important thing that our minds do!  How does memory work? How much do we remember? In addition to answering these relevant questions, this lesson plan will present research on the accuracy of memories, how memories can change, and how the brain allows for different types of memory. Students will also see some real-life examples of patients with various memory deficits. They will also have the opportunity to perform ‘experiments’ in pairs. |

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| **2. Building Background:**  *List questions you can use to immediately engage your audience and prepare their thinking for your activity.*  *-What prior knowledge might they have about/related to your topic?*  *-What prior knowledge (background) do they need for your activity?* | No previous experience in psychology or neuroscience is required.  --  Question list: What is memory? Ask students, what are some things you need memory for? What are the types of memory? Anyone know what a false memory is? |

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| **3. Lesson & Activity:**  *Outline the key components of your lesson.*  **Plan/Note**:  - key ideas/ vocabulary  - scaffolds  - images/media  - extension questions  \*Consider how to best deliver your content!  \*Plan interactive components that encourage active thinking in your students. | (a more comprehensive outline is in the lesson plan)   1. Organized Discussion: What is memory? You basically need memory for everything you do. 2. Organized Discussion: What are the types of memory? Elaborate on the multi-systems model of memory. 3. Organized Discussion: What is short-term memory? 4. Experiment: Chunking experiment that they will do in groups 5. Video: Clive Wearing, for what happens with no memory 6. Organized Discussion: What is a false memory? 7. Experiment: Do the false memory experiment with students: sometimes your brain makes up its own memories. Experiment details are on the lesson plan. 8. Organized Discussion: What is long-term memory? Introduce HM and the hippocampus 9. Video: Memory savant video 10. Organized Discussion: Memory in research! Rodents, show some famous work (e.g. spatial navigation), maybe a video with grid cells 11. Experiment: Brain Bank. Point to different areas involved in memory |

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| **4. Wrap Up:**  *- Review key ideas*  *- Share takeaways and final thoughts*  *- Discuss connections to other questions and ideas. Extensions.*  *- Ask: Who could you teach what you learned here today?*  *- Ask/Suggest: What can I do to learn more?* | What did we learn today? Ask people what their key takeaway was? If they have any questions?  Give them resources to learn more. Think about doing research in high school! |

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| **MATERIALS NEEDED: *\*\*(please list all items and quantities necessary for preparation)*** |
| **Brain bank, gloves, laptop, PPE, made worksheets for students** |

\*\*attach any printouts to end of document here

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| **Other Notes** |
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**Extra Resources:**