

## 2018: An Entangled World

### Science: The Science of Memory

#### Introductory Questions

- How do we store and retrieve memories?
- How do our memories and experiences shape who we are?
- What makes certain memories “stick” more than others?
- How does memory relate to attachment—such as to other people, or even to inanimate objects, such as stuffed alpacas?
- Are our memories always reliable? If not, when can they become unreliable?
- Can we influence the way people remember us?
- Can we choose to alter or change our own memories – if so, how?
- How reliable is your memory? What steps can you take to make it more reliable?

#### Understanding Memory

##### Questions to Explore

- What parts of the brain control memory storage and retrieval?
- What types of memory are there?
- How do memories affect the way we view the world?
- What are flashbulb memories? How are they formed, and what differentiates them from other memories?
- Why do we remember some memories more vividly than others?

##### Terms to Research

- hippocampus | amygdala | cerebellum
- neuroplasticity | neurons | nervous system
- J. Piaget | Car Crash Study | Weapons Effect
- long-term vs. short-term memory | explicit vs. implicit memory
- muscle memory | collective memory
- mnemonics | mind palace
- humor effect | generation effect | positivity effect

#### When Memory Goes Awry

##### Questions to Explore

- Would it ever be ethical to change or remove someone else’s memories?
- Is there any way to know for sure whether our memories are accurate?
- How accurate is eyewitness testimony? Can it be misleading, and can it be improved?
- Do people from different cultures and societies remember things differently?
- Can we trust decisions made by people whose memories are not working properly?

##### Terms to Research

- amnesia | traumatic brain injury | blackouts
- Alzheimer's | dementia | flashback | PTSD | nostalgia

### **Technologies of Remembrance**

#### Questions to Explore

- Can technologies help us to remember?
- Can they help us to forget?
- Should we have rules about using technology to alter memory, and if so, what should they be?

#### Terms to Research

- Jacquard loom | punch card | drum memory
- digitization | caching | RAM
- obsolescence | GeoCities | The Wayback Machine

### **Additional Questions and Cases**

- Consider [the power of first impressions](#) as you plan your outfit for your next debate. Why are they so impactful? Should they be? What does it take to change an impression?
- Consider the case of [highly superior autobiographical memory](#), a condition in which people are unable to forget even the most mundane details of their daily lives. Is it always better to have a better memory, or is it better to selectively (or un-selectively) forget? Would you want to remember everything?
- Diaries, blogs, tombstones, and eulogies are all ways to connect to the future. If you were to create them, what would you include in them?
- Similarly, time capsules like the [Crypt of Civilization](#) can allow the past to “communicate” with the future. What do the contents of time capsules tell us about how past generations wanted to be remembered? What would you put in a time capsule if you were to make one?
- Why do we preserve notable historic artifacts and sites? Consider a monument or memorial familiar to you. How does it connect to individual or collective memories?