"The man who mistook his wife for a hat"—famous title, should know briefly what happen to that man (reading)

-as early as 3000-2500BC Egyptian field surgeon already interested in the brain and how it relates to cognitive function (first written reference to the brain)

-know very briefly what are Meninges, gyri, sulci, and cerebrospinal fluid (CSF)

-First reported case of aphasia induced by localized brain trauma, Edwin Smith Surgical Papyrus, case c6

-Central Question in Neuropsychology: What is the relationship between human behavior and the Brain?

-localized function VS aggregate function (Know the definition)

-Phrenology, the FAULTY localizationist view... but the concept (localized function) turns out to be somewhat correct

-Broca’s case, “TAN”... know what area is damaged, the effect, etc.

-also know that the damage is caused by damage to the white matter (the fiber track) but not the gray matters (in Elman’s lecture)

-Broca’s study is a landmark in the neuropsychology field

-broca’s study leads to lesion methodology

-know the logic of lesion methodology

-Groundbreaking concepts and ideas in the field of neuropsychology--- “Neuron Doctrine” and discovery of the synapse (know what they are and also WHO discovered them!!)

-functional attributions of Brodmann’s area (not all the details, but should know concepts like why is this important, what kind of method Brodmann used to separate those areas, how many areas are there, roughly? 47 in human)

-Brodmann’s areas leads to the modified localizationist view, know the new argument!

-it turns out that localized view and aggregate view are both correct. Many functions of the brain are highly localized but they also need many other networks from different regions to function properly

- know Amnesia, aphasia, agnosia (look at the slides)

- know the two questions Neurobiologists trying to answer for memory (look at the slides)

- know different kinds of memory and their functions (look at the slides)

- know what are anteriograde amnesia and retrograde amnesia
- What happens if you damaged your hippocampus? What kind of memory remains? Loses?

-Know details of HM and what parts of his brain are removed? What HM can/cannot do?

-What does HM tell us about the medial temporal lobe?

-know broca’s aphasia and wernicke’s aphasia (what parts are damaged? What are the effects?)

-sign language is very similar to spoken language

-Know the two different kinds of visual agnosia (apperceptive and associative)

-the man from the reading suffers from visual agnosia

-know what area is damaged to these patients (roughly)

-visual agnosia patients have a good concept of specific objects and their functions, just cannot connect the incoming visual information with those concepts

-know what happens when severe brain injury to the left hemisphere (language region) occurs early in life (perinatal stroke)

-know very briefly the early milestones of how children learn language…. Comprehension, vocab production and grammatical production

-it turns out that vocabulary comprehension will be effected by damaged to almost any part in the right hemisphere of a child but not the wernicke’s area in typical adults….. really different from the pattern that we see in adults

-vocabulary production of children will be effected by damaged to the wernicke’s area which is an area responsible for language comprehension in adults

- note that we are comparing the acquisition area of language in children to the functional area of language in adults

-surprisingly kids suffered from severe brain damages to their language area could still demonstrate mastery of language basics by the age of 5 or 6, however it seems like they know the complex structures of their language, but tend not to use them too much

-know briefly how the brain compensates for extensive early damage to the brain (almost the same area in the other hemisphere will take over the job of the damaged portion of the brain)