

BRAIN BEE 2018: Guide for Independent Study

SESSION NUMBER	CHAPTERS TO COVER	DISORDER	NEUROANATOMY
1	Chapter 1 – The Nervous System	Depression	1 – Orientation within the brain
2	Chapter 2 – Neurons and the Action Potential	Bipolar Disorder	2 – Lobes and Functions
3	Chapter 3 – Chemical Messengers	Epilepsy	3 – Meninges/ Ventricular Systems/ Commissures
4	Chapter 4 – Drugs and the Brain	Addiction	4 – Basal Ganglia
5	Chapter 5 – Touch and Pain Bear Ch. 7 - Structure of the Nervous system	Chronic Pain	5 – Limbic System I – Amygdala and Cingulate Cortex
6	Chapter 6 – Vision Bear Ch. 15 - Chemical control of Brain and behaviour	Tourette's syndrome	6 – Limbic System II – Hippocampus and Insular cortex
7	Chapter 7 – Movement	Parkinson's disease	7 – Diencephalon – Thalamus
8	Chapter 8 – Developing Nervous System	Autism	7 – Diencephalon – Hypothalamus

9	Chapter 9 – Dyslexia Bear Ch. 22 - Mental Illness	Schizophrenia	8 – Brainstem
10	Chapter 10 - Plasticity Chapter 11 – Learning and Memory	Alzheimer’s disease	9 – Cerebellum
11	Chapter 12 – Stress Chapter 13 – The Immune System Bear Ch. 2 - Neurons and Glia	Neurological AIDS	Review 1 – 3 and use additional resources for practice
12	Chapter 14 – Sleep Chapter 15 – Brain Imaging Chapter 16 – Artificial Brains and Neural Networks	Stroke	Review 4 – 6 and use additional resources for practice
13	Chapter 17 – When Things go Wrong Chapter 18 – Neuroethics Chapter 19 – Training and Careers	Huntington’s disease	Review 7 – 9 and use additional resources for practice

Note: While you are learning how to recognize each part of the brain, you must also be able to identify the FUNCTION(s) that part of the brain performs.

Neuroanatomy Resources:

<http://www.neuroanatomy.ca> → Excellent resource. Covers all facets of neuroanatomy. Includes videos, tutorials, interactive pictures, quizzes, etc.

<http://library.med.utah.edu/WebPath/HISTHTML/NEURANAT/NEURANCA.html> → Labeled images of different areas/sections of the brain

Brain and Nervous system Pro III App for Apple (Buy at iTunes store) → Interactive. Use of iPad/Mac. Would be a good investment for those looking to continue down this road

<http://vanat.cvm.umn.edu/neuroQuiz/> → Interactive quiz

<http://www.innerbody.com/image/nerv02.html> - [Anatomy explorer](#)
[Digital Anatomist Project](#) - (Click on the button labelled "Click for Atlas" to see actual tissue sections)

http://www.med.wayne.edu/diagRadiology/Anatomy_Modules/brain/brain.html - Links to Saggital, Axial(horizontal) and Coronal section views

<http://www.pixelatedbrain.com/> - The Pixelated Brain – great learning resource site

Neuroanatomy text sample from Wolters Kluwer -

http://downloads.lww.com/wolterskluwer_vitalstream_com/sample-content/9780781794275_Snell/samples/LWBK124-3926G-FM.pdf

The Brain from Top to Bottom at McGill University -

<http://thebrain.mcgill.ca/intermediaire.php>

Cerebral Arteries - <http://www.ncbi.nlm.nih.gov/books/NBK11042/>