Note: The cnidarian one has no polarity.
Note the differences in the structures, e.g. which one is unipolar, which is bipolar etc!

Neuron classification is based on structure;

**Structural classes of neurons**

**Multipolar**
- Many dendrites
- One axon

**Bipolar**
- One dendrite (may have branches)
- One axon

**Unipolar**
- Single process extending from cell body
  - *May split to form afferent and efferent branches*

**Glial cells- the ‘other’ cells of the nervous system**

- More abundant than neurons
- 90% of cells in human brain are glial cells
- Do not generate or conduct APs
- Do not form synapses with neurons
- Take up and release neurotransmitters
- Support the functioning of neurons e.g both structurally and metabolically

Functions of Glial cells:
1. To surround neurons and hold them in place,
2. To supply nutrients and oxygen to neurons,
3. To insulate one neuron from another,
4. To destroy pathogens and remove dead neurons

**Tripartite brain**
- Classed as a tripartite structure
- See what each section develops into
- Major divisions of the brain:
  1. Cerebrum (consists of paired cerebral hemispheres)
  2. Thalamus and hypothalamus
  3. Midbrain (tectum)
  4. Pons and cerebellum
  5. Medulla
  6. Spinal cord

- Corpus callosum allows left and right side of brain to communicate
- Cerebellum regulates motor control
- Thalamus integrates signals
- Hypothalamus regulates endocrine tissue
- Pons involved in several things e.g. respiration, hearing, swallowing
- Medulla oblongata regulates respiration etc