

TBIOL 140: Nerves and the neuronal action potential**Worksheet*****Part 1. Nervous system.***

In the provided space below, please list the first words (associations) that come to your mind when you hear “nervous system” (30 sec)

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- Please compare your lists in pairs and pick 5 unique associations (30 sec)
- Please compare your lists in groups and pick 5 unique associations (30 sec)
- Please share your associations with the class (2 min)

Part 2. Action potential.

Your group will be assigned one of the three phases of the action potential. For the assigned phase, please describe the following and fill out the corresponding column in Table 1:

- Charges on each side of the membrane
- Changes in the membrane potential (becomes more/less positive, negative, or no changes)

Please complete the rest of the table while listening to the other groups' answers.

Table 1. Action potential phases.

<i>Questions / phase</i>		<i>Depolarization</i>	<i>Repolarization</i>	<i>Hyperpolarization</i>
Charges on each side of the membrane	Inside of the cell			
	Outside of the cell			
Changes in the membrane potential				

Part 3. Synapse.

Please watch a 1-min video on neuron communication and answer the following questions:

- What ions are released at the axon terminal?
- What activates receptors on a second neuron?

Please share your answers with the class.