Neuron

Spoken Tutorial Project
http://spoken-tutorial.org
National Mission on Education through ICT
http://sakshat.ac.in

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Learning Objectives

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- **Demonstrate Neuron, PhET Simulation**

System Requirement

- **Ubuntu Linux OS v 14.04**

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- **Java v 1.7.0**

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- **Java v 1.7.0**
- **Firefox Web Browser v 53.02.2**

Pre-requisites

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- **Learner should be familiar with topics in high school biology**

Learning Goals

- **Movement of ions across the membranes when the neuron is stimulated or at rest**

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- **Movement of ions across the membranes when the neuron is stimulated or at rest**
- **Function of leak and gated channels**

Learning Goals

- **Membrane permeability**

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- **Membrane permeability**
- **Sequence of events that generates an action potential**

https://phet.colorado.edu

About Neuron

- **Neurons are highly specialized cells in nervous system**

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- **They can detect, receive and transmit different kinds of stimuli**

Resting Potential

▶ **The electrical potential difference across the axon membrane is called Resting Potential**

Summary

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- **How to use Neuron, PhET simulation**

Summary

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- Movement of ions across the membranes when the neuron is stimulated or at rest
- Function of leak and gated channels

Summary

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- **Membrane permeability**
- **Sequence of events that generates an action potential**

Assignment

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Observe,

- **the difference between a gated channel and a leak channel**

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- **the difference between a gated channel and a leak channel**

- **the sequence in which ion channels open or close to propagate an action potential**

About the Spoken Tutorial Project

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- **It summarises the Spoken Tutorial project**

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- **If you do not have good bandwidth, you can download and watch it**

Spoken Tutorial Workshops

The Spoken Tutorial Project Team

- ▶ **Conducts workshops using spoken tutorials**
- ▶ **Gives certificates to those who pass an online test**
- ▶ **For more details, please write to contact@spoken-tutorial.org**

Forum for specific questions

- **Do you have questions in THIS Spoken Tutorial?**
- **Please visit**

  http://forums.spoken-tutorial.org
- **Choose the minute and second where you have the question**
- **Explain your question briefly**
- **Someone from our team will answer them**

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- **It is supported by the National Mission on Education through ICT, MHRD, Government of India**
- **More information on this Mission is available at http://spoken-tutorial.org /NMEICT-Intro**