

Making the Leap Part 1: Observing Transmission of Information through Neurons Teacher Pages

Activity Objectives:

Using a video clip, students will be able to:

- ▼ Make observations and inferences about the conduction of signals through neurons

Activity Description:

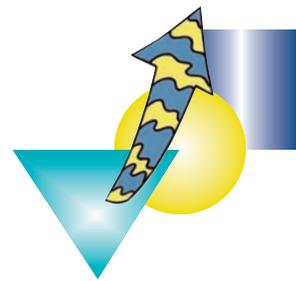
As they view a short video clip, students will use their powers of observation and interpretation to figure out how nerve impulses are transmitted through neurons. Students will record their observations and inferences on a note page provided in the activity or can use notebook paper. In *Making the Leap Part 2*, students will rotate through six stations and compare their observations and inferences with information provided in the station cards. Students are empowered when they see how much they were able to figure out *on their own* from watching the video.

Activity Background:

The background information is provided in *Making the Leap Part 2*. Since students are observing and making inferences in this part of the lesson, they do not need background information.

Activity Instructions:

- This activity is designed as an engagement activity for *Making the Leap Part 2*. Therefore, no prior instruction is needed.
- As a whole group or on individual computers, allow students to view a short video clip of transmission through neurons.
- An excellent video clip to use for this is included in *The Human Body Book* by Richard Walker, Steve Parker and Robert Winston. A complete reference is included in the reference section of this activity. Teachers can ask their librarian to purchase the book for the school. The video clip is also posted online and a link provided in the reference section. There are many wonderful video clips that would serve this purpose, so feel free to explore!
- Students should observe what is happening and make inferences about their observations. If students have not had instruction about making observations and inferences, explain that **observations** are actions that gather information by using the senses. **Inferences** require reasoning about the observations. For example, “the neuron has myelin around the axon” is an observation. “The myelin might help the axon carry impulses” is an inference about the observation. Both are important skills in daily living and in science.



Activity Overview



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Neurotransmission: Content Lessons

- Students can record their observations and inferences on the page provided in the student section of this activity or can use their own notebook paper.
- As a whole group, discuss the observations and inferences students have made.
- Students should immediately begin the station activity in *Making the Leap Part 2* in order to fully process out the information on neurotransmission.

Materials:

Video clip of transmission of information through neurons (show to whole class or allow students to view on individual computer stations)

1 Copy of *Student Page* of this Activity and 1 Piece of Notebook Paper

Management Suggestions: Allow students to make observations and inferences about the video clip with no prior instruction. Ask them to compare their work with the information provided in the six stations in *Making the Leap Part 2*. They will be pleased to see how much they were able to figure out on their own!

Suggested Extensions: After completing this observation and inferencing engagement, students should proceed to *Making the Leap Part 2: A Station Activity*.

References Used:

National Institute on Drug Abuse Website

Accessed at

http://www.drugabuse.gov/NIDA_notes/NNvol21N4/Impacts.html

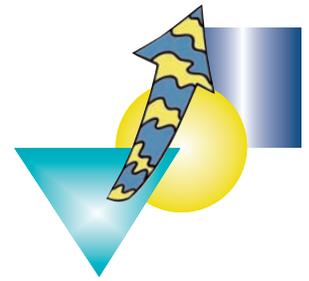
on November 11, 2009.

Video clip from the Human Body Book DVD was accessed at

<http://www.youtube.com/watch?v=90cj4NX87Yk>

on November 11, 2009.

Walker, Richard; Parker, Steve; and Winston, Robert. (2007). *The Human Body* (Book & DVD). DK Publishing, Inc., 256 pp.



Activity Overview, continued



CONTENT
LESSON

Neurotransmission: Content Lessons