

<p>Topic, Grade Level, Time</p>	<p>Topic: Neurons and Neuron Communication Grade Level: 10-12 Time: 2 days (70 minute periods)</p>
<p>Lesson Plan</p>	<ul style="list-style-type: none"> • adapted from ‘A Zombie Got My Leg Challenge’ https://www.teachengineering.org/activities/view/uoh_pirates_lesson01_activity1
<p>Engage The purpose for the ENGAGE stage is to pique student interest and get them personally involved in the lesson, while pre-assessing prior understanding.</p>	<p>Day 1:</p> <ul style="list-style-type: none"> • Students will watch the Ted Ed video ‘<u>What Percentage of Your Brain Do You Use?</u>’ <ul style="list-style-type: none"> ○ Small group discussion after video <ul style="list-style-type: none"> ▪ KWL about the brain
<p>Explore The purpose for the EXPLORE stage is to get students involved in the topic; providing them with a chance to build their own understanding.</p>	<p>Day 1:</p> <ul style="list-style-type: none"> • Teacher-led introduction/overview of nervous system. <ul style="list-style-type: none"> ○ main function, major cell types (neurons, neuroglia) • Students will jigsaw researching types of neuroglia. Each group will get one type, create a Google slide, then present it to the class. • Students will complete activity ‘Neuron Communication and Signal Transmission’ <ul style="list-style-type: none"> ○ Essential Question: How do neurons actually send messages to each other in order to communicate and transmit signals?
<p>Explain The purpose for the EXPLAIN stage is to provide students with an opportunity to communicate what they have learned so far and figure out what it means.</p>	<p>Day 2:</p> <ul style="list-style-type: none"> • Students will complete activity ‘Neuron Communication and Signal Transmission’ <ul style="list-style-type: none"> ○ Essential Question: How do neurons actually send messages to each other in order to communicate and transmit signals?
<p>Elaborate/ Extend The purpose for the EXTEND stage is to allow students to use their new knowledge and continue to explore its implications.</p>	<p>Day 2:</p> <ul style="list-style-type: none"> • Student groups will complete the activity ‘Neurotransmitters, Drugs, and Addiction’
<p>Evaluate The purpose for the EVALUATION stage is for both students and teachers to determine how much learning and understanding has taken place.</p>	<p>Day 2:</p> <ul style="list-style-type: none"> • Student groups will complete the activity ‘Neurotransmitters, Drugs, and Addiction’

This lesson could be enhanced through the use of media arts. Neuron communication is a concept that students can struggle with, and using media arts could help students better understand the process. A thought I have is either having students create a stop-motion video on neuron communication or creating a 3D model of neuron communication. I have used stop motion video project when teaching cell transport, and students were more engaged and understood the processes significantly better than when I did not use the project. The media arts standards that I feel would apply would be Media Arts Creating Anchor Standard 2 (Organize and develop artistic ideas and work), Creating Anchor Standard 3 (Refine and complete artistic work), Producing Anchor Standard 5 (Develop and refine artistic techniques and work for presentation), and Connection Anchor Standard 10 (Synthesize and relate knowledge and personal experiences to make art).