**Lesson:** *The Brain Connection*

**Lesson Objective:** Students will learn how strong neural connections are created in their brains.

**Materials:**

* Thin thread
* Yarn or other thick cord/rope
* Pictures of neurons or the word “neuron” written on cardstock
* Diagram of a neuron and brain

**Introduction of Lesson:** Begin by teaching students how the brain works. Say, “Inside the brain we all have brain cells called neurons. We have billions of neurons; some connect to each other and some are just sort of floating around.” Display a picture or diagram of a neuron and ask students what might cause these neurons to connect with each other.

**Task One:** Ask for three-five volunteers to act as neurons. They can either hold the picture of a neuron or wear the word “neuron” around their necks.

**Task Two:** Ask students if someone could share something new that he or she has recently learned. He or she may say, for example, a sport, division, how to play a game, etc. Use the new thing learned by the student as an example for the lesson.

**Task Three:** Use a thin piece of thread and ask two student neurons to connect using this thread, with each of them holding one end. This thin connection will represent the new thing learned by the student. Discuss how this is just the beginning of learning, so it’s a weak connection.

**Task Four:** Ask the student if there is something that he has learned and is getting better at, but might still need some practice. After listening to his response, two of the student neurons can connect using a thicker string such as a piece of yarn. The connection or pathway is getting stronger, but not quite to mastery yet.

**Task Five:** Look at the first connection, the thin piece of thread that represents the new learning and ask the following: “What will happen to his connection after he has more experience learning and practicing the new concept? If he persists and puts forth much effort, how will the connection change?” Demonstrate how this thread of a connection is replaced with a thick cord or rope. Then say, “What if he decides that the new learning is just too tough for him and he gives up? What will happen to the neural connection?”

**Task Six:** Ask students to think about a time when they felt frustrated while learning something new. Ask them to visualize their neurons making stronger connections every time they push through the challenge and master new learning. Say, “Once you build a strong connection, you have added density to your brain and actually made yourself smarter!”

**Task Seven:** Using the diagram of a brain, ask students to draw their strong and weak or “not yet” neural connections and label them. For example, one student may write, “spelling words” next to their strong, thick neural connection.

**Conclusion of Lesson:** Have students share their diagrams and neural connections with the class. Assess student learning of neurons and neural connections to find out if they mastered how the brain works. This can be done by asking questions about what a neuron is and how neural connections are formed using the heads down, thumbs up or down strategy. Display the diagrams on a bulletin board.