



New York Mills High School

Curriculum Document

Curriculum Area: Science

Course Name: Neuroscience

Common Course Catalog Number: 335

Length of Course: Pre-Requisite: Semester

Grade Level: 10-12

Course Description:

This class will be an opportunity to answer unique questions about our brain. Questions like: Why do we sleep & dream? How does your brain perceive time? Are we controlled by our basic needs? How do brains remember best? A goal of this class will be to give you a better understanding of how your brain works. This will allow you to be a more effective learner, better at motivating yourself and better able to avoid those traps all of our brains are vulnerable to. Some other topics include emotions, drugs effects on the brain, wisdom, learning, brain development and “reality”. We will also devote time to your curiosities about the brain through discussions, experimentation and research.

Essential Learner Outcomes

I can describe the interactions of brain regions while identifying brain structures.

I can evaluate how the brain rewards itself and how this can lead to “problems”.

I can use my understanding of my own brain to improve my ability to learn and socialize.

Units of Study:

- 1. Time perception**
- 2. Motivation**
- 3. Learning & Memory**
- 4. Emotions (Neurotransmitters unit)**
- 5. Wisdom & Judgement**
- 6. Inhibition and Rational thought**

- 7. Thinking about the past/future**
- 8. Translation of sensory input into electrical impulses (creating thoughts, memories and eliciting reactions)**
- 9. neurons & neurotransmitters**
- 10. Brain development as we age**
- 11. Desires (food, sleep, reproduction, thirst, social, happiness)**
- 12. Sleep & dreams**