

WORKSHEET
Science on Saturday

Giving your Brain a Voice: Engineering sensors that listen to brain cells

Video Links:

[Engineering sensors that listen to brain cells](#)

Presenters:

Anna Belle, Allison Yorita – LLNL Scientists
Erin M. McKay – Biology Teacher – Tracy High School

Student Lecture Notes:

1. Describe how neurons use electrical signals to communicate.

2. Describe one thing that a real life neural interface can do today to help someone.

3. What surprised, confused you or intrigued you about the process of microfabrication?

4. What makes a clean room clean?

5. Briefly explain the figure at the right. And what do the lucky charms represent?

6. Briefly describe what the neurotransmitter, glutamate, does in the brain.

7. Explain the purpose of the enzyme.

8. Why do we need the chemical sensor to last longer than 10 days?

9. How are the scientists trying to improve on the hand painting technique?

10. What happens to the biosensor by week 4 of soaking in glutamate?