

Science Time

Program Content for November 16, 2016

Read the article “Brain implant aids paralyzed patient in communication” on page A13 of the Sunday, November 13, 2016 edition of The Seattle Times.

Objective/s

- I can explain how science and technology are being used to treat individuals with ALS.

Next Generation Science Standards (NGSS) connection

- *Cross cutting concept:* The uses of technologies and any limitations on their use are driven by individual or societal needs, desires, and values; by the findings of scientific research; and by differences in such factors as climate, natural resources, and economic conditions. Thus technology use varies from region to region and over time.

Pre-reading and Vocabulary: Define each term and then use it in a sentence to demonstrate your understanding.

1. diagnosis
2. cognitive
3. implant
4. calibrated
5. electrodes

Comprehension Questions

1. What have researchers recently designed for patients with late-stage Lou Gehrig’s disease?
2. What is another name for Lou Gehrig’s disease?
3. What is locked-in syndrome?
4. What was the idea that researchers approached Hanneke De Bruijne with in 2015?
5. How many words could De Bruijne type per minute?
6. What is another way that De Bruijne can communicate?
7. What is the major drawback of this other form of communication?
8. What is the motor cortex?
9. What is a “brain click”?
10. What concerns some researchers with the brain-computer interface system?

Prompts and Extensions

1. Learn more about ALS [here](#).
2. Watch this [video](#) about another technology being used to give people with ALS their voice back.
3. This [news clip](#) will provide insight into other research being done to treat ALS.
4. [Read](#) more about the brain-interface technology highlighted in the article above and about other applications of its use.
5. Recently, the Ice Bucket Challenge swept the nation to help raise awareness and donations for those with ALS. Learn about the impacts of this phenomenon [here](#), and what you can do to continue to help support the search for a cure.

Science Time is posted to the Web on Wednesdays. Please share this NIE Science Time program with other teachers. To sign-up for the electronic edition for your class, please register

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