

**BACCALAURÉATS GÉNÉRAL ET TECHNOLOGIQUE**  
**SESSION 2013**

ÉPREUVE SPÉCIFIQUE MENTION « SECTION EUROPÉENNE OU DE LANGUE ORIENTALE »  
Académies de Paris-Créteil-Versailles

**Binôme : Anglais / SVT**

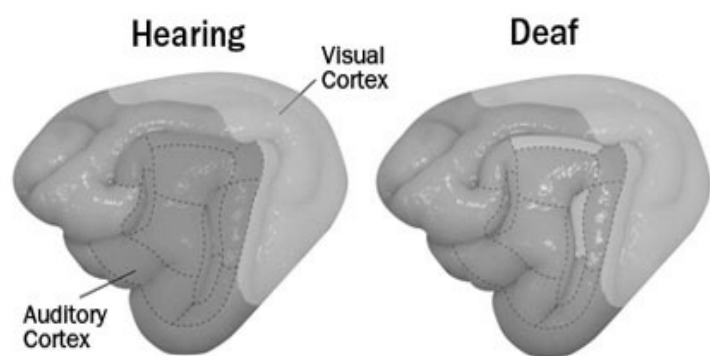
Sujet n°18

**Theme 3B Nervous system**  
**Séries S, ES, L**

**How a Deaf Brain Is Rewired to Boost Vision**

5 A brain is a terrible thing to waste—and your brain knows that. A new study of congenitally deaf cats has shown that some parts of their brains which would typically work on hearing are repurposed, and instead help out with vision. As a result of that clever efficiency, these deaf cats have superior peripheral vision and motion-detection abilities than cats with normal hearing.

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Researchers say the human brain may perform the same trick.

15 For years, researchers have known that deaf people often have superior peripheral vision and motion detection, but just how the brain creates these advantages was unclear. For the study, published in Nature Neuroscience, the researchers first determined that the deaf cats had augmented peripheral vision and motion-detection abilities, and then set out to find out why.

20 The results show that parts of the auditory cortex have been pulled into the visual processing system, but the researchers can't yet say whether the brain rewiring of these congenitally deaf cats took place in the womb or during development. Since the brain loses plasticity as it ages, it's not clear if the brains of people who lose their hearing in the course of their lives can make similar compensations.

By Eliza Strickland, October 11, 2010, Discover magazine

**Sum up this article and explain the main ideas using your scientific knowledge**