

# UK children tested on how sleep, exercise affect learning

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Tens of thousands of English schoolchildren will be given a lie-in or more rigorous sports classes as part of a major trial announced on Thursday to assess how advances in neuroscience can affect learning.

There is [evidence](#) that tailoring the school day to reflect the delayed sleep cycle of teenagers improves their learning and that aerobic exercise boosts [brain function](#), but how and to what extent will now be tested on a large scale.

An estimated 66,000 pupils in 385 schools will take part in six projects over the next few years, funded by £4 million (five million euros, \$6.5 million) from the Wellcome Trust for [medical research](#).

"Our growing understanding of how the brain acquires and processes information has great potential to improve teaching and learning," said Dr. Hilary Leivers, head of education and learning at the trust.

"We know that many teachers are keen to try new approaches based on [neuroscience](#). However, we have so far lacked evidence about what will actually be beneficial to their students."

The sleep project, which will involve 31,800 pupils, is based on evidence that the teenage cycle of sleep and wakefulness runs two hours behind that of adults—meaning they are often at school when their bodies want to be in bed.

The researchers want to see how adjusting lesson times, and teaching students about how detrimental their constant use of social media and electronic devices can be on sleep, might improve their learning.

Another project involving 10,500 pupils will assess the impact of increasing the level and changing the type of [aerobic activity](#) offered to students.

And a third, involving 2,250 pupils, will assess evidence suggesting that repeating a lesson multiple times, with breaks in between, strengthens connections between neurones.

All the six projects, conducted by different groups of researchers, will involve randomised controlled trials, ensuring the [pupils](#) being tested can be compared with a group who are taught as normal.

The results are not expected until 2017 at the earliest.

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