

The Sleeping Teenage Brain

Reading the Text



Read the whole text on pages 82-84.

After Reading

First response

- Turn to a partner and tell them something you have learned from the text that you didn't know before.
- As a class, discuss:
 - Whether the text contained a lot of information that was new to you
 - How easy or hard it was to understand
 - Whether you enjoyed reading it
 - Whether you think Nicola Morgan has a good understanding of how a teenager might think and feel.

Teenage editors (1): looking more closely

- Get into groups of three and discuss the questions, below, to help you to look more closely at some different aspects of the text. Make notes as these will help you in the next activity: 'Teenage editors'.

- » What do you think the writer's purpose is?
 - For example, to inform, educate, advise or entertain? You may think the writer has more than one purpose.
- » What scientific vocabulary does the writer use?
 - For example, 'plasticity', 'neurons', 'circadian rhythms'. Does this seem to be at the right level for the typical teenage reader?
- » Where is formal language used? Where is informal language used? Do you think Nicola Morgan uses the right level of formality for her teen audience?
- » Why does Nicola Morgan address the reader directly, using the second person ('you')?
- » Why have bullet points been used? Do they help you to read the text?
- » How would you describe the tone of the writing (for example, sympathetic, informative, bossy, patronising, factual)? Do you think this is the right tone for a teenage reader?



NON-FICTION SHORTS

Teenage editors (2): writing a report

- Imagine you have received the letter printed on page 79 from Nicola Morgan's publisher, asking you to write a report on the extract you have read.
- Working on your own and drawing on the work you have done on the text so far, come up with at least five points for your report. Write each one on a separate Post-It or a small piece of paper.
- Working in a three, pool your ideas by putting all your Post-It's or pieces of paper together and looking through them.
- Agree on the five or six strongest points and put all the others aside. Discuss what might be the best order for these ideas, moving them around on the desk to try out some different possibilities.
- Working on your own, write your report to Nicola Morgan. You may find the sentence starters, below, helpful in thinking about what to say.
 - » Overall we think that...
 - » As teenagers ourselves we...
 - » When you... we think this would... because...
 - » One particularly successful aspect of your writing is...
 - » A less successful... We think it would work better if you...
 - » Another thing you could do is...
 - » So, in your next book we would suggest...

A letter from the publisher

Dear teens,

We are very keen to expand the number of non-fiction books aimed at teenagers in our catalogue.

At the moment all the decisions about commissioning and editing our books for teenagers are made by adults. We are keen to change this by setting up a teen editorial advice board to make sure that such books have maximum appeal to our target audience. We hope you will be interested in taking part.

As we are looking to commission more books from writer Nicola Morgan, we thought that a good place to start would be by asking you for a report on an extract from one of the books of hers that we have already published, to see whether the idea of a teenage editorial board would work, and to provide some feedback to help with her next book.

Your report should be addressed directly to Nicola Morgan. Please include a mix of points about the text as a whole and about specific parts of the text.

Yours...



NON-FICTION SHORTS

Writing for the reader

Nicola Morgan has obviously tried to imagine what her teenage audience might be thinking, for example when she says

‘I’m afraid you won’t like this one...’

Trying to get into the mind of the kind of person who might be reading your text can really help you to make good choices about things like tone, vocabulary and content.

Stage 1: choose a task

- Working with a partner, choose one of the writing tasks, below.
 - A. Write a letter to your headteacher to try to persuade him or her that school should start at a later time.
 - B. Write an advice leaflet for parents, explaining how they can best help their teenager to get good sleep. Be careful with this one: you are not simply repeating the advice in the chapter, you are thinking about how parents could successfully manage and discuss this sensitive topic with their child.

Stage 2: getting into the mind of your reader

- In your pair, brainstorm some ideas about what the headteacher/parent might think on this issue. For example, what might they already know or want to know? What opinions might they have?
- Drawing on your brainstorm, have a role-play conversation with your partner, taking it in turns to be the headteacher/parent. As the headteacher/parent explains their thinking, the other person should respond. For example:
 - A counter-argument on this point
 - A solution to a problem
 - Reassurance or sympathy for a worry they have.

Stage 3: moving towards writing

- With your partner, discuss how you could use your role play conversation to help with your writing. Use the questions, below, to get your discussion started.
 - What was the best tone to use when responding? For example, did more formal or more friendly work better? Were you sympathetic? How did you try to inspire confidence in your advice?
 - Did you come up with some great points that you could use in your writing?
 - Were there any effective words and phrases someone used in the conversation that you could also use in your writing?
 - What might you need to add when writing, for example some scientific vocabulary?
- Working together, without writing anything down, discuss a plan for your writing. Think about what you will include, how you will organise your ideas and what you know about the typical features of this kind of writing.
- Working individually, write your letter or leaflet, drawing on your role play and discussions to help you.



THE SLEEPING TEENAGE BRAIN

BY NICOLA MORGAN

This is an extract from *Blame My Brain*, a book designed to tell teenagers everything they need to know about the biology and psychology behind teenage emotions and behaviour.

The sleeping teenage brain is really working very hard.

There is evidence that your brain does a lot of its important development while you are asleep. It sounds like a wonderful new excuse for not handing in your homework: ‘Well, Mr Bumble, sir, you see, I read this book where it said my brain does a whole load of really important work while I am asleep so I thought you’d be really pleased about this, and so, well, I went to sleep. But guess what? When I woke up, the piece of paper I’d left by my bed was still completely blank.’

Unfortunately, it’s not quite as simple as that, but the truth is almost equally amazing. First, remember what happens in your brain when you do something or learn something, or even try to do something.

Remember that it’s not the number of neurons you have that is important – it’s the number of connections, and how strong those connections are. And the more times you do the same thing, or have the same thought, or recognise the same face, or understand the same piece of algebra (or even try to understand it), the more the connections between the relevant neurons increase and strengthen. This means that the next time you do it, it’s a bit easier.

But the really amazing thing is that there is evidence that your sleeping brain practises the things you did while you were awake. In one study, scientists examined the brains of kittens whose brains were not yet fully developed. They found that the connections between neurons in the brain physically changed during sleep, depending on what activity the kitten did during the day. Scientists can actually look at the kitten’s brain and see a difference in the number and complexity of dendrites and synapses after sleep which follows a particular activity. Similar experiments have been done on rats.

If this also happens in human brains (and brain biology often seems to follow similar patterns in other mammals), this means that if you learn your history dates one evening, your brain could be rehearsing them, strengthening those connections, while you are in REM sleep, and you will do well in the test the next day. On the other hand, if you don’t get enough REM sleep, this may not happen. Also, if you spend the evening slobbering out in front of some crummy piece of reality TV, the only thing your brain will find to practise during the night will be images of people shouting at each other or walking around with bare feet making inane remarks about nothing in particular.

All this brain activity happens for adults and younger children too, but there's something which makes teenagers' brains different and is a reason why this is especially important for teenagers. One of the most defining and fascinating things about teenagers' brains is that, contrary to what scientists used to believe, it is this time in your life when your brain is doing its most radical and fundamental changing since you were 2 years old.

Scientists call this 'plasticity'. It means that your brain is changing physically, growing new abilities in new areas. And what happens to your brain as it changes can have long-term effects on how it works.

So, the scary bit is that what you do to your brain in your teenage years is very important – much more important than was realised when your parents were teenagers. And one of the best things you can do is sleep – but sleep at the right time.

That, of course, is the problem. You can't change the time school starts in the morning (though some schools in the US have done this, with some success). You can't change your circadian rhythms. You can't radically change the time your brain decides to start producing melatonin.

But there are things you can do to get the most out of your body clock and to get the best sleep you can.

[...]

How to make the most of your sleep patterns

Even though you can't stop having a teenage brain – and why would you want to? – there are things you can do to help yourself get the sleep you need when you need. You can minimise the effects of the sleep deprivation that the modern world forces on you. You still won't find that your brain does your history homework in your sleep, but you might even find you have the energy to do it yourself.

- Bright light in the morning is the best way to tell your body clock to wake up. It may sound unpleasant, but if someone opens your curtains and switches on all the lights before you need to get up, this will help.
- From lunchtime onwards, avoid coffee, tea, Coke with caffeine in (choose caffeine-free drinks) and tobacco (avoid tobacco altogether, in fact – but you know that).
- If you are sleepy during certain times of the day, try to use those moments for active, stimulating things so you avoid falling asleep, therefore keeping your body clock on cue for sleeping at night.
- Do try to catch up at weekends – by trying to go to sleep at a sensible time on at least one of the nights, rather than by sleeping in till lunchtime, which will not help your body clock.
- Try to help your body clock by getting lots of light through the morning and darkness



NON-FICTION SHORTS

in the evening. During the day, the more you can be outside, the more natural light you will get, helping your body clock.

- If getting to sleep is your problem, it is even more important not to compensate by sleeping late in the morning. Practise sleep hygiene.
- A warm milky drink (not coffee or tea) can help – when milk is heated it contains a chemical which is a natural sleep inducer.
- Do not take sleeping pills to help you sleep unless a doctor prescribes them. There is nothing wrong with taking a mild herbal remedy sometimes, though you might start to think that you can't do without it, which is psychologically a bad idea. Ask your pharmacist for advice about what to choose. Contrary to popular belief, alcohol does not help you sleep.
- Lots of people find that lavender oil sprinkled on the pillow can help.
- I'm afraid you won't like this one but there's evidence that when parents set a bedtime, teenagers do get more sleep and function better next day. (And when the bedtime was set at midnight, the study showed more instances of depression than when bedtime was set at 10pm. I did say you wouldn't like it!)