**MC900389482[1]**MC900389482[1]**S3 National 5**

**Homework**

**Newspaper Analysis**

**Task**

Complete the analysis by reading the article and writing **detailed** information under the following headings:

1. Name of newspaper and date.
2. Headline
3. What the article is about
4. Audience and purpose of the article
5. (a) Two language techniques, including examples, used by the writer, eg, simile, metaphor, word choice, sentence structure, tone, link.

(b) State why each technique is effective.

1. The meanings of **five** new words
2. Summarise, **in your own words,** five key ideas.

August

Erno Rubik: how we made Rubik’s Cube

The Guardian 26 May 2015

Professor Erno Rubik (inventor of the Rubik’s Cube)

In the mid-1970s, I was teaching design at the [Academy of Applied Arts in Budapest](http://en.wikipedia.org/wiki/Moholy-Nagy_University_of_Art_and_Design). I was searching for a way to demonstrate 3D movement to my students and one day found myself staring into the River Danube, looking at how the water moved around the pebbles. This became the inspiration for the cube’s twisting mechanism. The fact that it can do this without falling apart is part of its magic.

[I experimented in my mother’s flat, using wood, rubber bands and paper clips to make a prototype](http://brc.lsc.org/invent/). I needed some sort of coding to bring sense to the rotations of the cube, so I used the simplest and strongest solution: primary colours. Putting the stickers on [the finished cube](https://www.youtube.com/watch?v=jTkhA3RO5fU) felt very emotional. I knew it was revolutionary. The moment I started twisting the sides, I could see it was a proper puzzle – but what I didn’t know was whether it could be solved. It took me weeks: there are 43 quintillion permutations!

Once I’d cracked it, I knew it could sell. But I took three years to get it to market. First, a firm called Politechnika manufactured it as Buvos Kocka, or [Magic Cube](https://uk.rubiks.com/about/the-history-of-the-rubiks-cube). Then a salesman called Tibor Laczi told me he could get it distributed on the other side of the iron curtain. He has since described me as being “terribly dressed, looking like a beggar, with a cheap Hungarian cigarette hanging out of my mouth”.

He told me we could sell millions and took it to the 1979 Nuremberg toy fair where it was seen by Tom Kremer, who was the key to getting global distribution. I’ve always kept my distance from the business side, though. I feel more like a father to a child: my cube inspired thousands of “twisty puzzles” and I’m amazed how it continues to excite new generations. [People have taken cubes underwater](http://www.dailymail.co.uk/news/article-2999250/Rubik-s-Cube-world-champion-solves-puzzle-15-seconds-SHARK-TANK.html) and to outer space. On the 40th anniversary, I was in New York to see the [Empire State Building light up in its colours](https://www.pinterest.com/pin/146226319125886306/).

I never imagined it would become a global craze. It became the bestselling toy of all time, with 350m sold. The world record was broken again recently, too. [It now stands at an astonishing 5.25 seconds](http://www.mtv.com/news/2145118/rubiks-cube-world-record-video/). Teenagers are fastest. I was 30 when the cube was born, so was never in the same league. My average was always about a minute.

September

The Independent – Tuesday 26 May 2015, Doug Bolton

Nasa asks for the public's help to identify mysterious bright spots on Ceres

Nasa scientists have asked the public what the bright spots on the surface of dwarf planet Ceres could be, being no closer to the answer despite the Dawn probe taking the most clear and detailed pictures of the planet ever.

The Dawn space probe, which was launched in September 2007, took the pictures of Ceres that show the bright spot from almost 29,000 miles away. The probe is getting closer to being pulled into orbit around the dwarf planet.

The pictures show two clear bright spots on the surface of the planet, which is around 590 miles in diameter and made up of rock and ice.

Bright spots had been seen on the surface of the planet earlier, but only after the Dawn probe took detailed images, could [Nasa scientists](http://www.independent.co.uk/news/world/americas/nasa-pays-11000-to-allow-human-lab-rats-to-stay-in-bed-for-70-days-and-nights-10170777.html) see that there were many bright spots close to each other.

Andreas Nathues, lead investigator for the framing camera team at the Max Planck Institute for Solar System Research in Gottingen, Germany, said: "The brightest spot continues to be too small to resolve with out camera, but despite its size it is bright that anything else on Ceres."

"This is truly unexpected and still a mystery to us."

Chris Russell, the principal investigator for the Dawn mission, said: "Ceres' bright spot can now be seen to have a companion of lesser brightness, but apparently in the same basin. This may be pointing to a volcano-like origin of the spots, but we will have to wait for better resolution before we can make such geologic interpretations."

Nasa has now let the public give their ideas on what the spot could be, [launching an online poll on its website](http://www.jpl.nasa.gov/dawn/world_ceres/).

Nasa theorises that the light is due to a reflection of sunlight hitting the surface of the planet, but are unsure what material causes the reflection.

30 per cent of respondents think it is ice, but the winning choice is 'other', with 38 per cent - do they think it could be alien life?

Dawn previously visited the giant asteroid Vesta from 2011 to 2012, taking tens of thousands of images, and many more measurements, of the body.

It is currently studying Ceres, the dwarf planet that is one of the largest bodies in the asteroid belt between Mars and Jupiter.

October

The Guardian, Feb 8th 2011 Mark King

William & Kate - made in China

Here comes the bride, all dressed in ... plastic. At least she might be if you purchase one of the increasing number of commemorative toys being produced to cash in on the marriage of [Prince William](http://www.theguardian.com/uk/prince-william) and Kate Middleton in April 2011.

Never usually ones to miss out on a money-making opportunity, toy manufacturers are launching royal wedding-themed playthings aimed at children (who probably have no idea who Willliam and Kate are) and their parents in the hope that Wills and Kate fever will add to a toy market worth around £2.7bn a year in the UK alone.

The most talked about toy is the £15 [Happyland Royal Wedding Set](http://www.elc.co.uk/HappyLand-Royal-Wedding-Set/131121,default,pd.html), available to pre-order from the Early Learning Centre for delivery in March, though online customers have already begun receiving their sets. "Prince William and Kate sit in a gold trimmed horse-drawn carriage while The Queen, Prince Phillip and their favourite corgi are protected by a Royal Cavalry soldier in full uniform and a foot soldier wearing a smart red jacket and bearskin helmet," the marketing blurb informs us.

This is, admittedly, a cute set of figurines – albeit one featuring some interesting design choices. Prince Phillip seems to be sporting a reasonably thick head of hair, while William's equally follicly-challenged bonce is tastefully covered by a military cap. The happy couple have a permanently fixed wave, while the horses appear to be the same size as the 3" human characters and the corgi more closely resembles a collie dog. But all of them have an unsettling blank stare, as though the happy royals have accidentally been crossed with a Stepford Wives toy range.

Corgi Cars has also got in on the act, producing a £9.99 1:36 scale navy blue Austin Mini – a limited edition celebration of "all things British", sporting an SW1 William & Kate London road sign on the side and a Union Jack roof. The toy car manufacturer has also produced a three-piece commemorative die cast set (featuring a Mini, London bus and a van) for £24.99 and a 24 carat gold-plated commemorative die cast Model T Ford van (£29.99). The vans sport a fetching portrait of Wills and Kate on the side, lest you forget who they are while your children are ramming them into your floorboards.

Many readers will find the toys expensive, with prices not too dissimilar to items in the [official range of china](http://www.royalcollectionshop.co.uk/bOfficial-Royal-Wedding-Commemorative-China_b/products/33/) (which includes handmade cups for £35 a pop and pill boxes at £25), and Aynsley's royal wedding collection (coasters at £9.95, Crown bells at £19.95). But, of course, you cannot put a price on taste.

Other items available across the web include commemorative jigsaws and teddy bears. But what I'd really like to see is a Star Wars-themed wedding set, with Prince Phillip as [Darth Vader](http://en.wikipedia.org/wiki/Darth_Vader) and The Queen as [Yoda](http://en.wikipedia.org/wiki/Yoda), Fergie as [Mon Mothma](http://www.starwars.com/databank/character/monmothma/) and princesses Eugenie and Beatrice as [Ewoks](http://starwars.wikia.com/wiki/Ewok). Prince Edward and the Countess of Wessex could be [C3PO](http://en.wikipedia.org/wiki/C-3PO) and [R2-D2](http://en.wikipedia.org/wiki/R2-D2) respectively, while at a push Prince Charles and Camilla could be Luke Skywalker's guardians [Owen](http://starwars.wikia.com/wiki/Owen_Lars) and [Beru Lars](http://starwars.wikia.com/wiki/Beru_Whitesun_Lars). William and Kate would, of course, be [Han Solo](http://en.wikipedia.org/wiki/Han_Solo) and [Princess Leia](http://en.wikipedia.org/wiki/Princess_Leia), while Prince Harry would make a fine [Jar Jar Binks](http://en.wikipedia.org/wiki/Jar_Jar_Binks).

November

The Guardian Sat 5 October 2013 Clive Thomson

Teenagers and social networking – it might actually be good for them

Is too much online socialising among teenagers really creating a generation who can't relate face to face? Not according to the evidence, says Clive Thompson

I ask a teenage girl, how often do you text? "250 times a day, or something," she tells me. Shocking! The digital lives of teenagers have become the target of weekly attacks. In a [recent essay for the Guardian, the novelist Jonathan Franzen bemoaned online socialising](http://www.theguardian.com/books/2013/sep/13/jonathan-franzen-wrong-modern-world), arguing that it was creating a uniquely shallow and trivial culture, making kids unable to socialise face to face. Then the American comedian Louis CK proclaimed on TV that he wouldn't give his daughters cellphones for fear they wouldn't develop empathy.

There's also the scientist and writer [Susan Greenfield](http://www.susangreenfield.com/)'s famously apocalyptic warnings: "We could be raising a hedonistic generation who live only in the thrill of the computer-generated moment and are in distinct danger of detaching themselves from what the rest of us would consider the real world."

As a parent of two boys at primary school, I'm not immune to worry about these issues. And you don't need to be a parent to fret about the effect of all this technology on young people. Newspapers are constantly filled with frightening accounts of pornography addiction and aggression supposedly caused by violent videogames – particularly now, as Grand Theft Auto V hits the shelves. But even when these titillating accounts touch on real concerns, they do not really reflect the great mass of everyday teenage social behaviour: the online chat, the texting, the surfing, and the emergence of a new teenage sphere that is conducted digitally.

That trend is real. Is it, as Franzen and the others fear, turning kids into emoticon-addled zombies, unable to connect, unable to think, form a coherent thought or even make eye contact? Could this be true?

I don't think so. Let's go back to that girl who texts 250 times a day. The truth is, she was an extreme case I cherry-picked to startle you – because when I interviewed her, she was in a group of friends with a much wider range of experiences. Two others said they text only 10 times a day. One was a Facebook refusenik ("I'm all Instagram, pictures of what I'm doing in the city, with my friends. We're visual people"). A few were devotees of [Snapchat](http://www.snapchat.com/), the app that lets you send a picture or text that, like a cold-war communiqué, is destroyed after one viewing. One had a phone filled with charmingly goofy emoticons, another disapproved: "I'm a skilled writer," she told me. "People sometimes misunderstand tone, so you have to be precise." As it turns out, the diversity of use in this group of friends is confirmed by research. Fewer than 20% of kids send more than 200 texts a day; 31% send barely 20 or fewer.

New technologies always provoke generational panic, which usually has more to do with adult fears than with the lives of teenagers. In the 1930s, parents fretted that radio was gaining "an invincible hold of their children. When you look at today's digital activity, the facts are much more positive than you might expect.

Indeed, social scientists who study young people have found that their digital use can be inventive and even beneficial. This is true not just in terms of their social lives, but their education too. So if you use a ton of social media, do you become unable, or unwilling, to engage in face-to-face contact? The evidence suggests not. [Research by Amanda Lenhart](http://www.pewinternet.org/Reports/2012/Teens-and-smartphones.aspx) of the Pew Research Centre, a US thinktank, found that the most avid texters are also the kids most likely to spend time with friends in person. One form of socialising doesn't replace the other. It augments it.

"Kids still spend time face to face," Lenhart says. Indeed, as they get older and are given more freedom, they often ease up on social networking.

December

The Scotsman 26 May 2015, Andrew Whittaker

HS2 rail link ‘unlikely’ to reach Scotland

**A DECISION on whether to extend the HS2 high-speed rail link to Scotland has yet to be made by ministers, the UK government has said.**

Journey times between London and Birmingham will be reduced as part of the first phase of HS2, before a second phase will see the high-speed line split in two towards both Manchester and Leeds.

“Westminster has shown a total lack of ambition”

*SNP’s Drew Hendry*

Politicians in Scotland hope the line will eventually be brought north of the Border to reduce the journey time from Glasgow or Edinburgh to London to around three hours, compared with around four-and-a-half hours today..

The Department for Transport said that advice on the options for high-speed rail to Scotland has been completed by HS2 Ltd, the company responsible for developing the project, and is now with ministers, who are considering the next steps.

When the scheme was launched in 2009, the then transport secretary, Lord Adonis, claimed it would be “the union railway, uniting England and Scotland, north and south, richer and poorer parts of our country, sharing wealth and opportunity”.

However, it was reported yesterday that HS2 Ltd had moved away from the idea of extending high-speed, and is instead looking at enhancements to existing lines. HS2 is currently focused on reducing journey times from London to Birmingham to 49 minutes, before it splits into lines to Manchester and Leeds over two phases.

SNP Westminster transport spokesman Drew Hendry said such a decision would be “outrageous” and a “snub” to Scotland.

Mr Hendry said: “It would be outrageous if the UK government planned to snub Scotland on HS2 and these claims would confirm fears that the feasibility study, which was sent to ministers months ago, had been held back until after the election.

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“Including Scotland in HS2 would be transformative and not only deliver greater economic and business returns but also maximise environmental benefits.

“The Westminster establishment have shown a total lack of ambition throughout the development of plans for HS2 and seems committed to keeping Scotland in the slow lane.

“There is an undeniable economic case to connect Scotland to the rest of the UK and the continent. Inclusion of Scotland in Westminster’s HS2 plans will improve connectivity and remove barriers for businesses in remote and rural parts of the country.”

A Department for Transport said ministers were considering advice from HS2 bosses on how the scheme could benefit Scotland.

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The spokesman said “The government is committed to a genuinely national high speed rail network and Scotland will benefit from high speed services from the moment HS2 opens.

“We look forward to continued close co-operation with the Scottish Government to maximise the benefits that Scotland gets from a high speed Britain.

“Advice prepared by HS2 Ltd to identify broad options for high speed and upgraded railways to Scotland has been completed on time and is now with ministers, who are considering next steps.

“This advice will be published in due course.”

However, Business Secretary Sajid Javid said: “We are committed to HS2. We’ve always said that it’s something that’s going to benefit every part of the country.”

January

The Scotsman Linda Urquhart 13 May 2015

Comment: How do we prepare youngsters for workplace?

**SEVERAL years ago, I attended an education event hosted by the Scottish Government. In discussion, I mentioned the issue of young people not coming out of school prepared for work.**

I was challenged by someone who, from memory, was very senior in a local authority, but had left school at sixteen to work as a hairdresser.  The point she made, rather forcefully I recall, was that her first employer, the owner of the hairdressing salon, had not expected a ready-made employee.  They had been willing to spend time explaining those important little things which contribute towards ‘employability’.  Turning up on time, turning up every day, making medical and dental appointments outside working hours where possible, helping your fellow employees and being nice to customers.  Today, it would include not using your mobile phone during working hours.

Her point was that some businesses were abdicating responsibility for this early support for young people and expecting schools to do the work for them.  Clearly, there is a balance to be struck and there is a lot that can and should be done, in schools and in further and higher education, in families and the broader community to develop employability skills in young people, but her challenge made me more aware of the responsibility on employers to take their part seriously, recognise some of the challenges of employing young people and rise to them.

More recently, as my own children have embarked on jobs, it’s been reinforced to me that some of the support that makes a successful transition into early employment is very much about the little things.  Does someone clearly explain the culture of the particular workplace a young person is joining and what’s expected of them?  Even as simple as, on the first day, does someone show them where to go for lunch?

This is why I’m delighted with Investors in Young People, the framework developed by Investors in People Scotland, which seeks to reward and recognise employers who have a track record in recruiting and training young people, while encouraging others to begin working with young people.  Through their work with organisations which are early adopters of the framework and are now recognised as Investors in Young People, IIP Scotland are seeing excellent examples of how to do all of this well, allowing us to make the most of the great pool of young talent which we have here in Scotland.

February

The Scotsman Lizzy Buchanan 23 May 2015

Vikings still running rampant in Scottish DNA

**SCOTLAND’S coasts and beaches carry the genetic footprints of invaders from Ireland and Picts and Norse warriors, new DNA research has revealed.**

After compiling thousands of samples from across the UK over the past four years, researchers at Scotland’s DNA have apparently uncovered evidence on the differences between England and Scotland’s ancestral DNA.

The team tested the genetic makeup of more than 5,000 men across the UK, tracing their past through markers on the Y-chromosome DNA passed from father to son.

The researchers used men as women historically moved around more, often due to marriage.

Alistair Moffat, historian and co-founder of the business, said: “We measured all of this DNA and started to realise there was a real difference between places in the UK. They are really quite striking. There is no doubt of the impact these invaders had on Scotland’s population.”

Researchers found 12 per cent of men in Argyll and south Scotland carried the M222 chromosome, which is believed to have been brought over from Ireland from the fifth century, when Irish invaders crossed the North Channel. These men are believed by the researchers to be direct descendants of the first Irish High King – Niall Noigiallach.

This DNA is very rare in England, with no appearance in East Anglia, 1 per cent in Yorkshire and central England, and 2 per cent in the South-east and the South-west. Scots comedian Rory Bremner was among those who shared this DNA.

One of Scotland’s lost tribes, the Picts, have also been traced after disappearing from their heartlands near the rivers Forth and Clyde following Viking attacks in the ninth century.

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In the heartland of the southern Pictish kingdoms, Tayside, Perthshire, Fife and Angus, nearly one-fifth of men carry the Pictish male lineage.

This marker is barely present in England with an average of 1 per cent of men carrying the genetic code.

Vikings are still running rampant through Scotland as, according to the researchers, 29.2 per cent of descendants in Shetland have the DNA, 25.2 per cent in Orkney and 17.5 per cent in Caithness. This compares with just with 5.6 per cent of men in Yorkshire carrying Norse DNA.

It was Germanic invaders who ravaged the English coast instead, leaving a trail of genetic footprints in their wake.

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The German Y chromosome R1b S21 is found at a high frequency of 29 per cent in the east, compared with a range of 19-24 per cent across the rest of England.

The percentage drops as low as 9 per cent in the South-west of Scotland.

Chief scientist Dr Jim Wilson said: “It actually tallies really well with what we learn in history but I was delighted to see these really fine patterns emerge across Britain – some of which are quite specific.”

The team collated the information based on where participants’ grandparents were born, to remove the migratory patterns of more recent generations.

Dr Wilson, also a reader in Population and Disease Genetics at Edinburgh University, said: “This data allows us to really look back into the past and make discoveries only DNA can show.”

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Scotland’s DNA now plans to conduct the same process in women, using mitochondrial DNA passed from mother to daughter.

March

The Independent Kate Wills Monday 25 May 2015

The Art of Swimming: The way many people swim might be doing them more harm than good, says a man bringing posture to the pool.

First things first: I can swim – in answer to the question that everyone asks when I tell them I’m going for a swimming lesson. (It occurs to me that no one would do the same if you said you were off to perfect your tennis or golf skills.) But my breaststroke is less Rebecca Adlington, more granny-who-doesn’t-want-to-get-her-hair-wet. And according to Steven Shaw, founder of The Art of Swimming, my strained lengths with my head sticking out the water aren’t doing me any favours. Shaw developed his method 25 years ago, after years of competitive swimming left him with neck and back problems, leading him to train as an Alexander Technique teacher. During his training, Shaw worked as a lifeguard, and it was while observing people’s bad posture in the pool that he realised Alexander’s principles of alignment could be applied to the water, too. The Art of Swimming was born and Shaw has become something of a guru to the thousands of people he’s taught around the world. With his bald head and cult-like following, he has been called “The Buddha of Breaststroke”. One devotee of his style tells me that after a class with Shaw you feel like “you’re not swimming in the water, the water’s swimming you”.

Which is why I’m now in a pool in Paddington, wearing giant goggles that make me look like I’m about to go welding – Shaw tells me that triathletes use them, for their range of vision – while wading sideways like a crab. This move is called The Bellows and is designed to co-ordinate breathing and movement. Memories of swimming lessons at school (splashing around feeling cold while a teacher shouted instructions from the side) dissipate as Shaw gets into the pool beside me and uses his hands to pull me along the water, carefully adjusting my head, neck and back while I glide.

We all know how good for us swimming can be: it tones the core, arms and legs, helps you relax and, when done regularly, can reduce the risk of heart disease, Type 2 diabetes and stroke. But for whatever reason – whether it’s the closure of public pools or that getting wet seems too much hassle – nobody’s swimming any more. Around 245,000 people binned their goggles last year and one in five adults in England can’t swim. And, according to Shaw, those that can aren’t swimming properly.

“The majority of people are doing more harm than good to their bodies when they’re swimming,” he explains. “I often watch people battling the water, gasping for breath. They don’t get very much pleasure from it. Breaststroke is most people’s default stroke, but having your head up, as a lot of people do, acts like a brake, so your arms and legs need to work harder to defeat that resistance.” All of which means I’ll have to put my face in the water. And since I hold my nose if I’m even thinking about going under, this could prove to be a problem.

But Steven’s speciality is adults who can’t swim – whether that’s because they’re disabled, have a phobia of water or just never learned. “I’m teaching a woman at the moment who had such a severe anxiety of water that she couldn’t even have a bath,” he says. “She was shaking just looking at the pool, but after a few sessions she’s now comfortable getting in.”

I can remember as a child the horrible sensation of water gushing up my nose and not being able to breathe for what felt like several minutes (but was probably seconds). “People who have anxiety about putting their face in the water think that it will take a few months, but within one or two sessions they can enjoy it,” promises Shaw. “If you’ve had this fear for a number of years, and you move through it, it’s a real liberation.”

We spend some time collecting water in our palms and pouring it over our heads to combat the natural reflex we all have to pull our face away from a splash. At first it’s uncomfortable, then I just feel stupid, but eventually it feels calming. Well, as calming as it’s possible to feel with chlorine-y liquid running down your face. Shaw demonstrates that the correct angle of my head guarantees no water can go up my nose, as does breathing out. Soon, I’m swimming on my own, with my head down (no nose-holding!), coming up for air in time with the movements of my arms and legs. The moment when I finally “get it” feels less like swimming, more like gliding weightlessly through my own underwater world. Keeping the rhythm and breathing in sync is actually very meditative. Or as Shaw poetically puts it: “Swimming is like writing a sentence, and the breathing is the punctuation.”

**April**

**More than half of all teenagers may be sleep deprived, according to experts.**

A combination of natural hormone changes and greater use of screen-based technology means many are not getting enough sleep. Research has suggested teenagers need nine hours' sleep to function properly.

"Sleep is fundamentally important but despite this it's been largely ignored as part of our biology," said Russell Foster, Professor of Circadian Neuroscience at Oxford University.

"Within the context of teenagers, here we have a classic example where sleep could enhance enormously the quality of life and, indeed, the educational performance of our young people.

"Yet they're given no instruction about the importance of sleep and sleep is a victim to the many other demands that are being made of them."

**'All-nighters'**

At One Level Up, an internet cafe and gaming centre in Glasgow, I found a group of young people who are used to very late nights.

"There's things called 'grinds' which we have on Saturdays which are an all-nighter until 10 in the morning," said 17-year-old Jack Barclay.

"We go home, sleep till 8pm at night and then do the exact same thing again. I like staying up."

Fourteen-year-old Rachel admitted occasionally falling asleep in class because she stayed up late at night playing computer games.

"If it's a game that will save easily I'll go to bed when my mum says, 'OK you should probably get some rest', but if it's a game where you have to go to a certain point to save I'll be like, 'five more minutes!' and then an hour later 'five more minutes!', and it does mess up your sleeping pattern.

"For me it takes me about an hour to get to sleep and I'm lying there staring into nothing thinking 'I'm going to play THAT part of the game tomorrow and I'm going to play THAT part of the game the next day."

**Hormonal changes**

Research has shown that teenagers naturally veer towards later bedtimes and are later to rise in the morning, possibly because of the hormonal changes that occur during puberty.

However Prof Foster said electronic equipment accentuated this natural night-owl behaviour.

He explained: "The data that's emerging suggests that these computer screens and gaming devices may well have a big effect in increasing levels of alertness.

"That will make it harder to get to sleep after you've stopped playing.

"The great problem with teenagers is that you're not only biologically programmed to go to bed late and get up late, but there's also many attractions like gaming and Facebook and texting and many teenagers are doing this into the early hours of the morning and delaying sleep even further."

Psychologist Jane Ansell set up the charity Sleep Scotland to help children with special needs establish good sleeping patterns.

However an increasing amount of the charity's workload is now spent working in mainstream schools with teenagers.

"People were being sent to me and were generally being diagnosed with Aspergers, and a lot were being diagnosed as ADHD," she said.

"I felt the first thing we had to do was to work out a sleep programme for them so that they weren't sleep deprived. Once they weren't sleep deprived, some no longer had ADHD symptoms because the symptoms of hyperactivity and sleep deprivation are pretty similar.

"I'm not saying they were all free of ADHD but it is a common mistake."

**Pilot studies**

Her pilot studies in three Scottish schools suggested 52% of teenagers were sleep deprived, and about 20% reported falling asleep in class at least once in the last two weeks.

While many teenagers have received exam grades over the summer, Ms Ansell said most of them did not realise that a healthy sleeping pattern could have improved their performance.

She added: "We have probably not understood how important sleep is.

"It affects your growth, and especially things like memory consolidation.

"If you don't have enough sleep your short term memory doesn't consolidate into your long term memory which is going to affect your school grades."

By Eleanor Bradford

BBC News Website

May

The Guardian, 21 May 2015 by Kate Hodge and Sarah March

GCSE maths papers to be changed amid concerns over difficulty

Exam boards have been told to change new GCSE maths papers just a few months before students are due to study them, amid concerns they are too tough.

[An investigation into the difficulty of the GCSE maths sample papers](http://www.bbc.co.uk/news/education-32831905), led by Ofqual, found there was a “significant risk” that three out of four of the main exam boards’ assessments would be too hard for students across a broad range of abilities.

As part of the research, thousands of students were asked to sit new sample maths papers. The study found average marks were very low compared with what would be expected in a real GCSE exam – even for students from the best-performing schools.

The exam regulator concluded that OCR, Pearson and WJEC Eduqas should make their higher and foundation-tier exam papers easier, while AQA was told to make its foundation paper more difficult.

Overall, the level of difficulty in the sample papers was higher than in current GCSE papers. This is in line with the government’s demands for a more rigorous curriculum.

The research found, however, that the higher-tier papers from WJEC Eduqas and Pearson were so difficult that the top grade was often no more than 50%.

This doesn’t just mean that only more-able students will benefit from the exam process. More importantly, the report notes that it is “likely to prevent the reliable grading of students”.

The investigation was launched after Pearson and OCR wrote to schools in 2014 urging them not to choose which new GCSE maths qualification to take based on sample papers. They also complained to Ofqual that the paper produced by AQA was easier than their own.

The report concluded that OCR and Pearson’s sample papers are harder than their current papers, while AQAs difficulty has remained broadly similar.

The findings were welcomed by exam boards. Rod Bristow, president of UK and core markets at Pearson, said: “As the new GCSE qualifications are introduced into schools for teaching, we will continue to work with the regulator and other exam boards to ensure a fair system for learners and clear information for teachers.”

Mark Dawe, chief executive of OCR, said: “We appreciate Ofqual’s determination to ensure that all awarding bodies’ exams are of the same rigour.”

Andrew Hall, AQA’s chief executive, said: “We’re pleased that Ofqual has recognised that our qualification works properly as an assessment – allowing us to set reliable grade boundaries which will ensure that students get the results they deserve.”

The chief executive of WJEC Eduqas, Gareth Pierce, was also positive about the report. He said: “The overall research findings allow us to refine our sample assessments. In response to Ofqual’s request, we will adjust some of our questions so that we move towards the middle ground in terms of relative difficulty, in the context of a similar expectation being made of all awarding bodies.”

Ofqual has asked all the exam boards to make the changes to their sample material and submit them for approval by the end of June. This presents huge problems for schools who will be teaching the syllabus in just six teaching weeks.

Maths teacher Mel Muldowney said: “I am not convinced that adequate reassurances have been made. This whole process has made the accreditation process look like a debacle.

“Teachers don’t have that time for this back and forth. We have a year 9 cohort of more than 550,000 students across the country – not an insignificant number – who could end up being poorly prepared or the wrong decisions being made about choice of exam board because of the rush.”

Glenys Stacey, Ofqual’s chief regulator, rejected suggestions that the changes would be too late. She said the final exams were more than two years away and the contents of what needs to be taught and learnt is already available