A day in the life of PC Gadget

“A policeman at the edge of technology”

This is a story about PC Gadget - he loves technology and likes to use the latest gadget at work and home, but his wife (Lara) doesn't always share his passion in keeping up with the latest computer fashion.

Read each section and answer the questions (download the answer sheet and you will have to do some research for some questions) – reading this tale will help you revise without realising it!

You might not know PC Gadget, but you may have heard of his uncle, Inspector Gadget who found fame in the 1980s as a technologically advanced fighter of crime – they even made a film in his honour! PC Gadget idolised his uncle and was determined to follow in his crime fighting footsteps and joined the Police Force (once he'd passed all of his GCSEs through hard work and concentration at school, of course). Unfortunately PC Gadget did not inherit the 'techno' gene so he had to rely on his ability to use gadgets that he bought instead of having them as part of his body.

This story will take you through a day in the life of PC Gadget where you will see how computer technology helps him and his family (most of the time).

6:00 am

“Beep, beep, beep”, PC Gadget was on an early shift and had set the alarm of his new Samsung Galaxy S mobile phone so that he didn't oversleep. When the contract ended on his ‘old’ 3G iPhone (‘G’ stands for generation), he had contemplated buying the 4G iPhone, but he
thought that it was quite expensive. He had also heard that the android phones were just as good and he could get a cheaper deal.

PC Gadget jumped out of bed in a state of excitement as he reached for the love of his life - his mobile phone. “Come to daddy” he said as he lovingly scrolled through the many applications he had downloaded the night before. He often reminisced about the ‘old days’ when mobile phones were operated by pressing buttons that often stuck, but now touch screen technology means that he can quickly turn off the alarm by a flick of his rather stubby finger. Lara, his unfortunate wife, rolled over and gave her husband and his phone a look of despair. “You think more of that blooming phone than you do of me” she muttered. “Well at least it doesn’t moan” thought PC Gadget, but didn’t have the guts to say it out aloud as Lara had once been an archaeologist-adventurer in her prime, but had hung up her boots and guns to settle down with her suburban family.

Questions:
1. What does the G in 4G stand for?
2. Give one disadvantage of mobile phones
3. How does PC Gadget's phone help him in the morning?
4. How have mobile phones changed?

“I shot the sheriff, but I didn’t shoot the deputy” sang PC Gadget as he showered. “I love this iPod docking station” he thought as he lathered his slightly thinning hair “It’s great how I can store all of my music collection and play them randomly, but what I really like is the way I can display the album cover which I downloaded through iTunes. It’s much better than having the CDs cluttering up the place and then they don’t play if you scratch them”.

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As he dried himself, PC Gadget made a mental note to ensure that his eldest son, Mario wasn’t downloading music illegally. He had been caught before and Gadget had explained how he was breaking the Copyright law and could get into serious trouble. “No son of mine will be accused of being a pirate, even if you do insist on wearing that a silly moustache! You do realize that it would be me and your mother that got into trouble since you are under 16!”

Questions:

5. What is the file format that iPods and similar devices use?
6. Give one advantage of PC Gadget’s iPod
7. Give one disadvantage of CDs
8. What law did Mario break when he downloaded music without paying for it?
9. People who download material without permission are called…..?

Before going to work, PC Gadget turns on his 72 inch, HD ready, 3D, digital plasma TV to watch the news and see what crimes have been committed. The TV does take up most of the front room so the furniture is squashed into a corner, but Gadget insists that the sacrifice on comfort is outweighed by the digital experience. Lara cannot deny that the picture quality is very good and that she enjoys seeing close-ups of Jack Branning on her recording of Eastender’s that she takes using her Sky Plus box.

Even the baby of the family, Yoshi likes to rewind his favorite programs so he can watch certain parts over and over again. PC Gadget thinks that being able to record TV programs is fantastic as it means that the children can still go to their clubs without finding excuses for staying in and watching the TV. It also means that he can keep up to speed on Heartbeat, which is his favorite program. The TV was quite expensive to buy, but they have become much cheaper over the years “This will last us a good while” said
Gadget in answer to Lara’s protests. “Besides which, we will all be switching to digital TV soon and now that we’ve got Sky Plus, we have a vast variety of programs to watch”.

Questions:

10. Give one advantage of digital TV set
11. Give two advantages of digital set top box such as Sky Plus
12. Can you think of any disadvantages of digital TV?
13. Plasma is one form of digital TV, do you know another type?

7:00 am
PC Gadget has had a hearty breakfast and is now ready to fight crime and heads off to work full of excitement and anticipation. The police station has installed a new system to record when employees start and finish work by using fingerprint recognition. PC Gadget plonks his podgy finger on the reader and awaits the bleep. When nothing happens, he tries again. Still nothing, so this time he wipes his finger on his trouser leg and tries again. “Come on Gadget” his colleague moans “We’ll all be recorded as being late if you keep messing around”. “It’s not my fault,” says Gadget “it’s this machine, it’s not recognising my finger”.

“Are you using the right one?” asks the other policeman.

“Oops” says Gadget and tries the other hand and the machines gives a cheery bleep to acknowledge that he has been signed in for the day. “This is a great system as it keeps an accurate record of who is in the building and that’s important for Heath and Safety, especially if there was a fire” enthuses Gadget. “Well, it’s great when it works, but what if we have a power cut or there’s some idiot in front of you who can’t remember to use the right finger?” counteracts the other policeman. “Erm,
well, must get on, criminals won’t catch themselves!” says Gadget. “Remember to sign out when you go on patrol, otherwise your beloved system will not be accurate” shouts the other man as he heads for the canteen where they operate a cashless system for paying for their snacks.

Questions:

14. Why is it important to know who is in the building?
15. What is an advantage of using fingerprint recognition?
16. How is this technology also used in the canteen?
17. What is the benefit of this?

7:30 am
PC Gadget enters the equipment room where he collects his radio and helmet camera. He has felt much safer since they have started wearing cameras as any footage recorded can be used in evidence. These small cameras record the film directly to a hard drive, so there are no tapes to fiddle with. Their radios have also improved as they now use a digital signal, so the quality is better. Officers can also be tracked using GPS, so they can be located easily and quickly. PC Gadget once contacted the station in a state of panic as he had been split from his partner and did not know where he was. The station located him on a map and directed him to safety – it turned out that he had accidentally taken a wrong turn and ended up in Castle Court instead of Victoria Square (an easy mistake to make!).
Questions:

18. What technology do the police use to communicate?
19. What is the advantage of using a camera?
20. What does GPS stand for?
21. What is GPS used for?

8:00 am

Appropriately ‘tooled-up’, PC Gadget and his partner are ready for their briefing. The Sergeant powers up the laptop and turns on the data projector “Right then you lot, we’ve got a gang of hooligans who are copying debit and credit cards when customers take money out of ATMs”. The sergeant shows the constables a presentation on the interactive whiteboard that outlines what the criminals are doing, including a clip from a CCTV camera. “These scumbags forgot that there are cameras installed inside the ATMs and we can clearly see one of the culprit’s ugly face” mumbles the sergeant “they install a skimming device that also has a mini-camera. The skimming device is mounted on the card entry slot, reads the bar code on the card. The camera records their PIN as they enter it. After they have completed their transaction, received their card, and walk away, someone else has their card number and PIN. Usually, the perpetrators make a new card and use it to withdraw money from their account.” The sergeant shows a picture of what a normal ATM should look like and what it looks like with the skimming device attached.
“We need you to keep your eyes peeled for ATMs that have these devices attached. On no account should you approach suspects as we think that they are armed and dangerous. If you see anything suspicious, call it in using your radio and we will send backup”. PC Gadget jumps up eager to get going.

Questions:

22. What technology helped the sergeant to deliver his briefing?

23. Why is this better than a traditional chalkboard?

24. The sergeant’s presentation included a video, what other media content could it have included?

25. What does ATM stand for?

26. Give 2 advantages of an ATM

27. Give a disadvantage of an ATM

28. What does PIN stand for?

29. Describe the process for withdrawing cash from an ATM

30. Identify any inputs and outputs of this process

31. What security measures are used to protect you whilst using an ATM?
“Hey twinkle toes, where do you think you’re going?” says Gadget’s partner, PC Alex Mason who had been a Special Forces Operative in a previous life. “Off to fight crime and keep the streets of Belfast safe” replied Gadget.

“Not so fast Columbo, we need to consult the crime detection database to see if we can see if there are any patterns to these crimes” sneered Alex who was glad to catch Gadget out.

Gadget pulled a face and followed Alex into the office. Gadget forcibly elbowed Alex out of the way and logged on to the computer. Once he had opened the database, he searched for crimes linked to ATMs. Within seconds he had a list of locations where similar crimes had been committed and he could easily see that the majority of these crimes happened in the Short Strand area. “Gee whizz” muttered Gadget “I am still amazed at how quick it is to find specific information using this database. I can remember the days when we used to search through piles of paperwork before we could find our answers, but now we just enter our criteria, press a button and Bob’s your uncle! Come on Alex, stop messing around on the floor and let’s make use of the extra time that this database has given us”.

09:30 am

Questions:

32. What is a database?
33. Give 2 advantages of a database
34. What feature would be used to search a database?
35. Gadget had to enter a username and password to access the computer because it contains personal data, what law does this meet?

PC Gadget and PC Mason are patrolling the streets when they see a likely looking suspect loitering across the road. Alex stepped out into the road “Whoa
there!” shouted Gadget “We have to use the pedestrian crossing to set a good example to the public”. Gadget walks over and presses the button to turn the traffic lights red. “Ahhh” says Gadget “You gotta love traffic lights, especially the ones at the Knocknagoney round-a-bout where they change automatically to keep the traffic flowing. And then there’s the ones that detect when a car is waiting – I always wonder how that works”.

“Enough of your nonsense Gadget, let’s get over there and speak to that suspicious character”. Gadget and Mason proceeded to cross the road safely when they were told to do so by the green man.

“Hey, you with the hoodie, would you mind coming over here for a few questions?” shouted Mason. As soon as the man saw the policemen, he started to run. “Stop in the name of the Law” shouted Gadget, but surprisingly, the man continued to run. Mason took up the chase, while Gadget radioed in a description of the man.

Questions:

36. Traffic lights are controlled by computers, why are computers better than humans when it comes to repetitive, boring jobs?

37. Give another example where computers keep us safe.

38. Give an example of where computers keep us comfortable.

39. How could a traffic light sense that a car is waiting?

10:30 am

It took an hour for Mason to catch the man and he was absolutely exhausted. Gadget however, was calm and composed as he used his initiative to follow the pursuit. When he had radioed the station, he asked the them to follow the chase on the cameras that monitor the
area. Eventually, when the man gave up, Gadget located the man using Google Maps on his mobile phone.

A police car arrived at the same time and the man was taken away for further questioning. “Well, I’m parched” gasped Gadget “What do you say I use the Internet on my phone to see if there is a café near here for a cup of tea and a bun?” Mason couldn’t reply as he was still puffed out.

Meanwhile, back at Gadget’s house, Lara had just finished her daily session with EA Sports Active 2. She has managed to lose the extra pounds gained over Christmas by following a 9 week programme where her virtual trainer takes her through her paces. Although she is seeing the benefits, she quite often gets annoyed because the motion sensors do not always record her movements, so she ends up doing far more than the game asks. She can often be heard shouting at the TV as she is frantically skipping. She later tracks her progress online, so she can see how well she has been doing.

11:30 am

Having located a café and had their fill of tea and buns, our two intrepid crime fighters return to the station to question their prisoner.

Questions:

40. Digital cameras are used to monitor the streets of Belfast, what are the benefits of this?

41. Interactive maps are now available on mobile phones, where else are they available?

42. Give another example of a game that encourages people to exercise.
“Right fella me lad, why did you run?” Gadget asked the man. “No comment” mumbled the man. “What’s your name?” asked Mason. “Kenny” replied the man “But that’s all I’m saying ‘til I get a lawyer”.

“We’ll see Kenny, we’re going to take your fingerprints and run them through our extensive database” said Gadget as he waggled his finger in a very menacing way.

With Kenny’s fingerprint taken, Gadget sat in front of his computer waiting patiently for the results to be displayed. “BINGO!” yells Gadget “Ya dancer, this guys print’s have been found on other ATMs that have been involved in the scam”.

Gadget scuttles off to the interview room where Kenny is nursing a weak cup of tea. “Your nicked” says Gadget with a certain amount of gusto “we have your fingerprints to prove your guilt”. “Who’s to say that I didn’t use the ATM to take out cash?” counteracted Kenny. After some thought, Gadget thought of a suitable answer “Because we have you on camera too!”. “Drat!” said Kenny “It’s a fair cop”.

Questions:

43. Do you think that the fingerprint database is a deterrent to criminals?
44. Has it improved fighting crime and do you think it makes it a safer place?
45. Do you think that using a computer to record and map the fingerprint is more reliable than humans?

12:00 pm

Back at the house, Lara has finished her exercise, watched last night's episode of Eastenders on the digital TV, which was recorded using Sky Plus and had placed a bid on a vintage
compens on Ebay. A busy morning, but Lara is participating in a teleworking scheme, where she works from home and she should have been entering data into a database. “Oh well, I’ll do some work after another cup of tea and Bargain Hunt, you never know I might see one of the treasures that I found in the old days”.

Questions:

47. What is teleworking?
48. Give an advantage of teleworking to the employer
49. Give an advantage of teleworking to the employee
50. Give 3 disadvantages of teleworking

2:30 pm
After lunch, which Gadget paid for using his fingerprint, he and Alex returned to their beat. As they walked down the street they saw many examples of ICT in action – shopping being added up using barcodes and scanners, customers paying for their shopping using ‘chip and PIN’ and EFT, shop doors opening by themselves and Gadget was particularly amazed at how many people were talking on their mobile phones. “What do people talk about?” asked Gadget. “Don’t know” said Alex “personally, I’m not one for conversation, I’d rather text – it’s short and to the point”.

“And cheaper, you miser” thought Gadget.

“I really like using the self-service tills in supermarkets, especially if I’ve only a few things” commented Gadget. “Not so good if you work for the supermarket and lose
your job” said Alex, whose wife had recently lost her job at Tesco as she was no longer required due to an investment in self-service tills. “Mind you, she’s now going back to college to learn how to use computers since most jobs these days need computing skills”. “Good for her!” said Gadget, “I hear that all ICT teachers are very understanding, good looking and charming – she will do well”.

4:30 pm

Questions:

51. What does EPOS stand for?

52. What does EFT stand for?

53. Why do shops use these systems?

54. How do automatic doors work?

55. Give another example of a control system

56. Give a disadvantage of using computers in shops

57. Why do you think older people are at a disadvantage when employers use computers?

Our fearless policemen return to the station and write up their day using MS Word, which is handy for Gadget who is not so good at spelling. He remembers his school days when this English teacher used to despair at his spelling, but now with spell checker, he generally gets it right. Sometimes he chooses the wrong word and there was one time where he selected ‘costumer’ instead of ‘customer’ when he was writing up a statement from a shoplifter – this caused some embarrassment in court.

“Well that’s me, I’m off home” said Gadget “But before I go home I’ve got to go find the optician where I’m getting my eyes lasered – I’ve an appointment to see if I’m suitable”.

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“Do you know where to go?” asked Alex.

“No, but I’m using my satellite navigation device to find it, so I’ll be there in no time and it even shows me where I can park” said Gadget, rather smug in his use of ICT.

“Are you not scared ‘bout the laser surgery?” asked Alex.

“Weellll, sort of, but at least my eyes will be ‘mapped’ using computer technology so I’ll get a perfect correction. It will be worth it, as I hate wearing glasses or contact lenses, they get in the way when wrestling criminals to the ground and then there’s the possibility of them breaking”.

Gadget jumps into his car and finds the optician straight away and makes his appointment on time. Before the advent of sat nav, he’d often missed appointments as he had been lost or couldn’t find a parking space.

“Get out of my way, I’m late!”
6:00 pm

Gadget arrives home having successfully navigated, parked and made his appointment on time. He found out that his eyes are suitable for laser surgery and the receptionist has made another appointment using their appointment database. He goes back in 4 weeks time (OMG).

As soon as he gets home, he fires up his laptop and turns on his magnificent digital TV to watch Hollyoaks. He finds his laptop very handy as the children are always using the family computer, which is upstairs, and he can’t watch TV up there either. The laptop uses wireless technology to access the Internet, so he doesn’t have to bother with cables.

“Oh, you’re home” grumbles Lara “Are you going to be long on that blasted computer as I would like some help with making tea”.

“I’ll be with you in a tick, I just want to update my status and make a tweet or two” says Gadget. He actually has accounts with many different social networking and blogging sites including Facebook, Bebo, Twitter, MySpace, Blogster and Google Blogger. After he had finished

Questions:

58. How has word processing packages helped you with your school work?
59. Give an advantage of using sat nav
60. How can computers help with our health, other than mapping eyes for laser surgery?
61. Why are computers sometimes better than humans at performing delicate operations?
updating his accounts and happy in the knowledge that the world knows what he has been up to and how he currently feels (he even took a personality test and managed his online farm) he goes to the kitchen to help his wife.

“It’s too late now, we’ve eaten tea and washed up! You spend far too long on that computer communicating with the rest of the world, what about talking to the people in this house?” moans Lara.

“Fair point” says Gadget, “I’ll request you all as friends and we can post messages to each other”. Gadget didn’t quite understand why Lara threw the frying pan at him and stormed out of the kitchen!

Questions:

62. What is meant by ‘wireless’ technology?
63. Name 3 devices that can use wireless technology
64. Give 3 advantages to social networking sites such as Facebook
65. Give 2 disadvantages of social networking sites
66. What problems can you suffer from if you use a laptop for many hours?
67. How could you reduce the effect of some of these problems?

8:00 pm

Feeling a little guilty, but still not sure what he’s done wrong, Gadget opens the laptop again. He opens his web browser (Firefox) and searches the Internet for some “forgive me” flowers for Lara using the search engine, Google. He quickly finds a local flower shop and orders a large bouquet and pays using his credit card. Before making his payment, he makes sure that the web page is secure by looking for the padlock and an ‘s’ at the end of ‘http’ in the address bar.
This meant that his personal data (name, address and card details) would be encrypted (muddled up) so that any hackers would not be able to use his card fraudulently. “The good ‘ol Data Protection Act really forces companies to keep personal data secure” muses Gadget. “The flowers will cheer the old gal up and put me back in the good books”. Deary me, how little Gadget understands about the female of the species – unfortunately we will not be around to see Lara’s reaction!

Questions:

68. What is a web browser?

69. What is a search engine?

70. Give 3 advantages of using the Internet

71. What is the name given to shopping online?

72. What is encryption and why is it used?

73. List 10 things that you can buy online

74. Give 3 advantages to the customer from shopping online

75. Give 3 advantages to the business from shopping online

76. Give 3 disadvantages of shopping online

77. What is the Computer Misuse Act?

10:30 pm

Gadget wearily climbs into bed having set his alarm and turns on his Kindle (eBook) to read the latest adventure of his hero,
Sherlock Holmes. The eBook stores many books and he can use the built-in dictionary to find the meaning of words that he doesn’t understand. It isn’t long before Gadget feels his eyes getting heavy and he is ready to enter the Land of Nod where he will dream about the next piece of computer technology he will buy.

“Night, night Lara” says Gadget.

“Humph!” grunts Lara.

Questions:

18. What areas of ICT have the biggest impact on your life?

19. Do any of these technologies have any negative impact i.e. there are problems

20. How do you think technology will help us in the future?

Well that’s the end of our little story, Gadget wishes you luck in your ICT exam and hopes that you can remember how important ICT is to our lives, but make sure that you use it wisely and carefully.