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| **Alan Turing** | | **Admiral Grace Hopper** | | **James Gosling** | |
|  | What contribution did Alan Turing make to Computer Science?  Alan Turing developed computational theory upon which modern computing is based. |  | What contribution did Admiral Grace Hopper make to Computer Science?  Admiral Grace Hopper devised the first commercial electronic computer. |  | What contribution did James Gosling make to Computer Science?  James Gosling developed the Java programming language. |
| The Turing test was devised to determine whether the user interaction is that of a human or a computer.  Why do you think a computer would find it difficult to answer preference-based questions?  Whilst the computer could look up different preferences, it would need to make comparisons of them. It is unlikely that it could use a database or the Internet to find an answer as the question is original. The computer will not have experience of this, so it will need to make a hypothesis as to why this is the situation. | Hopper was the first to refer to a computer problem as a “bug” and to speak of “debugging” a computer.  How did the term ‘bug’ come about?  They took the machine apart and found a large moth. | He did the original design of Java and implemented its original compiler and virtual machine.  What is a virtual machine?  A virtual machine, commonly shortened to just VM, is no different than any other physical computer such as a laptop, smart phone or server. It has a CPU, memory and disks to store your files, and can connect to the Internet if needed. |
| CAPTCHA is another measure used to determine whether it’s a human or a computer mainly for security purposes.  Explain a few reasons why a computer would find it hard to read CAPTCHA.   * A line through the text. * The text could be split over two lines. * Could be a grid behind the text. * The characters might all be warped. | What does the term ‘debugging’ mean?  When a program is not working the way it’s intended to and needs to be fixed (i.e. debugged) |
| **Lady Ada Lovelace** | | **Sir Tim Berners-Lee** | | **Steve Jobs** | |
| Ada Lovelace: Original and Visionary, but No Programmer | OpenMind | What contribution did Lady Ada Lovelace make to Computer Science?  She was the first computer programmer, the first person to realise computers could do more than just calculate numbers. |  | What contribution did Sir Tim Berners-Lee make to Computer Science?  Inventor of the World Wide Web. |  | What contribution did Steve Jobs make to Computer Science?  Steve Jobs commoditised computing, and developed smartphones and handheld devices. |
| Lady Ada Lovelace make a significant contribution to the development of the Analytical Engine.  Explain the purpose of the ‘Analytical Engine’.  The Analytical Engine was to be a general-purpose, fully program-controlled, automatic mechanical digital computer. It would be able to perform any calculation set before it. | What is the difference between the internet and the World Wide Web (WWW)?  The internet is a global network of computer networks and the World Wide Web is the ability of acquiring information using the internet. | How did the introduction of the smart device change how we access the internet in our everyday lives?  It allowed users to access the internet on the go and not to be confined to a desktop or laptop computer. It’s small and lightweight design made them very portable and easy to carry around. Another selling point is how multi-functional these devices are. You are now able to access apps to look at the news, shop, bank and access media services such as Spotify and Netflix whenever you want.  Students responses will vary. |
| Explain how the World Wide Web works.  The World Wide Web is a huge network of hyperlinked documents (contain links in the text of a Web site you can click on) that are accessible over the Internet. These documents contain links to related supporting graphics, images, videos, and to other documents, and are usually grouped together as a Web site and stored on a computer connected to the Internet (Web Host) and are viewed with a Web browser on a computer or other smart device. |