Lesson plan

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| Topic 2 Use and selection of online systems |
| Learning Objectives:   * Describe: * systems that enable and support remote working: VPNs, remote desktop technologies * factors affecting the use and selection of online systems: security, cost, ease of use, features, connectivity |
| Content |
| Starter  PowerPoint Guide: Topic 2 Use and selection of online systems  Explain to students about remote working, if they don’t yet know. The emphasis in this topic is that remote workers need to have IT support. The specification deals with VPNs (which encrypt connections) and remote desktop technologies (which allow support technicians to use a remote computer). At this point, students may recommend other technologies that help remote workers – for instance, Voice over IP (VoIP) is very useful for remote workers as they can have a local phone number but be anywhere in the world to take the calls.  Main  Remote working security  We first look at the security surrounding remote workers. Many of these security risks touch upon online systems in general, so you may wish to ask the question from that perspective too. Remote workers in public or shared locations are particularly vulnerable to Wi-Fi man in the middle attacks and stolen devices, which are likely to hold personal information and passwords.  Virtual Private Networks (VPNs)  Virtual Private Networks (VPNs) allow people to create a secure connection to another network over the Internet. VPNs can be used to access region-restricted websites and shield a user’s browsing activity from prying eyes on public Wi-Fi. These days, VPNs are popular for this second use, however, they originally were just a way to connect business networks together securely over the Internet or allow a worker to access a business network from home.  Case study: Nord VPN  A company’s VPN will allow a secure connection to their network. For personal users, they do not have a network they wish to connect to, but in places like hotels and airports they will want to connect to the Internet securely (without the risks of unencrypted Wi-Fi). Nord VPN is one such provider. It allows people to connect securely to Nord’s servers, which then connect to the Internet. Such systems will also allow users to connect to servers in their home country. This allows them to get around restrictions (such as for video streaming) when they are on holiday. The onion router (Tor) is an encrypted network which allows communications to the Internet in a way that is very hard to track. It is not necessary for businesses but can be useful to people such as journalists and whistle-blowers.  Give out **Worksheet 2** and ask students to do **Task 1.**  Topic 2 Worksheet 2  Topic 2 Worksheet 2 Answers  Remote support, desktop and working technologies  Students are likely to have experienced IT support in their school or college. For remote workers, it isn’t practical to travel to see them, so remote support software is used. This requires the name/IP address of the computer and a password. Once entered they are able to use the computer as if they were sitting directly at it. Some students may have experienced remote support with their own computers, or they may have helped someone remotely using software such as TeamViewer. If so, ask them to discuss how such software works and their experience of using it.  Take students through the other slides on remote desktop technologies and remote working technologies.  Productivity  Remote working can improve the productivity of workers as the statistics given show. Whilst some workers may be more productive, it is important to note that this isn’t always the case. In terms of remote support, it has a large productivity value in that an IT support engineer can save a large amount of travel time. Links to the studies used: <https://www.cosocloud.com/uncategorized/connectsolutions-survey-shows-working-remotely-benefits-employers-and-employees> <https://workplacetrends.com/the-work-connectivity-study/>  Ask students to do **Task 2** and **Task 3** on the worksheet.  Online system choice  A number of factors are used in choosing systems. The first slide discusses security, including the use of HTTPS/SSL (Secure Hypertext Transfer Protocol/Secure Sockets Layer) for establishing a secure connection to websites. Ask students for further factors that affect the choice of online systems. Answers are given on the next slide and each of these factors are discussed on the following slides.  Cost  Many online systems that students use will be free and paid for by advertising. Most companies pay for their online services either monthly or yearly. There will be other costs involved and these are given on the answers slide.  Ease of use  Students are likely to have used online systems such as social networks and office suites. When considering what makes them easy to use, ask them to make comparisons and explain what they like/dislike about it. Some areas to consider might be how easy it is to use on different devices or to achieve certain objectives. You may also wish to discuss features of the interface such as button size and clarity of text.  Ask students to do **Task 4** on the worksheet.  The final factors to consider when choosing online systems are features and connectivity.  Features  Students are likely to know many features of online software they use; however, they are unlikely to have much experience of such systems on a company scale. For instance, if you have 200 new employees joining a company, how do you set up all the accounts? How much storage do they each require? How easy these processes are, may well affect the choice of such a system. There may also be a legal need to keep a record of all files/emails ever created by users and store them for a number of years. Again, these are not features that personal users generally need.  To show features of business collaborative software that has a productivity focus, play the video ‘What is Slack?’ <https://www.youtube.com/watch?v=9RJZMSsH7-g>. This tool was generating over $400 million per year when it floated on the New York Stock Exchange in June 2019.  The questions on the slide ask students to consider online software that they use, and the features offered. The reason for asking how many features students don’t use is to try and establish that they may be paying for services unnecessarily.  Connectivity  When choosing online systems, the type of connection used can be critical. For instance, a company that makes all of its customer relationship management (CRM) software available in an online system will have a big problem if their Internet connection goes down. As such, companies have very reliable Internet connections and they may have a backup line too. Ask the questions on the slide and go through the following answers slide.  Ask students to do **Task 5** on the worksheet.  Plenary  Ask students to fill in the blanks with the words given at the bottom of the slide. Answers are given on the following slide.  Hand out **Homework 2**.  Topic 2 Homework 2  Topic 2 Homework 2 Answers |