


Lesson 1

| | | | |
|--|--|---|--|
| Class: Year 7 Stage 4 | | Date: 17th March | Time: Start: 10:00am - Finish: 11:00am |
| Technologies Context Area: Technology Mandatory - Digital technologies | | Lesson Topic: Network types and basics | |
| Recent Prior Experience Ss have previously learnt about investigating how colours are represented in images and videos, for example manipulating red, green and blue (RGB) colours in an image editor (ACTDIK024). Students are familiar with the safe use of ICT and know how to use all applications present in the lesson. They are also confident with group work, basic literacy and numeracy skills. | | | |
| Syllabus Outcome: - TE4-7DI explains how data is represented in digital systems and transmitted in networks | Indicators of Learning for this lesson: Content descriptor: explore how data is transmitted and secured in wired, wireless and mobile networks (ACTDIK023) Elaboration: explain that networks have components that control the movement of data, for example, routers, hubs, switches and bridges manage data traffic and that the characteristics of these components impact on the operation (speed and security) of network Success Criteria: Students can confidently say: - Students understand the difference between Local area networks and Wide area networks - Students understand the purpose of network connectivity devices (components) and how they make up networks | | Assessment: Learning activities Ss understand the function of each component of physical networks by identifying and matching each description to the name of the component. Ss are able to differentiate between LAN and WAN through writing down examples of each and understanding why the networks are used in specific settings Formative assessment ‘Two Minute Paper’ - ss will be prompted with headings e.g. LAN, routers etc and will write down everything they know. T will assess how well they have met the goals of the lesson. - Ss will share their network workbooks which will be informally assessed and marked to see whether they have understood each indicator or learning, and feedback will be provided. |
| Any safety and ethical issues to be considered: - Ethical use of Computers and the Internet - ICT safety - when students use their laptops, monitor the classroom to ensure they are on task | Resources: <i>List resources you used in preparing the lesson AND those used in the lesson implementation.</i> - whiteboard, laptop, projector/smartboard, whiteboard marker, network workbook (premade) - YouTube video ‘types of networks’ HERE | | |

| | |
|---|---|
| <ul style="list-style-type: none"> - Bags should be out of the way to avoid trip hazards - Power outlet cords - Treating everyone with respect - Plan groups prior to class to avoid distractions | <ul style="list-style-type: none"> - YouTube video 'How computer networks connect and work' HERE - Network online workbook - Image meme link HERE - Padlet HERE |
|---|---|

| Strategies & link to indicators of learning | Timing | Sequence: How is the lesson taught | Resources & Link to assessment | Differentiation |
|--|--------|---|--------------------------------|--|
| INTRODUCTION | | | | |
| behaviour management: Promoting positive behaviour Discuss learning goal Direct instruction | 2 min | (T) Meets Ss outside where they are lined up in 2 lines (T) <u>welcomes</u> students into the classroom and explains today's agenda and expectations of the lesson (T) <u>Praises</u> (Ss) on being efficient and settling down. (T) <u>Marks</u> the roll | Roll | Ensure Learning Support assistant (LSA) is in the classroom sitting with the two Ss Do not place directly under bright lights or where glare occurs |

| | | | | |
|--|-------|--|--|--|
| <p>Introduction to networks</p> <p>Class discussion</p> <p>Brainstorm using Padlet</p> <p>General capabilities:</p> <p>ICT skills</p> <p>Critical and creative thinking</p> <p>Personal and social capability</p> <p>Literacy skills</p> <p>Metacognition: Think pair share with an incorporation of ICT. Ss think about networks, talk with their elbow partner and share their responses on Padlet and then the class discuss answers.</p> | 8 min | <p>(T) <u>Projects</u> a meme on the board to capture (Ss) attention</p>  <p>(Ss) <u>React</u>= laughing, some understand, some don't</p> <p><u>Think pair share</u>:</p> <p>(T) <u>Settles</u> class and <u>Asks</u> (Ss) “Based on this image, think about what it means and explain if you have ever done something similar. Discuss your idea with your elbow partner and be ready to share.</p> <p>(Ss) <u>React</u> = some sharing & commenting, some don't understand</p> <p>(T) <u>Informs</u> students that the meme is talking about computer networks which is the new topic they will be starting.</p> <p>(T) <u>Creates</u> a Padlet to see what (Ss) already know about networks</p> <p>(T) <u>Prompts</u> students to open laptops and get onto Padlet and write down ideas of what a ‘Network’ means with the help of their partners</p> <p><u>Encourage</u> Ss to quickly share ideas with their elbow partner</p> <p>(Ss) <u>React</u>= Starting to interact and share ideas</p> <p>(T) <u>Praises</u> Ss and discuss some of the answers</p> <p>(T) <u>Inform</u> Ss that we will be exploring networks in detail</p> | <p>Whiteboard</p> <p>whiteboard marker</p> <p>pen</p> <p>paper</p> <p>projector</p> <p>Image meme link HERE</p> <p>Padlet</p> <p>T informally assess what students may already ‘Know’ about networks which gives an indicator of how much detail is needed</p> | <p>Verbally repeat clearly what is being written on board</p> <p>Make sure someone is able to help Ahn and Tuka when sharing ideas</p> <p>Share personal experiences or stories about networks in real life settings</p> |
| DEVELOPMENT | | | | |
| Activity 1: Learning components of networks | | <p>PowerPoint:</p> <p>(T) <u>Opens</u> PowerPoint and asks (Ss) to open the online “network workbook” that has been shared with them via google drive</p> | <p>laptop</p> <p>projector</p> <p>paper</p> | <p>Give specialised workbook which has larger text and more space for the ss who are visually impaired</p> |

| | | | | |
|---|--------|--|---|--|
| Literacy skills | | <p>(Ss) <u>React</u> = nodding/putting up their hand if they have any questions</p> <p>(T) <u>Continues</u> PowerPoint and <u>explains</u> in detail important components of networks while <u>instructing</u> (Ss) to continue taking notes in their workbooks</p> <p>(T) <u>Asks</u> Ss to complete the activities in their online workbook</p> <p>(T) <u>Allows</u> (Ss) to use their laptops to research and answer the questions and work with their elbow partner</p> <p>(T) <u>Assess</u> the classroom and behaviour of (Ss) working.</p> <p>(T) <u>Walk</u> around the class frequently, <u>praise</u> any good behaviour and encourage (Ss) to stay on task.</p> <p>(T) <u>Provide</u> examples if students are struggling and watch out for (Ss) not engaged.</p> | | Dictogloss activity, LSA reads out text describing networks and components, Ahn preforms task writing down words that stand out |
| CLOSURE | | | | |
| <p>Recap of key concepts of the lesson.</p> <p>Metacognition- 2-minute Paper</p> <p>Literacy skills</p> | 10 min | <p>(T) <u>Informs</u> (Ss) to stop working on their online book</p> <p>(T) <u>Sets</u> homework “finish the questions under lesson 1 and complete the PMI under the heading ‘homework’”</p> <p>(T) <u>Settles</u> class and informs (Ss) that it is 2 Minute Paper time.</p> <p>(Ss) <u>React</u>= get out a piece of paper and pen</p> <p>(T) <u>Writes</u> key concepts on the board which will stimulate Ss knowledge. E.g. LAN, Hub, Wired etc.</p> <p>(T) <u>Says</u> to (Ss) “You are to write down as many important things you learnt today using the headings to help” and “What you understood the least today”.</p> <p>(T) <u>Starts</u> the timer on the projector and says ‘GO!’</p> <p>(T) <u>Says</u> “Pens down” and asks (Ss) to place the piece of paper with their names on the (T) desk</p> <p>(T) <u>Thank</u> and <u>praise</u> (Ss) for their hard work and cooperation</p> | <p>Paper</p> <p>Pen</p> <p>Projector</p> <p>Laptop</p> <p>Whiteboard</p> <p>Whiteboard marker</p> <p>Formative assessment</p> <p>‘Two Minute Paper’- ss will be prompted with headings e.g. LAN, components of networks etc and they will write down everything they know.</p> | <p>Be understanding that Ahn will not get through this work</p> <p>Give an audio recording to listen to which goes over the content</p> <p>Allow Tuka to share his experiences with his family and the teacher through storytelling.</p> |