

## Lesson Plan (9INFO1)

<b>Class/Grade/Stage:</b> Year 9 (9INFO1)		<b>Date:</b> 19/06/2023	<b>Time: Start:</b> 10:55am <b>Finish:</b> 12:35pm
<b>Key Learning Area(s):</b> Information and Software Technology		<b>Lesson Topic:</b> Networking Systems and the Components of a Network	
<b>NESA Australian Professional Standards for Teachers</b>		<b>1.5</b> Differentiate teaching to meet the specific learning needs of students across the full range of abilities. <b>2.1</b> Content and teaching strategies of the teaching area <b>2.6</b> Information and Communication Technology (ICT) <b>3.3</b> Use teaching strategies <b>3.4</b> Select and use resources <b>4.2</b> Manage classroom activities <b>4.5</b> Use ICT safely, responsibly and ethically	
<b>Recent Prior Experience:</b> Stage 4: Digital Technology- from this prior course, students should have an understanding of how a computer works and basic terminology eg. Wireless and wired.  This is a new topic to the students and therefore they are not expected to have a vast amount of background knowledge.			
<b>Syllabus/Syllabi Outcome(s):</b>  <b>5.2.1</b> Describes and applies problem-solving processes when creating solutions.  <b>5.2.2</b> Designs, produces and evaluates appropriate solutions to a range of challenging problems.  <b>5.2.3</b> Critically analyses decision-making processes in a range of information and software solutions.	<b>Indicators of Learning for this lesson-</b> learning intentions and success criteria: <u><b>Learning Intention:</b></u> Students will develop the ability to identify what a network is and be able to comprehend the various components that make up a network system. Students will also be able to recognise the functions and roles of different network components, enabling them to effectively design their own home network. <u><b>Success criteria:</b></u> <ul style="list-style-type: none"><li>- Students will be able to identify a network and multiple components within a network system.</li><li>- Students can conduct individual research and summarise findings.</li><li>- Students understand the purpose and significance of a network.</li><li>- Students are able to effectively design and produce their own solution, applying problem-solving processes.</li><li>- Students utilise decision-making skills to determine the most reliable solution.</li></ul>		<b>Assessment:</b>  <b>Brainstorm at the beginning of the class: Assessment of students prior knowledge.</b> This will be answering the questions “what is a network?” and “what is the significance of a network within computer systems?”  <b>Worksheet:</b> Worksheet will be submitted through Google Classroom and marked upon completion to assess students understanding of the topic.  <b>Formative Assessment:</b> Students are provided with a scenario where they are required to create their own network to suit the brief.

<p><b>Any safety issues to be considered (APST 4.4.1):</b></p> <p>Consideration that students are using ICT software appropriately (APST 4.5).</p>	<p><b>Resources:</b></p> <p><b>Worksheets:</b>          Describing a range of network components (sourced from St. Andrews College)          Extension Worksheet: A computer network (sourced from St. Andrews College)</p> <p><b>Related to Final Activity:</b>  <i>Activity: Printed images of network components</i>          Printed images of each network component (created by Sophie Voll)          Two colours of yarn          Tape</p> <p><b>Videos:</b>          Computer Applications Technology. (2020, April 15). <i>Level 1 Networks Lesson 2 :</i>  <i>Components of a Network.</i> YouTube. <a href="https://www.youtube.com/watch?v=Itwk3BJ4GPY">https://www.youtube.com/watch?v=Itwk3BJ4GPY</a></p> <p>Network Direction. (2018, April 19). <i>Introduction to Networking   Network Fundamentals Part 1.</i>          YouTube. <a href="https://www.youtube.com/watch?v=cNwEVYkx2Kk">https://www.youtube.com/watch?v=cNwEVYkx2Kk</a></p>
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**Note: Printed resources are attached at the end**

## LESSON SEQUENCE

Lesson Content / Indicators of Learning/ Teaching Strategies ( <i>What is Taught</i> ):	Timing (mins)	Learning Experiences: ( <i>How it is taught</i> )	Resources and Organisation:
<b>INTRODUCTION</b>			
<p>Commencing a new unit: Networking</p> <p>Students appreciate and understand the learning intentions and success criteria.</p> <p><b>Group Discussion</b> Acknowledgement of any prior knowledge. <u>Link to Success Criteria:</u> Students will be able to identify a network and multiple components within a network system. <u>Key Questions:</u> What do we think a network is? What makes up a network?</p> <p><i>Note: Checklist has been developed for child with ADHD. This allows him to complete tasks and also outlines when he is able to have 5 minute drawing breaks.</i> <b>Code: Highlighted times represent his drawing breaks.</b></p>	<p>5mins</p> <p>15mins</p> <p>5mins</p>	<p>Students will be introduced to the new unit as their digital media unit has been finalised.</p> <p>The lesson will be introduced as the teacher will state the learning intentions and success criteria for the lesson.</p> <p>Students will be prompted in a group discussion surrounding the following question: "What do you think of when you hear the work network?" The students responses will be recorded on the board and discussed as a class. Following this discussion, the teacher will explain that a network is a collection of interconnected devices which communicate and share information.</p>	<p>Laptop and projector screen: This will enable the learning intentions and success criteria to be displayed.</p> <p>White board/marker</p>
<b>DEVELOPMENT</b>			
<p><b>The Role of a Network:</b> Group Discussion</p> <p><b>Videos: (APST 2.6)</b> 1. Introduction to Networking 2. Components of a Network <u>Link to Success Criteria:</u> Students will be able to identify a network and multiple components within a network system.</p>	<p>5mins</p> <p>15mins</p> <p>5mins</p>	<p>Students will recognise the role of a network by brainstorming the importance of them in various scenarios. For example: At home, in an office building, at school, a bank (ATM machines), companies with international offices, the internet.</p> <p>Students will watch two videos. The first video will provide a brief introduction to networking and the second will extend on from this, describing the components of a network. <i>Note: Student with drawing breaks may draw during the videos provided that he does not wear headphones.</i></p>	<p>Laptop and projector screen</p>



### Building a Network Activity- Sample Response:

Your ISP (Internet Service Provider) supplied router is continually dropping out and crashing. Mum and dad have asked you to investigate and build a new network that can be used in your large house to fix these problems with multiple devices that need a variety of connections.

#### Key:

Red = wired

Blue = Wireless

Note: There are multiple solutions to this activity. Students **do not** need to use each card provided

