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| **Assessment task**Investigation | **Task title:** Network Risk Assessment**Purpose:** Students select appropriate hardware for a gaming PC, identify cyber-security threats including phishing, and explain differences in the transmission and security of data over networks.  |
| **Achievement standard**By the end of Year 8 students develop and modify creative digital solutions, decompose real-world problems, and evaluate alternative solutions against user stories and design criteria. Students acquire, interpret and model data with spreadsheets and represent data with integers and binary. They design and trace algorithms and implement them in a general-purpose programming language. Students select appropriate hardware for particular tasks, explain how data is transmitted and secured in networks, and identify cyber security threats. They select and use a range of digital tools efficiently and responsibly to create, locate and share content; and to plan, collaborate on and manage projects. Students manage their digital footprint |

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| **Relevant aspects of the Achievement standard** | **Relevant content descriptions** | **Australian Curriculum Elaborations** | **Alignment to the task**  |
| **Knowledge and Understanding** | select appropriate hardware for particular tasks | **AC9TDI8K01**explain how hardware specifications affect performance and select appropriate hardware for particular tasks and workloads | * Selecting appropriate hardware for particular tasks, for example choosing a powerful graphics card for computer gaming or large external storage for video editing.
 | * Students select and list of hardware components needed for the PCs that will be used at the Esports tournament (6 PCs for 3v3 Rocket League)
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| explain how data is transmitted and secured in networks | **AC9TDI8K02**investigate how data is transmitted and secured in wired and wireless networks including the internet | * Describing physical networks and comparing their properties, for example the bandwidth, latency and reliability of wired versus wireless networks.
* explaining how problems occur in network communication and how they can be solved, for example routers can drop packets and how Transmission Control Protocol (TCP) uses acknowledgements to confirm packets have been received
 | * Students detail the network hardware requirements and setup for the tournament, including:
	+ an explanation of a local area network (LAN) compared to a wide area network (WAN)
	+ a comparison of wired and wireless network setups
	+ a network map explaining how the tournament will be set up.
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| **Processes and Production Skills** | identify cyber security threats | **AC9TDI8P13**explain how multi-factor authentication protects an account when the password is compromised and identify phishing and other cyber security threats | * identifying the common techniques used in phishing scams to identify and exploit susceptible users, for example using an email address from an unofficial domain when pretending to be an online retailer, or including grammatical errors to help filter out users who are more likely to detect the scam
 | * Students complete the provided threat assessment form, identifying two potential cyber-security threats and recommending appropriate risk management strategies.
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