

<b>Subject:</b> DIG07	<b>Classes:</b> All year 7 classes	<b>Unit title:</b> Esports Information Systems	
<b>Year Level:</b> 7	<b>Term:</b> 2	<b>Duration:</b> 10 Weeks	



## Unit Plan Overview

In this unit, students will get an introduction to the basics of Esports and Excel. The unit's focus is on building students' knowledge and skill in both Microsoft Excel and Esports (Mario Kart and Minecraft). Students will explore the world of Esports from the basics of competitive gaming, to the complexities of networking a tournament together. Through this real-world context, students will collect, analyse and visualise data in Excel, learning how to use functions such as conditional formatting and graphing features as well as IF statements.

For this unit's assessment item, students work in teams to set up and run an Esports session on the Nintendo Switches. Students will also collect race data from their classmates and use this to collate and graph overall race data across the classroom and determine the best Esports champions in their class. All of this will ultimately require students to implement an online, cloud-based information system and evaluate this information system against other solutions.

For further information to support teaching the unit, view the:

- Year 7 Digital Technologies Plan, the Unit's Assessment Alignment Planner, Assessment task and exemplars and resources Sharepoint.
- Esports resources supplied on Sharepoint






Throughout the unit, ensure all students have opportunities to develop their higher-order thinking skills. Students develop skills in thinking when they are encouraged to reflect, inquire, generate, and analyse, synthesise and evaluate.

## Achievement Standard

By the end of Year 8, students **distinguish between different types of networks and defined purposes**. They explain how text, image and audio data can be represented, secured and presented in digital systems.

Students plan and manage digital projects to create interactive information. They define and decompose problems in terms of functional requirements and constraints. Students design user experiences and algorithms incorporating branching and iterations, and test, modify and implement digital solutions. They **evaluate information systems and their solutions in terms of meeting needs, innovation and sustainability**. They **analyse and evaluate data from a range of sources to model and create solutions**. They use appropriate protocols when communicating and collaborating online.

Assessment Dimensions	
<b>Knowledge and Understanding</b>	<b>Processing and Production Skills</b>
<b>Content Descriptor:</b> <ul style="list-style-type: none"> <li>Investigate how data is transmitted and secured in wired, wireless and mobile networks, and how the specifications affect performance (ACTDIK023)</li> <li>Evaluate how student solutions and existing information systems meet needs, are innovative, and take account of future risks and sustainability (ACTDIP031)</li> </ul>	<b>Content Descriptor:</b> <ul style="list-style-type: none"> <li>Analyse and visualise data using a range of software to create information, and use structured data to model objects or events (ACTDIP026)</li> <li>Acquire data from a range of sources and evaluate authenticity, accuracy and timeliness (ACTDIP025)</li> </ul>
<b>At the end of the unit students will KNOW:</b> (Declarative Knowledge)	<b>At the end of the unit student will be able to DO:</b>
<ul style="list-style-type: none"> <li>The networking basics of Nintendo Switches for setting up an Esports tournament.</li> <li>The usefulness of an online information system in comparison to an offline or physical information system.</li> <li>How to effectively and safely compete in Esports at Forest Lake State High School</li> <li>How IP addresses, networks and basic router logs can be used in UplinkOS</li> </ul>	<ul style="list-style-type: none"> <li>Collate data in an online Excel spreadsheet.</li> <li>Use Excel graphing functions to create graphs with multiple data points.</li> <li>Use Conditional Formatting to highlight certain aspects of the data</li> <li>Create complex IF statements for Excel formulas.</li> <li>Compete in Mario Kart as an Esport and show teamwork and communication skills</li> <li>Complete missions in UplinkOS</li> </ul>
<b>Essential Vocabulary</b> (to be explicitly taught)	Esports, sportspersonship, networking, hardware, devices, Mario Kart, Win, Loss, Mental wellbeing, Excel, Spreadsheet, Data, Visualising data, graphing. Functions, conditional statements

Assessment Summary		
Summative Assessment Task/s Summary	Type	Date
Project – Students work in groups to run an Esports competition and then work individually to collate data, generate graphs and use Excel as an online information system. Students complete networking missions in the game UplinkOS to better understanding networking and data transmission.	Excel File and Word Document ZIP.	Week 6-9
System and School Priorities		
<b>General Capabilities</b>	 Literacy –  Numeracy –  Information and Communication Technology (ICT) Capability –  Critical and Creative Thinking –  Personal and Social Capability	
<b>Cross-Curriculum Priorities</b>		
<b>ASoT</b>	Links to OnePortal FLSHS Pedagogical Handbook. Click thorough the document to find FLSHS and ASOT specific pedagogy and resources	

<u>Reading Focus</u>	General reading strategies and specific unit focus
<b>Literacy Focus</b>	General literacy strategies and specific unit focus
<u>Numeracy Focus</u>	General numeracy strategies and specific unit focus
<u>ICT Focus</u>	General ICT ideas and specific unit focus
<u>Differentiation</u>	Links to OnePortal site with FLSHS specific information to help teachers

Teaching Sequence - Overview		
Duration	Topic	Notes
Week 1	<ul style="list-style-type: none"> <li>Introduction to Nintendo Switches and Esports (Mario Kart)</li> <li>What is Esports? Who can be involved? What are the avenues (competing, casting, hosting, and sponsorship)?</li> </ul>	
Week 2	<ul style="list-style-type: none"> <li>Mind map the various components of an Esports tournament (hardware, software, networking) in regard to Nintendo Switches</li> <li>Introduction to Minecraft Edu Survival Challenge (while students play Mario Kart as well)</li> </ul>	
Week 3	<ul style="list-style-type: none"> <li>Discuss the Achievement Standard: <b>Students distinguish between different types of networks and defined purposes.</b></li> <li>Collecting data on paper (physical information system) and on digital information systems (Excel online)</li> <li>Networking two Nintendo Switches together</li> <li>Mario Kart and Minecraft Edu training</li> </ul>	Two switches for a lesson required to demonstrate networking
Week 4	<ul style="list-style-type: none"> <li>Discuss the Achievement Standard: <b>They analyse and evaluate data from a range of sources to model and create solutions.</b></li> <li>Generating Graphs from our data</li> <li>Collecting lap data versus overall race data</li> <li>Working in a team and being team players</li> <li>NAPLAN</li> </ul>	
Week 5	<ul style="list-style-type: none"> <li>Discuss the Achievement Standard: <b>They analyse and evaluate data from a range of sources to model and create solutions.</b></li> <li>Students begin exploring the provided Excel template for their assessment task and adding classmate names and data</li> <li>Discussions around team work and competitive gaming</li> <li>NAPLAN</li> </ul>	Assessment handed out Teams chosen
Week 6	<ul style="list-style-type: none"> <li>Discuss the Achievement Standard: <b>Students distinguish between different types of networks and defined purposes.</b></li> <li>Teacher begins allowing students to run their Esports tournament as per the assessment task. Other students record the results per lap in the Excel spreadsheet</li> <li>UplinkOS missions</li> </ul>	Run in-class Esports tournaments (run by students)
Week 7	<ul style="list-style-type: none"> <li>Students reminded of how to graph their data and students finish off running their Esports Mario Kart sessions.</li> <li>UplinkOS missions</li> </ul>	
Week 8	<ul style="list-style-type: none"> <li>Discuss the Achievement Standard: <b>Students evaluate information systems and their solutions in terms of meeting needs, innovation and sustainability</b></li> <li>Students finalise their graphs and write their evaluation paragraphs</li> <li>Teacher-led teaching around the Compare and Contrast paragraph and the power sentence</li> </ul>	
Week 9 – 10	<ul style="list-style-type: none"> <li>Students build teamwork and social skills playing Keep Talking and Nobody Explodes with a Year 7-wide competition for best bomb defusal time.</li> </ul>	Assessment due

Lesson	Content and Skills	Resources
1.1	<p><b>Learning Goal:</b> We will be able to explain what Esports is and how Forest Lake SHS implements Esports club.</p> <p><b>Lesson starter discussion:</b> what video games do you play, watch, or know of?</p> <p><b>Think, pair, share:</b> what makes video games so appealing and rewarding?</p> <p><b>Class Discussion and writing on board:</b> what do you think of Esports? Is it a real sport? Opinions and thoughts.</p> <p><b>Watch two Esports videos</b></p> <p><b>Presentation around Esports Club/Esports Y9 subject.</b></p> <p><b>Introduction to Nintendo Switches:</b> use the remaining lesson time to group students into teams to compete in Super Smash Bros. All students should be involved.</p>	<p>Esports videos:</p> <ul style="list-style-type: none"> <li>• <a href="https://www.youtube.com/watch?v=nM3-6LFdd7M&amp;ab_channel=Astralis">https://www.youtube.com/watch?v=nM3-6LFdd7M&amp;ab_channel=Astralis</a></li> <li>• <a href="https://www.youtube.com/watch?v=j5QahFFHv0I&amp;ab_channel=LeagueofLegends">https://www.youtube.com/watch?v=j5QahFFHv0I&amp;ab_channel=LeagueofLegends</a></li> <li>• Nintendo Switch</li> <li>• Super Smash Bros.</li> </ul>
1.2	<p><b>Learning Goal:</b> We will be able to control our player in Mario Kart and explain the various career opportunities involved in the Esports industry.</p> <p><b>Lesson starter:</b> pick one character from Mario Kart (project characters on board) and come up with as many words to describe the character as possible. This is a key skill for casting Esports as casters need to be able to quickly think on their feet to describe different characters in games. The more memorable the description, the better.</p> <p>Have students share some descriptions/descriptive words.</p> <p><b>Students work in groups:</b> groups need to choose one career opportunity for Esports (caster, player, tournament host, business manager, coach etc) and create a poster/mindmap that explores this.</p> <p><b>Super Smash Bros:</b> any spare time should be used to play Smash and begin discussing strategy.</p>	<ul style="list-style-type: none"> <li>• Need to project the character selection screen from Mario Kart onto board.</li> <li>• Nintendo Switch</li> <li>• Super Smash Bros.</li> <li>• Just Dance</li> </ul> <ul style="list-style-type: none"> <li>• A2 paper provided for each group</li> </ul>

Lesson	Content and Skills	Resources
2.1	<p><b>Learning goal:</b> We will be able to explain the various components of an Esports tournament including the hardware, software, networking and human components.</p> <p><b>Lesson starter:</b> students brainstorm and list as many hardware components as they can think of that relate to Esports (PC hardware, console hardware).</p> <p><b>Mind Map:</b> talk to students about effective mind mapping and why mind maps are useful. Students then break into groups and use the laptops to research and then mind map (on A2 paper) what they think a FLSHS Mario Kart Esports tournament would involve. Including the hardware, software, networking and human components.</p> <p><b>Esports Tournament Hosts:</b> teacher presents some current Esports tournament hosts to the class and walks through their websites/set ups.</p>	<ul style="list-style-type: none"> <li>• Super Smash Bros.</li>   <li>• A2 paper provided for each group</li>   <li>• <a href="http://www.dota2.com/international/overview">http://www.dota2.com/international/overview</a></li> <li>• <a href="https://lolesports.com/en_US/worlds">https://lolesports.com/en_US/worlds</a></li> <li>• <a href="https://www.highschoolsportsleague.com/">https://www.highschoolsportsleague.com/</a></li> <li>• <a href="https://www.thefusecup.com.au/">https://www.thefusecup.com.au/</a></li> </ul>
2.2	<p><b>Learning goal:</b> We will be able to understand strategy in Mario Kart and Minecraft Edu Survival and how to deal with gaming rage.</p> <p><b>Lesson starter:</b> Students are to find a meme about gaming rage that they feel represents their own competitive or gaming rage.</p> <p><b>Gaming rage:</b> What is it? Why does it occur? Strategies to prevent gaming rage and deal with our emotions in a safe and constructive manner.</p> <p><b>Watch video on raging/tilting</b></p> <p><b>Minecraft Edu:</b> Introduction to Minecraft Edu and the Esports survival challenge</p> <p><b>Smash:</b> Start to discuss different strategies for Super Smash and have students use specific strategies when playing.</p>	<ul style="list-style-type: none"> <li>• <a href="https://www.youtube.com/watch?v=n9A8VJBh_Yc&amp;ab_channel=ExtraCredits">https://www.youtube.com/watch?v=n9A8VJBh_Yc&amp;ab_channel=ExtraCredits</a></li>   <li>• Nintendo Switch</li> <li>• Super Smash Bros.</li> </ul>

Lesson	Content and Skills	Resources
3.1	<p><b>Learning goal:</b> We will be able to explain the role of information systems in society, past and present, and how LAN networks can be used on the Switches.</p> <p><b>Lesson starter:</b> List as many 3 or 4 letter words as possible from the letters in "Information systems." Compile these on the board after 5 minutes.</p> <p><b>Information systems:</b> What are they? What is information? What is data? How do we store this information past/present/future?</p> <p><b>Networking Nintendo Switches:</b> Demonstrate to students how to set up a networked pair of Switches for Mario Kart. Talk about what kind of network this is (WLAN) and the hardware required in each Switch to make this work. Test network range by moving the Switches further and further apart to see if there is any network degradation – also talk about controllers and Bluetooth connection.</p> <p><b>Network map:</b> Teacher talks to students about network maps, what they represent and how they are constructed. Students develop a network map of their home network in pairs on A2 paper.</p> <p><b>Discuss the Achievement Standard:</b> Students distinguish between different types of networks and defined purposes.</p>	<ul style="list-style-type: none"> <li>• Information systems PowerPoint</li>   <li>• 2 Nintendo switches for networking and demonstrating LAN functionality</li> <li>• Nintendo Switch</li> <li>• Mario Kart</li>   <li>• A2 paper</li> </ul>

Lesson	Content and Skills	Resources
3.2	<p><b>Learning goal:</b> We will be able to use physical and digital information systems to collect Mario Kart data.</p> <p><b>Lesson starter:</b> students brainstorm as many information systems as they can think of from their everyday lives.</p> <p><b>Generating a physical information system:</b> what would a physical information system for recording Just Dance data look like? Draw an example in books. How would you update the data? Delete the data? Add new data? Can you sort this data efficiently?</p> <p><b>Generating a digital information system on Excel:</b> Teacher walks students through accessing Excel online and how to set up a basic Just Dance information system that exists in the cloud. How to CRUD. Create, read, update data, delete data.</p> <p><b>Using Information Systems with Just Dance:</b> Use remaining lesson time to have students compete in Just Dance and record their data (score) in their book info sys and the Excel info sys.</p>	<ul style="list-style-type: none"> <li>• Nintendo Switch</li> <li>• Super Smash Bros.</li> <li>• Just Dance</li>   <li>• Excel</li> </ul>
4.1	<p><b>Learning goal:</b> We will be able to collect significant data for use in our information system.</p> <p><b>Lesson starter:</b> Think back to last lesson and draw up a Venn diagram of the pros and cons of physical versus digital information systems (10 mins).</p> <p><b>Collecting data:</b> Have students race in Mario Kart in their teams and collect data for all classmates. This data should just be their final position at the end of the 3<sup>rd</sup> lap.</p>	<ul style="list-style-type: none"> <li>• Nintendo Switch</li> <li>• Super Smash Bros.</li> <li>• Just Dance</li> <li>• Mario Kart</li> </ul>

Lesson	Content and Skills	Resources
4.2	<p><b>Learning goal:</b> We will be able to visualise our data by generating graphs for comparing and showing the data collected.</p> <p><b>Lesson starter:</b> Students are presented with various bar graphs and dot plots on the board. They will need to identify the winners and losers of each race from these graphs. A class discussion can then be had around what the best way to visualise data of a race is.</p> <p><b>I Do:</b> Teacher shows the students how to take data from last lesson and appropriately graph it in Excel.</p> <p><b>You Do:</b> students then work individually to take their data from last lesson of their group and appropriately graph the data in Excel.</p> <p><b>Minecraft Edu and Mario Kart:</b> Time remaining is spent with students exploring Esports professionalism via Mario Kart.</p> <p><b>Discuss the Achievement Standard:</b> They analyse and evaluate data from a range of sources to model and create solutions.</p>	<ul style="list-style-type: none"> <li>• Nintendo Switch</li> <li>• Mario Kart</li>   <li>• PowerPoint of various graphs</li>   <li>• Excel</li> </ul>
5.1	<p><b>Learning goal:</b> Students will unpack their assessment task and explore the components of the provided online information system for recording their data.</p> <p><b>Lesson starter:</b> Students write a short story documenting their latest experience in either Mario Kart or Minecraft. This should use Write That Essay sentence types and be a creative piece that builds hype and suspense as they tell the story of their latest gaming experience. (This gives students a soft introduction into casting and recounting events of a game)</p> <p><b>Information System:</b> Teacher walks students through the layout of their online information system (an online shared Excel document for each group). Teacher demonstrates the conditional formatting functionality and Excel equation calculator.</p> <p><b>Mario Kart:</b> Students begin recording their data into the information system for assessment and playing Mario Kart to build data.</p> <p><b>Discuss the Achievement Standard:</b> They analyse and evaluate data from a range of sources to model and create solutions.</p>	<ul style="list-style-type: none"> <li>• Nintendo Switch</li> <li>• Mario Kart</li> <li>• Laptops</li> <li>• Excel</li> </ul>



Lesson	Content and Skills	Resources
5.2	<p><b>Learning goal:</b> We will understand the positive and negative impacts of online gaming and Esports on students and their mental wellbeing.</p> <p><b>Lesson starter:</b> Students develop a mindmap about online gaming, splitting it into the positives and negatives.</p> <p><b>Mario Kart:</b> Students continue from last lesson recording their Mario Kart results into their information system.</p>	
6.1	<p><b>Learning goal:</b> We will be able to demonstrate our understanding of networks and Esports by running an Esports tournament of Mario Kart.</p> <p><b>Lesson starter:</b> Students watch a brief video about networks and how networks operate</p> <p><b>Graphs in Excel:</b> Teachers walks students through the required graphs for the assessment task. This includes graphing the Lap1-3 data for their race and also graphing the points-per-student for the class data. Teacher will demonstrate using a different data set that is based on wins/losses in a game of League of Legends. So, it's not a direct copy of the student's task, but will show them the skills. Students then work with their own info system to graph data.</p> <p><b>UplinkOS:</b> students work through networking problems in UplinkOS game.</p>	<ul style="list-style-type: none"> <li>• Video</li>   <li>• League of Legends data set</li> </ul>
6.2	<p><b>Learning goal:</b> We will be able to understand effective communication and the role it has in ensuring proper, effective teamwork when gaming.</p> <p><b>Lesson starter:</b> Students work in pairs back-to-back, one facing the board and the other facing the back of the room. The teacher draws a picture on the board and the board student must use only limited verbal instructions to get the other student to be able to draw the picture.</p> <p><b>Effective communication:</b> Students create a "Looks like/feels like/sounds like" for Effective Communication on A3 pages in groups of 3/4.</p> <p><b>UplinkOS:</b> students work through networking problems in UplinkOS game.</p>	<ul style="list-style-type: none"> <li>• A3 paper</li> </ul>

Lesson	Content and Skills	Resources
7.1	<p><b>Learning goal:</b> We will be able to identify and utilise effective communication skills to compete in 2v2 Rocket League matches.</p> <p><b>Lesson starter:</b> Review the A3 posters from last lesson looking at effective communication and what it looks/sounds/feels like.</p> <p><b>Rocket League:</b> Students team up in pairs and class runs a Rocket League tournament to determine best RL team. During the tournament, teacher and students should recognise and practice effective communication to work together as a team.</p>	<ul style="list-style-type: none"> <li>• Nintendo Switch</li> <li>• Rocket League</li> <li>• 4 controllers</li> </ul>
7.2	<p><b>Learning goal:</b> We will be able to graph our Mario Kart results and visualise data in multiple ways</p> <p><b>Lesson starter:</b> What does visualising data mean to you? Write a 2-3 sentence description and share with a partner.</p> <p><b>Graphing:</b> Students are given time to complete their Mario Kart graphs for assessment</p>	<ul style="list-style-type: none"> <li>• Nintendo Switch</li> <li>• Mario Kart</li> <li>• Laptops</li> <li>• Excel</li> </ul>
8.1	<p><b>Learning goal:</b> We will be able to utilise WTE compare and contrast paragraphs to discuss information systems.</p> <p><b>Lesson starter:</b> Introduce two different but similar things (eg. Beach holiday vs Rainforest retreat, Netflix vs Disney+) and work with students to create a compare and contrast paragraph.</p> <p><b>Assessment:</b> Let students work on their own C&amp;C paragraph for the assessment.</p> <p><b>UplinkOS:</b> students work through networking problems in UplinkOS game.</p>	<ul style="list-style-type: none"> <li>• Nintendo Switch</li> <li>• Mario Kart</li> <li>• Laptops</li> <li>• Excel</li> <li>• UplinkOS</li> </ul>

Lesson	Content and Skills	Resources
8.2	<p><b>Learning goal:</b> We will be able to utilise screen capture tools to finalise our assessment task</p> <p><b>Screen capture:</b> Have students load up UplinkOS and screencapture their profile (with their level; beginner etc) and bank balance.</p> <p><b>Assessment:</b> Students paste their screen captures into their Excel document, finalise any sections of their assessment, and ensure they have shared their Excel through OneDrive with the teacher as an "online" information system.</p>	<ul style="list-style-type: none"> <li>• Nintendo Switch</li> <li>• Mario Kart</li> <li>• Laptops</li> <li>• Excel</li> <li>• UplinkOS</li> </ul>
Week 9-10	<p><b>Learning goal:</b> We will build teamwork and critical thinking skills (21<sup>st</sup> century skills) to solve problems in Keep Talking and Nobody Explodes</p> <p><b>Lessons:</b> Introduce one Gaming Appreciation topic and then spend time in a yarnning circle discussing experiences and the importance of these. Utilise remaining time to allow students to practice these Gaming Appreciation skills and build 21<sup>st</sup> century skills by competing in KT&amp;NE.</p> <p><b>Topics:</b></p> <ol style="list-style-type: none"> <li>1. Gaming Appreciation</li> <li>2. Motor Skills</li> <li>3. Learning Concepts</li> <li>4. Access health information, products and services</li> <li>5. Self-management</li> <li>6. Interpersonal communication</li> <li>7. Influence of culture, media and technology</li> <li>8. Goal-setting and decision-making skills</li> <li>9. Active participation</li> <li>10. Advocating for Esports</li> </ol>	<ul style="list-style-type: none"> <li>• Nintendo Switch</li> <li>• Mario Kart</li> <li>• Laptops</li> <li>• High School Esports League: Curriculum Handbook</li> </ul>

Unit plan created by: Justin Betts

Date for Review / Evaluation: 1/06/2022

**Unit Review: Betts, Butler, Cagney, Naidoo, Raatz**

**Strengths:** Engaging, relevant, fun, good skill building, well-aligned to curriculum, promotes Esports

**Weaknesses:** NAPLAN, timing, UplinkOS confused some students



**Recommendations:** Rework unit so NAPLAN has less impact – move the Switch stuff forward and work on paper during NAPLAN (helps students to compare paper vs digital). Start UplinkOS in Week 1 and revisit every few weeks when time permits. Students can play at home/in Library. Instead of using a program as intricate as Uplink OS, possibly get the students to start researching what type of network would be required to run an e-sports tournament. What type of protection is needed for online Presence? What would they need to prepare for to ensure safety while casting online.

