

Strand	Knowledge and understanding		Processes and production skills																			
			Creating digital solutions by:																			
	Digital systems	Representation of data	Collecting, managing and analysing data	Investigating and defining		Generating and designing		Producing and implementing		Evaluating		Collaborating and managing										
Content Description	Investigate how data is transmitted and secured in wired, wireless and mobile networks, and how the specifications affect performance (ACTDIK023)	Investigate how digital systems represent text, image and audio data in binary (ACTDIK024)	Acquire data from a range of sources and evaluate authenticity, accuracy and timeliness (ACTDIP025)	Analyse and visualise data using a range of software to create information, and use structured data to model objects or events (ACTDIP026)	Define and decompose real-world problems taking into account functional requirements and economic, environmental, social, technical and usability constraints (ACTDIP027)	Design the user experience of a digital system, generating, evaluating and communicating alternative designs (ACTDIP028)	Design algorithms represented diagrammatically and in English, and trace algorithms to predict output for a given input and to identify errors (ACTDIP029)	Implement and modify programs with user interfaces involving branching, iteration and functions in a general-purpose programming language (ACTDIP030)	Evaluate how student solutions and existing information systems meet needs, are innovative, and take account of future risks and sustainability (ACTDIP031)	Plan and manage projects that create and communicate ideas and information collaboratively online, taking safety and social contexts into account (ACTDIP032)												
Sequence of Lessons / Unit	Approx. time req'd	Year A or B	CD	Achievement standard #	CD	Achievement standard #	CD	Achievement standard #	CD	Achievement standard #	CD	Achievement standard #	CD	Achievement standard #	CD	Achievement standard #	CD	Achievement standard #	CD	Achievement standard #	CD	Achievement standard #
Collaborative project	6 -8 hrs	8	<input type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>	2	<input checked="" type="checkbox"/>	2	<input checked="" type="checkbox"/>	4	<input checked="" type="checkbox"/>	5	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>	3, 8

Cells highlighted in blue indicate that the unit is relevant to a component of the Year 8 Achievement standard. The number in each blue highlighted cell correlates to the numbered Year 8 Achievement standard in the table below

Years 5 and 6 Achievement Standard	Years 7 and 8 Achievement Standard	Years 9 and 10 Achievement Standard
<p>By the end of Year 6:</p> <ul style="list-style-type: none"> Students explain the fundamentals of digital system components (hardware, software and networks) and how digital systems are connected to form networks. (1) They explain how digital systems use whole numbers as a basis for representing a variety of data types. (2) Students define problems in terms of data and functional requirements and design solutions by developing algorithms to address the problems. (3) They incorporate decision-making, repetition and user interface design into their designs and implement their digital solutions, including a visual program. (4) They explain how information systems and their solutions meet needs and consider sustainability. (5) Students manage the creation and communication of ideas and information in collaborative digital projects using validated data and agreed protocols. (6) 	<p>By the end of Year 8</p> <ol style="list-style-type: none"> 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. 	<p>By the end of Year 10</p> <ul style="list-style-type: none"> Students explain the control and management of networked digital systems and the security implications of the interaction between hardware, software and users. (1) They explain simple data compression, and why content data are separated from presentation. (2) Students plan and manage digital projects using an iterative approach. (3) They define and decompose complex problems in terms of functional and non-functional requirements. (4) Students design and evaluate user experiences and algorithms. (5) They design and implement modular programs, including an object-oriented program, using algorithms and data structures involving modular functions that reflect the relationships of real-world data and data entities. (6) They take account of privacy and security requirements when selecting and validating data. Students test and predict results and implement digital solutions. (7) They evaluate information systems and their solutions in terms of risk, sustainability and potential for innovation and enterprise. (8) They share and collaborate online, establishing protocols for the use, transmission and maintenance of data and projects. (9)

Connected or distracted, informed or misinformed?

The internet facilitates fast and vast communication through a global network of connected devices. We can interact, gather data and information, do our banking, purchase items, view and listen to multimedia and even control devices remotely. Social media has enabled us to communicate and build our social networks as well as share our thoughts on such a mammoth scale. However, with access to this technology comes some pitfalls that users need to be aware of and negotiate their way through. We can collect data to find out trends in social media use in a small sample and compare that data with nationally collected data from a much larger sample size. Infographics combine images, text and numeric data to convey, in a compelling and succinct way, particular messages and information on a chosen topic. These can be published and shared online. Students can also create a basic webpage by modifying HTML and previewing the output.

This unit of work can be integrated with English and provide an opportunity to analyse and explain how language has evolved over time and how technology and the media have influenced language use and forms of communication ([ACELY1729](#)).

Flow of activities				
Activity	Social media	Informed or misinformed?	Social media use	Publishing our ideas
Questions to guide exploration	<i>What is social media and how do your peers/classmates use it?</i>	<i>Is social media information credible? How do different platforms influence the way you communicate?</i>	<i>How has social media changed the way society receives and express opinions?</i>	<i>What did we find out? How do we present our information? How well are they presented?</i>
Short text	Define social media and describe some applications. Collaboratively as a group complete a task online.	Define and show examples of 'clickbait' and 'fake news'. Gather data about people's experiences with these.	Gather and present data on social media use. Compare this data to national trends.	Present and publish ideas in the form of an infographic or basic webpage.
Curriculum alignment	Collaborating and managing (ACTDIP032) Generating and designing (ACTDIP028) Collecting, managing and analysing data (ACTDIP025) General capabilities -ICT (Communicating with ICT element)	Collaborating and managing (ACTDIP032) Collecting, managing and analysing data (ACTDIP025) Investigating and defining (ACTDIP026) General capabilities -ICT	Collaborating and managing (ACTDIP032) Collecting, managing and analysing data (ACTDIP025) Investigating and defining (ACTDIP026) General capabilities -ICT	Collaborating and managing (ACTDIP032) Evaluating (ACTDIP031)
What's this about	<p>Social media are digital tools that enable users to create and share content via the internet.</p> <p>Social media typically have common features which may include: log-in, profile page, followers, personalisation, information updating/posting, like or comments, rating or voting. Information shared may be in the form of a still or moving image, a brief line of text (caption) or simply liking the post.</p> <p>Collaborative tools enable students to complete a common task. Students work together using a collaborative tool via an internet connection. It can include accessing, modifying, storing and retrieving common data files. Students follow agreed protocols when collaborating online. Discuss a suitable and agreed process of contributing to, modifying or suggested deletion of another student's piece of work.</p>	<p>As social media platforms evolve so too does the language and terminology that can become buzzwords and part of our everyday language. An example is the word 'clickbait'.</p> <p>Clickbait is a common term related to content shared via social media. 'Clickbait' is basically a sensational, exaggerated or melodramatic title for an online article with the express purpose of manipulating people into clicking the link and reading the content.</p> <p>Fake news is deliberate disinformation spread via news media in particular via social media. Fake news is written with the intent of misleading the reader.</p>	<p>According to the 2017 Sensis Social Media Report, 'Australia's growing obsession with smartphones has driven more people onto social platforms than ever before. In fact, almost eight in 10 Australians (79%) are now on social media, which is up 10 points on last year.'</p> <p>Research reports on social media use provide an insight into current trends of use of social media Australia-wide. These types of reports provide a useful resource for students to compare their data and findings from a small sample size to larger based surveys which have data from a significantly sized audience.</p>	<p>Infographics combine images, text and data to convey particular messages and information on a chosen topic. These can be published and shared online.</p> <p>Using an online HTML editor, enables a student to edit the HTML, and click on a run to view the result. They can build a basic webpage by adding additional content.</p> <p>The HTML based program can be saved as a HTML file in Notepad (for windows) or TextEdit (for iOS) and viewed in a browser.</p> <p>Using a template enables students to modify an existing webpage by changing text for example and seeing the impact on the output screen.</p>
The focus of the learning	As a learning hook, use an online quiz such as Kahoot.it to engage students in questions about social media such as its date of inception, evolution and history, platforms, benefits/issues	Brainstorm or provide a list of terminology that is evolving or becoming common place with the use of social media and being digitally connected. Relevant terminology may include: misinformation, clickbait, disinformation, false balance, manipulation, Pay-per-	Invite students in collaborative groups to gather their own data about the use of social media. Ask students to consider the audience and sample size and how they intend to gather the data (online form or face-to-face survey).	<p>Ask students to select an aspect of social media that is of interest.</p> <p>Ask students to brainstorm some alternative ideas for presenting their research. These don't have to be</p>

<p>and stats related to use. Students could generate their own quiz questions and run them in class.</p> <p>Students could conduct a short online survey to canvas how their peers use social media. Each group could survey the use of one social media platform, and record their information into a shared class document, for example OneNote or Google docs.</p> <p>Ask students to draw the interface of a popular social media platform and label the parts of the site that they consider are common features of a social media platform. Consider the use of icons and emojis as forms of representation.</p> <p>Evaluate the usefulness of the platform. Invite students to draw an interface of their own social media application and describe its functionality and purpose.</p>	<p>click (PPC), fake news, notifications, digital addiction, bots, trolling, viral, digital footprint, social media tools, trending, social interaction, immediacy, listicles and hyperconnectivity.</p> <p>Organise students in collaborative groups and use a collaborative tool such as OneNote, Office 365, collaborate, Google docs, Padlet or similar to share their ideas on selected terminology (listed above) focusing their responses to the following questions:</p> <ol style="list-style-type: none"> 1. What is it? 2. What’s an example? 3. How has it influenced or affected you? <p>Discuss social protocols of managing the collaborative process to end up with a completed table of responses.</p> <p>Provide age-appropriate relevant examples of clickbait or have students share suitable examples. Discuss inappropriate content and expectations of students not referring to these types of examples.</p> <p>Discuss examples of fake news.</p> <p>Students provide some guidelines about what clickbait is and how to avoid it. They could categorise types of clickbait.</p> <p>Ask students to collect data about where people get their news. The survey may be focussed on news in general or be more focussed on an aspect of news online such as experiences related to whether they have been manipulated by ‘clickbait’ or impacted by fake news.</p> <p>Ask students:</p> <ul style="list-style-type: none"> • What are they trying to find out? • What do they expect to find out? • How will they ensure their survey questions will provide them with relevant data? <p>Share collected data presented visually.</p> <p>Integrating with English Investigate the ways in which English has evolved particularly new terminology associated with social media. What is the origin of these terms? Are they derivatives of another word? How have they come into existence?</p> <p>Students create clickbait to entice readers to read their student created texts.</p>	<p>Some relevant areas of focus may include such things as:</p> <ul style="list-style-type: none"> • Device ownership • Social networking site usage • Social media usage by time of day • Reasons for not using social media • Social networking sites used • Messaging services used • Time spent on social networking sites <p>Ask students:</p> <ul style="list-style-type: none"> • What are they trying to find out? • What do they expect to find out? • How will they ensure their survey questions will provide them with relevant data? <p>Guide students in organising, sorting and managing the collected data. Look for patterns in the data for example, are there patterns of use in certain age groups?</p> <p>Provide guidance and support to help students choose a suitable format to visualise and/or present the data.</p> <p>Compare data to current research reports into social media use and trends. Look for similar trends or where data from students’ small sample size may be at odds with national data trends.</p>	<p>detailed but students could initially consider two different types of information, namely an infographic or a webpage. Students select their preferred idea, based on at least two criteria, namely accuracy/validity of information and the appearance/aesthetics of the information. This information should be compelling and informative.</p> <p>Develop a list of agreed criteria on which they will undertake a self-assessment and be peer assessed.</p> <p>Infographic Suitable applications to build an infographic include Canva or Pictochart.</p> <p>Students plan out their infographic collaboratively online using a shared space to document and record ideas. They can consider what data is most appropriate to support their key ideas and message. From their pooled information they can construct their draft infographic.</p> <p>When designing the infographic, they can allocate tasks and sections of the infographic to particular students within their group. Ask each student to keep a record of their roles and responsibilities and the elements on which they worked. Each group develops a process and timeline to efficiently enable students to input text and images into the infographic.</p> <p>They can publish in PDF or share via relevant social media platforms, via email or embedded into a blog or school’s shared online space.</p> <p>Basic webpage Suitable applications to build a basic webpage include W3S website or Thimble Mozilla.</p> <p>Provide students with a HTML or JavaScript based template to modify and create a basic webpage focused on social media.</p> <p>Students can modify text including, body text, headings and buttons, images and backgrounds. In some templates students may easily modify the CSS to change font colour, size and type for example, or the background colour.</p> <p>Have students plan out their webpage and create a plan collaboratively in a shared space. Before planning their webpage provide students with an opportunity to explore and play with the html to familiarise themselves with the way it works.</p>
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<p>Supporting resources and tools and purpose/ context for use.</p>	<p>What Is Social Media? This article provides a useful background to social media.</p> <p>Kahoot! Kahoot! is a game-based learning and trivia platform that can be used in classrooms. Sign up for free to create, play and share engaging quizzes on any topic. Can be used in browser or via the mobile app.</p> <p>History of social media infographic Follow this site to view an infographic on the evolution of social media since its creation in the 1970s.</p> <p>A Chronological History of Social Media The history of social media stretches back much further than you'd think, let's take a quick tour of its rise and rise.</p> <p>Facilitating Collaborative Learning: 20 Things You Need to Know From the Pros This article provides some suggestions for best practices for collaborative learning.</p>	<p>Statistics & Facts about Fake News Fake news has been one of the most hotly-debated socio-political topics of recent years. This site provides graphical representation of the facts and statistics surrounding fake news (membership required).</p> <p>One Amazing Reason Clickbait Can Be Bad For You! A new study demonstrates how headlines can alter how you perceive the content of news articles.</p> <p>How technology disrupted the truth Social media has swallowed the news – threatening the funding of public-interest reporting and ushering in an era when everyone has their own facts. But the consequences go far beyond journalism.</p> <p>Beyond fake news: 10 Types of misleading news This infographic provides a useful collection of ways users are misled, in relation to online news articles.</p> <p>The Fake News Invasion: Understanding the Dangers of Misinformation and What To Do About It [Video] This digital video conference between Sonia Urbom, Audrey Tang and Steven Reiner discusses fake news.</p>	<p>Social Media Statistics Australia – August 2018 David Cowlinv has collated a variety of statistics from a range of sources on social media use in Australia.</p> <p>Sensis Social Media Report 2017 Research based statistics on social media use in Australia, released 22 June 2017 by Sensis.</p>	<p>Infographic applications Canva Piktochart.</p> <p>Website templates Thimble Mozilla Thimble is a full-featured code editor that runs right in the browser. It's designed to help new coders create their own sites and web-based projects using HTML, CSS & JavaScript. Everything you need is at your fingertips, allowing you (or your classroom) to get up and running as quickly as possible.</p> <p>W3.CSS Templates Modify, save, share, and use these templates to create your own webpage.</p>
<p>Assessment</p>	<p>Suggested approaches may include: Accuracy and number of terms completed by each group/team member.</p> <p>Achievement standard Use appropriate protocols when communicating and collaborating online.</p> <p>Explain how text, image and audio data can be represented, secured and presented in digital systems.</p>	<p>Suggested approaches may include: Accuracy and relevance of data collected and presented.</p> <p>Achievement standard Use appropriate protocols when communicating and collaborating online.</p> <p>Explain how text, image and audio data can be represented, secured and presented in digital systems.</p>	<p>Suggested approaches may include: Accuracy and relevance of data collected and presented.</p> <p>Achievement standard Use appropriate protocols when communicating and collaborating online.</p> <p>Explain how text, image and audio data can be represented, secured and presented in digital systems.</p>	<p>Suggested approaches may include: Accuracy and relevance of data collected and presented.</p> <p>Design of webpage or infographic.</p> <p>Achievement standard Use appropriate protocols when communicating and collaborating online.</p> <p>Plan and manage digital projects to create interactive information.</p> <p>Evaluate information systems and their solutions in terms of meeting needs, innovation and sustainability.</p>