How to Collect Data

Monday, 13 June 2016

9:55 AM

# Summary

This session aims to introduce students to what data is and how it can be collected. Certain software tools will be used at the same time through instruction. Specifically search engines, online surveys and spreadsheet software (MS Excel).

Integration Friendly

EAL Friendly

High-Achiever Friendly

# Background Knowledge

There is no specific prior knowledge required for this lesson

# Fundamentals of this Lesson

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| Learning Intention | Success Criteria |
| * + Understand what **data** is
	+ Understand the variations of data collection
	+ To be able to collect each data type
	+ identify how certain technology around them works (Myki(RFID), Barcode Scanners)

  | * + Able to recall what **data** is
	+ Can identify the data collection styles (Interviews, surveys, observations)
	+ Can describe how data is collected through various sources
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| Core Content | Activities / Assigned Questions |
| Excel Formatting

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| --- | --- |
| C:\EE6216A5\BED38C0B-40FD-4319-BA98-AE4900F5DBD4_files\image001.png   | This task allows students to become familiar with Excel, without losing them in data. Demonstrate to students how to format cell colour, column widths and height. Encourage the use of cell merging.<<8 Bit Spreadsheet Art.docx>> Once students have completed the above 8Bit Artwork task, students can create their timetables in excel. **Extension:** Conditional Formatting  |

What is Data?

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| --- | --- |
| C:\EE6216A5\BED38C0B-40FD-4319-BA98-AE4900F5DBD4_files\image002.png | Introduces students to data and one way how to collect data, with a number of activities to complete during presentation.<<Data Introduction.pptx>> |

 Collecting Data?

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| C:\EE6216A5\BED38C0B-40FD-4319-BA98-AE4900F5DBD4_files\image002.png | Different methods of collecting data, including Search Engines/Myki/Barcode Scanners/etc. Also touches briefly on Quantitative and Qualitative data<<Collecting Data.pptx>> |

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| C:\EE6216A5\BED38C0B-40FD-4319-BA98-AE4900F5DBD4_files\image003.png  | Additional Tasks

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| C:\EE6216A5\BED38C0B-40FD-4319-BA98-AE4900F5DBD4_files\image004.gif  | **Excel Tutorial Videos - GRI**Students watch and complete tasks performed within the video. It focuses on basic formulas for MS Excel. <https://www.youtube.com/playlist?list=PL9alTSc9G43SYnL8q-URp_OTTN-RL5UOs>  |
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| C:\EE6216A5\BED38C0B-40FD-4319-BA98-AE4900F5DBD4_files\image005.png  | Integration TasksTo be created   |
| C:\EE6216A5\BED38C0B-40FD-4319-BA98-AE4900F5DBD4_files\image006.png  | EAL Support Tasks*Vocab** ***Example*** Description

*Activity*Refer to Integration Task    |
| C:\EE6216A5\BED38C0B-40FD-4319-BA98-AE4900F5DBD4_files\image007.png   | Extension Tasks* Excel Learning task difficulty can be scaled by student when selecting second image
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| Helpful Teacher Resources | Staff Feedback |
|   | * + Learning activities – formulas; add, multiply, divide, subtract , percentage. Formatting; merge and centre, column and row sizes, margins, page orientation. Changes to font size and colour, inserting images, word wrap and adjusting work sheet layout for printing.
	+ Production of layout diagrams.
	+ Produce written evaluation of completed tasks.
	+ How to use a search engine (intitle: , inurl: prefixes, etc
	+ Sources of Data (RFID - Myki, Printing tag)
	+ Authenticity of Data

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# Victorian Curriculum Links

Analyse and visualise data using a range of software to create information, and use structured data to model objects or events

[(VCDTDI038)](http://victoriancurriculum.vcaa.vic.edu.au/Curriculum/ContentDescription/VCDTDI038)

* Designing a search engine query to find specific information on the web and checking its accuracy against information contained in other sources, for example entering instructions such as intitle: and inurl: prefixes to find information within a general directory, and comparing the results with information found in a wiki
* acquiring data from a range of sources, for example people, websites, books, mobile phones, radiofrequency identification (RFID) and data repositories such as the Australian Bureau of Statistics datasets, and compiling these data into a digital format
* checking authenticity of data, for example ensuring the source or author is a reliable individual or organisation
* using techniques to locate data that are timely, for example using a filtering function to specify the timeframe, such as years, for the required data