**Karlene Irving GID**

**Lesson Plan Stage of inquiry process:** Open

**Student learning goals:**

* recognise an “essential question on curricular content” (Maniotes and Kuhlthau, 2014, p 11) to introduce the inquiry assignment:

**‘What are DSNs and how do they meet the needs of present and future communities?’**,

* understand that they choose a DSN to explore including its components, processes and how it meets present and future needs of a community,
* build on the students’ knowledge gained from the unit “Using and Interpreting Data” and “internal and external components of digital systems that perform functions” which included describing and creating spreadsheets and databases (NESA, 2017, p. 93),
* explore what a IL model is and why it will be helpful,
* begin to learn the main features of GI – eight stages, students choose an interest area, devise questions, work in groups called inquiry circles and do research as part of the process, not the whole process (Kuhlthau and Maniotes, 2014, p.13),
* identify a wide variety of DSN’s and
* explore the functions, components, processes, technologies of the school’s DSNs and how they meet the needs of the school community (NESA, 2017, p93).

**Location:** Library and a walking tour of the school’s DSNs

**Team:** Teacher librarian, teacher, Secondary Information Processes and Technology (IPT) teacher, Information Technology (IT) Manager and Music teacher

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|  | **Strategies** | **Tasks** |
| **10 mins**  **40 mins** | IPT teacher facilitates the *Stroop effect* game (CS Education Research Group, (n.d.).  Brainstorming on DSNs advantages and disadvantages and previous unit.  *DSNs* *handout* and permission notes for excursions are given to students.  TL hands out adapted *CMC* ( Loertscher, C. Koechlin,S. & Zwann, S., 2005) scaffold.  IPT teacher and IT Manager take the students on a tour of the school’s DSNs (K-12): Library, School Administrative Manager’s offices, Secondary school’s Agriculture, Food Technology, Music, ISP, Visual Arts, PDHPE and Science departments. | Participate in game to increase understanding and identify problems with DSNs.  Recall knowledge on ‘Using and Interpreting Data’ and ‘components of digital systems’.  Engage in tour  Record on *CMC* scaffold ( Loertscher, C. Koechlin,S. & Zwann, S., 2005) identifying components, purposes and impacts of DSNs and a DSN that they could be interested in. |
| **5mins** | Music teacher : GI rap song similar to *Scientific Method Song (*Have Fun Teaching, March, 2015).  TL teaches students dance moves inspired by *Scientific Method Dance* (Sumner Third Grade, 2015).  Visual icon displayed | Students engage in song/dance |
| **Reflection**  **Time: 5 mins** | Students undertake refection survey | TL reflection survey on *Survey Monkey* (Wainwright, n.d.) based on reflection Sheet 1 scaffold (Todd, 2005)  Take *DSNs sheet* home |

(Maniotes L.K. , Harrington, L, & Lambusta,P. 2016).

**Overview of GI and Student learning experiences and work produced**

**IMMERSE (over 4 lessons)**

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| **Tasks** | **Skills** |
| Permission notes handed in.  Half day excursion: Trangie Agricultural Research Centre: teacher and TL –digital systems and networks for sheep genetics, weather measurements, farming, research.  On coach students look at vocabulary list, ideas for blog tags to go on class blog. Also sing GI song/explain.  Adapted *CMC* scaffold (Loertscher, Koechlin Zwann, 2005) used for each Immerse lesson. One hardcopy is used for each topic area introduced. Therefore, same scaffold will be used 11 times.  Students record components and processes as well as social impacts, interest areas.  Students as a class prior have devised inquiry questions for the excursions, guest speakers and videos under guidance of TL and teacher.  Return trip transfer recordings and reflections onto Blog related to the topic area (using adapted CMC (Loertscher, Koechlin Zwann, 2005) as a guide)  2. Walking excursion: Shire Council’s solar powered CCTV and IGA supermarket.  CMC (Loertscher, Koechlin Zwann, 2005), post reflections on blog on return in class. GI Song/Dance as they walk to or from.   1. Walking excursion to Shire Library, part of a Wide Area Network (WAN). Posts on blogs, transfer from CMC (Loertscher, Koechlin Zwann, 2005) on return 2. Videos/guest speakers (each for 5 mins) of 7 DSNs. Recognising similar components, processes but different ways of meeting community needs today and in future. The first few minutes of some videos only to be shown because of their lack of engagement for students. Higher level literacy students can explore these more later.   DMT (Fitzgerald & Sheerman, 2015): reflect and record. Teacher provides encouragement in blog. Students submit their hardcopies of named and dated CMC (Loertscher, Koechlin Zwann, 2005) for teacher /TL to check. | \*Pose questions: closed or open (Fitzgerald & Sheerman, 2015). \*Recognise key inquiry questions: What are DSNs? What are the main components (parts) of DSNs? How is data transmitted between two digital components? How do existing information systems meet the needs of present and future communities? (NESA, 2017, p.93). \*Advantages and disadvantages? \*Listen \*Process and organise information (Kuhlthau, Maniotes and Caspari, 2012). \*Identify possible sources (NSW DET, 2007). \*Use key words to locate useful information within sources (NSW DET, 2007). \*Record, analyse and summarise information (NSW DET, 2007). \*Record details of sources used (NSW DET, 2007). \*Recognise worth and credibility of sources (NSW DET,2007). \*Record initial reflections on blogs. \*Identify and clarify information and ideas (Fitzgerald cited in Kuhlthau, Maniotes & Caspari, 2012). \*View \*Recall GI stages and concepts \*Process and organise information (Fitzgerald cited in Kuhlthau, Maniotes & Caspari, 2012).  \*Begin to limit an investigation to a manageable size (DET, 2007). |

**EXPLORE**

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| GI song/dance/explain  *DMT*  scaffold helps to form potentially 11 inquiry circles.  Information Literacy (IL)/inquiry skills revisited using 3 relevant scaffolds.  Students use mind maps (Bubbl.us, n.d.) in inquiry circles to build depth to questions. Building Knowledge and CMC scaffolds (Loertscher, Koechlin, & Zwann, 2005).  Students research multi modal sources in area of interest to explore ideas.  Teacher checks blogs for students development of thinking, comments re direction for them. | The above and:  \* Recall relevant information and skills from previous experience (NSW DET, 2007)  \*Limit an investigation to a manageable size ((NSW DET, 2007)  \*Collaborate with others so as to build knowledge  \*“Comprehending texts through listening, reading and viewing” (ACARA, 2017). \*“Inquiring-identifying, exploring and organising” (ACARA, 2017). \*Identify possible sources (NSW DET, 2007). \*Use key words to locate useful information within sources (NSW DET, 2007). \*Record reflections, questions, notes on blog. |

**IDENTIFY**

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| GI song/dance/explain.  Building Knowledge (Loertscher, Koechlin, & Zwann, 2005) and Mindmaps.  How to devise questions using the 4 relevant scaffolds chosen by TL, depending on literacy levels.  Students with low literacy skills: SLSOs help using Clarifying Understanding  Big focus questions/mind maps for each inquiry circle  Post on the class blog under their relevant category (interest area) to share/teacher checks/comments. | The above and:  \* Form a deep focus question \*Extend mind maps with deeper questions |

**GATHER**

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| GI song/dance/explain.  Permission notes  Research in print/online becomes focused and deeper. TL suggested scaffolds and posted questions are used to identify where they need more information and to go deeper.  4 lessons: inquiry circles, create when ready.  Walking excursions for 4 inquiry circles, one at a time: sports centre, bank, police station and hospital.  TL guides research for students remaining in other inquiry circles and guided in research by the TL.  Mind maps and flow charts display findings, as well as a report.  In one of the Gather lessons the students must post their reflections/what new things they have learned on the blog for teacher comment. | The above and:  \*“Inquiring-identifying, exploring and organising” (ACARA, 2017).  \*“Comprehending texts through listening, reading and viewing” (ACARA, 2017). |

**CREATE**

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| GI song/dance/explain  Create when focus question is deep enough for their literacy level.  Students useTL recommended scaffolds to help create report.  Research report is up to 3 pages, includes a bibliography, mind maps of components, with different depths and flowcharts. Students give a point of view as to the advantages and disadvantages of the DSN in present and future communities. | The above and:  \*Record, analyse and summarise information (NSW DET, 2007).  \*Creative and critical thinking (ACARA, 2017). . |

**SHARE**

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| GI song/dance  Jigsaw circles allow students of varying abilities/different interests the opportunity to share what they have learned in a small group setting.  Teacher, Assistant Principal, TL, SLSOs and Aboriginal Aides assist in supervision and facilitating discussions.  Teachers observe, mark and facilitate.  Inquiry circles choose one student to lead a class discussion on their behalf and others can join in if confident.  Submission of a report. | \* Describe, analyse and identify orally and in wrote form. |

**EVALUATE**

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| GI song/dance  Survey Monkey: skills development/content enjoyment  Online *PQP peer review* (Fitzgerald and Sheerman, 2015) on jigsaw circle discussions.  Inquiry circles devise 5 questions each for a *Kahoot*  (Brand, Brooker, Versvik and Furuseth, 2013) | Identify  Comprehend  Organise  Reflect  Analyse  Process  Conclude |

**Assessment Elements of the General Capabilities**

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| **Tasks**  **Capabilities** | **Adapted *Constructing Meaningful Choice Scaffold* (11)** | **Blog Posts** | **Inquiry Question Sheets** | **Discussions** | **Report** | **Capability Total Mark:** |
| **1.Comprehending texts through listening, reading, viewing**: Key terms, components, facts, processes communicated **(Literacy)** |  |  |  |  |  |  |
| **2.Identifies the impacts of ICT in society: present and future (ICT)** |  |  |  |  |  |  |
| **3.Inquiring-identifying, exploring, organising (CCT)** |  |  |  |  |  |  |
| **Mark for each task:** |  |  |  |  |  |  |

**Capabilities Rating scale below Students will be able to see the tasks in which they have greater skills.**

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| **1 & 2** | **3** |
| 5= logically with a high level of detail and analysis 4= with detail and analysis  3= with detail but no analysis 2= little detail, no analysis  1= no detail or analysis | 5= deep questions posed, clear focus question, information gathered from a variety of authentic sources, all sources cited in a bibliography, content communicated clearly and concisely with logical progression of ideas 4= challenging questions, thoughtful focus question, variety of sources, bibliography, content logically organised  3= questions easily answered, focus question, limited sources, bibliography, content loses some focus.  2= teacher generated questions and focus question, minimal effort in finding sources, bibliography inadequate, limited content  1= no questions, one source facilitated by teacher in class, no bibliography, content provided by teachers |