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| **7-12 Inquiry Skills Scope and Sequence** |
| and |
| **F-12 Core Skills and Tools** |
| Inquiry curriculum skills, evident in the Australian Curriculum and general capabilities, mapped to the Guided Inquiry Design Framework, and core essential skills and web tools to support teaching and learning programs. |
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| **Karen Bonanno** |
| **With contribution from Lee FitzGerald** |
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The inquiry framework referred to below comes from *Guided Inquiry Design: A Framework for Inquiry in Your School* by Carol C Kuhlthau, Leslie K Maniotes and Anne K Caspari. In 2012, Karen Bonanno was given permission by the authors of *Guided Inquiry Design: A Framework for Inquiry in Your School*, Carol Kuhlthau, Leslie Maniotes and Ann Caspari, to develop a scope and sequence tying the five kinds of learning to the inquiry skills and general capabilities in the Australian Curriculum.

© Guided Inquiry Design Framework - Kuhlthau C. et al. (2012). *Guided Inquiry Design: A Framework for Inquiry in Your School*. Santa Barbara, California: Libraries Unlimited.

 Mapping the curriculum and general capabilities to Guided Inquiry Design Framework by Karen Bonanno. (2015). Zillmere, Queensland: Eduwebinar Pty Ltd.

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**Legend for document**:

**Black** = Content descriptors from the Australian Curriculum 

**Blue** = Descriptors from the Australian Curriculum general capabilities 

**Red** = suggested introduction of inquiry skills as identified in Kulthau, C. et al. (2012). *Guided Inquiry Design: A Framework for Inquiry in Your School*. Santa Barbara, California: Libraries Unlimited. Contribution by Lee FitzGerald and Karen Bonanno.

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| **Guided Inquiry Design Framework**  | **Year 7-8** | **Year 9-10** | **Senior Secondary** |
| **Open****Invitation to inquiry****Open minds****Stimulate curiosity** | **Look for aspect of topic that engages****Identify key words, concepts and ideas****Pose pertinent questions for discussion and exploration** **Understand an information search process / framework** | **Consider aspects of topic that engages****Identify and group key concepts and ideas****Pose leading questions for discussion and exploration****Apply an information search process / framework to breakdown tasks into components** | **Express understanding of key aspects of the topic that engages****Identify, group and categorise key words, phrases, concepts and ideas****Pose leading questions for discussion, exploration and debate****Apply an inquiry based approach to undertake tasks** |
| **Immerse** **Build background knowledge****Connect to content****Discover interesting ideas** | **Year 7-8****Articulate prior knowledge****Relate inquiry task to content****Relate knowledge to real world****Brainstorm and record answers****Choose between alternative interesting topics** | **Year 9-10****Articulate and record prior knowledge****Relate inquiry task to real world****Relate inquiry task to specific content****Brainstorm and record answers****Choose an interesting topic to explore** | **Senior Secondary****Articulate, record and justify prior knowledge****Relate inquiry task to real world issues and contemporary thinking on a topic****Brainstorm and record answers****Choose an interesting and challenging topic to explore**  |
|  |  | **Senior Secondary****ANCIENT HISTORY & MODERN HISTORY****Identify links between events to understand the nature and significance of causation, change and continuity over time** |
| **Explore****Explore interesting ideas****Look around****Dip in** | **Year 7-8****HISTORY****Identify and locate relevant sources, using ICT and other methods** **Identify and describe points of view, attitudes and values in primary and secondary sources**  | **Year 9-10****HISTORY****Identify and analyse the perspectives of people from the past****Identify and analyse different historical interpretations (including their own)** | **Senior Secondary****ANCIENT HISTORY & MODERN HISTORY****Formulate, test and modify propositions to investigate historical issues****ANCIENT HISTORY & MODERN HISTORY****Evaluate critically different historical interpretations of the past, how they evolved, and how they are shared by the historian’s perspective** |
| **Year 7-8****Explore encyclopaedic sources of information for overview information on a topic and explain why****Choose an area of interest and explain interest in relation to topic****Use successful search terms****Skim read a range of sources for interest, scan for content and record bibliographic information****Capture and categorise overview information into a chart** | **Year 9-10****Explore a wide range of information sources for overview information on a topic****Choose an area of interest and explain interest in relation to identified topic****Use successful search terms and keyword phrases to guide exploration****Skim read a range of sources for interest, scan for content and record full bibliographic information****Capture and categorise information into a chart****Begin to formulate a possible inquiry question** | **Senior Secondary****Explore a wide range of information sources for overview information on the topic****Choose an area of interest, explain and justify interest in relation to identified topic****Use successful search terms and keyword phrases to guide exploration****Skim read a range of primary and secondary sources for interest, scan for content and record full bibliographic information****Capture and categorise information into an organising framework****Begin to formulate a possible inquiry question or hypothesis** |
| **Identify****Pause and ponder****Identify inquiry question****Decide direction** | **Year 7-8****HISTORY****Identify a range of questions about the past to inform a historical inquiry** | **Year 9-10****HISTORY****Identify and select different kinds of questions about the past to inform historical inquiry****Evaluate and enhance these questions** | **Senior Secondary****ANCIENT HISTORY & MODERN HISTORY****Frame questions to guide inquiry and develop a coherent research plan for inquiry** |
| **Year 7-8****SCIENCE****Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge** | **Year 9-10****SCIENCE****Formulate questions or hypotheses than can be investigated scientifically****Plan, select and use appropriate investigation methods, including field work and laboratory experimentation, to collect reliable data; assess risk and address ethical issues associated with these methods** | **Senior Secondary****BIOLOGY & EARTH AND ENVIRONMENTAL SCIENCE****Identify, research and construct questions for investigation; propose hypotheses; and predict possible outcomes****CHEMISTRY****Identify, research and refine questions for investigation; propose hypotheses; and predict possible outcomes** |
| **Year 7-8****GEOGRAPHY****Develop geographically****significant questions and plan an inquiry using****appropriate****geographical methodologies****and concepts** | **Year 9-10****GEOGRAPHY****Develop geographically****significant questions and plan an inquiry that identifies and applies appropriate****geographical methodologies****and concepts** |  **Senior Secondary****GEOGRAPHY****Formulates geographical inquiry questions****Plans a geographical inquiry with clearly defined aims and appropriate methodology** |
| **Year 7-8****ICT****Use a range of ICT to analyse information in terms of implicit patterns and structures as a basis to plan an information search or generation** | **Year 9-10****ICT****Select and use a range of ICT independently and collaboratively, analyse information to frame questions and plan search strategies or data generation** |  |
| **CRITICAL / CREATIVE THINKING****Pose questions to probe assumptions and investigate complex issues** | **CRITICAL / CREATIVE THINKING****Pose questions to critically analyse complex issues and abstract ideas** |  |
| **Gather****Gather important information****Go broad****Go deep** | **Year 7-8****HISTORY****Use historical terms and concepts****Identify and locate relevant sources, using** **ICT and other methods****Identify the origin and purpose of primary and secondary sources****Locate, compare, select and use information from a range of sources as evidence****Identify and describe points of view, attitudes and values in primary and secondary sources** | **Year 9-10****HISTORY****Use historical terms and concepts** **Identify and locate relevant sources, using ICT and other methods****Identify the origin, purpose and context of primary and secondary sources****Process and synthesise information from a range of sources for use as evidence in an historical argument****Evaluate the reliability and usefulness of primary & secondary sources****Identify and analyse the perspectives of people from the past****Identify and analyse different historical interpretations (including their own)** | **Senior Secondary****ANCIENT HISTORY & MODERN HISTORY****Identify, locate and organise relevant information from a range of primary and secondary sources****ANCIENT HISTORY****Identify and practise ethical scholarship when conducting research****MODERN HISTORY****Practise ethical scholarship when conducting research****ANCIENT HISTORY & MODERN HISTORY****Identify the origin, purpose and context of historical sources** |
| **Year 7-8****SCIENCE****In fair tests, measure and control variables, and select equipment to collect data with accuracy appropriate to the task****Construct and use a range of representations, including graphs, keys and models to represent and analyse patterns or relationships, including using digital technologies as appropriate****Summarise data, from students’ own investigations and secondary sources, and use scientific understanding to identify relationships and draw conclusions****Collaboratively and individually plan and conduct a range of investigation types, including fieldwork and experiments, ensuring safety and ethical guidelines are followed** | **Year 9-10****SCIENCE****Select and use appropriate equipment, including digital technologies, to systematically and accurately collect and record data****Analyse patterns and trends in data, including describing relationships between variables and identifying inconsistencies****Use knowledge of scientific concepts to draw conclusions that are consistent with evidence****Critically analyse the validity of information in secondary sources and evaluate the approaches used to solve problems** | **Senior Secondary****BIOLOGY****Design investigations, including the procedure/s to be followed, the materials required, and the type and amount of primary and/or secondary data to be collected; conduct risk assessments; and consider research ethics, including animal ethics****CHEMISTRY****Design investigations, including the procedure/s to be followed, the materials required, and the type and amount of primary and/or secondary data to be collected; conduct risk assessments; and consider research ethics****EARTH AND ENVIRONMENTAL SCIENCE****Design investigations including the procedure/s to be followed, the information required and the type and amount of primary and/or secondary data to be collected; conduct risk assessments; and consider research ethics****BIOLOGY****Conduct investigations, including using ecosystem surveying techniques, safely, competently and methodically for the collection of valid and reliable data****BIOLOGY****Conduct investigations, including use of probabilities to predict inheritance patterns, real or virtual gel electrophoresis, and population simulations to predict population changes, safely, competently and methodically for the collection of valid and reliable data****CHEMISTRY****Conduct investigations, including use of devices to accurately measure temperature change and mass, safely, competently and methodically for the collection of valid and reliable data****EARTH AND ENVIRONMENTAL SCIENCE****Conduct investigations, including use of map and field location techniques and environmental sampling procedures, safely, competently and methodically for the collection of valid and reliable data****BIOLOGY****Interpret a range of scientific and media texts, and evaluate models, processes, claims and conclusions by considering the quality of available evidence, including interpreting confidence intervals in secondary data; and use reasoning to construct scientific arguments****CHEMISTRY & EARTH AND ENVIRONMENTAL SCIENCE****Interpret a range of scientific and media texts, and evaluate processes, claims and conclusions by considering the quality of available evidence; and use reasoning to construct scientific arguments****CHEMISTRY****Interpret a range of scientific texts, and evaluate processes, claims and conclusions by considering the quality of available evidence, including confidence intervals in secondary data; and use reasoning to construct scientific arguments** |
| **Year 7-8****GEOGRAPHY****Collect, select and record relevant geographical data and information, using ethical protocols, from appropriate primary and secondary sources** **Evaluate sources for their reliability and usefulness and represent data in a range of appropriate forms, for example, climate graphs,****compound column graphs, population pyramids, tables,****field sketches and annotated diagrams, with and without the use of digital and spatial****technologies** | **Year 9-10****GEOGRAPHY****Collect, select, record and organise relevant data and geographical information, using ethical protocols, from a range of appropriate primary and secondary sources****Evaluate sources for their reliability, bias and usefulness, and represent multi-variable data in a range of appropriate forms, for****example, scatter plots, tables, field sketches and annotated diagrams, with and without the use of digital and spatial technologies** | **Senior Secondary****GEOGRAPHY****Collects geographical information incorporating ethical protocols from a range of primary and secondary sources****Records observations in a range of graphic representations using spatial technologies and information and communication technologies****Evaluates the reliability, validity and usefulness of geographical sources and information** |
| **Year 7-8****ICT****Apply practices that comply with legal obligations regarding the ownership and use of digital products resources****Independently apply strategies for determining the appropriate type of digital information****suited to the location of storage and adequate security for online environments****Use a range of ICT to analyse information in terms of implicit patterns and structures as a basis to plan an information search or generation****Locate, retrieve or generate information using search facilities and organise information in meaningful ways****Manage and maintain data for groups of users using a variety of methods and systems**  | **Year 9-10****ICT****Identify and describe ethical dilemmas and consciously apply practices that protect intellectual property****Use a range of strategies for securing and protecting information, assess the risks associated with online environments and establish appropriate security strategies and codes of conduct****Select and use a range of ICT independently and collaboratively, analyse information to frame questions and plan search strategies or data generation****Use advanced search tools and techniques or simulations and digital models to locate or generate precise data and  information that supports the development of new understandings****Manage and maintain data securely in a variety of storage mediums and formats** |  |
| **Year 7-8****CRITICAL / CREATIVE THINKING****Collect, compare and categorise information from digital, online and print sources****Scrutinise information for currency, accuracy, authenticity and relevancy****Keep a log of bibliographic details** | **Year 9-10****CRITICAL / CREATIVE THINKING****Collect, synthesise and organise information from a range of digital, online and print sources****Critique information for reliability, usefulness and purpose****Record full bibliographic details** | **Senior Secondary****CRITICAL / CREATIVE THINKING****Collect, synthesise and organise information from a range of digital, online and print sources****Critique information for reliability, usefulness and purpose****Record full bibliographic details** |
| **Create / Share** **Reflect on learning****Go beyond facts to make meaning****Create to communicate****Learn from each other****Share learning****Tell your story** | **Year 7-8****HISTORY****Sequence historical events, developments and periods** **Draw conclusions about the usefulness of sources****Develop texts, particularly descriptions and explanations that use evidence from a range of sources that are acknowledged****Use a range of communication forms (oral, graphic, written) and digital technologies** | **Year 9-10****HISTORY****Use chronological sequencing to demonstrate the relationship between events and developments in different periods and places** **Develop texts, particularly descriptions and discussions that use evidence from a range of sources that are referenced****Select and use a range of communication forms (oral, graphic, written) and digital technologies** | **Senior Secondary****ANCIENT HISTORY & MODERN HISTORY****Use historical terms and concepts in appropriate contexts to demonstrate historical knowledge and understanding****ANCIENT HISTORY & MODERN HISTORY****Identify, locate and organise relevant information from a range of primary and secondary sources****ANCIENT HISTORY & MODERN HISTORY****Analyse, interpret and synthesise evidence from different types of sources to develop and sustain an historical argument****ANCIENT HISTORY****Evaluate the reliability, usefulness and contestability of sources to develop informed judgements that support a historical argument****MODERN HISTORY****Evaluate the reliability, usefulness and contestable nature of sources to develop informed judgements that support a historical argument****ANCIENT HISTORY & MODERN HISTORY****Analyse and account for the different perspectives of individuals and groups in the past****ANCIENT HISTORY & MODERN HISTORY****Evaluate contested view about the past to understand the provisional nature of historical knowledge and to arrive at reasoned and supported conclusions****ANCIENT HISTORY & MODERN HISTORY****Develop texts that integrate appropriate evidence from a range of sources to explain the past and to support and refute arguments****ANCIENT HISTORY & MODERN HISTORY****Communicate historical understanding by selecting and using text forms appropriate to the purpose and audience****ANCIENT HISTORY & MODERN HISTORY****Apply appropriate referencing techniques accurate and consistently** |
| **Year 7-8****SCIENCE****Communicate ideas, findings and solutions to problems using scientific language and representations using digital technologies as appropriate** | **Year 9-10****SCIENCE****Communicate scientific ideas and information for a particular purpose, including constructing evidence-based arguments and using appropriate scientific language, conventions and representations** | **Senior Secondary****BIOLOGY & EARTH AND ENVIRONMENTAL SCIENCE****Represent data in meaningful and useful ways; organise and analyse data to identify trends, patterns, and relationships; qualitatively describe sources of measurement error, and uncertainty and limitations in data; and select, synthesise and use evidence to make and justify conclusions****CHEMISTRY****Represent data in meaningful and useful ways, including using appropriate graphic representations and correct units and symbols; organise and process data to identify trends, patterns and relationships; identify sources of random and systematic error and estimate their effect on measurement results; and select, synthesise and use evidence to make and justify conclusions****BIOLOGY****Select, construct and use appropriate representations, including classification keys, food webs and biomass pyramids, to communicate conceptual understanding, solve problems and make predictions****BIOLOGY****Select, construct and use appropriate representations, including diagrams of structures and processes; and images from different imaging techniques, to communicate conceptual understanding, solve problems and make predictions****CHEMISTRY****Select, construct and use appropriate representations including chemical symbols and formulae, molecular structural formulae, physical and graphical models of structures, chemical equations and thermochemical equations, to communicate conceptual understanding, solve problems and make predictions****CHEMISTRY****Select and use appropriate mathematical representations to solve problems and make predictions, including calculating percentage composition from relative atomic masses and using the mole concept to calculate the mass of reactants and products****EARTH AND ENVIRONMENTAL SCIENCE****Select, construct and use appropriate representations, including maps and other spatial representations, diagrams and flow charts, to communicate conceptual understanding, solve problems and make predictions****BIOLOGY****Interpret a range of scientific and media texts, and evaluate models, processes, claims and conclusions by considering the quality of available evidence, including interpreting confidence intervals in secondary data; and use reasoning to construct scientific arguments****CHEMISTRY & EARTH AND ENVIRONMENTAL SCIENCE****Interpret a range of scientific and media texts, and evaluate processes, claims and conclusions by considering the quality of available evidence; and use reasoning to construct scientific arguments****BIOLOGY & CHEMISTRY****Communicate to specific audiences and for specific purposes using appropriate language, nomenclature, genres and modes, including scientific reports****EARCH AND ENVIRONMENTAL SCIENCE****Communicate to specific audiences and for specific purposes using appropriate language, genres and modes, including complications of field data and research reports** |
| **Year 7-8****GEOGRAPHY****Evaluate sources for their reliability and usefulness and represent data in a range of appropriate forms, for example, climate graphs,****compound column graphs, population pyramids, tables,****field sketches and annotated diagrams, with and without the use of digital and spatial****technologies****Represent the spatial****distribution of different types of geographical phenomena by constructing appropriate****maps at different scales that conform to cartographic****conventions, using spatial****technologies as appropriate** **Analyse geographical data and other information using****qualitative and quantitative methods,****and digital and****spatial technologies as****appropriate, to identify and propose explanations for spatial distributions, patterns and trends and infer relationships** **Apply geographical concepts to draw****conclusions based on****the analysis of the data and information collected****Present findings, arguments****and ideas in a range of****communication forms****selected to suit a particular audience and purpose, using****geographical terminology and digital technologies as appropriate** | **Year 9-10****GEOGRAPHY****Evaluate sources for their reliability, bias and usefulness, and represent multi-variable data in a range of appropriate forms, for****example, scatter plots, tables, field sketches and annotated diagrams, with and without the use of digital and spatial technologies****Represent the spatial****distribution of geographical****phenomena by constructing****special purpose maps that conform to cartographic****conventions, using spatial****technologies as appropriate****Evaluate multi-variable data and other geographical****information using qualitative****and quantitative methods,****and digital and spatial****technologies as appropriate,****to make generalisations and inferences, propose****explanations for patterns,****trends, relationships and****anomalies, and predict****outcomes** **Apply geographical concepts to synthesise information from various sources and draw conclusions based on****the analysis of data and****information, taking into****account alternative points of view****Present findings, arguments and****explanations in a range****of appropriate communication****forms, selected for their****effectiveness and to suit****audience and purpose, using relevant geographical****terminology and digital****technologies as  appropriate** | **Senior Secondary****GEOGRAPHY****Evaluates the reliability, validity and usefulness of geographical sources and information****Analyses geographical information and data from a range of primary and secondary sources and a variety of perspectives to draw reasoned conclusions and make generalisations****Identifies and analyses trends and patterns, infers relationships, and makes predictions and inferences****Communicates geographical information, ideas, issues and arguments using appropriate written and/or oral, cartographic and graphic forms****Uses geographical language in appropriate contexts to demonstrate geographical knowledge and understanding****Proposes individual and collective action, taking into account environmental, social and economic factors; and predicts the outcomes of the proposed action** |
| **Year 7-8****ICT****Apply practices that comply with legal obligations regarding the ownership and use of digital products resources.** **Identify and value the rights to identity, privacy and emotional safety for themselves and others with using ICT and apply generally accepted social protocols when using ICT to collaborate with local and global communities****Use a range of ICT to analyse information in terms of implicit patterns and structures as a basis to plan an information search or generation****Assess the suitability of data or information using appropriate own criteria****Use appropriate ICT to collaboratively generate ideas and develop plans****Design and modify simple digital solutions, or multimodal creative outputs or data transformations for particular audiences and purposes following recognised conventions****Select and use appropriate ICT tools safely to lead groups in sharing and exchanging information, and taking part in online projects or active collaborations with appropriate global audiences****Understand that there are various methods of collaboration through computer mediated communications that vary in form and control** | **Year 9-10****ICT****Identify and describe ethical dilemmas and consciously apply practices that protect intellectual property.****Independently apply appropriate strategies protect rights, identity, privacy and emotional safety of others with using ICT, and discriminate between protocols suitable for different communication tools when collaborating with local and global communities****Select and use a range of ICT independently and collaboratively, analyse information to frame questions and plan search strategies or data generation****Develop and use criteria systemically to evaluate the quality, suitability and credibility of located data or information and sources****Select and use ICT to articulate ideas and concepts, and plan the development of complex solutions****Design, modify and manage complex digital solutions, or multimodal creative outputs or data transformations for a range of audiences and purposes****Select and use a range of ICT tools efficiently and safely to share and exchange information, and to collaboratively and purposefully construct knowledge****Understand that computer mediated communications have advantages and disadvantages in supporting active participation in a community of practice and the management of collaboration on digital materials** |  |
| **Year 7-8****CRITICAL / CREATIVE THINKING****Clarify information and ideas from texts or images when exploring challenging issues****Critically analyse information and evidence according to criteria such as validity and relevance****Draw parallels between known and new ideas to create new ways of achieving goals****Generate alternatives and innovative solutions, and adapt ideas, including when information is limited or conflicting****Predict possibilities, and identify and test consequences when seeking solutions and putting ideas into action****Justify reasons for decisions when transferring information to similar and different contexts****Differentiate the components of a designed course of action and tolerate ambiguities when drawing conclusions** | **Year 9-10****CRITICAL / CREATIVE THINKING****Clarify complex information and ideas drawn from a range of sources****Critically analyse independently sources information to determine bias and reliability****Create and connect complex ideas using imagery, analogies and symbolism****Speculate on creative options to modify ideas when circumstances change****Assess risks and explain contingencies, taking account of a range of perspectives, when seeking solutions and putting complex ideas into action****Identify, plan and justify transference of knowledge to new concepts****Use logical and abstract thinking to analyse synthesise complex information to inform a course of action** |  |
| **Evaluate****Evaluate achievement of learning goals****Reflect on content****Reflect on process** | **Year 7-8****SCIENCE****Reflect on the method used to investigate a question or solve a problem, including evaluating the quality of the data collected, and identify improvements to the method****Use scientific knowledge and findings from investigations to evaluate claims** | **Year 9-10****SCIENCE****Evaluate conclusions, including identifying sources of uncertainty and possible alternative explanations, and describe specific ways to improve the quality of the data** |  |
| **Year 7-8****GEOGRAPHY****Reflect on their learning to propose individual and****collective action in response to a contemporary****geographical challenge, taking account of****environmental, economic and social considerations, and****predict the expected****outcomes of their proposal** | **Year 9-10****GEOGRAPHY****Reflect on and evaluate the findings of the inquiry to propose individual and****collective action in response to a contemporary geographical challenge,****taking account of****environmental, economic and social considerations; and****explain the predicted****outcomes and consequences****of their proposal** | **Senior Secondary****GEOGRAPHY****Applies generalisations to evaluate alternative responses to geographical issues at a variety of scales** |
|  |  | **Senior Secondary****ANCIENT HISTORY & MODERN HISTORY****Evaluate critically different historical interpretations of the past, how they evolved, and how they are shaped by the historian’s perspective****ANCIENT HISTORY & MODERN HISTORY****Evaluate contested views about the past to understand the provisional nature of historical knowledge and to arrive at reasoned and support conclusions** |
| **Year 7-8****ICT****Explain the benefits and risks of the use of ICT for particular people in work and home environments** | **Year 9-10****ICT****Assess the impact of ICT in the workplace in society, and speculate on its role in the future and how they can influence its use** |  |
| **Year 7-8****CRITICAL / CREATIVE THINKING****Assess assumptions in their thinking and invite alternative opinions****Evaluate and justify the reasons behind choosing a particular problem-solving strategy****Identify gaps in reasoning and missing elements in information****Explain intentions and justify ideas, methods and courses of action, an account for expected and unexpected outcomes against criteria they have identified** | **Year 9-10****CRITICAL / CREATIVE THINKING****Give reasons to support their thinking, and address opposing viewpoints and possible weaknesses in their own positions****Balance rational and irrational components of a complex or ambiguous problem to evaluate evidence****Analyse reasoning used in finding and applying solutions, and in choice of resources****Evaluate the effectiveness of ideas, product and performances and implement courses of action to achieve desired outcomes against criteria they have identified** |  |

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**Guided Inquiry Design Framework: Core skills and tools**

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| **Core skills in Guided Inquiry Design Framework** | **Inquiry community in Guided Inquiry Design Framework**  | **Tools**<http://eduwebinar.com.au/web-tools-to-support-inquiry-based-learning>  |
| ***Open – Students*** Ask 6 Ws (what, when, where, which, who, why)DefineDescribeFindListNameRecallRecogniseRememberRetrieveUnderstand inquiry processUnpack task | ***Open – Inquiry community***EngageHighlight conceptsIntroduce key inquiry questionsInvite to inquiryOpen mindsSet tone and directionSpark conversationStimulate curiosity | Bubbl.us<https://bubbl.us/>Lino<http://en.linoit.com/>Mindmeister<http://www.mindmeister.com/>Padlet<http://padlet.com/>Poll Everywhere<http://www.polleverywhere.com/k12-student-response-system>Popplet<http://popplet.com/> Spiderscribe<http://www.spiderscribe.net/>Stoodle<http://stoodle.ck12.org/> Stormboard<http://stormboard.com/>TED-Ed<http://ed.ted.com/>Text2MindMap<http://www.text2mindmap.com/>Youtube<http://www.youtube.com/>Socrative<http://socrative.com/> |
| ***Immerse - Students***BrainstormChooseCollaborateDiscussExchangeUse prior knowledge | ***Immerse – Inquiry community***Build backgroundCollaborateConnect to contentConverseDiscover interesting ideasEvoke prior knowledgeFind third space | eduCanon<http://www.educanon.com/> National Geographic Videos<http://video.nationalgeographic.com.au/> TED-Ed<http://ed.ted.com/>Youtube<http://www.youtube.com/>Virtual field trips  |
| ***Explore - Students***BrowseCategoriseChartChooseConceptualiseDevelop/reject search termsFormulateJournal/Log: Reflect on learning, take notesLocateObservePreliminary searchesScanSearch broadlySkim | ***Explore – Inquiry community***CollaborateConverseDip inExplore interesting ideasLook aroundSkim variety of information | Bibme<http://www.bibme.org/> Compfight<http://compfight.com/>DuckDuckGo<http://duckduckgo.com/>Easybib[www.easybib.com](http://www.easybib.com) GoGooligans.com<http://www.lures.info/childrens_search/gogooligans.html>Infotopia<http://www.infotopia.info/>InstaGrokhttp://www.instagrok.com/Kidtopia<http://www.kidtopia.info/>Mashpedia<http://www.mashpedia.com/> Photobucket<http://beta.photobucket.com/>Quintura for kids<http://quinturakids.com/>Search-cube<http://search-cube.com/>Simple Wikipedia<http://simple.wikipedia.org/wiki/Main_Page>SlimeKids<http://www.slimekids.com/search-engines/>WikiSummarizer<http://www.wikisummarizer.com/> |
| ***Identify – Students***ChartChooseExperiment with search termsFormulate inquiry questionHypothesiseInvestigateJournal: Reflect on learning, take notesLog – Keep bibliographic detailsPlanSearch widelySuggest | ***Identify – Inquiry community***Identify inquiry questionCollaborateConverseDecide directionForm a focusFrame inquiry processPause and ponderQuestion focus formulationThink/Pair/Share | Knowledge Compass<http://knowledgecompass.weebly.com/> |
| ***Gather – Students***CaptureChartClassifyCollectCompareComposeComprehensive searchingEvaluateLocateMeasureOrganiseRecordRetrieveSelectSummarise | ***Gather – Inquiry community***Cluster ideasCollect detailed information from a variety of sourcesGather important informationGo broadGo deep | Bibme<http://www.bibme.org/> Compfight<http://compfight.com/>Diigo<http://www.diigo.com/>Easybib:[www.easybib.com](http://www.easybib.com)Evernote<http://evernote.com/>Kaboompics<http://kaboompics.com> Lino<http://en.linoit.com/>Netvibes<http://www.netvibes.com/en>Pearltree<http://www.pearltrees.com/>Padlet<http://padlet.com/> Photobucket<http://beta.photobucket.com/>Pics4Learning<http://www.pics4learning.com/>Polldaddy<http://polldaddy.com/>QR codes<http://qrcode.kaywa.com/>ScoopIt<http://www.scoop.it/>sitehoover<http://www.sitehoover.com/en/>Spiderscrib<http://www.spiderscribe.net/>Survey Monkey<http://www.surveymonkey.com/> |
| **Create / Share - Students**ArticulateBuildCategoriseChartChooseCombineCommunicateComposeConcludeConstructCreateDesignDevelopDrawExchangeExperimentFormatInferIntegrateInterpretInventMakeOrganisePresentProduceRepresentSequenceShareSimplifySynthesise | **Create / Share – Inquiry community**Create to communicateGo beyond facts to make meaningLearn from each otherReflect on learningShare learningTell their story | Animoto<http://animoto.com/>Audacity<http://audacity.sourceforge.net/>AudioBoo<http://audioboo.fm/>Blabberize<http://blabberize.com/>Blogger<http://www.blogger.com/>Bookbuilder<http://bookbuilder.cast.org/>Canva<https://www.canva.com/> easel.ly<http://www.easel.ly/>Flipboard<https://flipboard.com> Glogster<http://edu.glogster.com/>GoAnimate for Schools<https://goanimate4schools.com/public_index> Haiku Deck<https://www.haikudeck.com/> infogr.am<http://www.infogr.am/>Issuu<http://issuu.com/> Jing<http://www.techsmith.com/jing.html>Learnist<http://learni.st/>Livebinders<http://www.livebinders.com/>morgueFile<http://www.morguefile.com/archive> Ocenaudio<http://www.ocenaudio.com.br/> PB Works<http://www.pbworks.com/>Photo Peach<http://photopeach.com/>Piktochart<http://piktochart.com/>Pixton<http://www.pixton.com/schools/overview>Podbean<http://www.podbean.com/>PosterMaker App<https://itunes.apple.com/ca/app/id423574589?mt=8> Prezi<http://prezi.com/>PresentationTube<http://presentationtube.com/> Scribe<http://www.scribd.com/>Smilebox Teacher’s Toolbox<http://media.smilebox.com/teachers/welcome>Smore for educators<https://www.smore.com/educators> Stormboard<http://stormboard.com/>Storyboard generator<http://generator.acmi.net.au/storyboard>Tagul<http://tagul.com/>Twiddla<http://www.twiddla.com/>Vimeo<http://vimeo.com/>Voki<http://www.voki.com/>Weebly for education<http://education.weebly.com/>Wikispaces<http://www.wikispaces.com/>Wordle<http://www.wordle.net/>WordPress<https://wordpress.com/>xtranormal<http://www.xtranormal.com/> |
| **Evaluate – Student**AssessCheckCritiqueEvaluateFeedbackImprovePeer assessReflectSelf-assessSuggestTest | **Evaluate – Inquiry community**Celebrate and showcase learningConverseEvaluate achievement of learning goalsReflect on contentReflect on process | Edmodo<http://www.edmodo.com/>Kaizena<https://kaizena.com/> iRubric<http://www.rcampus.com/indexrubric.cfm> Penzu classroom<http://penzu.com/content/products/classroom>Socrative<http://socrative.com/>Stoodle<http://stoodle.ck12.org/> VoiceThread<http://voicethread.com/> |