

# FOSIL AND IFF: TWO SIDES OF THE SAME COIN?



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Following on from exploring the [Framework of Skills for Inquiry Learning \(FOSIL\) website](#) (The Fosil Group, 2019) and the [Empire State Information Fluency Framework \(ESIFC\)](#) (State School Library Systems Organisation, 2019), it seemed a timely exercise to try to map the phases of FOSIL to the NSW Information Fluency Framework (NSW Department of Education, 2021). Also, I've been inspired by emails with Darryl Toerien, who has gone through the exercise of mapping FOSIL to ESIFC, and so have attempted a similar exercise with IFF. Please note it is a first attempt and there are no doubt, many more proficient mappers that I am in TL Land!

## Why?

### ■ Coverage of many IFF elements in one go!

I hoped that the aligning of IFF elements to FOSIL would show that a substantial number of information fluency skills can be covered in one inquiry unit. The FOSIL Framework is excellent, containing as it does that early phase so important in inquiry learning, of engaging students curiosity (in Guided Inquiry Design (GID) , Open, Immerse, Explore), in FOSIL, Connect and Wonder. The FOSIL Framework is also excellent because the materials on the [website](#) (The FOSIL Group, 2019) are extensive, thoughtful, and copyright free.

### ■ Copyright free materials

IFF is a public-facing document, so it made sense to me to try this mapping exercise in FOSIL, as materials there are also copyright free.

### ■ The example set by FOSIL/ESIFC mapping

The mapping Darryl Toerien and Barbara Stripling have carried out linking the Empire State Information Fluency Continuum to FOSIL is a guiding experience for me.

I am convinced that IFF provides TLs with a long-awaited opportunity to gather evidence of student learning. It can be used either by choosing elements that make sense in your school, and reinforcing learning priorities in your school; or, as I suspected, it will be possible to bring most of them together and achieve many of the elements of IFF **in the one place** that is, in an inquiry unit. And being able to provide evidence of that learning.

### How to proceed?

Because the IFF is broken down into a continuum K-12, my dilemma was:

- Do I choose a stage, and just try to map FOSIL to that stage? Or do I try to map FOSIL to the whole continuum, Stage 1-6?

My conclusion was that I wanted to show the links with FOSIL in broad terms, and that trying to go stage by stage, was unwieldy, and would have produced a truly massive chart! So, I decided to stay at the top level of the elements, Social, Literate, Innovative, Critical and Ethical – and that's resulted in a clear overview that shows the stage of FOSIL and the indicators (FOSIL Inquiry Cycle skill sets, 2022).

I played around with a table – Did I put IFF first, or FOSIL first? In the end it made sense to go with FOSIL and its indicators (FOSIL Inquiry Cycle skill sets, 2022) on the left of the chart, and then to go search through IFF to find linkages. This was because of my suspicion that the stages of inquiry learning formed a way of meeting nearly all of IFF elements in an order reflecting, the Connect, Wonder, Investigate, Construct, Express, Reflect stages. (Or indeed, GID, NSW ISP, or any inquiry learning model).

The conclusion is, for me, at least, that nearly all of the SLICE elements can be achieved through inquiry learning, in the one place, except the Connect and Reflect stages of FOSIL, and the Social element of IFF, interestingly. Carmel Grimmett, Library Coordinator, NSW DET, read a draft of this article and has made some suggestions included below.

My mapping suggested this:

- All of the Innovative, Critical and Ethical elements are covered in FOSIL in an order directed by the stages of FOSIL, i.e. not in the same order as they appear in IFF.
- Nearly all of the Social element of SLICE was not to be found in FOSIL, except for *Social – IFFSL1.2 - Understand how information is affected by cultural knowledge, beliefs and practices*, which fitted against Investigate in FOSIL/Perspective, point of view. That is, these Social elements were not to be found in FOSIL:

#### As consumers, students:

- Appreciate and resolve diverse perspectives
- Empathise across cultures.

#### As creators, students:

- Collaborate with others

- Communicate information across cultures
  - Contribute to society.
- The Literate element matched well to FOSIL stages, except for *IFFL11.2 - Interpret texts and data to build meaning* and *IFFL2.3 - Reflect on the efficacy of communication*. However, as Carmel Grimmett (C. Grimmett, personal communication, February 21, 2023) pointed out:

I think these elements could both work - under 'Construct - Interpretation and synthesis of information' when, for example, a student locates information in different graphs or statistics and combines and reinterprets it to fit their inquiry question. And if they are following up with a poster/speech/podcast... then they self-evaluate, that can be reflecting on the efficacy of their communication to their chosen audience.

It's likely that the elements of the Social/Consumers elements of the IFF that I couldn't map with FOSIL could be covered:

- As a provocation (story, multimedia text, social issues games, for example) with a related collaborative activity to introduce the inquiry unit and the Wonder phase of FOSIL, thus covering some of the missing social outcomes (C. Grimmett, personal communication, February 21, 2023); and
- in the choice of inquiry topic, allowing the exploration of diverse perspectives and attitudes across cultures.

And the Social/ creators elements, could be covered by both using inquiry circles for collaboration, and by the topic which might involve communication across cultures and having a final step missing in both GID and FOSIL, for example, the Reflect and Act step in the Murdoch Cycle of Inquiry (2020).

### So, what?

So, if TLs could persuade school leadership that information fluency skills can be achieved through whole form inquiry units at strategic stages of schooling, developed in collaboration with the TL, then the haunting suspicion alive and well in schools that those 21<sup>st</sup> century skills, General Capabilities/ information fluencies, are not being taught and assessed could be put to rest. It is hard to persuade school leadership and teachers, overloaded with content requirements and accountability, and the onslaught of educational theories, that inquiry learning is worthwhile, and it's even harder to get them to (a) realise, and (b) continue to realise that the TL is nicely placed to be the instigator and collaborative partner in making sure that the general capabilities/ IFF skills are (a) covered systematically, and (b) they are assessed.

At Broughton College, my colleague Alinda Sheerman has suggested the following to her leadership team for 2023:

We propose that every student should be immersed in one inquiry unit per year in one subject area until Year 10, in order to learn the skills and general capabilities many usually so quickly brush over when programming. In Stage 6 the extension subjects rely heavily on 'research' and the students should have gained the skills during Years 3-10. "Research", as a term, can range in definition from scientific research to fact finding. It may be that many teachers may not understand the term so misinterpret what students need to be doing...or indeed what they are capable of doing. Tech savvy does not mean information savvy!

The TLs now want to combine inquiry learning with the Information Fluency Framework (IFF) as devised by the NSW Department of Education and taught through pilot school libraries state-wide last year. This is to embed relevant skills at each stage of the inquiry.

Junior School in Years 3-6 will, this year, be embarking on one inquiry unit per year in collaboration with the junior school Teacher Librarian (TL). They will be using the inquiry process FOSIL (in place of Guided Inquiry) to support the IFF. Year 5 will be starting this term with a Humanities inquiry unit and the assessment of General Capabilities will be incorporated. Every term a different grade will work with the TL who is co-planning, co-teaching, co-assessing and co-reporting with each grade.

We intend to move from the Guided Inquiry process for inquiry learning to FOSIL and use it to support the IFF. (FOSIL has fewer steps that are very well supported with Creative Commons documents unlike GI that is heavily copyrighted.)

The proposal, in a nutshell, is that one year group per term conducts a six-week collaborative inquiry unit in one subject area. Over four years all IFF elements should be treated and implemented in a unit of work.

OR: A pilot project might mean just one class with a brave teacher collaborates with the TL and conduct action research together on this pedagogical approach. Watch this space!

### And so, what else needs to be done?

Please note that this mapping exercise is entirely my own initiative and interest. One of the inspiring aspects of the development and use of IFF has been the fact that it's a public facing document, and it has had wonderful collaborative development, and it continues to need that collaboration to make it a central pillar to teacher librarianship in Australian schools. I've noticed that many TLs connected with IFF say that there is no need for teachers to get involved in the intricacies of IFF and that they may well glaze over and not engage with it, but they do know and worry about the General Capabilities, and how they are incorporated into their teaching, and how they are assessed. So, what next needs to be done?

- I think we need to map IFF more closely to the General Capabilities!
- I think the exercise I've been through at the overarching level of IFF needs to be done for every stage

Don't miss Darryl Toerien's inspiring article in this issue of *ACCESS*, *Do Not Block the Way of Inquiry!*

Stages of FOSIL Inquiry model	Indicators	Information Fluency Framework linkages	
		As consumers:	As creators:
<b>Connect</b>	Interest/Prior knowledge		
	Background knowledge: Overview/Context/Key Ideas		
	Topic		
	Process of inquiry/Plan		
<b>Wonder</b>	Questions	<b>Innovative – IFFL1.1</b> Pose questions to be answered using information	<b>Critical – IFFC2.1</b> Generate ideas in response to problems
	Predicted sources and answers Hypothesis/Tentative hypothesis	<b>Literate – IFFL1.1</b> Find and select useful information from a range of sources <b>Innovative – IFFI1.1</b> Pose questions to be answered using information	<b>Critical – IFFC2.2</b> Hypothesise results of a problem using logic and reasoning
<b>Investigate</b>	Different types of sources/Organisation of information	<b>Literate – IFFL1.1</b> Find and select useful information from a range of sources <b>Critical – IFFC1.1</b> Reflection on information needs, emotions, thoughts and strategies when consuming information	
	Navigation and search strategies		
	Evaluation, selection, curation and use of multiple sources	<b>Literate – IFFL1.2</b> Interpret texts and data to build meaning	
	Perspective/Point of view	<b>Social – IFFSL1.2</b> Understand how information is affected by cultural knowledge, beliefs and practices <b>Literate – IFFL1.3</b> Organise information	
	Strategies to make sense of information	<b>Critical – IFFC1.2</b> Apply logic and reasoning to evaluate information sources	
	Capturing information and thinking/notetaking	<b>Literate – IFFL1.3</b> Organise information	
<b>Construct</b>	Organisation of information to make meaning	<b>Literate – IFFL1.3</b> Organise information <b>Critical – IFFC1.3</b> Synthesise and make sense of information from diverse sources	<b>Critical – IFFC2.3</b> Connect information and transfer into new contexts.
	Interpretation and synthesis of information	<b>Literate – IFFL1.3</b> Organise information <b>Critical – IFFC1.3</b> Synthesise and make sense of information from diverse sources	<b>Critical – IFFC2.3</b> Connect information and transfer into new contexts.
	Conclusions	<b>Innovative – IFFI1.</b> Connect and combine ideas <b>Critical – IFFC1.3</b> Synthesise and make sense of information from diverse sources	<b>Innovative – IFFI2.1</b> Generate and evaluate ideas <b>Critical – IFFC2.3</b> Connect information and transfer into new contexts.
	Claims/opinions/point of view		
<b>Express</b>	Organisation of information to express/present meaning for different purposes		<b>Literate – IFFL2.1</b> Select and create appropriate forms of information <b>Literate – IFFL2.2</b> Communicate information effectively to different audiences
	Product and/or presentation: Audience/level of complexity/format/technology		<b>Innovative – IFFI2.2</b> Implement ideas under given constraints.
	Revision based on self-assessment and feedback		
	Academic integrity	<b>Ethical – IFFE1.1</b> 1. Understand ethical decision that are embedded in information <b>Ethical – IFFE1.2</b> 2. Apply reasoning to consider consequences and make decisions about the use of information	<b>Ethical – IFFE2.1</b> Understand ethical decisions when creating information <b>Ethical – IFFE2.2</b> Apply reasoning to consider consequences and make decisions about the creation of information <b>Ethical – IFFE2.3</b> Consider information rights and responsibilities of difference groups when creating information.
<b>Reflect</b>	Assessment of new learning and experience of inquiry		
	Personal strengths and goals for improvement in process and product		
	Recognition of gaps in knowledge and new questions		



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