

OVERVIEW

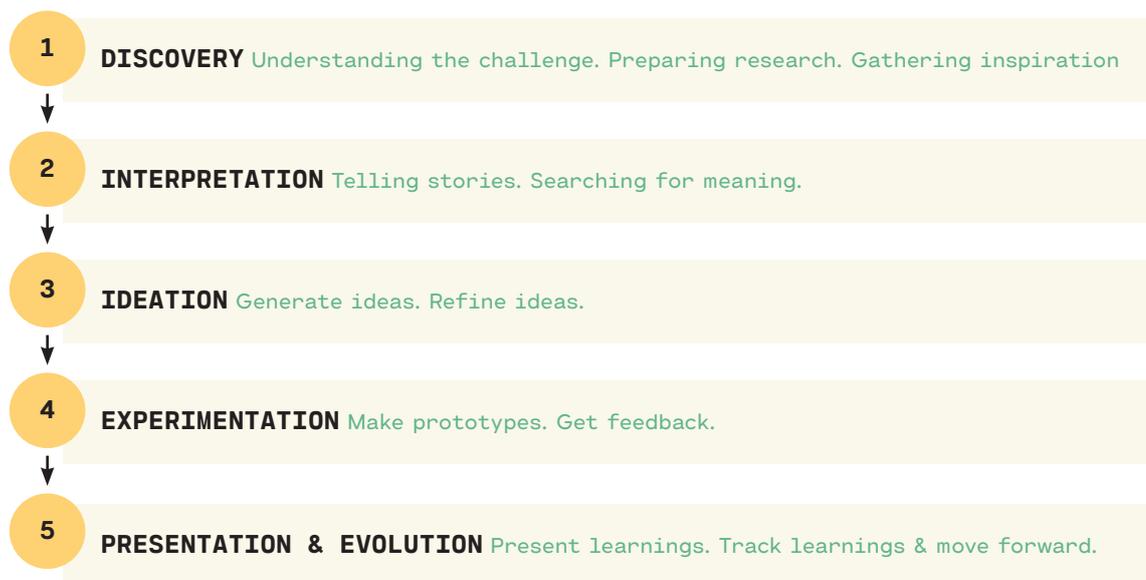
DESIGN THINKING IN THE CLASSROOM

The digital resources in this report have been selected around a design thinking approach to pedagogy in order to complement the curriculum in a Visual Arts, Visual Communication Design or Media Arts classroom. However, the resources and methodologies suggested could also be applied to any subject within the Victorian Curriculum.

The design thinking methodology is 'an analytic and creative process that engages a person in opportunities to experiment, create and prototype models, gather feedback, and redesign' (Razzouk & Shute, 2012, p. 330). Design thinking is important to my teaching practice as when it is used correctly it can create 'emergent learning spaces' (Crowhurst, 2015) whilst fostering creativity.

The design thinking approach is justified in the writings of proponents of constructivism. Jean Piaget was a leading advocate for cognitive constructivism believing that learning is an active process that should be whole and authentic to be effective (Ayas, 2006). The work of Lev Vygotsky was focused on social constructivism where social interaction and the use of cultural tools facilitate learning (Ayas, 2006).

Seymour Papert was a constructionist who built on the ideas of both Piaget and Vygotsky, claiming that 'the role of the teacher is to create the conditions for invention' (Papert, 1993). These 'conditions for invention' or 'emergent spaces' can be created when taking a design thinking approach to learning. The design thinking process can be broken into five distinct stages:

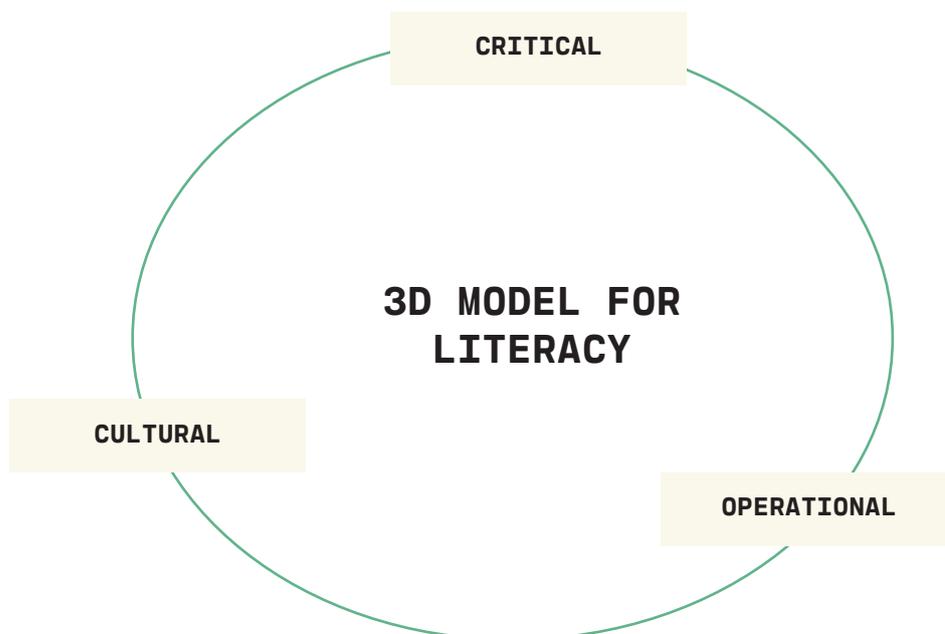


THE DESIGN THINKING PROCESS
ADAPTED FROM 'THE DESIGN THINKING PROCESS FOR EDUCATORS TOOLKIT', IDEO, 2012

THE 3D MODEL FOR DIGITAL LITERACY

A helpful approach for justifying the use of digital technology and applications in the classroom is Bill Green's 3D model (Green, 1988; Green & Beavis, 2012). The model was originally developed for written literacy, but has also been appropriated for digital literacy. Green describes the model as 'a holistic, integrated view of literacy comprising three interlocking dimensions or aspects' (Green, 2002, p. 27). The three dimensions are:

- **Operational** which includes the functional abilities and techniques required to communicate with the given tool (in the case of the written word these tools would be words and letters, with the techniques being reading and writing. In the case of digital literacy, the techniques would include reading and writing, but also listening and typing. The tools would become computers, smartphones and other classroom appropriate digital devices).
- **Cultural** which is about how to 'make meaning in context' (Bulfin & McGraw, 2015). Literacy is more than the ability to operate the tools of the medium, it also requires an understanding of cultural contexts including meanings, values, motivations, passions, beliefs, ideologies, situations and relationships.
- **Critical** which acknowledges that literacies are socially constructed. 'The critical dimension draws attention to issues of power and how some forms of literacy are more dominant – or socially powerful – in some contexts than others' (Bulfin & McGraw, 2015).



THE 3D MODEL AND IT'S DIMENSIONS
ADAPTED FROM GREEN & BEAVIS, 2012

LINKING THE 3D MODEL FOR DIGITAL LITERACY TO A DESIGN THINKING PROCESS

Bill Green's 3D model provides a framework for developing digital literacy. The design thinking process allows students to create, experiment and gather feedback when finding solutions to problems or producing creative work.

The following diagram links each of the six digital resources I've selected into the design thinking process. Dimensions from the 3D model have been included next to each resource to justify each selection. A more in-depth analysis of each resource's relationship with digital literacy and the Victorian Curriculum is provided in the following six pages.

1. DISCOVERY	2. INTERPRETATION	3. IDEATION	4. EXPERIMENTATION	5. PRESENTATION
TWITTER Operational, Cultural & Critical				
PINTEREST Operational & Cultural				
EDUBLOGS Operational, Cultural & Critical				
INKSCAPE Operational				
iMOVIE Operational				
INSTAGRAM Cultural				

DIGITAL RESOURCES MAPPED ACROSS THE DESIGN THINKING PROCESS
WITH REFERENCE TO DIMENSIONS FROM THE 3D MODEL

CONCLUSION

USING THE DESIGN THINKING FRAMEWORK AND THE 3D MODEL TO JUSTIFY THE USE OF DIGITAL RESOURCES IN THE CLASSROOM

The 'classroom suggestions' for each digital resource provide tangible ways in which resources can be pedagogically implemented in the classroom through a design thinking framework. Each suggestion fosters emergent and constructive spaces, where learners are free to create, test and develop their own ideas and solutions. This contributes to authentic and cultural facilitation of learning in a modern, holistic classroom.

These suggestions also demonstrate how each resource can be aligned with elements of the Victorian Curriculum for Visual Arts, Media Arts and Visual Communication Design. The use of the 3D model justifies the use of each resource ensuring that they foster the operational, cultural or critical aspects of digital literacy.