

# VCE Computing 2016-2019

Implementation program

April to May 2015

VCAA and Digital Learning and Teaching  
Victoria (DLTV)

# Session objectives



Why change?

Study design overview

Key study-wide changes

# Why change?

Depth over breadth

Increase project work (managing projects and too much theory)

Increase focus on creativity

Sharpen identity of some units (e.g ITA)

Impact of Australian Curriculum: Digital Technologies

# Key changes – VCE Computing

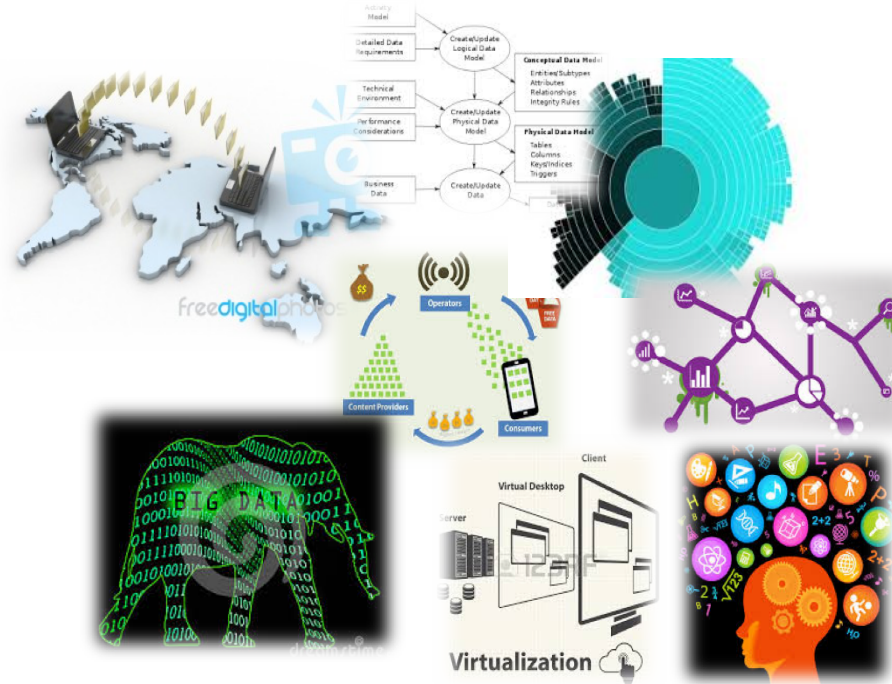
Name changes: IT to Computing; IT applications to Informatics; Units 1 and 2 from IT to Computing

New assessments in Units 3 and 4 – School assessed Tasks (SATs) as well as SACs

Underlying principles of computational, design and systems thinking reflected all units

Increased focus on data analytics

# Study overview - Aims



Creators of digital solutions

Features of data and information

Discerning users of digital systems

Components of information systems

Integrity and security of data and information

Ways of thinking when creating solutions

# Study overview - structure

Creators of digital solutions

Features of data and information

Discerning users of digital systems

Components of information systems

Integrity and security of data and information

Ways of thinking when creating solutions

Unit 1  
Computing

Unit 2  
Computing

Creators of digital solutions

Features of data and information

Discerning users of digital systems

Components of information systems

Integrity and security of data and information

Ways of thinking when creating solutions

Creators of digital solutions

Features of data and information

Discerning users of digital systems

Components of information systems

Integrity and security of data and information

Ways of thinking when creating solutions

Unit 3  
Informatics

Unit 3  
Software development

Creators of digital solutions

Features of data and information

Discerning users of digital systems

Components of information systems

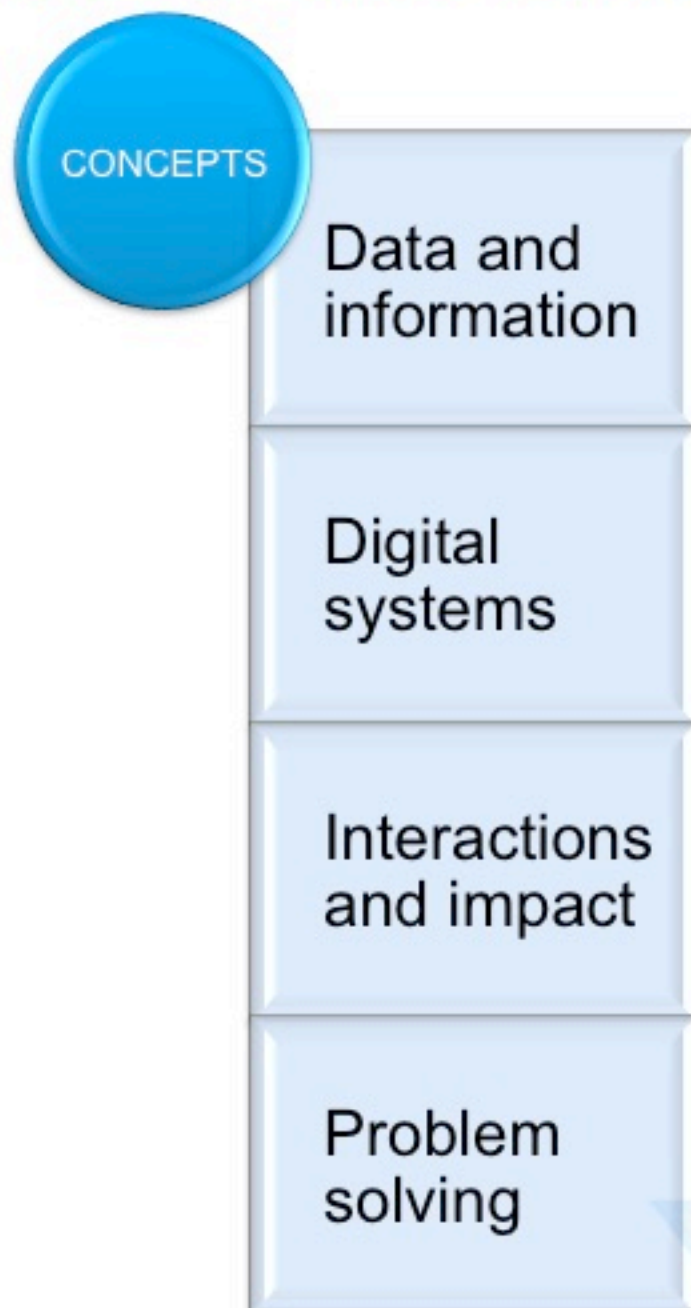
Integrity and security of data and information

Ways of thinking when creating solutions

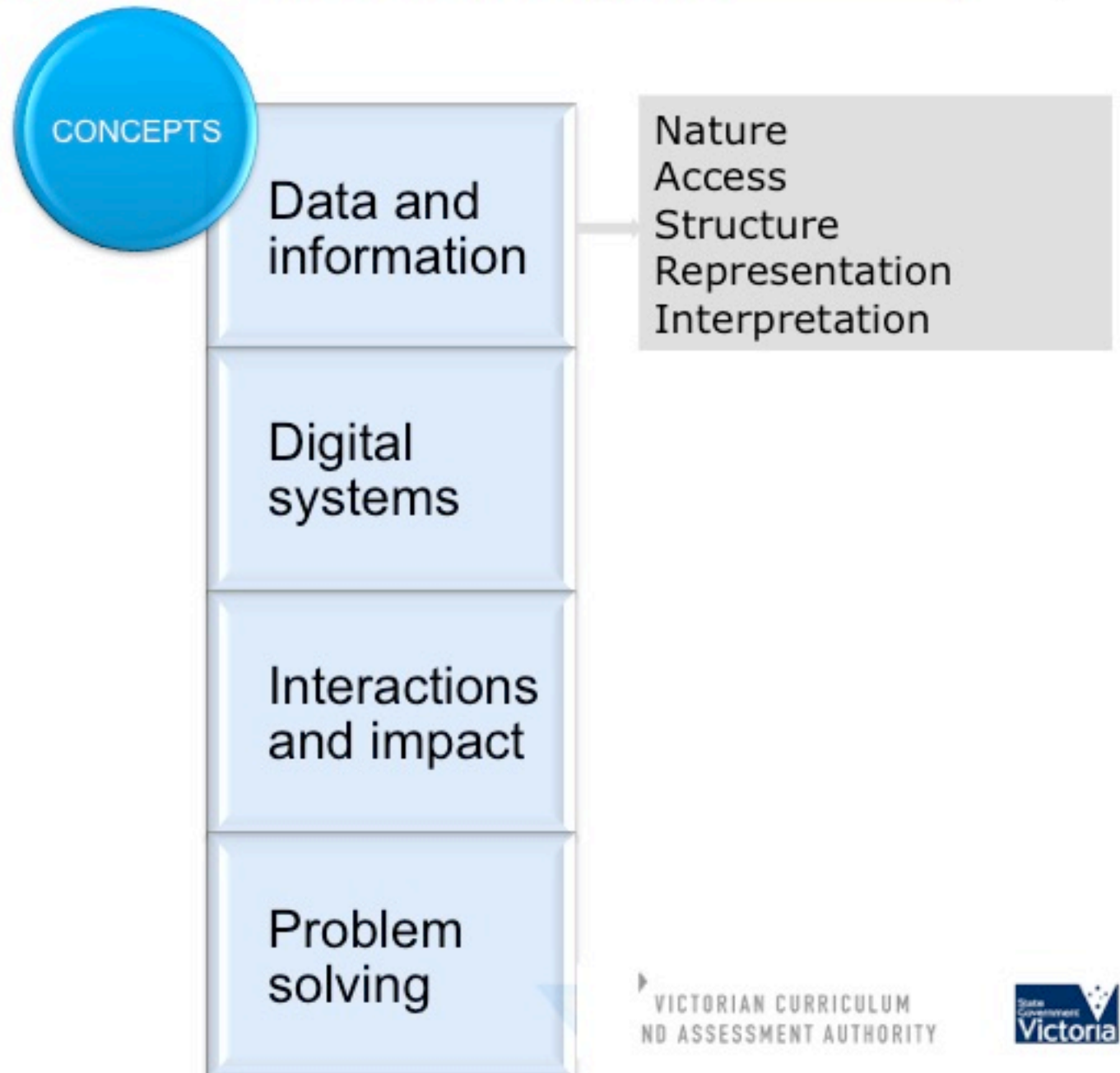
Unit 4  
Informatics

Unit 4  
Software development

# Study-wide changes

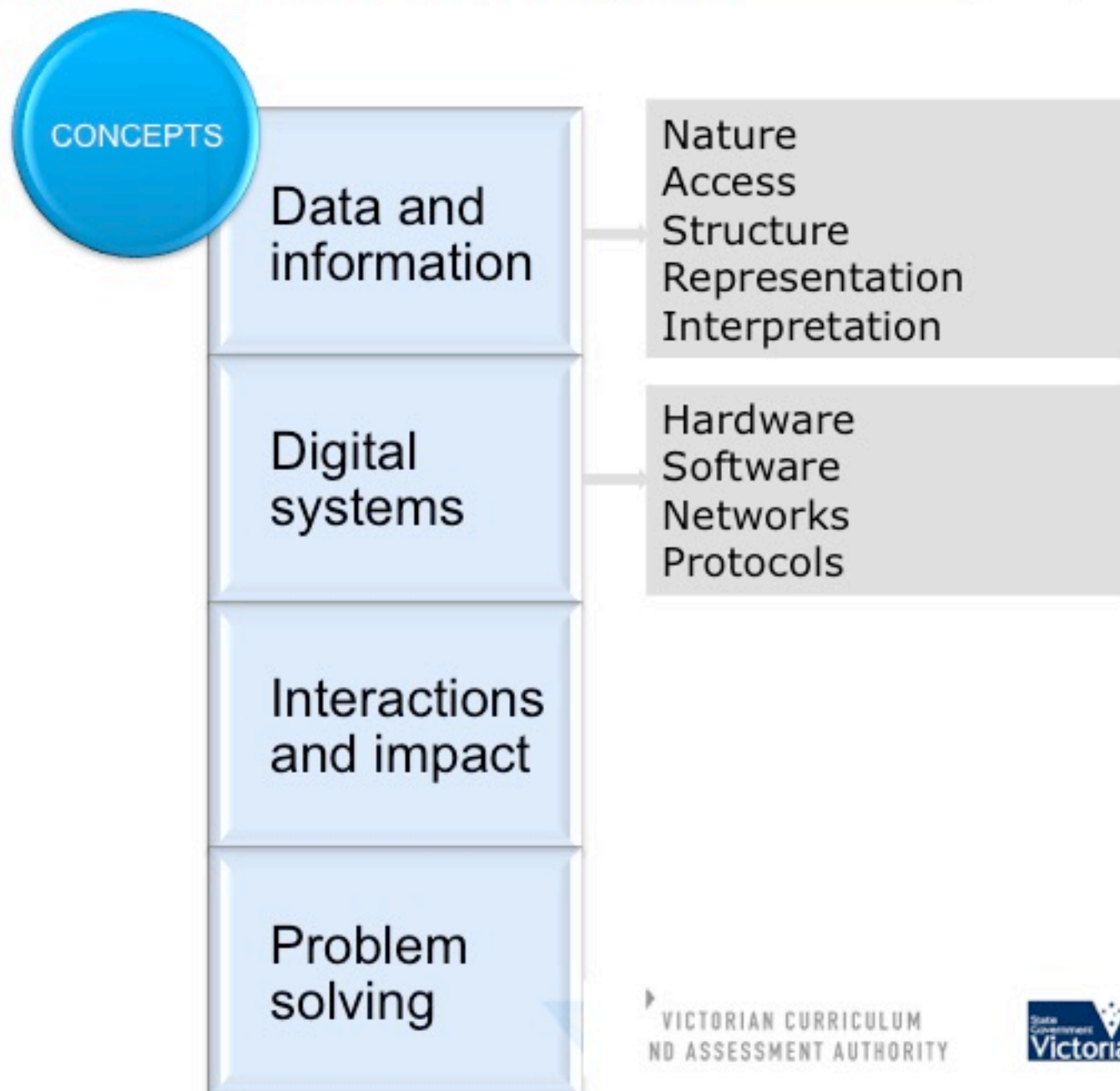


# Study-wide changes

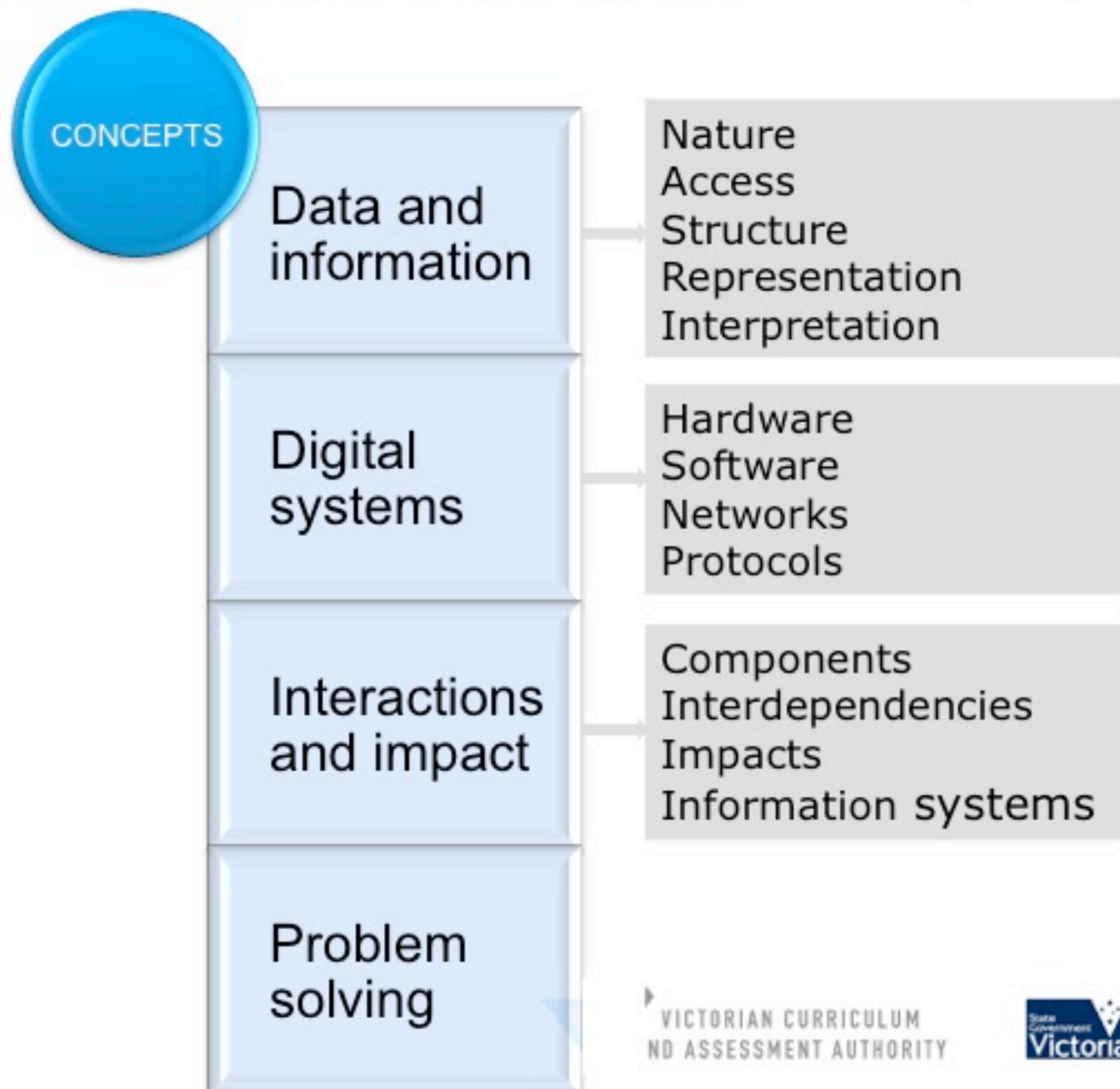




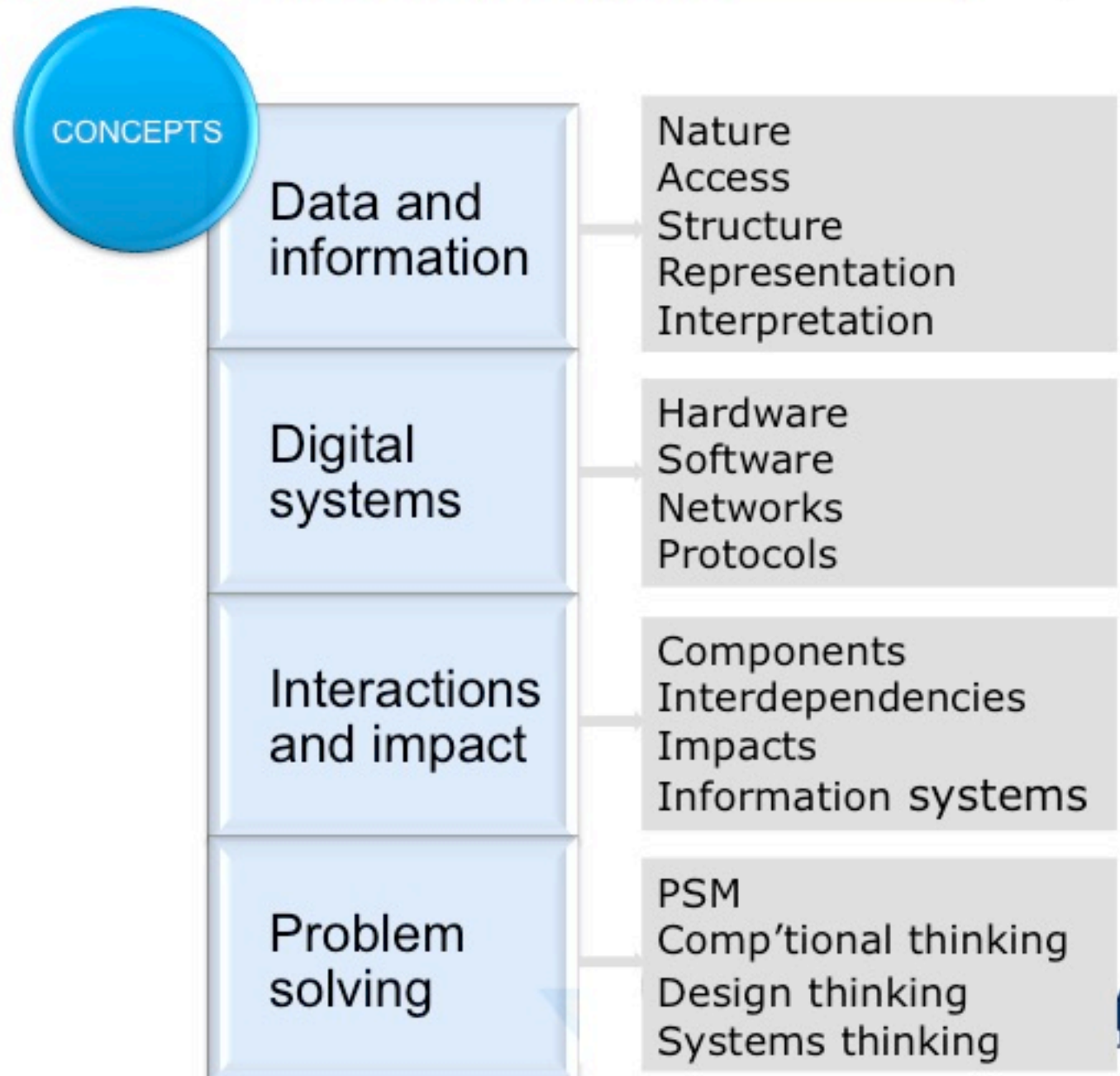
# Study-wide changes



# Study-wide changes



# Study-wide changes



# Study-wide changes

## CONCEPTS

Data and information

Nature  
Access  
Structure  
Representation  
Interpretation

Digital systems

Hardware  
Software  
Networks  
Protocols

Interactions and impact

Components  
Interdependencies  
Impacts  
Information systems

Problem solving

PSM  
Computational thinking  
Design thinking  
Systems thinking

### Outcome 1

On completion of this unit the student should be able to acquire data, and design and develop a graphic solution that communicates an investigation.

To achieve this outcome the student will draw on key knowledge and skills from Area of Study 1.

### Key knowledge

#### Data and information

- types and purposes of qualitative and quantitative data
- sources of, and methods and techniques for acquiring primary data
- factors affecting the quality of data and information such as accuracy and reliability
- methods of referencing primary sources
- techniques for authorising the collection and use of data and using consent forms
- techniques for protecting the privacy of the providers of data, for example de-identifying personal data

#### Digital systems

- physical and software controls used to protect the security of digital systems, including backing up, usernames and passwords, systems protection software

#### Interactions and impact

- Australian Privacy Principles relating to the acquisition, storage, use, communication of data and information, including non-identifiable information (principle 2), information only being held for its primary purpose

# Software tools

Two types of tables e.g. Unit 1

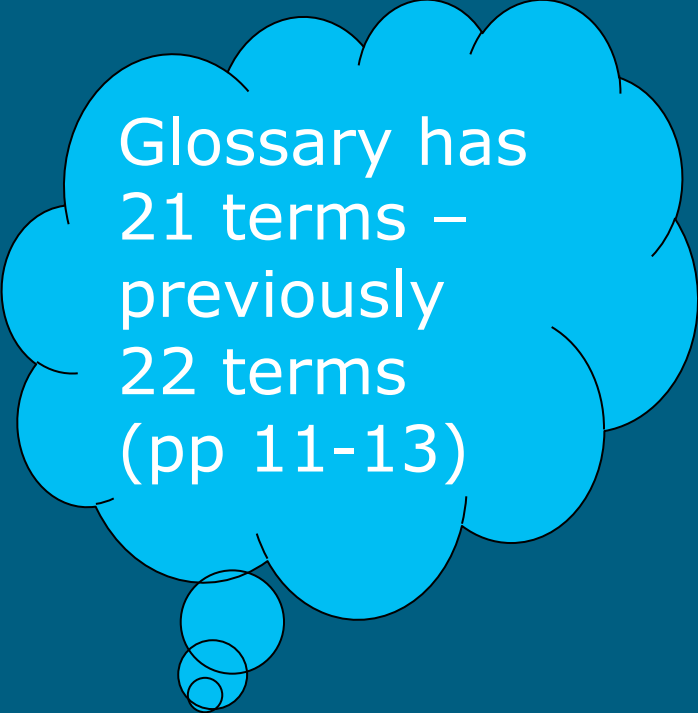
<b>Area of study</b>	<b>Tool that is STUDIED and USED in this unit</b>
Data and graphic solutions	Any software tool to create a graphic solution (specific reference to software functions in key knowledge)
Collaboration and communication	Web authoring, visualising thinking tool, tool for planning a project

<b>Area of study</b>	<b>Tool that is USED in this unit</b>
Networks	Any graphic tool to represent a network solution (assumed that student can use these without being taught as part of the study)

# Glossary

## New terms:

- Application architecture
- Computational thinking
- Data types
- Design principles
- Design thinking
- Normalisation
- Solution (digital)
- Systems thinking
- Types of data
- User experience
- User flow diagrams



Glossary has  
21 terms –  
previously  
22 terms  
(pp 11-13)

	Unit 1	Unit 2	Info 3	Info 4	Sof Dev 3	Sof Dev 4
Prog. language		Light Gray			Light Gray	Light Gray
UML					Dark Gray	
Flat D'B		Dark Gray				
Project planning	Light Green					
Visual thinking	Light Blue					
Web authoring	Light Blue			Light Blue		
* choice		Yellow		Yellow		
Data visual'tion		Light Gray				
Drawing / graphics	Dark Gray		Dark Gray			
RDBMS			Light Gray			

*Mandated software only*



# Advice for teachers

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## VCE ENGLISH LANGUAGE ADVICE FOR TEACHERS

### Introduction

The *English Language Advice for teachers 2016–2021* contains curriculum advice for Units 1 to 4 and assessment advice for school-based assessment in Units 3 and 4. Advice on matters related to the administration of Victorian Certificate of Education (VCE) assessment is published annually in the VCE and VCAL Administrative Handbook. Updates to matters related to the administration of VCE assessment are published in the VCAA Bulletin. Teachers must refer to these publications for current advice.

Updates to the online Advice for teachers are published in the VCAA Bulletin.

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#### VCE English Language

- [VCE English Language](#)
- [Introduction](#)
- [General curriculum and assessment advice: Units 1-4](#)
  - [Developing a course](#)
  - [Assessment principles](#)
- [Units 1 and 2](#)



# Advice for teachers

## INFORMATICS

### SCHOOL-ASSESSED COURSEWORK – Unit 3, Outcome 1, Task 1

#### PERFORMANCE DESCRIPTORS

#### DESCRIPTOR: typical performance in each range

	Mark range	Very Low	Low	Medium	High	Very High
<b>Unit 3</b>  <b>Outcome 1</b>  On completion of this unit the students will be able to design a solution, develop it using a relationship database management system	1 - 90	Few requirements are represented in the design of the solution and only some aspects of the provided analysis are evident.  Limited relevant design tools are selected, and limited techniques are applied to the outline of the data types and structures and how the solution will function.  The reasonableness of data has not been thoroughly checked through the application of validation techniques in the use of	Some requirements are represented in the design of the solution; however, only some aspects of the provided analysis are evident.  Limited selection of design tools and the application of some correct techniques result in some description of data types and structures and how the solution will function.  Limited validation techniques allow unreasonable data to be input.	Most key requirements are represented in the design of the solution; however, there are some misinterpretations of the provided analysis.  Some appropriate design tools are selected, and application of mainly correct techniques results in a generally accurate description of data types and structures and how the solution will function.  Some validation techniques effectively or efficiently check	A mainly accurate interpretation of the provided analysis is evident in the design of a feasible solution.  Most selected design tools are appropriate and while some techniques have not been correctly applied, the designs are still capable of describing the data types and structures and how the solution will function.	All selected design tools are appropriate, and correct techniques have been applied to thoroughly and accurately describe data types and structures and how the solution will function.  All validation techniques efficiently and effectively check the reasonableness of data.  developed skills are to efficiently and manipulate data ct queries that

Rubric against the outcome – holistic rubric

Advisory, hence in Advice for teachers

# Timetable

	2015	2016
<b>VCE Computing</b>	Workshops Advice for teachers Sample exam questions	Full implementation of all units (1-4) SAT criteria SAT training days

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