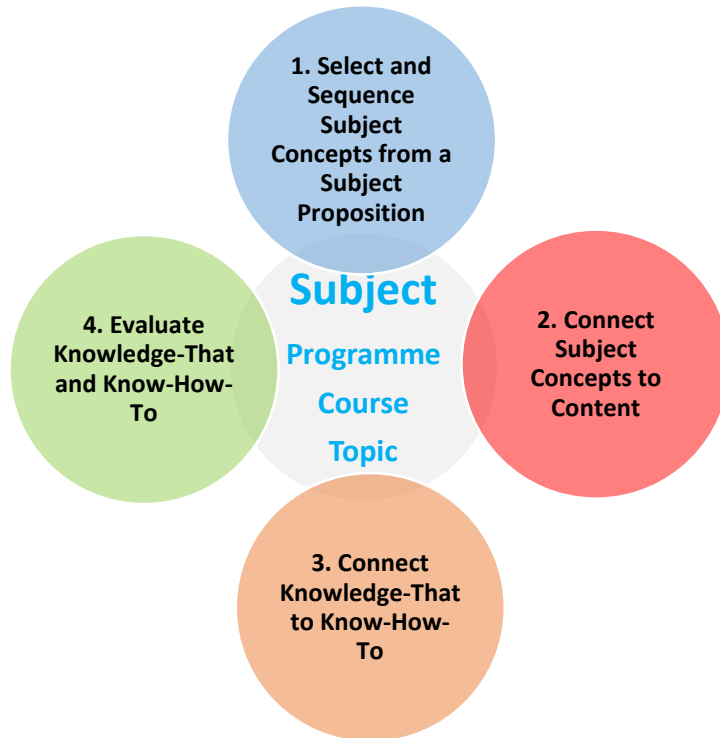


THE CURRICULUM DESIGN COHERENCE MODEL

Short Outline (14th February 2021)

The Model identifies four connected Elements which make up the curriculum design process. Topic design *precedes* and *is separate from* teaching methods and learning activities.



ELEMENT ONE: SELECT AND SEQUENCE SUBJECT CONCEPTS FROM A SUBJECT TOPIC PROPOSITION

1. Decide on the topic to be designed
2. Select the *generalising* topic concepts
3. Write the proposition – this puts the topic and the key concepts into one statement

ELEMENT TWO: CONNECT GENERALISING TOPIC CONCEPTS TO SUBJECT CONTENT

Criterion 1 Select content that best captures or *materialises* the meaning of the subject concepts

Criterion 2 Select context about the development of a subject's concepts (if applicable)

Criterion 3 Select content that is important for the society

ELEMENT 3: CONNECTING 'KNOWLEDGE-THAT' TO 'KNOW-HOW-TO'

Performance competencies: using techniques and skills to show how to apply the concepts and content

Judgement competencies: explaining the use of the techniques and skills in expressing the subject concepts

ELEMENT FOUR: EVALUATING KNOWLEDGE-THAT AND KNOW-HOW-TO

Competency 1: Content recall

Competency 2: Skill and technique

Competency 3: Intelligent know-how-to

EXAMPLES OF ELEMENTS 1 AND 2

SUBJECT	TOPIC	ELEMENT 1: PROPOSITION AND CONCEPTS (disciplinary-derived)	ELEMENT 2: CONTENT TO CONNECT TO THE CONCEPTS (Content may include these below)
Chemistry	Poisons	Poisons are composed of chemical elements and a molecular structure	Chemical formula (eg, Tutin poison $C_{15}H_{18}O_6$, molecular weight 294.3)
Phys Ed	Exercise	Exercise uses muscles, energy, stamina, endurance	Skeletal muscle tissue, connective tissue, nerve tissue, blood or vascular tissue Energy systems: immediate, glycolytic oxidative etc
Maths	Shape measurement	Measurement of shapes quantifies length, area and volume	Unit (e.g. centimetre), perimeter (e.g. circumference), square, rectangle etc
Music		Chant is a musical form, using voice(s) with a limited pitch range and rhythm generated by the text	8 th C Gregorian chant, 21 st C Rap, Traditional Māori Mōteatea
Social Studies		Ngati Kuri has experienced settlement, displacement and revival	Oral and written sources (Eg Genealogies) Verified sources: pre-1840 to 21 st century Maori and European sources: e.g. Dieffenbach 1830s, Polynesian Society, records (e.g. 1860 list of hapu) Maori Land Court Minute Books, Waitangi Tribunal Reports (e.g. Ngati Kuri Claims Settlement Act)
Art History	Monet's style	Monet's style is Impressionist because of its subject matter, spontaneity, colour and light effects, and painting technique	En plein air landscapes, rapid brushstrokes, <i>impasto application of paint</i> e.g. St. Lazare Station (1877), Musée d'Orsay
English	Apostrophe	The apostrophe is the grammatical marker of possession, contraction, and expansion.	Possession, e.g. child's shoes, children's shoes Contraction and expansion, e.g. its, it's
Biology	Butterflies	Butterflies are insects that undergo metamorphosis during the life cycle and change their invertebrate bodies and wings	Criterion 1 Lepidoptera insect category - invertebrate body with two types of wings - metamorphosis egg, larva (caterpillar), pupa (chrysalis), adult. Criterion 2 Maria Sibylla Merian (1647-1717): butterfly biologist –metamorphosis of the life cycle. Criterion 3 N Z types: e.g. Red Admiral kahukura etc.
Physics	Butterflies	Butterflies control their flight for propulsion, speed, and velocity	Changes in body shape e.g. slim-lining Air currents
		The origins of WWI are located in international relations 1871-1914	International alliances – e.g. Entente Cordiale Prussian militarism, e.g. The German Navy Act, British naval arms race, e.g. HMS Dreadnought Russian rearmament programme and mobilisation
Maths	Algebra of straight lines	The algebra of straight lines is the pattern formed by a sequence of points in a line according to a specific rule	Plotting Coordinates (e.g. x, y values) Regular gradient
English	NZ English: Accents and Pronunciations	NZ English accent and pronunciation is characterised by the use of phomenes, diphthongs, intonation, and high rising terminal contour	Rising intonation patterns (graphs) vowel, consonant and diphthong sounds from the 19 th century (audios) etc
Chemistry	Chemical bonding	Chemical bonding is a lasting attraction between atoms or ions that result from the interactions between positive and negative charges	Elements' chemical composition (Periodic table) Metals' physical properties e.g. copper