

CURRICULUM AND TIMETABLE DEVELOPMENT

SABBATICAL REPORT

Peter Turnbull Term Three 2017

CENTRAL SOUTHLAND COLLEGE



Acknowledgements

I wish to thank all the schools and individuals who were so generous with their time and willingness to share their experience and ideas.

In particular:

Linda Hutt	Westland High School
Penny Mossman	Amuri Area School
Diane Fletcher	Southland Girls High School
Bridget Ryan	St Peters College, Gore

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Executive Summary

CSC can learn from other schools and settings but any changes have to be well thought through and tailor-made for our context. Solutions must be for our challenges, not simply lifted from others.

Longer Learning Times provide scope for improved curriculum delivery, provided they are implemented with care and significant PLD time.

Form-time and Activities are a significant part of the CSC timetable. We must continue to explore ways of improving their efficacy and reduce time wastage.

I believe a trimester based Junior school timetable has merit for CSC.

Much of the innovation and new ideas (cross-curricular, 'big projects', SPIN's and so on) seem to have been applied to the Junior school (Year 9 and 10) with tentative changes only to Level 1 and very little if any to Level 2 or 3 NCEA.

The Alfriston approach which spreads Level 1 NCEA over Year 10 and 11 as 'Graduation Years' is interesting and one we should investigate further.

MLE's as a concept seems to be unproven, experimental and perhaps even detrimental in some cases to teaching and learning. Given the design and reasonable condition of CSC buildings it is unlikely that any MLE's will be built here in the foreseeable future. While there has been some adaptation of existing areas into break-out spaces, I believe we should proceed with considerable caution in making any more building structural changes.

The 21st Century learning movement is gaining some momentum and must be considered and acknowledged, but with caution. CSC should however, always be looking to innovate and improve student learning and achievement.

1. Purpose

This study is not an academic treatise but largely a nuts-and-bolts look at timetables and curriculum. The aim is to inform the development of a more flexible timetable structure (and any consequent curriculum changes) for Central Southland College. The timetable should also improve the use of time within the school day, week and year. Any change to the timetable structure aims to:

1. improve student engagement and motivation.
2. improve the integration of off-site and out of class learning in a way that minimises the impact on other, in-school learning.
3. increase relevance by linking the school curriculum to future pathways beyond school to further study and career opportunities [no specific research was actually carried out on this aim].

These purposes aim to:

Help lift both the quantity and quality of CSC student's achievement.

This initial, narrow focus was on the timetable structure and possible changes or improvements we could make at CSC. (with any subsequent changes to curriculum structure).

Subsequent reading broadened the focus to include thinking about curriculum and timetable reform and the aspirations of a 21st Century education. This is discussed later.

2. Central Southland College Context

CSC is a state co-educational Year 9 to 13 school. Current Roll 580. Founded in 1965 to replace the existing Winton District High School. Pupils are drawn largely from the surrounding farming families but a significant portion also from the townships of Winton and Otautau.

The College offers a broad curriculum, using a relatively standard timetable.

The physical layout is the standard 'Nelson Plan' with some additions: (a limiting factor in terms of later discussion about 'modern learning environments').

- 20 standard classrooms (including 2 with [aging] computer suites] With BYOD these are currently being re-purposed.
- 5 Science Laboratories (2 with a shared breakout space).
- 1 Double sized Materials Technology room with separate machine spaces.
- 1 DVC room.
- 1 Textiles Technology room.
- 1 Art room with 1 breakout space + 1 larger general room used for some Art classes (requires refurbishing).
- 1 Foods room (overfull).
- 1 Music room with breakout practice suites, computer composition lab and recording studio.
- 1 School Hall.
- 1 School Gymnasium (one bay short of full size) + weights room. Currently requiring significant remedial earthquake work. Additions may be made if possible.
- S Block spaces: S3 (large Drama space, S4 Room; S5 with dividing doors; large 'common' area, currently used by Year 12 during interval and lunch.

- Shared covered community swimming pool (Operating Term One and Four only).
- Stand-alone library.
- Very limited indoor social spaces for students: Few large dry areas during inclement weather.
- Pleasant and well landscaped outdoor areas.
- Large playing fields including purpose-built grass athletics track.
- CSC is currently 'full' so an Enrolment Zone is being enforced by the Ministry.



Timetable 2018

Period	Time	Monday	Tuesday	Wednesday	Thursday	Friday
Briefing	8:55 – 9:05					
1	9:05 – 10:00	Line 1	Line 6	Line 5	Line 3	Line 2
2	10:00 – 10:55	Line 2	Line 1	Line 6	Line 4	Line 3
Interval	10:55 – 11:15					
3	11:15 – 12:10	Line 3	Line 2	Line 1	Line 5	Line 4
4	12:10 – 1:05	Line 4	Line 3	Line 2	Line 6	Line 5
Lunch	1:05 – 1:45			1:05 – 1:55		
Form Time	1:45 – 2:10	Form Time	Form Time	Activities	Assemblies	Form Time
5	2:10 – 3:05	Line 5	Line 4		Line 1	Line 6

My recollections over the years of the timetable at CSC.

1980's

- Streaming - was abandoned 1986 - for mixed ability classes.
- Until then French was compulsory for the 'top stream'.
- 1987 on - incoming Year 9's chose 4 options. Then 2 for the beginning of Year 10.
- Senior students chose from lines as they do now (for a time, subjects were set in advance).
- Six lines, some with different numbers of periods, with an extra period allocated to English - 5 periods per week.
- New subjects arose - became popular - distorted the timetable then fell away to normal levels - often seemed to result in students choosing something new or 'easy'.

Early 1990's

- In responses to a looming (but delayed) NQF – the College attempted a modular timetable at Year 12 and 13. Up until then, Year 12's had 2 hours study and 2 hours compulsory recreation. Year 13's had 4 hours study. It was decided that some of this Study and Recreation time could be used to provide short modules (they were designed to accommodate Unit Standards and based on ideas from Tikipunga High School in Northland).
- Staff had to provide a variety of short courses instead of study; e.g. life skills, vocational courses. The structure was too loose and considered far too much effort so was abandoned.
- BUT – it did simplify timetable into 6 lines of 4 periods.

Late 1990's / early 2000's

- New (1st) NZ Curriculum - had phrases like 'must' study a learning area during Year 9 and 10
- Options at Year 9: 'Chose' 6 during the year on two, 3 hour Lines:
 - Choose 2 from Art, Music, Drama; plus 2 Technology options; plus 1 other, plus Keyboarding compulsory. This was considered a disadvantage to other Option subjects and too narrow a choice for incoming Year 9 (in retrospect it was an example of key people pushing an agenda which favoured some subjects and reduced subject choice).

Mid 2000's

- Revised Curriculum from 2007 (implemented from 2010).
- 'must' statements disappeared.
- Combined lines D, E and F for juniors and divided into 4 lines of 3 periods.

Senior Lines	D	D	D	D	E	E	E	E	F	F	F	F
Junior Lines	G	G	G	H	H	H	I	I	I	J	J	J
Year 9 Classes	Science PE/Health			PE/Health Science			9 Tasters			9 Tasters		
Year 10 Classes	10 Option A			10 Option B			10 Social St. 10 PE/Health			10 PE/Health 10 Social St		

- All Year 9's sample 12 taster options for 5-6 week taster (15 periods), including Te Reo.
- Year 9 choose 2 options to continue on with at end of Term Three and into Year 10.

- Year 11 & 12 indicate the 6 subjects they would like to study. Year 13 indicate 5 (or six on request).
- From the numbers (from above) – the number of classes in subjects and levels are determined; HOD's assign staff and class 'wish list'.
- 'Best-fit' timetable matrix developed – there are always significant clashes at Year 12.
- Students make final choices from these lines.
- 'Clashes' and appropriateness of a course are managed by Careers / Deans / HOD's by either:
 - making new choice
 - combining classes
 - off-line classes
 - e-learning

2015

- After many years of raising the prospect of Timetable change, the College began in 2015 the process of investigating alternative timetable structures: discussion has centred on a possible trimester timetable approach (initially in the junior school), and the integration of some form of longer learning times. These ideas, and others stalled so some in-depth research was needed to progress them.
- The College recently successfully introduced a Secondary Tertiary Provider course in Agriculture using ITO standards and ITO Building and Construction standards into the school programme. We are interested in how changes in structure can enhance these courses and allow for the introduction of more of these courses. We wish to build on the out of class elements, the improved motivation and clear links to Vocational Pathways that these types of courses offer.
- While the motivation and engagement of junior students (Years 9 and 10) at the College is satisfactory, we recognise that there can be a drop off in engagement in these years as part of the transition process to secondary school. We suspect some aspects of our current structure may hinder this transition by restricting choice and being inflexible. Any loss of motivation by junior students inevitably flows through to lower formal achievement in the senior school.
- The College is an 80% bus school which means that most of our sport and other extra-curricular activities have to be managed within the school day with an *Activities Period* which can have a negative impact on the time available for curriculum delivery. This has changed over the years with many (senior) sports teams having practices outside of school time. Our school community places a high value on the benefits of these extra-curricular aspects of the school so we are interested in how different structures could contribute to mitigating the impacts of these interruptions to classroom learning.

2017 into 2018

Year 9 students in Term Four chose 4 Options instead of 2: Each Option taught on the basis of 2 Periods for Group A, 1 Period Group B in Week 1, then 1 Period for Group A, 2 Periods for Group B in Week 2 and so on. In Term One 2018, this was not working (lack of continuity) so we decided to have 13 weeks (3 periods a week) of Options 1 & 2, then revert to 13 weeks each for Options 3 & 4.

Key Challenges:

1. Providing a broader, more flexible choice from Year 9 to Year 10: Initially seen as the “Twelve to Two” squeeze.
2. Excessive amount of the school week taken up with Form Time – often seen as unproductive, but this varies, depending on Year level, and time of school year.
3. Disengagement and poor use of time by a significant proportion of students in ‘fill-in’ Activities period.
4. Interruptions to the school programme by curricula and (worthy) extra-curricula groups out of regular classes: (field trips, EOTC, sports, cultural activities, STAR, Gateway)
5. Interest, from many subject areas, in having some ‘longer learning times’.
6. To ensure that the senior timetable has as much choice and flexibility as possible to meet a variety of student needs. (there is some general concern regarding clashes and lack of options during course selection)
7. The robustness of our current arrangement regarding five hours non-contact a week. “The employer shall provide five timetabled non-contact hours within each week to each full-time teacher (subject to the Timetable policy clause). The non-contact time may be a combination of differing periods of time which total no less than the equivalent of five hours.” (or a maximum of 20 contact hours) STCA. This could become more acute if the current negotiations result in more non-contact time being granted.

3. Student Feedback: Survey June 2017

Prior to Sabbatical leave, I conducted a basic survey of students from all levels of the school. Feedback was sought on a 1 to 5 scale on the following topics: (See Appendix)

1. The worth of Afternoon Form Times, Activities and Assemblies
2. Questions about length of classes; (Too short – Too Long) Form Briefing, Interval, Lunch, Afternoon Form Time and Activities.
3. Their view of Longer Learning Times: 90 minutes and 120 minutes.
4. Some questions about their own level of effort.
5. Their subjects and time allocated to them: (Too little – Too much).
6. Their impressions of a mock Trimester Timetable: (Much worse – Much better)

Data from Sabbatical Survey: CSC Student responses to the questions:

Year	Numbers	Long Form Worth	Long Form Length	Activities Worth	Activities Length
Total	184	3.2	3.3	4.1	2.9
Year 9	40	3.3	3.1	3.5	2.9
Year 10	39	3.3	3.3	3.7	3.2
Year 11	45	2.8	3.7	3.8	2.6
Year 12*	30	3.2	3.0	3.4	2.7
Year 13*	29	3.3	3.1	3.6	2.9

* Two classes each at Year 12 and 13 were surveyed but several students were absent as Peer Reading Tutors) – arguably the ‘stronger’ students.

In general terms then, students generally saw some worth in Long Form times (Year 11 not so much), but they also thought it was a little too long. (Average score of 3 = length is ‘About Right’: Any number less than 3 = tending to too short: Numbers greater than 3 = tending to too long) They saw a good deal of worth in Activities and thought the length was about right to a little short.

Other findings: Length of time: (Same scale as above)

Form Briefing	2.8
Interval	2.3
Lunch	2.7
Long Form Time	3.3
Activities	2.9
55 Minute Periods (Current Length)	3.5
90 Minutes (‘Longer Learning Time’)	4.2

Results are perhaps not surprising – if teenage students are asked about the length of Interval and lunch (eating and free time) they are likely to say they are too short! Also, that any class times - 55 minutes or 90 minutes are too long.

However, when questioned about specific subjects they indicated they thought some class times tended to be too short, and class time should be longer. (Same scale as above)

PED	2.4
Art	2.2
Technology	2.6
Agriculture	2.9
DTG	2.7
Textiles	2.4
Foods	2.3
Drama	2.7
Music	2.6
French	2.7

This is again, perhaps not surprising as students may like to spend longer times studying subjects which are 'chosen'. Conversely, 'core' subject times were either about right or tending too long:

English:	3.3
Mathematics	3.2
Science	3.0
Social Studies	3.1

Trimester Timetable:

From a 1 to 5 scale (Much worse to much better): Averages were:

Year 9:	3.1
Year 10:	3.6

This is an interesting result as those students in Year 10 who were most effected by the Timetable structure and Option choice were somewhat in favour of a Trimester structure.

4. Early Ideas.

Amuri Area School

2015 Rural Secondary schools TOD.

Penny Mossman

Piqued the interest of many schools - specifically structuring the day and week in 2012 to allow off-site primary industry training.¹

Westland High School

Address to NASDAP Conference 2015

Linda Hutt DP

Developed a Trimester timetable (Year 9 & 10) where the distinction between Core and Option has been removed (with minimum requirements). Students choose a variety of stand-alone Trimesters which include a wider variety of subjects

Wellington East Girls College

Address to NASDAP Conference 2015

Recently adopted a timetable with Longer Learning times (95 – 100 minute sessions) to cater for changes in teaching and learning approaches (21st Century Learning) that was limited by a traditional timetable

Based on this focus I began with a limited number of school visits coupled with professional reading.

5. School Visits

a) Westland High School

School Context

355 students, Year 7 to 13

30% Maori

30% bus pupils

High number of Special Needs students - about 10 teacher's aides on staff

Approximately 50 Trades academy students

Some who do 2 + 3: 2 days at Polytech, 3 in school

WHS Change Process

They consulted with their community first about the issue they had to resolve: i.e. the awkward numbers of students in Year 9 and 10 (their Middle School) and staffing implications plus disengagement by students and lack of flexibility and choice. The community didn't come up with any ideas but appreciated being genuinely consulted

Consulted staff seeking a win:win solution: The idea for Trimesters came from within staff. Process was all about what is the best course of action. Change required a growth mindset.

Student voice was also sought.

Advanced slowly: took 6 months and have now had this structure in place for 5 years.

Focussed on meeting the needs of their students. i.e. some students only needed 'bits' of Maths or Science. Tried to identify what success might look like for each individual student

Idea of promoting individual learning pathways rather than setting up subjects for a year which students may or may not fit.

Implementation & Operation

Combined Year 9 and 10 into classes - multi-level: (some staff initially didn't like mixed classes but now they do and wouldn't go back)

Middle School programme:

- No distinction between core and option. Minimum requirements set for English (all year) Maths, Science, Social Science, PE, Arts, Tech and Languages (Maori)
- Whole programme divided into Trimesters: Separate, discrete programmes of work: allows a 'dip in, dip out' flexible approach.
- Teachers names attached to each Trimester block (initially thought they wouldn't - doesn't seem to have had a negative effect for staff)
- Courses classified as: Foundation, Open or Restricted

Departments had to be innovative in dividing up courses and come up with different solutions: e.g. a maths and physics mix.

Course counselling was vital: done mainly through the Whanau teacher (1 hour per week on a Friday)

Student selection at the start of the year (end of last year?) Chose their whole year's choices

With students having a relatively free choice, it forced some staff to 'up their game'

If a trimester is over-subscribed, they could have the opportunity of doing the same one later in the year (or next year?)

Some Year 10's advance to NCEA topics. (not sure how that was organised)

At about week 8 a review process starts. Short report with progress data (teacher comment has to be backed up by data). Consultation with Whanau teacher - a student could continue with original trimester selections or they could change if progress (or lack of it) indicates they should.

They encourage some student choice within the trimester - topics, pace of work, assessment etc. so there is some ownership by the students.

Developments

Year 7's and Year 8's are now mixed. Year 8's enjoyed the opportunity to step-up and help younger kids and special needs students.

One problem now is a lack of transformation of programmes, after the initial enthusiasm and development. Departments are still staying in subject silos (confidence to change is required and still challenging for some staff)

WHS believe they need to develop evaluative skills to better determine progress of students. They are looking at benchmarking - develop some robust data on Year 9 & 10 because students needed to better see progress and pathways. They are also considering using a traffic light system plus a result summary for reporting. Data is needed to back up descriptions of progress.

Timetable Information

3 Trimesters on a 6 line timetable *

Senior students select 5 subjects and on 'Line 6' choose short courses/trades academy time/outdoor education/STAR/Gateway. Operates on a 2/2 split.

25th Period (our Activities) is Whanau time (Form class and/or Assembly). This occurs on Friday morning, P1 then a double P2 & 3 Line 5, and another double P4 & 5 Line 6. Doubles are split by interval and lunch.

Most (all?) Year 13 have study on Line 6 only.

No other long form times: 15-20 min briefing at the start of each day.

1 hour periods, with a longer Interval, shortish lunch and finish at 3:00.

Some small classes are combined or have other students put into them for supervision (not sure how this was structured)

With low numbers the contact time counted is reduced say to 2 of the 4, and students supervised elsewhere.

All lines have 2 single hour periods and one double period. Some, but not all doubles are split by interval or lunch.

They are investigating 3 x 1¹/₂ hour (90 minute periods)

Miscellaneous

Emphasis is on gaining Level 2. Reasoned that Level 1 will take care of itself. Keep the pressure off at Level 1.

"Group 2" Year 12 students who have yet to get Level 2, and are unlikely to do so in exams, stay in some classes operating after NCEA exams start, to get extra credits. They seem to be able to come and go - helped by the fact that only 30% are on buses, and the rest live in or near the town.

No bells. They used to have one at the end of interval and one at the end of lunch. The bell system was lost with the fire, so no bells. Seems to work ok. Suggested that no bells sent a message that people's time and what they were doing was valuable rather than some arbitrary time structure.

Middle School (Year 9 & 10) Structure 2015 Westland High School

When planning your course for the year, you, your parents and your whānau teacher need to think about how you have done last year and what is a reasonable course for you to take. You need to have balance, with a wide range of courses, challenge (a few things that might be more difficult), some exercise and lots of fun. These courses are designed to help you to develop the skills you need to learn as you get older, while keeping your motivation and interest up as well. Your whānau teacher is an important person in this process, to make sure that you, your parents and the school are all working together to find the best courses for you.

But quite a lot is now up to you. You need to make sure you are developing the skills you need, and in particular developing what we call “key competencies” in the curriculum. This means you need to work by yourself and with other people, get along with other people so you don’t interfere with their learning and they don’t interfere with yours, get your head around the new challenges you face and learn new words and ideas and take a real part in making sure that you learn a lot this year and get the habits you need for the future. Yes, you have to do homework, and yes, you have to learn some things before you get to the real challenges.

What you choose now will set the framework for the year, but you also need to know that if you fail your assessments, you may not be able to take some of the courses offered later in the year, so there may be some change to what you have chosen now.

Courses have been listed as “Open”, which means anyone can take them, “Foundation”, which means you need to take this course to get into a restricted course later, (or, in the case of English, the work will be at a slightly easier level than in restricted courses) or “Restricted”. If a course is restricted, you need to have achieved in the courses listed, eg MATNS, or the Head of the Department has set criteria for entry to this course.

Year ten students need to make sure they choose courses that will prepare them well for NCEA next year. . In some courses there are NCEA units as part of the assessment, and these courses will extend students who are ready and able to do them. Often courses which are restricted will be at a higher level than other courses.

You must fill in all the blocks. You cannot take two subjects from the same column.

English: (yellow) You should take an English course in each trimester.

Maths: (pink) You must take three trimesters of maths over two years as a minimum. If you are in year ten and did reasonably well in year nine, you should be looking at the advanced maths courses, some of which are restricted.

Science: (light blue) You must take three science courses over two years as a minimum. Over the two-year period you need to have achieved the standard in assessments in at least four trimesters to be eligible for the advanced science class in year 11. Make sure you balance your courses between ones that are biology-focused, chemistry or physics courses.

Social Sciences: (lavender) You must take three Social Sciences courses over two years as a minimum.

PE/health/Outdoor ed: (green) You must take two of these as a minimum. If numbers in outdoor ed are too large, preference will be given to students in year ten who have not taken outdoor ed in year nine.. You may not do two PE courses in a trimester.

Arts: (orange) You must take one course during the year as a minimum, and it is recommended that you take a range of arts courses.

Technology: (turquoise) You must take one technology course during the year as a minimum, and it is recommended that you take a range of technology courses.

Languages: (bright green)

Te Reo Māori: This course is an essential preparation for anyone who wishes to proceed to NCEA qualifications in Māori. Note that it is possible to complete the NCEA and UE literacy requirements through Māori language standards. You need to commit to taking this course all year. If you take Te Reo Māori, English in trimester two is optional.

Spanish: It is desirable to learn another language, with either Spanish (one trimester) or Te Reo Māori available.

Māori Performing Arts will incorporate the senior kapa haka as an integral part of the course. Mr Tk is timetabled for half of the time as well as Mrs Wp.

Middle School Trimester One	Column One	Column Two	Column Three	Column Four	Column Five	Column Six
	English — advertising Ms H ENGOAD OPEN	English — advertising Mr W ENGOAD OPEN	English — advertising Mr W ENGOAD OPEN	English — advertising Mr W ENGFAD FOUNDATION	English — advertising Ms H ENGOAD OPEN	English — advertising Mr WI ENGAAD RESTRICTED
	Mathematics — Maths for living Mr C MATLI OPEN	Spanish Mr Wt SPAN OPEN	Mathematics — Numbers and patterns Miss B MATNS FOUNDATION	Te Reo Māori Mr Tk TERE0 OPEN	Mathematics — (advanced algebra) Mr C MATAA RESTRICTED: MATNS	Science — Forensic and Cook Mrs Bw SCIFC FOUNDATION
	Science — A and E and extinction Miss Ws SCIAE OPEN	Mathematics — Statistics and Probability Mr S MATSP FOUNDATION	Social Sciences — Treaty of Waitangi Mrs Wp SSTOW OPEN	Science — science fair and investigations Miss B SCISI OPEN	Science — science fair and investigations Miss B SCISI OPEN	Social Sciences — Island Time Mr Wt SSISL OPEN
	Music — Music Skills and Culture Mr Sw MUSSC OPEN	Social Sciences — Real Game Mrs D SSRG OPEN	Technology — Graphics Mrs P GRAPH OPEN	Social Sciences — Geography and conflict Mr Mt SSGC OPEN	Drama — Production Mr MI DRAPRD OPEN	Visual Art — Painting Mrs P VAPAI OPEN
	Technology — Food: Ethnic cuisine Mr Ck FOODEC OPEN	Technology — Food: all wrapped up Mr Ck FOODWA OPEN	Technology — Metal: garden tools Mr A METGT OPEN	Technology — Computing: Making a Game Mrs D COMPMG OPEN	Technology — Textiles: fabric making Mrs Ch TEXFM OPEN	Māori Performing Arts Mrs Wp MAOPA OPEN
	PE/health — Athletic safety Mr T PEHAS OPEN	Technology — Robotics Mr C ROBOT RESTRICTED	PE/health — Outdoor education Mr M OUED OPEN	PE/health — Athletic safety Mr T PEHAS OPEN	Technology — Multi-materials: skateboard deck Mrs P MMSKD OPEN	PE/health — Athletic identity Miss Bp PEHAI OPEN

Middle School Trimester Two	Column One	Column Two	Column Three	Column Four	Column Five	Column Six
	Mathematics — Numbers and patterns Mr C MATNS FOUNDATION	English — war stories Ms H ENGOW OPEN	English — war stories Mr W ENGOW FOUNDATION	English — war stories Mr W ENGOW OPEN	English — Advanced creative writing Mr WI ENGACW RESTRICTED	English — war stories Mr MI ENGOW OPEN
	Science — science fair and investigations Miss B SCISI OPEN	Mathematics — Advanced Statistics Mr S MATAS RESTRICTED: MATSP	Mathematics — Trig and Transformations Mrs Ca MATTR RESTRICTED: MATNS	Te Reo Māori Mr Tk TERE0 OPEN	Science — transport and environmental sustainability Mr Jo SCITES OPEN	Social Sciences — Civics Mr Wt SSCIV OPEN
	Social Sciences — Psychology Mr Mt SSPSY OPEN	Social Sciences — Asian Tigers Mr Wt SSAT OPEN	Science — Pyrotechnics and Catastrophe Mrs Bw SCIPC RESTRICTED: SCIFC	Mathematics — Maths for living Miss B MATLI OPEN	Social Sciences — Māori at war Mrs Wp SSWAR OPEN	Māori Performing Arts Mrs Wp MAOPA OPEN
	Music — Electronic music composition and production Mr Sw MUSECP OPEN	Technology — Food: Ethnic cuisine Mr Ck FOODEC OPEN	Technology — Food: all wrapped up Mr Ck FOODWA OPEN	Science — Species at war/Live and Kicking Miss Ws SCISW OPEN	Drama — keeping it kiwi Mr MI DRAKK OPEN	Visual Art — Sculpture Mrs P VASCL OPEN
	Technology — Textiles: winter warmers Mrs Ch TEXWW OPEN	Technology — Robotics Mr C ROBOT RESTRICTED	Technology — Multi-materials: carving in Oamaru stone Mrs P MMCOD OPEN	Social Sciences — Financial Literacy Mrs D SSFIN OPEN	Technology — Computing: Digital media Mrs D COMPDM OPEN	Technology — Metal: house ware Mr A METHW OPEN
	PE/health — Body balance Miss Bp PEHBB OPEN	PE/health — Health studies Mr T PEHHS OPEN	PE/health — Outdoor education Mr M OUED OPEN	Technology — Metal: house ware Mr A METHW OPEN	PE/health — Body balance Mr M PEHBB OPEN	PE/health — Relating to others Mr T PEHRL OPEN

**Middle School
Trimester
Three**

Column One	Column Two	Column Three	Column Four	Column Five	Column Six
English — poetry Ms H ENGOP OPEN	English — poetry Ms H ENGOP OPEN	English — poetry Mr W ENGFP FOUNDATION	English — poetry Mr W ENGOP OPEN	English — Shakespeare Mr WI ENGAS RESTRICTED	English — poetry Mr W ENGOP OPEN
Mathematics — advanced algebra Mr C MATAA RESTRICTED: MATNS	Mathematics — Maths for living Mr S MATLI OPEN	Mathematics — Geometry (ADVANCED) Miss B MATGM OPEN	Te Reo Māori Mr Tk TEREO OPEN	Mathematics — Statistics and Probability Mr C MATSP FOUNDATION	Mathematics — Numbers and patterns Mrs Ca MATNS FOUNDATION
Science — Electromancer and Alien (advanced) Miss B SCIEA OPEN	Social Sciences — Island Time Mr Wt SSISL OPEN	Science — Pyrotechnics and Catastrophe Mrs Bw SCIPC RESTRICTED: SCIFC	Science — Species at war/Live and Kicking Miss Ws SCISW OPEN	Social Sciences — Māori renaissance Mrs Wp SSSAN OPEN	Science — A and E and Extinction Miss Ws SCIAE OPEN
Music — Electronic music composition and production Mr Sw MUSECP OPEN	Technology — Computing: digital outcome Mrs D COMPDO OPEN	Social Sciences — human rights and conflict Mr Mt SSHRC OPEN	Social Sciences — Real Game Mrs D SSRG OPEN	Drama — film studies Mr MI DRAFS OPEN	Māori Performing Arts Mrs Wp MAOPA OPEN
Technology — Metal: jewellery Mr A METJY OPEN	Technology — Food: ethnic cuisine Mr Ck FOODEC OPEN	Technology — Food: all wrapped up Mr Ck FOODWA OPEN	Visual Art — sculpture Mrs P VASCP OPEN	Technology — Textiles: tie-dyeing /screen printing Mrs Ch TEXDP OPEN	Visual Art — photography Mr Sw VAPHO OPEN
PE/health — Flying Fit Miss Bp PEHFF OPEN	PE/health — Striking Fit Mr T PEHSF OPEN	PE/health — Outdoor education Mr M OUED OPEN	PE/health — Flying Fit Mr M PEHFF OPEN	Technology — Graphics Mrs P GRAPH OPEN	Technology — Multi-materials: CO2 dragster Mrs P MMCOD OPEN
					PE/health — Striking Fit Mr T PEHSF OPEN

b) Amuri Area School

(Article from the NZ Education Gazette 11 March 2013.)

“A significant number of students from Amuri Area School attended trades academy programmes at Canterbury Tertiary College in Christchurch. Students would travel 200km return, to the College two or three times a week. If this continued they would miss a significant amount of class time under a traditional 1 hour, 6 line timetable. Similar problems also occurred for time spent out of school for Outdoor Education, Hospitality and Gateway subjects.

‘During 2012 the timetable for Year 11, 12 and 13 students changed. Each morning, students attend a one hour period for a subject such as English. Following that, three days a week the rest of the day is one subject for a four hour block. The other two days students attended two, two-hour periods. Some immediate advantages with this format were that teachers could teach an in-depth class without having to pack up (and start up again later). A science based subject could cover the theory, carry out a practical and complete the write up all in one session. EOTC in their subject was also possible without disrupting other classes. Subjects such as Visual Art, Technology, Chemistry and Physics could see how it could benefit and other subjects – Mathematics, Biology and PE were prepared to try it.

Teachers were always aware, even in one hour classes of the need for a range of activities and so they worked hard on changing lesson plans and met and talked with others about best practice. In August 2012, the new structure was independently reviewed and a number of benefits were found.

- It allowed students to follow their interests without missing classes and having to catch up
- Teachers found they were working through their programmes of work a lot more quickly – in previous years teachers had struggled to complete their programmes due to interruptions and students being away
- The school could employ part-time teachers for one day a week which was more attractive than 1 hour a day over four days
- Students in the Trades Academies (some ‘at-risk’) gained their Level 1 and a number of Level 2 credits. It also provided an opportunity for adult learners.

One disadvantage of the changes was that if a student had a sick day they would miss the bulk of their course. Teachers helped mitigate with the use of on-line Learning Management System and providing notes.”

Observations from the visit July 2017 (Penny Mossman)

With some minor adjustments, the timetable successfully continues today.

Three days a week: 1 Period (1 subject)
 4 Periods (1 subject)

Two days a week: 2 Periods (1 subject)
 2 Periods (1 subject)
 1 Period (1 subject)

Juniors do doubles on the 4 period subject days

The staff are now writing a collaboration plan (begun during an Area Schools TOD).

- Planning is centred around collaboration between departments/subjects
- A teacher teaches their subject but there is an overarching plan to do with a 'theme' e.g. sustainability
- The plan aims to link ideas between subject areas not team-teaching or using breakout time. It aims to more explicitly acknowledge and build on what is taught in other subjects and *how it can relate to the theme in your own subject.*

It is only being trialled at Year 9 in the beginning.

Amuri Area School Times Year 7-13

8.30 Entry to school grounds
8.40 Warning Bell
8.45 Form Time/Assembly/Whanau Meeting
8.55 Period 1
9.55 Period 2
10.55 First Break
11.15 Warning Bell
11.20 Period 3
12.20 Period 4
1.20 Second Break
2.00 Warning Bell
2.05 Period 5
3.05 End of day

Other Points:

AAS has Vertical Forms (Houses) There is not much Form-time – about 10 minutes per day. They are about to trial a 1 hour form-time – “Aspire Time” to focus on the ‘front half of the NZ Curriculum’.

They aim to link the Key Competencies and Career competencies to their school values. The time is set aside to set goals, review and monitor progress towards achieving goals. They want to create a ‘graduate profile’ involving coaching, mentoring, goals and career goals. Year 12 and 13 students will complete a CV during this time also.

Comment: The day and week structure used by AAS seems to work very well and has stood the test of time. It is very successful in accommodating off-site learning and reducing interruptions. It seems however to solve the very specific challenge of a large number of AAS students accessing learning off-site. Numbers of off-site learners at CSC are much smaller, so the need is not so great. However, if the push for greater industry links changes this the AAS model should be considered.

c) Southland Girls High School

(Diane Fletcher, Assistant Principal)

The school operates a 10 day timetable, with 6 timetable lines

On **Monday, Wednesday and Friday** there are 5 Periods with 3 prior to lunch and 2 after.

Period 1: 1 Hour (8:50 – 9:50 am)
 Academic Tutor: (9:50 – 10:10 Literacy)
 (10:10 – 10:15 Roll Call)
 Period 2: 1 Hour (10:15 – 11:15)
 Interval 20 Minutes (11:15 – 11:35)
 Period 3: 55 Minutes (11:35 – 12:30)
 Lunch 45 Minutes (12:30 – 1:15)
 Period 4: 1 Hour (1:15 – 2:15)
 Period 5: 1 Hour (2:15 – 3:15)

On **Tuesday and Thursday** there are three, 90 minute periods, one for each line of the timetable over two days.

Period 1: 90 minutes (8:50 – 10:20)
 Literacy: 15 minutes (10:20 – 10:35)
 Interval: 20 minutes (10:35 – 10:55)
 Period 2: 90 minutes (10:55 – 12:25)
 Lunchtime: 50 minutes (12:25 – 1:15)
 Administration/
 Assembly/House 30 minutes (1:15 -1:45)
 Period 3: 90 minutes (1:45 – 3:15)

Over the 10 day (two week) cycle, all lines of the timetable average 4 hours of class time. For instance:

Week 1, a Line might have 3 slots: 60 min, 90 min & 60 min = 3½ hours.

Week 2 the same line will have 4 slots: 60 min, 90 min, 60 min & 60 min = 4½ hours.

Students took some time to get used to the structure and it was a big challenge for many staff. During the end-of-year review however, a common answer was; “why would you go back – its working well.” There is less movement around the school and the place seems more settled and calmer.

	WEEK ONE					WEEK TWO				
Days	1	2	3	4	5	6	7	8	9	10
Period 1	A _G	D	F	C	E	F	B	D	A	C _G
Period 2	B	F	E	E	C _G	A _G	E	F	D	E
Period 3	C	A	A	B	F	D	C	B _G	F	B
Period 4	D		B _G		D	C		A		F
Period 5	E		C		A	B		E		D

The “G” line is for Year 9 and 10. The three line (A, B & C) consist of 4 junior line of 3 hours each: Classes are PE, 3 Options, including Social Studies.

The School Year

The year is divided into semesters - at Level 1, 2 & 3 courses are still effectively a full year course. The Semester only really applies therefore to Year 9 and 10.

Year 9 and 10 do not operate as separate classes.

- At Year 9 students choose the 'level' to operate at – 3 Levels for English and Mathematics and are placed in Science classes. At Year 10 students choose their level for English, Mathematics and Science.
- Social Science is divided into 'Learning Packages'. They must choose 3 out of 4 semesters each year over Year 9 & 10
- All students do 2 semesters of PE each year
- All students choose 5 option semesters over Year 9 & 10

Semesters	A B C Lines			
Year 9	Junior Line	Junior Line	Junior Line	Junior Line
Semester 1	PED & Health	Social Science	Social Science	Option 2
Semester 2	PED & Health	Social Science	Option 1	Option 3
Year 10	Junior Line	Junior Line	Junior Line	Junior Line
Semester 1	PED & Health	Social Science	Social Science	Option 4
Semester 2	PED & Health	Option 6/Soc Sci?	Social Science	Option 5?

Other Points:

- Academic Tutor Classes. (AT) About 18 students in each; no 'Form classes' as such. AT time occurs during the week; normal administration plus Growth Mind-set, including mentoring and goal setting. ALL staff take a Tutor group
- Personal Learning Conference: These occur twice a year *during the school day* from 9:00 am through to 7:00 pm. Students must reflect on their learning prior to the meeting and information is gathered on how they are progressing. The AT meets with the student and parents, not specialist teachers. About a 90% of parents take advantage of attending these meetings. This time can also be used for planning courses; during the same week as the Conference in Term Three, students are choosing courses for the next year. The time-table is built around these choices.
- Students choose *both* semesters at the start of the year. There is some room to move during the year with Dean and AT input.

d) St Peters College Gore

Bridget Ryan, Assistant Principal

Staff from St Peters in Gore also attended the Rural TOD in 2015, where Penny Mossman from Amuri Area school gave her address. They were similarly enthused by the timetable adopted by AAS (detailed above) as they also had students out at various times to academies and on EOTC. They put in place a structure where there were four, 100 minute period per day.

Initially staff and students, in particular in Year 13, thought the change was beneficial. However, after two years, students and staff decided 'no' and they wanted to change back. On reflection there was perhaps not enough change in pedagogy and teachers struggled to always use the time effectively. Also, if students were away or there were interruptions, too much class time could be lost which became a real problem.

Now the school has a 6 Period day of 50 minutes per period over 6 Lines. Subjects can request a double period, if it fits – for instance PE for travel time to Invercargill.

6. Refocus: 21st Century Learning

After initial reading, school visits and a subsequent trawl through a range of information about timetable (and Curriculum) changes in many schools it became obvious I needed to broaden my focus and complete some reading about the movement toward 21st Century Learning and how in some schools (and the Ministry) this informs and drives curriculum and timetable change in particular. Timetable and curriculum change at the College, and at the schools visited above, all display some elements of the new approaches to education, but in other ways change was driven, or is being contemplated in response to a particular problem or situation they faced. For some schools, changes were tailor-made in response to a problem while for others, solutions were borrowed from other schools. Both aspects – problem solving *and* developments in educational philosophy need to be considered.

In terms of Timetable and Curriculum change, new philosophies seem to manifest themselves in some combination of the following:

- Modern Learning Environments (MLE)
- Integration of ICT
- Changes to the school *day*: Longer/different learning times
- Changes to the school *year*: Semesters or Trimesters
- Integrated or interdisciplinary curriculum, reflected in structures such as projects ‘big ideas’, learning episodes and big or small learning modules

7. 21st Century Learning – Philosophy

Summary of: ‘Supporting future-oriented learning and teaching – a New Zealand perspective:

NZCER Report 2012

Authors:

Rachel Bolstad and Jane Gilbert, with Sue McDowall, Ally Bull, Sally Boyd and Rosemary Hipkins

(Italics are my thoughts)

Introduction: 21st Century Learning

Widely *argued* that current educational systems structures and practices are not sufficient to address and support the learning needs of all students in 21st C

Changes are needed – future thinking based on the synthesis of prior research, current innovative practice by a small number of schools and on-line submissions from innovative leaders and teachers (*Seemingly only 29*).

Why change?

Social, economic & technological change and the huge increase in human knowledge. 20th Century schools were a good fit between the education provided and education *needed* for stable economies with large hierarchical organisations. (*It could be argued that this ‘stability’ applies more to the latter half of 20th Century – 2 World Wars, Depression and the Cold War do not suggest stability*)

Now it is widely argued (*but there seems little hard evidence*) that learning should change with world change.

Two ideas:

- a) a shift in the meaning of knowledge – education for the knowledge age; knowledge is still important – curriculum still needs to set explicit goals for student knowledge
- b) Learning research – people do not learn well as spectators - as passive receptionist of pre-packaged bits of knowledge – need to be engaged in learning; the more you learn, the more capable you are of learning

Unbundling:

This requires a structural move away from ‘traditional’ ideas of teaching and schools. *Content unbundling* – the stuff of learning – need to revisit assumptions about the scope and sequence of what students are expected to learn and explore new varied ways of approaching curriculum and course work.

Re-bundle into new schooling. *(many would agree that this requires a huge workload to come up with the new structure – something that also seems implicit in the NCEA Review)*

1. Rethinking Learner & Teacher Roles: Personalised Learning

Need to move away from the industrial age and one-size-fits all.

“The school, the year group, the class, the lesson and blackboard, the teacher in front of 30 children is an obstacle to personalised learning.” A Teacher.

Schools shouldn’t just transmit knowledge, teachers must change. Learners shouldn’t merely absorb and store up knowledge – the learning needs to be personalised/differentiated to meet different needs. All resources (teachers, parents, assessment, technology, time and buildings) have to be deployed more flexibly.

21st Century learning is personalised learning which builds the system around the learner – deciding how to use teachers, time, space & technology with flexibility;

Implemented in pockets only and not representative of general practice.

2. Equity, Diversity & Inclusivity

The approach aims to provide for equity, diversity and inclusivity - success for all including those who are currently missing out. *(Big Opportunity 6?)*

Schools should aim to develop every person’s potential – not simply raise everyone’s achievement to a standard *(a problem with NCEA and National Standards?)* Students should reach their full potential. *(Schools – and their Mission Statements seem to have been striving for this for decades. The structure of NCEA could be working against this. Teachers and students are focussing, almost exclusively, on the Standard, credits and level of achievement at the expense of a coherent curriculum let alone a ‘love of learning’)*

All students should have the opportunity to succeed – high expectations for all. Change is extremely difficult – the new environment is where the majority of teachers think in new ways. *(my concern that this needs another generation of uncritical acolytes)*

3. Curriculum & Knowledge

View 1: Curriculum as content (concepts & skills from disciplines to form subjects or learning areas. Learners absorb and assimilate knowledge and show how well they have done through assessment. Knowledge is stored for later use.

View 2: Knowledge is something that does things – more a verb than a noun – creating and using new knowledge to solve problems just-in-time.

Knowledge Age ‘thinkers’ argue that reproducing existing knowledge is not the core goal of education because:

- a) It’s not possible to determine what knowledge people need in their lives beyond school (*has it ever been?*)
- b) Future use is not enough for thinking; we should be equipping people to do things with knowledge. (*see McPhail’s critique regarding the benefit of knowledge and thinking*)

Learning

The role of education should instead be to develop everyone’s capability to work with knowledge. Disciplinary (subject) knowledge should be in context within a student’s learning capacity. The argument is that this approach has not really emerged much yet in schools. 21st Century learning needs to ‘support’ educators and the public to understand the paradigm shift. (*the term ‘support’ crops up dozens of times in the NCEA Review document – a cynic could see this instead as code for more work*)

Example quoted of Albany Senior High School: Three key Timetable structures.

- One day a week suspend traditional timetable to work on ‘Impact Studies’ of students own choosing and design
- Four days of extended blocks of 100 minutes: specialised subjects of 2 blocks per subject
- 2 X 100 minute blocks of tutorial time with guidance from mentors

4. Rethinking Learning and Teacher’s Roles

View that traditional schooling rewards success with advancement and future learning while ‘failure’ results in vocational pathway. (*is this simplistic or an outdated view of the way schools do things now?*) Curriculum shouldn’t just describe things to be learned (reason for little content in NZC?) whereas a curriculum should shape learners abilities and equip people to do things with knowledge. An individual’s stock of knowledge is an important foundation for personal cognitive development but must be coherent and collaborative.

Curriculum should be designed to develop learning capacity which means:

- rethink the purpose of disciplinary knowledge (*who and how – who decides?*)
- rethink assessment (*NCEA as an impediment – most innovations seem confined to Year 9 and 10 with a few tinkering with LEVEL 1: Big Opportunity 1 and 3?*) Some schools are developing assessment to be used flexibly but constrained by NCEA.

The learner is at the centre where the learner ought to be transformed by the world and the world transformed by the learner. (*is aspirational but is it realistic?*)

There is a need to move beyond student centred/teacher centred. There should be a 'knowledge building learning environment drawing on the strengths of both teachers and learners to support learning'. The new learning involves mentoring and individual help and – time is required and the challenge is in managing the open ended projects, using space, time and outside help. Some evidence that this approach benefited those considered as 'low achievers'. Learning gave a meaningful chance to 'shine' with wider skills shown than before.

5. Continuous Learning for Teachers & Leaders

Many may resist change to existing approaches if they don't see the need for change or are not convinced. Many ideas are not new – we can build on this to form a coherent education system. Support what is known and accommodate new knowledge and purposes of learning.

Promoting teachers as learners needs even more organisational structures and systems to support that learning. Future oriented strategic leaders are required as change facilitators.

6. Collaborative & Network Learning: Partnerships and Relationships

Authentic contexts require extra resources and experts from a wide range of community resources. Any changes must be supported by the community. More collaboration is required between schools. *(evident in Big Opportunity 1 and 3)* For example clusters of schools in research project which shared practice and there was input from policy and research. *(an argument for COL's: but are these hamstrung by a flawed leadership and funding model?)*

New Partnerships:

There should be a new connectedness where schools, groups, businesses and individuals are the key to 21st Century educations – schools don't have all the in-house resources required.

At present it is seen that the 'messiness' of real-world problems are simplified by contrived learning tasks where answers and outcomes are already known by teachers. Knowledge-generating learning needs a wider range of people to help. *(Big Opportunity 3?)*

7. New Technology and Collaborative Practices

Going beyond just using ICT;

Four Strategies: Supported by tools and infrastructure; providing inspiring ideas and opportunities to connect ideas; enhancing capability; Support innovation:

8. Policy Implications:

Key Ideas: Diversity: Connectedness: Coherence

9. Rebuilding the NZ Education System for the 21st Century:

Are schools personalising learning?

Educating for diversity?

Building learning capacity?

Reconceptualising roles for teachers and learners?

Engaging in professional learning?

Developing new or real partnerships?

8. 21st Century Schools: Some Approaches

Alfriston High School: (John Locke – Sabbatical)

A 'new' school (2003) based around modern learning environments and echoes many of the ideas expressed in 'Supporting future-oriented learning and teaching – a New Zealand perspective', above.

The school's mission and goals include the ideas of:

Qualities needed by young people:

- excellent communication and people skills
- a will to succeed
- an ability to learn and adapt
- have vision and a view of the big picture
- have well-rounded skills
- be ethical and trustworthy

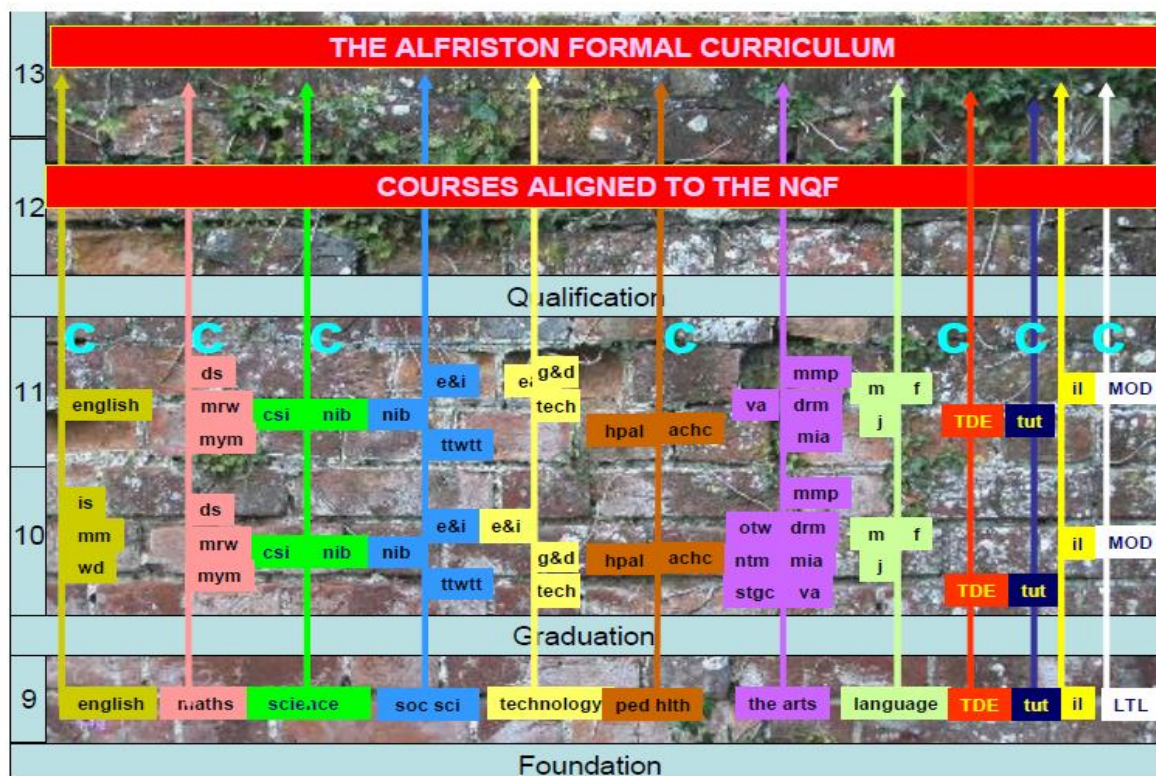
Also, the school delivers the curriculum *and*: - social cohesion, citizenship, sustainable future, bicultural & multicultural, enterprise and innovation, literacy including digital literacy.

The school is based on: a focus on learning; a climate for learning; professional leadership; a learning organisation and students rights and responsibilities.

Curriculum Integration:

Concept based learning based on relevant contexts. Learning is cross-curricula but secondary teaching is specialist, so the challenge is to create breadth and authenticity in learning yet retain the rigor of *specialist* study. Alfriston is working toward an integrated curriculum by collaborative planning.

Curriculum Structure:



Year 9:

'Foundation' course delivered by subject specialists whose lessons complement each other – e.g. what is learned in Science is supported by what is happening in English or Technology. The 'Learning to Learn' programme is a 60 hour intranet-based course aiming to develop problem solving, synthesising, researching, reflecting and collaborating.

Year 10:

Some courses are a blended mix of learning areas. Nature in Balance (NIB) includes curriculum 'must know' while 'Stagecraft' is a blend of Music, Drama and Dance.

Modules are used at Year 10 & 11 to provide flexibility and extension to the curriculum.

'Three-day episodes': Once a Term the timetable is suspended for three days where cross-age groups work together to meet a deadline in a realistic learning situation.

'Independent Learner Class (ILC); Students apply for a licence to learn once a term on a negotiated project – no timetable; students are monitored but not supervised.

Learning process:

Learning is delivered through explicit teaching of a 'Learning to Learn' programme, Modules and Three-day episodes. ICT is immersed throughout the school and students are expected to make use of a range of multi-media resources.

The Graduation Programme

At Alfriston Year 10 and 11 students progress to 'graduation' into the senior school. Graduation indicates what a student has achieved and an indication of likely success at Level 2. In this programme students choose seven two-year Level One course when in Year 10 leading to a minimum 105 credits. Some readjustment can be made in Year 11. There are several 'blended' courses that contain essential 'must know' for more than one subject.

During Year 11 there are 3 trimesters of 12 weeks which are a combination of project based learning classes and passion projects.

Year 12 and 13:

Focusses on external qualifications. They include 20% of independent study using intranet based resources and based in the independent Learning Centre, using ICT and trained research assistants.

Other Structures:

- They use a Whanau structure (similar to Houses) to foster collaboration and identity. Each whanau has around 300 students (each with its own physical space) with tutor groups of about 25. There is competition between whanau: academic, sport, cultural and community.
- Mentoring is important, particularly in Trimester based courses.
- There are high expectations of assuming leadership roles
- The school has a uniform, with a range of garments allowing for choice.

Learning and Teaching:

- The traditional one teacher, one class, one subject, one hour, one room approach has been extended to include: *Learning times*#, *flexible groups in size and age*, *cross disciplinary and integrated courses*, *larger blocks of time*, *24/7 access (ICT)* and *flexible learning spaces*. (#100 minute periods which may save up to 270 hours lost time from fewer transitions).
- Self-management diaries are endorsed and are the passport around the school.
- Learning logs – daily summary of learning.
- Traffic light system explaining the steps needed to become a better learner.

Summary:

View that traditional chalk and talk teaching style is neither inspiring nor adequate by itself, but still remains as one of a *range* of styles every teacher must employ. 21st Century schools are more interactive with the student at the centre.

Other Snap-shots

Wakatipu High School

- Two week timetable.
- Year 9 and 10: 12 semester options completing 6 each semester.
- Year 9 - a full year of English and Mathematics and minimum of 1 semester of Arts, PE, Science, Social Science and Technology plus 2 more semester choices from any area.
- Year 10 – a full year of English and Mathematics plus a minimum of 1 Semester of PE, Science and Social Science plus 2 more semester courses.
- Year 9 and 10 also undertake 'Wicked Problem Solving – focus on a real-life issue from the local area which involves looking at opposing views, ethics in data gathering, timelines, interaction with outsiders, analysis and recommendation to stakeholders.
- Year 11-13: Their traditional programme also includes 'Passion Pathways': Student constructed in consultation with staff and not restricted to any one learning area. Usually involves 15 – 20 NCEA credits from several areas.

WEEK 1					WEEK 2				
Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10
Ako 60 min	Line 4 60 min	Ako 15 min	Line 2 60 min	Ako 60 min	Ako 60 min	Line 5 60 min		Line 6 60 min	Ako 60 min
Break 1 15 min	Break 1 15 min	Line 3 60 min	Break 1 15 min	Break 1 15 min	Break 1 15 min	Break 1 15 min	Ako 15 min	Break 1 15 min	Break 1 15 min
Line 1 90 min	Line 5 90 min		Break 1 15 min	Line 3 90 min	Line 6 90 min	Line 4 90 min	Line 3 90 min	Line 1 60 min	Line 1 90 min
		Line 4 65 min					Line 5 65 min		
Break 2 40 min	Break 2 40 min	Break 2 40 min	Break 2 40 min	Break 2 40 min	Break 2 40 min	Break 2 40 min	Break 2 40 min	Break 2 40 min	Break 2 40 min
Line 2 85 min	Line 6 85 min	Line 5 85 min	Line 4 85 min	Line 1 85 min	Line 6 85 min	Line 2 85 min	Line 3 85 min	Line 5 85 min	Line 4 85 min
Break 3 40 min	Break 3 40 min	Break 3 40 min	Break 3 40 min	Break 3 40 min	Break 3 40 min	Break 3 40 min	Break 3 40 min	Break 3 40 min	Break 3 40 min
Line 3 60 min	Line 2 60 min	Line 1 60 min	Line 6 60 min	Line 5 60 min	Line 1 60 min	Line 6 60 min	Line 4 60 min	Line 2 60 min	Line 3 60 min
Finish 3:30 pm	Finish 3:30 pm	Finish 3:30 pm	Finish 3:30 pm	Finish 3:30 pm	Finish 3:30 pm	Finish 3:30 pm	Finish 3:30 pm	Finish 3:30 pm	Finish 3:30 pm

St Peters College, Palmerston North

Aimed for an empowered, self-managing life-long learners. Decided to restructure their day for 2017.

- 3 Period day, 90 minutes each period. Believed that this provided an opportunity for in-depth learning, greater variety within lessons, more student/teacher interaction, less time pressure during the day and reduces unproductive transition times.

Campion College

- Impact projects: Develop skills of problem solving, critical thinking, collaboration, creativity and communication. Continues all year one day each week.
- Based on four principles: Student interest (project is the student's), substantial learning (outside the classroom), quality product and impact on the community.

Rolleston High School

- New school, **Year 9 only** so far. (2017)
- AKO: Students meet with their learning coach to monitor progress and develop their personalised inquiry programme.
- CON: Connection Learning – multidisciplinary skills and knowledge. Involves a collaborative environment with individual and small group work. Includes the subject areas of English, Mathematics, Science, Social Science.
- PE: Physical Education & Health: One slot of 100 minutes.
- SEC: Selected Learning: 2 options per term, 8 in total for the year.

Timetable

	Monday	Tuesday	Wednesday	Thursday	Friday
8:50 – 10:30	Ako	Ako	Ako	Ako	CON
Break					
11:00 – 12:40	CON	SEL1	CON	PE	SEL2
Break					
1:20 – 3:00	SEL1	CON	SEL2	CON	AKO

Te Puke High School (From a seminar at the AP/DP Conference 2015)

Changes made for 2016: (Year 9 and 10)

Integrated Core:

All students study 6 integrated themes in each year which include concepts from English, Mathematics, Science, Social Science and PE/Health. There is access to specialists from each area:

- *Who am I?*
- *Problem Solving*
- *Our world*
- *Who are we?*
- *Star Gazing*
- *Creativity*

Foci: Students are required to select 12 Foci options: extension, interest or support which are cross-curricula.

SPINS:

Special interest subjects cover Technology, Arts, Languages etc. Students select across all learning areas at 9 & 10. 6 week rotation, two spins per rotation, 12 over the year.

Some points from their Decision-making process:

- *Students arrive excited but engagement dropped off late in Year 9 and deteriorated in Year 10.*
- *Curriculum seemed to be repetitive.*
- *Change started with research.*
- *Curriculum ideas from Rosemary Hipkins & Jane Gilbert.*
- *Agreed the school needed to be more student centred (junior curriculum) and students needed more choice and voice.*
- *Challenge to initiate and lead change.*
- *Facilitating change and being ready for other staff to emerge as leaders.*
- *Started with vision of improving student achievement.*
- *Reading and discussion (and angst).*
- *Focus totally on what was good for THEIR students, not individual departments.*
- *Use leaders who are able to step-up to school-wide thinking.*
- *Regularly seek connection across disparate views.*
- *Be willing to adjust time frames.*
- *Build trust that the good of the school and students will be represented in learning areas.*
- *Coordinating and refocusing not manipulating and controlling.*

Hobsonville Point High School

- A new school based on a Modern Learning Environments.
- Big Projects Year 9 & 10: on-going and longer term study; students partner with external businesses and groups; range of roles available; philanthropy and service elements; cross-curricula themes (e.g. sustainability, wetlands, music production, sports academy).
- Specialised Learning – curriculum areas. Delivered by specialist teachers – students select a range of modules: some have a specific learning focus, some are integrated around a theme, some are compulsory some are optional.
- Learning Hubs: 15 students with a ‘learning coach’ to help with the learning path: Track progress, negotiate, review goals, learning portfolio, discuss issues & find solutions, pastoral care’ build the capacity to take responsibility for their learning.
- NCEA: ‘doing less better’: At Year 11 20-40 credits only at Level 1 or 2: (mainly internal) Study involves Projects, Learning Hubs and Qualification Modules (SPINS).
- Year 12: Level 2 focus on 80 Credits. Also involves Projects/Learning Hubs/QLM/SPINS. Based on “naturally occurring” Achievement Standards.
- Year 13: ‘Pathway or Launch Pad: Level 3 and UE.

	Monday	Tuesday	Wednesday	Thursday	Friday
8:40 – 9:10	Learning Hub	Learning Hub	Learning Hub	Learning Hub	Staff PLD
9:10 – 10:40	Big Learning Module (BLM)		Special Interest 1 (SPIN)	Special Interest 2 (SPIN)	
10:40 -11:30	My Time	My Time	My Time	My Time	Learning Hub
11:30 – 11:50	Break	Break	Break	Break	Break
11:50 – 1:20	Big Learning Module (BLM)	Big Projects	Small Learning Module (SLM)	Special Interest 3 (SPIN)	Small Learning Module (SLM)
1:30 – 2:00	Lunch	Lunch	Lunch	Lunch	Lunch
2:00 – 3:30	Big Learning Module (BLM)	Big Projects	Small Learning Module (SLM)	Special Interest 4 (SPIN)	Small Learning Module (SLM)

9. Models of Curriculum Integration

(Survey of schools by Philip Jellyman; Sabbatical Report, 2015, St Dominics Catholic College)

1) Multidisciplinary (thematic) approach.

Context of the “big questions as the focal point for subjects.

- teach each subject separately (but linked to the theme).
- subject areas collaborate to maximise integration in the course.
- themes develop collaboratively then share multidisciplinary activity.

2) Interdisciplinary integration

Common interdisciplinary skills are emphasised across subjects and are central to the learning process e.g. a focus on thinking skills.

3) Transdisciplinary integration (democratic)

Curriculum is developed between students and teachers based on a real life question. Negotiation is important - knowledge and research to problem solve. Teachers guide and provide specific teaching in areas of weakness. Subject content is incorporated when needed and linked to the question.

Proponents of Integration see it as integral to modern teaching and learning: how students learn best; prepares students for their future, changing workplace. It better meets the NZC goals: ‘confident, connected, life-long learners, key competencies...’

The author visited or studied 15 schools:

He found no common template or pedagogical approach.

a) Core Subject based Integration:

Based around 4-5 core subjects with the expectation to integrate teaching between the subjects. Planning meetings are scheduled, which are based around a ‘big topic’ or question or issue - broad topics pre-planned by teachers. The issue is investigated from a subject point of view with cross-overs when logical.

Advantages: Specialists can still focus on core subject knowledge.

Disadvantages: Minimal integration and lack of engagement with the process.

b) Paired Teachers

Similar to above with teachers or Departments paired to develop an integrated programme: e.g. English & Social Studies; Science & Maths.

Advantages: Specialists can still focus on their core and it is more flexible and easier in a pair.

Disadvantages: Limits depth and breadth of integration.

c) Multiple Teachers: One Programme

One class or classes with 2-3 teachers assist progress through pre-prepared integrated programme (around a big topic) using an inquiry approach. Is designed to cover particular curriculum content (not separate subject areas), teachers as facilitators and 'clinics' or tutorials on areas needing help. This operates best in a MLE or shared space with 50-60 students with access to 'specialists'. This may increase cross-curricula collaboration and improved staff and student relationships.

d) Integrated Curriculum as a Subject

'Integrated Studies' - a separate subject plus some core subjects elsewhere on the Timetable. Run by 1-2 teachers supported by core teachers who are timetabled to work with the class. Again, designed around a big concept using inquiry. Ranges from pre-planned to student preferences. Allows some siloed teaching plus development of Key Competencies.

e) Project Based

Students explore a common context in a project which may be teacher or student designed, connected to the real world and to an external organisation. 'Passion' or 'Impact' projects investigating an area of interest with actionable outcomes.

f) Combination of Integrated Units plus a Big Project

Implementation: Longer learning times (e.g. 100 minutes) for an in-depth focus; is generally welcomed by both staff and students. It does require thorough staff preparation. Pastoral care is intertwined using academic coaches, who may also be their integrated curriculum teacher.

Benefits of an Integrated Curriculum

This depends on the pedagogical approach taken.

If not supported by staff/HOD/SLT there is unlikely to be an improvement on current teaching. If it is supported and well designed, students are more engaged, develop deeper questioning and independent thinking skills compared to specialist subject teaching. The subject matter is more relevant and authentic, and along with student inquiry, students can better recognise connections between subjects. There were fewer attendance and disruption problems. Personalised learning seemed to benefit both high achieving and those at risk.

Subject achievement is not notably improved but it did meet the NZC goal of developing 21st Century learners. Staff were more aware of what else was being taught and integrated into their own subject.

Barriers:

- A confused vision of an integrated curriculum meant there was a struggle to get buy-in.
- Staff resistance especially from subject leaders – vital subject specific knowledge would be lost and could affect NCEA grades (two schools moved away from integrated studies because of this).
- 'Just in Time' planning created planning challenges; needed a more dynamic, shared decision making with uncertain outcomes.
- Parental resistance at times was strong, based on worries about being prepared for NCEA. Parents struggled to recognise the benefits of KC's Vs knowledge.
- Time: Integrated programmes take much more time than traditional.

Integration Years 11 – 13:

Most integration is at the junior end – Year 11 and beyond focussed on subject areas because of NCEA and subject endorsement. There was limited change: combined subjects which logically connect, Integrated for “working towards” Year 11 group (at-risk learners) and some incorporated non-NCEA “passion” units into the timetable.

Conclusion:

Integrated curriculum, aligned with “modern” teaching practice (inquiry learning, authentic contexts) has *potential* (lack of evidence) to enhance student learning and competencies.

Most attempting integrating curriculum are new schools with MLE’s (new buildings are the only option allowed) and the timetable is designed for this purpose, with parents inducted into the school vision. A collective vision and being clear about what it is designed to achieve is most important.

10. Longer Learning Times:

Education Endowment Foundation Report 2017 (Australia)

Evidence suggests that how teachers *use* time is more important than the length of the lesson.

Some findings:

- Some higher achievement in Science, but unclear for English and Maths.
- Will not raise achievement by itself.
- Alters the way teaching is done.
- Not a lot of Australian or NZ research – looked mainly at Maths, English & Science.

Grey Tuck, Kuranui College Sabbatical Report 2006

- Helsingin Luonnontiedelukio School Helsinki.

Five 85 minute periods in a school day from 8:00 am to 4:00 pm.

Lunch integrated into Period 3.

Student thoughts: 'better than the old timetable; time to study and achieve something in each period; in-depth learning.

Principal: Staff had not changed teaching from a transmission approach to learning. Some staff had left and there was a need for more PLD.

- Virginia USA: Block Scheduling.

After research had moved from 55 minute, to three or four, 75 to 120 minute periods. Believed that the change added 198 hours of instructional time a year (less lost in fewer transitions). There was also less student movement and lateness. Student and teacher relationships improved and both claimed they did not 'burn-out'. Topics were completed in 25% less time and in-depth problem solving skills improved. The school environment changed for the better with less discipline problems.

- Kuranui College.

Kuranui College 2017: Geoff Shepherd; Principal

Mixture of Two Semesters/Full year courses? Students choose courses from set lines.

Year 11 Six subjects: English, Maths and encouraged to take Science.

Year 12 Same

Year 13 Six for First Semester (given a study line if they deserve it)

Stuff News May 6, 2016

"Wellington schools make the shift to longer class times".

- Wellington Girls East: 100 minute periods (see above).
- Naenae College and Wainuiomata College: 90 minute periods.
- Paraparaumu and Taita College plan longer class times.

Aim is for students to be more engaged: Teachers get to know their students better and there was time to settle into a topic, work together, discuss and do practical work.

Louise Starkey, Senior Lecturer at Victoria University School of Education says there are arguments for and against longer times but it probably offered more advantages than disadvantages. It's not so much how time is structured but how it is used.

Stuff News October 13, 2016

“Mountainview High School goes to 100 minute periods”.

3 X 100 minutes per day.

Module based curriculum: Two subjects in each module:

Students choose 8 Modules from 32 each year.



Two subjects, such as English and Maths, are covered in each module. A teaching period will be taught by two teachers and split into different, interactive sections.

For a “Gladiators” module, Physical Education and Social Sciences could be covered so part of a class could research ancient Roman history while the other part could practice Roman athletics outside.

Class sizes would increase, but the teacher-to-student ratio would be the same.

A new building, opened at the start of last term, has sliding, glass walls to accommodate for larger class sizes and the module-based curriculum.

The changes had been made after researching and speaking with other schools using the different method.

Each student has a mentor teacher they would meet with regularly. This teacher would plot their individual study plan, making sure no Ministry of Education-required subjects, such as English, were neglected.

If a student was falling behind or wanted to accelerate their learning, there would be smaller, single subjects taught as well.

Longer lessons would not be apparent as the content would be presented in different, more interactive ways and it would transition between.

The School Day

8:40 – 9:00	Group Meet/Assembly
9:00 – 10:40	Period One
10:40 – 11:10	Interval
11:10 – 12:50	Period Two
12:50 – 1:30	Lunch
1:30 – 3:10	Period Three

In 2015 Waimate High School started teaching in four 80 minute lessons after speaking to staff, students and other schools.

Principal Janette Packman said "most staff say they would not want to go back to 55 minute lessons which we had previously".

However, not all schools had shifted to longer teaching periods.

Roncalli College felt the school's five 55 minute teaching periods enabled continuity of learning, variety and meant students were able to make up work from missed class more easily.

Mackenzie College said the need for flexible timetabling meant the school was reviewing its current five hour-long periods, with the potential for change in 2018.

"Having taught at schools that have had lesson lengths anywhere from 45 minutes to 90 minutes, the one hour lessons have been chosen to allow the range of subjects to be taught in reasonable intervals through the day and allow for a degree of student-centred hands-on-learning that would be more of a challenge in shorter time frames," Principal Goldsmith said.

But the review meant the College would "at least seriously look at some longer lesson times".

Timaru Girls' High School's six period timetable was likely to continue as it enabled an exchange of students with Timaru Boys' High School (TBHS), which also has six teaching periods per day.

The TBHS timetable, of 45 to 50 minute lessons, was based on previous norms in our school and others around New Zealand.

Leading Learners: St Mary's Catholic College

100 minute lessons, 5 years on:

- Needs significant PLD first
- Maths and languages wanted more frequent, not, longer times.
- Technology, Physical Education and Science in favour.
- There isn't a perfect lesson length.
- The change is massive – it affects every part of teachers and a student's day.
- On review, few wanted to go back to the old structure.
- 100 minute lessons are a choice, not a fix.
- You can't 'wing' 100 minutes – more demands for planning.
- Teachers see students less often and significant time lost if they miss a class.
- There are no back-to-back classes; every lesson is followed by a break.
- less time lost moving around.
- The school feels calmer.

11. 21st Century Learning: Critique

As is evident from some of my comments regarding the current enthusiasm for '21st Century Learning' I remain interested but unconvinced. There *are* ideas, approaches and opportunities arising from this movement but I think, considering the critique below, caution is wise. It also seems evident that much of the NCEA review seems to be based on this approach and the blueprints from a number of innovator schools. Reaction to the review so far has been mixed, to say the least.

Dr Graham McPhail: Notes from his Workshop, AP/DP Conference 2015

21st Century Learning movement is one of great aspirational ideas; however, there is a need to be cautious – there is very little empirical evidence and it seems a little like a solution in search of a problem.

His description of the old 19th Century model (described as Future 1) is of a:

- one size fits all.
- homogenous group of students getting access to knowledge: recall of facts are important.
- under-socialised – little recognition of individuals.
- pedagogy is a one-way transmission.

Current practice (20th Century called Future 2) however involves students engaged actively with the teacher;

- teacher is not the expert but a co-learner.
- student-centred learning; could it be overdone?
- possibly *over-socialised*: too obsessed with students at the centre?
- lack of boundaries.
- *under-specified* knowledge; the Curriculum is quite empty, which is both a strength and weakness.

Hattie disagrees – learning should be visible and explicit; it should be about what is being learned.

The new, 21st approach revolves around:

- Competencies and project based learning.
- Interdisciplinary approach.
- Modern learning environments in new schools.

One argument for this approach is the pace of change is so great with 'unknown futures': - isn't the future always unknown?

Knowledge is proliferating and people need to be more critical in its use. Humans are 'connected' all the time, there will be ever-changing jobs and skillsets requiring training. The claim is that the 20th Century system hasn't equipped people to cope with change – "but that's people now; aren't we coping – aren't we having new ideas?"

Future 3 (as outlined earlier)

1. Personalised learning – focus on what the student’s interests are plus what the teacher knows as important.
2. Equity, diversity and inclusivity – many ways to be successful.
3. Using knowledge to develop learning capacity “knowledge is a process of creating new knowledge”.
4. Rethinking learners and teacher’s roles. The learner being involved in decisions about learning – challenged by tasks set.
5. Culture of continuous learning for the teacher.
6. New partnerships and relationships – schools not siloed from the community.

An alternative view is that this approach is not safe. 21st Century learning does not constitute a theory of knowledge.

Teaching and Learning should be based on the prime purpose of a school: To do what no other institution cannot do – which is to provide:

- a theory of knowledge.
- a curriculum structure.
- in sequence.
- pedagogy (views that the Ministry is a bit obsessed by pedagogy – finding a pedagogy to engage priority learners?)

In 21st Century learning no-one seems to say what are you teaching them. What do we want them to know – this is not really in the curriculum. What can help us? Level 1, 2 & 3 Achievement Standards is a ‘default curriculum’ plus National Standards (gone). There is no big picture – the NZC is quite empty.

We need a Theory of Knowledge first. The report (by Rosemary Hipkins, Jane Gilbert et al, summarised above) focuses on the rate of change, competencies, skills needed (which is good) but it is not a theory of knowledge. For them knowledge is a process; it keeps changing and is not really important in itself. McPhail argues this is not true. The core fundamentals of any discipline change very slowly. For example, music over time has changed a lot, but the fundamentals of tone, harmony etc. have not.

All disciplines have a core – the disciplines have seen massive change but not at a deeper level. The danger with a “Project” approach is that it weakens the sense of what a discipline is: students with no core knowledge will have a weak and superficial knowledge of the disciplines being studied. [is this already happening with NCEA and credit farming?]

He suggests an alternative model: A Progressive Knowledge Model:

Start with ‘knowledge’. Memorising is still an important part of learning. Brains do not develop properly if we don’t memorise some things. We need to decide what knowledge in each discipline is fundamental. This is **powerful knowledge**; knowledge for all. If students have access to this core knowledge it will **change a student’s way of thinking and give them options for seeing the world differently**. They will develop the ability to think conceptively (progressive) which helps everybody, rather than ‘watering down’ the hard stuff.

There is a differentiation of knowledge between Social, (everyday, ‘getting from A to B’ knowledge), and Disciplinary knowledge. The obsession with putting social knowledge at school at the centre

verses disciplinary knowledge is that students will have no progressive (vertical) structure of knowledge to get from one level of understanding to the next.

This is the danger of the under-specified curriculum, which can lead to diluting disciplinary knowledge with everyday personal knowledge and waves of pedagogic populism – what seems important is what they – students - ‘like’ at a shallow level rather than powerful fundamental knowledge. We should focus more on curriculum/knowledge and then the *best pedagogy to teach/learn it*. That is; how to make fundamental disciplinary knowledge accessible and interesting.

21st Century learning is structured around themes, projects and problems, which by their nature are general- this swings pedagogy to what can we do to make it ‘interesting’ rather than what do we have to know deeply to solve the problem?

What schools should focus on is providing the structures for meaning: Students do not know this until they meet “you”, the teacher – the historian or economist. The teacher models and embodies what it is to be part of the disciplines structure of meaning. The school offers ***an epistemic ascent or conceptual progression moving from lower order to higher order understanding.***

Students come to schools with their everyday knowledge and it is the role of the school to transform what they know about the world by introducing them to scientific, disciplinary knowledge. Schools construct knowledge to bring about changes in the intellectual capacity of the student – this cannot happen anywhere else. Conceptual progress is a core component for intellectual development – so how are the aspirational goals of 21st Century learning going to enable learning growth and access to conceptual progression from project to project, module to module? A structure based on themes or ‘big projects’ could lack coherence and result in dilution. Who is, and how are, we going to know if a student has grasped a fundamental idea?

McPhail, APDP Conference, August 2015

[**Joe Bennett** outlined a similar, anecdotal idea in *The Press 22 May 2012*]

He believes that teaching is done according to each teacher’s nature. A teacher that matters to a student is someone who puts something in a kid’s mind like fitting a plug into a socket (through enthusiasm for a subject/discipline) as a way of seeing the world lit up like a light bulb.]

Mark Wilson: Principal Cashmere High School. Sabbatical Report 2015

His executive summary found:

- There is no consistent evidence that modern **learning environments (MLE)** make any positive difference to student achievement (improving the general quality of physical spaces does)

There are concerns about how much autonomy (in an MLE) is actually effective for independent learning – i.e. distractions, avoidance & noise

There needs to be a strong framework to closely monitor and mentor students.

Single-block rooms seem more at home in the USA – they are ideal for ‘lock downs’ with armed intruders. They are cheaper to construct and could be described as minimalist ‘carpeted barns’.

They do make teaching more transparent and support collegiality: to observe and be observed to improve practice and develop collaborative planning and teaching is helpful. But ‘team-teaching’ seems to have little or no positive effects on achievement.

Modern, open-plan interactive workspaces in business, promote interaction, but are driven by cost-cutting. They suffer from more noise, illness, interruptions and distractions.

Some schools are now closing in walls due to noise levels.

MLE pedagogy is driven by the philosophy of independent, active, decision-making learners – 21st Century learners – with teachers as the facilitators. There is evidence that a better physical environment improves learning, but no conclusive empirical evidence that MLE's have a positive or negative impact on engagement or achievement.

Classrooms may be open but teaching may not be. Traditional settings seem slightly better in achievement but slightly worse in creativity.

Open learning environments are *not* conducive to specialised curriculum teaching (*seen as pivotal by McPhail*) and should not be implemented due to noise, distractions, class size and an absence of any real positive benefits.

Full MLE schools have yet to reach projected rolls, despite population growth in their areas: Traditional schooling is still attracting most and have higher achievement rates.

Proponents suffer from *chronological snobbery*: That is, new educational approaches seem to be grasped and applied uncritically. Those with 'traditional' views can be made to feel out of touch or an obstacle to school improvement. It is hard to engage in critical discussions as people are made to feel unfit because they don't believe in what "everyone else" believes – 'the emperors' new clothes' syndrome.

MLE learning assumes ALL students:

- have an intrinsic desire to learn
- an ability to work hard
- an ability to set their own learning programme

Hattie and Yates however found that students aren't always 'born' to learn in ways we want and that the brain is a social machine learning by watching, imitating and interacting. We avoid thinking by using memories.

Learning proceeds quickly when it builds on what is already known (conceptual progression – McPhail).

Learning sometimes must be a grind – people who struggle can give up especially when in the company of others (*in an MLE?*)

- **Digital Technology** use achieves some positive learning outcomes but there is a need to manage the negative issue of shallow learning and dependency.

There seems a positive effect of digital technology when used appropriately (engagement and enjoyment of learning can improve) but it *does not* replace the need for quality instruction and good teacher practice.

There is no evidence that this generation of '**digital natives**' learns differently to any other generation. Developing digital skills is important, but how students learn hasn't changed nor are they better at learning.

Integrating digital technology into modern teaching is essential to prepare students for the future.

- Proven traditional teacher practice is still an **effective pedagogy** – i.e. direct instruction

Strategies such as integrated curriculums have not shown so far any real benefit in secondary school student achievement other than fostering collaboration and cross-curriculum links. However, values and Key Competencies can be more explicit in such classes.

Longer learning times seem to have some benefit:

- less pressure and rush: fewer transitions.
- more time for in-depth learning, thinking and a diversity of learning activities.
- more time to positively develop student - teacher interrelationships.
- need to plan and teach differently.
- students 'see the point' of learning.
- good for practical work and off-site learning.

But: if students miss a lesson they miss a lot.

There is a good case for a flexible timetable with a variety of learning times.

Cross-curricular learning can break down silos and improve engagement and collaboration. However, thematic approaches seem more effective in primary and intermediate settings. Key ideas and specialist knowledge can be lost in a secondary school and depth can be 'watered down' especially if the teacher is a 'generalist'. However, if the teacher is a specialist, one discipline can be over-emphasised at the expense of others.

Perhaps time is better spent in a secondary school on fostering greater collaboration *within* a faculty rather than across learning areas: (most relevant in larger schools).

Any traditional 'drill and repeat' is shunned by 21st C teachers – hard work and repetitive practice to achieve success is well recognised (Gladwell's 10 000 hours) – natural talent *won't* effortlessly float to the top.

Riley argues our brains are not designed for thought but rather avoidance – TV is better than a novel. If we too readily give students control over the pace of learning it invites them to avoid new or unfamiliar tasks. Such learning can be more meaningful but the role of the teacher directing and controlling is pivotal for successful learning and achievement. Well scaffolded support is better and personal mentoring and guidance is very effective in supporting learning and achievement. A *variety* of approaches is needed rather than one or other learning style.

Kevin Knight

Cost saving decisions (post-earthquake) are speeding the creation of flexible learning spaces (MLE's) as advocated by the 21st Century learning movement. Large rooms, with several teachers – an idea founded in discredited open plan schools of the 1960's and 1970's.

Digital devices with a heavy focus on teacher collaboration makes it “new” and sold as a brand new idea to government. Maori have been badly impacted by colonisation, especially in achievement. The mission of (the then) minister, Hekia Parata, was to improve educational success, through a collaborative culture – (this was similar to the rhetoric in 1960's and 70's in relation to improved learning for native Americans).

In reality it is more a money saving strategy (building big barns) with an educational philosophy tied together with a cultural thrust.

If teachers are highly competent *and* students by nature are self-disciplined there is creative teaching and strong outcomes. However, with regular, generally competent teachers and students who need more management, MLE's are unsuccessful. There are no studies and evidence is anecdotal.

Collaborative learning becomes off-task chat and learners are distracted by surrounding noise. Teachers take turns to interact while others take a break so teacher centred whole-class teaching actually increases. Some parents are withdrawing students to 'traditional' classroom schools.

The noise is never-ending – quiet reflection, where learning occurs, is not happening.

12. Additional Information.

Form Time, Period time, Contact time and the STCA

The current CSC timetable is constructed to give teaching staff *as near as possible* no more than 20 hours contact per week. This is achieved by having 55 minute periods and school shortened to finish at 3:05 pm.

However, a “standard” teacher teaches:

$$\begin{array}{rcl}
 5 \text{ Lines:} & 4 \times 5 \times 55 \text{ minutes} & = 1100 \text{ minutes} \\
 \text{Form Class*} & 3 \times 25 \text{ minutes} & = 75 \text{ minutes} \\
 \text{Activities} & 1 \text{ class} & = 70 \text{ minutes} \\
 & & = 1245 \text{ minutes} \div 60 = 20 \text{ hours and } 45 \text{ minutes}
 \end{array}$$

* This does not include 5 Form briefings ('considered Administration time') = a Total 50 minutes: and one Assembly of 25 minutes.

A proposal (in 2018) to address staff sentiment (in 2017) that there were too many (or too much time spent in) long form times resulted in the following Timetable suggestion:

P	Time	Mon	Wed	Fri	P	Time	Tue	Thur
Briefing	8:55 – 9:05	Briefing	Briefing	Briefing	Briefing	8:55 – 9:05	Briefing	Briefing
1	9:05 – 10:05	Line 1	Line 5	Line 2	1	9:05 – 10:00	Line 6	Line 3
2	10:05 – 11:05	Line 2	Line 6	Line 3	2	10:00 – 10:55	Line 1	Line 4
Interval	11:05 – 11:25	Interval	Interval	Interval	Interval	10:55 – 11:15	Interval	Interval
3	11:25 – 12:25	Line 3	Line 1	Line 4	3	11:15 – 12:10	Line 2	Line 5
4	12:25 – 1:25	Line 4	Line 2	Line 5	4	12:10 – 1:05	Line 3	Line 6
Lunch	1:25 – 2:05	Lunch	Lunch	Lunch	Lunch	1:05 – 1:45	Lunch	Lunch
5	2:05 – 3:05	Line 5	Activities	Line 6	Form Time	1:45 – 2:10	Form Time	Form Time
					5	2:10 – 3:05	Line 4	Line 1

Even this modest proposal has run into significant ‘head winds’ and would seem to make achieving the 20 hours contact even more difficult, without a compensatory mechanism.

Activities:

An Activities Period of 70 minutes operates every Wednesday after lunch. This is a CSC ‘tradition’ since foundation and was a solution to being a ‘bus school’. Most students left school at the end of the day on buses for home, so sports and cultural events such as the Musical Production needed time during the school day to practise and organise. Activities is the solution. In earlier days summer Activities were Period Four before lunch and in winter, Period Five after lunch. Now, Activities is always Wednesday Period 5. The time undoubtably has real benefit (particularly in regard to the ‘front’ of the NZ Curriculum) but there has always been an under-current of disquiet.

Concerns are:

- A reasonable chunk of time devoted to non-curriculum or unproductive 'extra-curricular'
- A significant minority of students who cannot find any Activity that interests them so are disaffected.
- Some Activities could be regarded as 'fillers' and hard to justify in a school programme. They might be 'fun' but are hardly the core business of a school. (e.g. Social Touch, Social Softball, Walking, Running, Fishing, Board games)
- Discipline problems that can arise due to disengagement and lack of boundaries – those least able to cope with a change in routine are often in the filler activities.
- Shortage of staff to take activities – it can be used as non-contact time to achieve maximum contact hours.
- The quality of programmes is dependent on what staff are prepared to, or able to offer; this can be variable and does not always match student needs.
- Decline in the number of sports teams that use this time to practise – much is done out of school time.

However, the data also shows that students generally put a high value on Activities as part of the CSC experience. And, many very valuable events are catered for in this time. These are largely in the performing arts – AIM, Production, Rockquest, Variety Show – and in *some* Team sports: Rugby, Soccer, Trapshooting – and other specialist Activities.

Other schools may well have time devoted in this way, but none of the schools visited or checked on-line in this study seem have such an Activities or Sports period.

NCEA Review and the “Six Big Opportunities”

The review will likely impact on any curriculum and timetable decisions we make. However, the response so far seems to vary from luke-warm to hostile. The review seems to be less about NCEA and more an attempt to broaden the up-take of 21st Century teaching and learning in schools. My view is the review fails to address any of the fundamental structural weaknesses in the system which contribute to over-assessment, and crippling moderation requirements. That is the Standards based system and the Internal – External interface. Much of the joy has gone out of teaching (and learning) in the senior secondary school. Exemplars, scaffolding of answers, teaching to the Standard, ignoring chunks of the curriculum are commonplace, resulting in a loss of subject integrity, rote learning and shallow learning.

The review seems to be based around projects and lacks a central theory of knowledge, as outlined by McPhail above. That is “a school should offer ***an epistemic ascent or conceptual progression moving from lower order to higher order understanding.***

Professor Elizabeth Rata has also recently provided a cogent argument against the thrust of the review, distinguishing between the 'knowledge-how' of projects and 'knowledge-that'.

“Starting with ‘knowledge-how’, with the project, hands-on approach, leads to the very rote-learning its supporters are, rightly, so opposed to. But there are deeper problems... without being taught the academic ideas behind the ‘doing’ we cannot generalise to other projects or situations. We are stuck in the one instance, in the here and now. We can apply skills, often quite advanced skills, but we can’t understand, let alone explain and justify why we do what we do.

It should concern us all that while New Zealand students are stuck in the Knowledge-how world of experience, the NCEA review is too.”

Summary

- Data from the student survey showed that students:
 - generally agreed that period times for many particular subjects were a little short.
 - Afternoon Form-times were a little too long.
 - saw a good deal of value in the Activities Period.
- The schools visited all had lessons for CSC:
 - A Trimester based timetable has considerable merit; increase flexibility and student choice; Some subject innovation.
 - Longer learning times have merit and we should look at some integration of these.
 - Many schools are reshaping Form-times as Tutor Time/Ako, focusing on assisting and monitoring student programme planning and learning.
 - Whatever pathway we as a school take needs to be carefully thought through, researched and a *large measure of consensus*. It needs PLD support and time.
 - Any changes should be tailored to solve our particular problem or challenge: use other models but don't uplift one from another context.
- The 21st Century Learning approach has many challenging and interesting points to make. It has informed curriculum, timetable and learning changes in several schools, particularly 'new' schools. However, most 'curriculum innovations' appear to be largely confined to Year 9 and 10. Timetables in these schools refer to SPIN, cross-curricula, interdisciplinary, projects, 'big projects' 'big learning modules and so on. Some schools have de-emphasised Level 1 but NCEA seems to be untouched, particularly at Level 2 and 3. Traditional course structures remain.
- The critique of the 21st Century approach raises several valid concerns:
 - the down-grading of 'powerful knowledge'.
 - the lack of a conceptual progression of knowledge.
 - the lack of any real evidence of the efficacy of this approach.
 - MLE's should be treated with caution.
- The suggested "Big Opportunities" of the so-called NCEA review seem to be lifted from the 21st Century Learning movement and the experience of a few new and innovator schools. The critique above, becomes even more pertinent.
- The experience of the changes made at CSC to Year 9 – 10 Options and the proposed changes to Form-times and period length is a little sobering. There seemed to be a tendency by staff toward identifying problems, perceived and real rather than looking for opportunities for innovation and improvements - could this be 'initiative fatigue'?

A Possible Timetable Solution for CSC:

Rationale/Aims

1. Provide more *useful/flexible* time for subjects.
2. Increase flexibility and *choice* in the Junior school.
3. *Reduce downtime/time* wasting in Form time.
4. Address *5 non-contacts/20 hours maximum*.
5. Foster *self-management* by students.
6. *Preserve* and build on the best elements of the *Activities* period.
7. Provide some *broader course* options.
8. Preserve *Peer Support* and *Peer Reading*.
9. *Reduce interruptions*:
10. Ensure *Time Equity* between subject Lines:
11. Space for developing *Digital skills*.
12. Keeping the '*one period after lunch*' pattern.
13. Keep the best aspects of *Peer Support and Reading and Form-time for specific levels and purposes*.
14. *Increase choice* for Year 11.
15. *Interval and Lunch at reasonable times of the day*.

A 'Seven Line' Timetable

Week One

Start Time	Monday		Start Time	Tuesday		Wednesday		Start Time	Thursday		Start Time	Friday	
8:55	Form Briefing	10	8:55	Form Briefing	10	Form Briefing	10	8:55	Form Briefing	10	8:55	Form Briefing	10
9.05	Period One Line 2	90	9.05	Period One Line 4	90	Period One Line 3	90	9.05	Period One Line 6	90	9.05	Period One Line 5	90
10.35	Interval	25	10.35	Interval	25	Interval	25	10.35	Interval	25	10.35	Interval	25
11.00	Period Two Line 4	50	11.00	Period Two Line 1	50	Period Two Line 6	50	11.00	Period Two Line 2	50	11.00	Period Two Line 3	50
11.50	Period Three Line 1	90	11.50	Period Three Line 5	50	Period Three Line 4	50	11.50	Period Three Line 7	90	11.50	Period Three Line 2	50
			12.40	Period Four Line 7 #	50	Period Four Line 1	50				12.40	Period Four Line 6	50
1.20	Lunch	35						1.20	Lunch	35			
1.55	Form Time	20	1.30	Lunch	35	Lunch	35	1.55	Form Time	20	1.30	Lunch	35
2.15	Period Four Line 3	50	2.05	Period Five Line 6	60	Period Five Line 2	60	2.15	Period Four Line 5	50	2.05	Period Five Line 4	60
END	3.05	370	END	3.05	370	3.05	370	END	3.05	370	END	3.05	370

Week Two

Start Time	Monday		Start Time	Tuesday		Wednesday		Start Time	Thursday		Start Time	Friday	
8:55	Form Briefing	10	8:55	Form Briefing	10	Form Briefing	10	8:55	Form Briefing	10	8:55	Form Briefing	10
9.05	Period One Line 1	90	9.05	Period One Line 4	90	Period One Line 3	90	9.05	Period One Line 6	90	9.05	Period One Line 5	90
10.35	Interval	25	10.35	Interval	25	Interval	25	10.35	Interval	25	10.35	Interval	25
11.00	Period Two Line 3	50	11.00	Period Two Line 1	50	Period Two Line 4	50	11.00	Period Two Line 5	50	11.00	Period Two Line 2	50
11.50	Period Three Line 2	90	11.50	Period Three Line 5	50	Period Three Line 6	50	11.50	Period Three Line 7	90	11.50	Period Three Line 3	50
			12.40	Period Four Line 7 #	50	Period Four Line 1	50				12.40	Period Four Line 6	50
1.20	Lunch	35	1.20	Lunch	35	Lunch	35	1.20	Lunch	35	1.20	Lunch	35
1.55	Form Time	20	1.30	Lunch	35	Lunch	35	1.55	Form Time	20	1.30	Lunch	35
2.15	Period Four Line 4	50	2.05	Period Five Line 3	60	Period Five Line 5	60	2.15	Period Four Line 2	50	2.05	Period Five Line 1	60
END	3.05	370	END	3.05	370	3.05	370	END	3.05	370	END	3.05	370

Rationale and the Proposed Timetable

1. Provide some more *useful/flexible* time for subjects, particularly practical work: (Longer Learning Times, One per Line, per week)
2. Increase flexibility and *choice* in the Junior school: (Some extra choices on Line 7, more if we could incorporate a Trimester Timetable)
3. *Reduce downtime*/time wasting in Form time: (Two form-times only; 20 minutes; but time available in Line 7)
4. Address *5 non-contacts/20 hours maximum* (Line 7; or Two lines off)
5. Provide opportunities to foster *self-management* by students (Supervised study; some – on Line 7 for Year 12 & 13 + extra study on other lines for Academic Year 13)
6. *Preserve* and build on the best elements of *Activities* ('Electives' options in Line 7: Opportunity to use Lunchtime) Line 7, Period Three Thursday: (90 minutes) "Guaranteed" access to students; Year 9 & 10: Keyboarding & Digital Literacy and Safety in First Block of 5/6 weeks, Term 1.
7. Provide some *broader course* options (Line 7)
8. Preserve *Peer Support* and *Peer Reading* (Line 7, Period 4 Tuesday instead of Form Time)

9. Reduce interruptions: (Give more time for Activities – ‘Electives’ but confine them to Line 7: EOTC for subjects could be targeted during their LLT)
10. Ensure *Time Equity* between subject Lines: (Over the Two Week Timetable: 440 minutes for all lines: necessitated a shift of some lines from sequence)
The Current timetable - each line over two weeks has $55 \times 8 = 440$ minutes.
11. Space for developing *keyboarding/digital skills* (Year 9 and 10 On Line 7)
12. Keeping the *one period after lunch* pattern.
13. Have some *flexi-time*: Line 7: # Period Four Tuesday: (50 minutes) Is essentially a ‘flexi period’ or hybrid between form-time/assemblies/Electives/curriculum. It could be used from time to time or every second week for: Roll Call and Full Assembly; Year 9 Peer Support (Week 1-6) OR Peer Support planning; Year 9 and 10 Peer Reading
14. *Increase choice* for Year 11 (Line 7 short and minor courses)
15. Interval is earlier and longer each day – food for learning.

There is no particular pattern to Line placement – they were shuffled to get the “average” Line placement similar for all lines.

	<i>‘Average’ Line Placement</i>	
	New	Current
Line 1:	Period 3	Period 2.8
Line 2:	Period 3	Period 2.5
Line 3:	Period 2.7	Period 2.5
Line 4:	Period 2.7	Period 3.5
Line 5:	Period 2.9	Period 3.3
Line 6:	Period 2.9	Period 3.0

Challenges & Possible Refinements

- Success or failure will turn on making purposeful and engaging use of Line 7. Also, if we can line up the Junior lines a bit better.
- Year 11: ensuring Line 7 is meaningful for the disaffected (those who presently don’t embrace activities or extra learning opportunities)
- Study time for Year 12: Supervision & the disaffected.
- Could start at 8.50 am to allow more time for lunch/interval/glide time.
- Pedagogy for LLT.
- Continuity for subjects in Year 9 and 10.
- Trimester Courses for Year 9 and 10.

Possibilities for using Line 7

Line 7 Half Trimester	Electives All Levels	Year 9	Year 10	Year 11	Year 12	Year 13
A Week 1 to Week 6 Term1	N/A (Camps, Octathlon)	Digital Literacy & Safety I (90) Peer Support (50)	Digital Literacy & Safety II: or Short Courses	Short Courses Year Long Courses (Minor)	Study Short Courses Year Long Courses (Minor)	Study Peer Support Short Courses Careers
B Week 7 Term 1 to Week 3 Term 2	AIM Sports Teams Electives	Electives Peer Support Peer Reading	Short Courses Option? Electives Peer Reading	Short Courses Year Long Courses (Minor) Electives	Study Short Courses Year Long Course (Minor) Electives	Study Short Courses Careers Electives
C Week 4 Term 2 to Week 10 Term 2	Production Sports Teams Electives	Peer Reading Electives	Short Courses Option? Electives	Short Courses Year Long Courses (Minor) Electives	Study Short Courses Year Long Course (Minor) Electives	Study Peer Reading Short Courses Careers Electives
D Week1 Term 3 to Week 6 Term 3	Variety Show Sports Teams Electives	Electives Option?	Short Courses Option Electives	Short Courses Year Long Courses (Minor) Electives	Study Short Courses Year Long Course (Minor) Electives	Study Short Courses Careers Electives
E Week 7 Term 3 to Week 3 Term 4	Sports Teams Electives	Electives Option?	Option? Electives	Short Courses Year Long Courses (Minor) Electives Exam Prep	Study Short Courses Year Long Course (Minor) Electives Exam Prep	Study Short Courses Careers Electives Exam Prep
F Week 4 Term 4 to Week 9 Term 4	Junior Electives	Junior Electives Option? Careers Outdoor Education	Junior Electives Option? Careers Outdoor Education	<i>Exam Leave</i>	<i>Exam Leave</i>	<i>Exam Leave</i>

“Course” for Year 11, 12 and 13 refers to curriculum or possibly cross-curricular studies. It is likely all of these courses would involve a limited number of credits from Achievement or Unit Standards.

Year 9: Basic Outline

	Line 1	Line 2	Line 3	Line 4	Line 5	Line 6	Line 7	
Quarter One	MATHS	ENGLISH	SOCIAL STUDIES	PED	SCIENCE	Taster	Digital skills, literacy and safety	Peer Support
						Taster		
Quarter Two	MATHS	ENGLISH	SOCIAL STUDIES	SCIENCE	PED	Taster	Elective	Peer Support & Read Elective
						Taster		
Quarter Three	MATHS	ENGLISH	SOCIAL STUDIES	SCIENCE	Taster	Taster	Elective	Elective
					Taster	Taster		
Quarter Four	MATHS	ENGLISH	SOCIAL STUDIES	PED	Taster	Taster	Elective Option	Elective Option
					Taster	Taster		

Year 10:

	Line 1	Line 2	Line 3	Line 4	Line 5	Line 6	Line 7	
Quarter One	MATHS	ENGLISH	SCIENCE	OPTION 1	OPTION 3	PED	Digital skills, literacy and safety	Careers
Quarter Two	MATHS	ENGLISH	SCIENCE	OPTION 1	OPTION 3	SOCIAL STUDIES	Elective	Elective
Quarter Three	MATHS	ENGLISH	SCIENCE	OPTION 2	PED	SOCIAL STUDIES	Elective	Elective Peer Read
Quarter Four	MATHS	ENGLISH	SCIENCE	OPTION 2	PED	SOCIAL STUDIES	Option 4	Option 4

APPENDIX

STUDENT SURVEY: Time & Curriculum Delivery

ALL answers are anonymous and confidential

Number	Question	Responses				
1	Year Level	9	10	11	12	13
2	Gender	Female			Male	
3	How important or worthwhile are?	Not at all				Very
	• Long Form Times	1	2	3	4	5
	• Activities	1	2	3	4	5
	• Assemblies (Level & School)	1	2	3	4	5
4	Many Schools have different lengths of time for classes, interval, lunch and form time: Rate the following:	Too Short		About Right		Too Long
	• Class Periods (55 mins at CSC) – all classes	1	2	3	4	5
	• 55 minutes for: <i>English</i>	1	2	3	4	5
	• 55 minutes for: <i>Mathematics</i>	1	2	3	4	5
	• 55 minutes for: <i>Science</i>	1	2	3	4	5
	• 55 minutes for: <i>Social Studies</i>	1	2	3	4	5
	• 55 minutes for: <i>PE & Health</i>	1	2	3	4	5
	• 55 minutes for: <i>Taster 1: Write Here</i>	1	2	3	4	5
	• 55 minutes for: <i>Taster 2: Write Here</i>	1	2	3	4	5
	• Form Briefing	1	2	3	4	5
	• Interval	1	2	3	4	5
	• Lunch	1	2	3	4	5
	• Long Form Time	1	2	3	4	5
	• Activities	1	2	3	4	5
	• 1 Hour Period Times	1	2	3	4	5
	• 90 Minute Period Times (1½ Hours)	1	2	3	4	5
	• 2 Hour Periods	1	2	3	4	5
5	Your work habits. Remember, this is anonymous so answer as truthfully as you can!	Very little				Lots
	• Time spent on Homework	1	2	3	4	5
	• Time spent working in class: <i>English</i>	1	2	3	4	5
	• Time spent working in class: <i>Maths</i>	1	2	3	4	5
	• Time spent working in class: <i>Science</i>	1	2	3	4	5
	• Time spent working in class: <i>Social Studies</i>	1	2	3	4	5
	• Time spent working in class: <i>PE</i>	1	2	3	4	5

	<ul style="list-style-type: none"> Time spent working in class: <i>Option 1:</i> <i>Write Here:</i> 	1	2	3	4	5
	<ul style="list-style-type: none"> Time spent working in class: <i>Option 2:</i> <i>Write Here:</i> 	1	2	3	4	5
6	In Year 10, English, Maths, Science, Social Studies and PE are compulsory. You also study two Options: If you had more choice, what would you like (or need) to have more or less class time on?	A Lot Less		Same		A Lot More
	<ul style="list-style-type: none"> <i>English</i> 	1	2	3	4	5
	<ul style="list-style-type: none"> <i>Maths</i> 	1	2	3	4	5
	<ul style="list-style-type: none"> <i>Science</i> 	1	2	3	4	5
	<ul style="list-style-type: none"> <i>Social Studies</i> 	1	2	3	4	5
	<ul style="list-style-type: none"> <i>PE</i> 	1	2	3	4	5
	<ul style="list-style-type: none"> <i>Option 1:</i> <i>Write Here:</i> 	1	2	3	4	5
	<ul style="list-style-type: none"> <i>Option 2:</i> <i>Write Here:</i> 	1	2	3	4	5
7	What subjects that we don't have at CSC would you like to be able to study? (List)					
8	<p>An alternative timetable (an example is outlined below) allows students to opt in and out of subjects, including compulsory and options three times a year. It is called a Trimester timetable where each trimester is about 12 weeks long.</p> <p>Some restrictions <i>might</i> be:</p> <ul style="list-style-type: none"> You may have to do 3 English Trimesters You may have to do at least 2 Maths Trimesters You may have to do at least 2 Science Trimesters You may have to do at least 2 Social Studies Trimesters You may have to do at least 2 PE Trimesters You <i>could up to 7</i> Option Trimesters (which could be a combination of 1 or 2 or 3 Trimesters per Option) <p>You could also however, choose subjects which interest you on <i>different lines</i> of the timetable in each trimester. This means you could be studying subjects with different groups of students, and not with your Form Class.</p>					
	<p>Have a look at Bart's timetable:</p> <ul style="list-style-type: none"> He has chosen one subject in each line for each trimester Over the year (3 trimesters) he has chosen 3 English, and, 2 each for Mathematics Science, Social Studies and PE He has chosen Art for the year (3 trimesters) plus 1 trimester each of DTG, Economics, Agriculture and Drama His English, Maths, Science and Social Studies classes are in different lines in each Trimester. 					
9	<p>Pretend this choice of Trimesters is available to you. See if you can select a course of study for Year 10 that would suit you.</p> <p>Note 1: The topics for each subject are made up so are not the topics studied at CSC</p> <p>Note 2: 'Open' courses anyone can choose, 'Foundation' courses are for those that struggle with a subject and 'Restricted' means you need to have proven ability in a subject.</p>					
		Much Worse		About the same		Much Better
10	As a first impression, how do you rate this Trimester Timetable compared to the CSC one?	1	2	3	4	5
11	Do you have any more comments or suggestions to make?					

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