

## Creating classrooms that will allow students to meet tomorrow's world

### Year 8 Parent Information Research and theory underpinning the HUB:

**"I never learned anything at school that was useful in real life" said a 40 year old.** Whether this is fact or fiction, the statement stands true in the mind of many. Secondary schooling and examinations are often perceived as being misaligned to the real world. At UHS our vision is to create meaningful connections for our students to live and learn beyond school successfully and that school is relevant, meaningful and productive.

*"The No. 1 thing that the company looks for is not I.Q. but learning ability. Candidates need to be able to process things "on the fly" and draw conclusions from seemingly unconnected info".*

*Laszlo Bock,*  
Google's Senior Vice President of People Operations

As a school, we are committed to delivering a quality education that prepares our students for tomorrow's world and this will be undeniably dependent on a structural change from the industrial model rows of desks and the teacher in the centre as the deliverer of knowledge. From 2019 the HSC will be fundamentally different, even to the point of 'open-book/source' examinations that will be much more than testing a student's recall of facts and equations. The assessment will be probing, assessing a student's ability to apply knowledge and skills, which leads to better retention of knowledge. Ensuring learning is relevant to our students is directly related to improving their understanding and skills. It highlights the need for us to understand educational practice development and continue to look for concepts and ideas that can be reinterpreted and re-imagined within the context of our school so that we can deliver quality learning experiences for our students.

In 2017, the school researched information and educational settings about future directions in education that prepare students to successfully move into the world. Our team of teachers made contact with a number of schools from within NSW and beyond, and also undertook a study tour to visit schools who were clearly innovating in spaces and pedagogy to align with teaching to support great learning. From this research, the team utilised the educational research, with particular reference to research coming out of Melbourne University and The Centre for Educational Statistics and Evaluation. As a school community this robust research underpins and informs our school vision to meet the growing needs of our school community.

#### **The Research is grouped under the following overarching themes:**

1. Future demands and future skills; the work force demands growth for non-routine cognition.
2. Alignment of our community's expectations of what we want for our young people; building both the hearts and minds of all students.
3. The HSC is different from 2019 onwards; preparing our students for future learning.
4. Spaces and student organisation to facilitate learning; rearranging the way we learn.
5. Teacher collaboration; building on the expertise of teaching.
6. Social and emotional learning; upskilling students to work and learn with others in a productive and meaningful way.

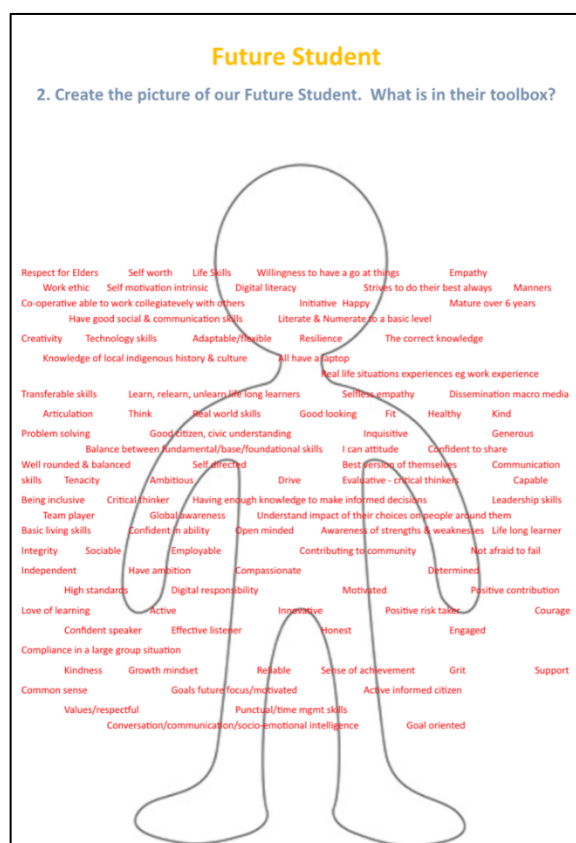
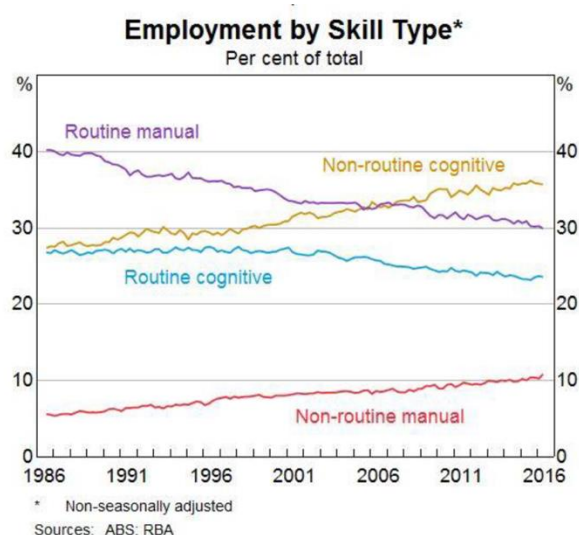
*\* This is not an exhaustive list, there are still many reasons that substantiate the need for change.*

## Details of Research and how this is illustrated in our school:

### 1. Future demands and future skills. The work force growth in non-routine cognition.

It is clear the demands of tomorrow's workforce is no longer based on the need for Routine-Cognitive roles, rather, it relies on the ability to move quickly with change, and be open to relearning; be creative. The need for skills dependant on the routine cognition is eroded, as employers need people who are creative, intuitive and self-starters. Such thinking is illustrated by Michelle Selinger in her research on *"Learning Hubs, Where Learning Takes Place in a Digital World"*, and on the future of geographically distributed, networked work and learning, and how this approach is enabling profound changes to organizations, communities, and individuals. It focuses on new models for learning and how institutions are adapting their infrastructures, propositions, and engagement modes to a digital world.

Michelle Selinger: [https://www.cisco.com/c/dam/en\\_us/about/ac79/docs/ps/Learning-Hubs.pdf](https://www.cisco.com/c/dam/en_us/about/ac79/docs/ps/Learning-Hubs.pdf)



### 2. Alignment of our community's expectations of what we want for our Young People.

Surveys, consultation and feedback indicate that our parents and community want future students prepared for the world with many skills and understandings that will serve them beyond school.

### 3. The HSC is different from 2019: A Stronger HSC

<https://educationstandards.nsw.edu.au/wps/wcm/connect/372e955d-9769-451b-80f7-f2e4844a89e2/stronger-hsc-std-current-state-future-state.pdf?MOD=AJPERES&CVID=>

In summary, the 2019 HSC examination questions assess depth of knowledge and application of skills.

School based assessment will be rigorous and encourages alternatives to exam-style assessments in schools to challenge students in different areas, and allow more opportunities to apply, rather than recite, knowledge.

CURRENT STATE	FUTURE STATE
Assessment tasks focus on essays and written exams	Students receive a wide variety of assessment tasks, such as presentations and speeches, projects, in-class problem solving, starting with English, Mathematics, Science and History
Take-home essays and test questions tend to replicate HSC examination questions	School-based assessment tasks evaluate the knowledge and skills not assessed in the end-of-year written HSC exams
Students report excessive stress. From a student's perspective, school assessments can be relentless, repetitive and stressful	Assessment tasks are capped to reduce relentless pressure and allow students more opportunities to demonstrate what they know
Too many assessments reduce the time students have to build a depth of understanding in a subject	A reduction in assessment tasks creates opportunities for deeper learning by students
Small numbers of students engage in negative practices such as plagiarism and cheating in school-based assessments	The cap on assessment tasks to reduce excessive student stress, coupled with tougher school-based assessment guidelines, reduces opportunities for plagiarism and cheating

The tendency for students to 'cram' for tests is often criticised for encouraging superficial learning and poor retention of knowledge. One way to change the nature of the examination is to allow students to use authorised references or other source material in examinations. Some researchers advocate open-book examinations as a means of testing more than a student's recall of facts and equations. The evidence suggests this method, when used with more probing and conceptual questions, allows for a more penetrating assessment of a student's understanding and ability to apply knowledge and skills, and leads to better retention of knowledge. This allows students and teachers the time to focus on mastering knowledge and skills (depth) rather than 'surface learning' across a range of topics (or breadth). Some assessments pose open-ended questions, which may not be directly included in the curriculum but require students to apply what they have learned in a new way. Teachers use real-life scenarios in their teaching to broaden students' application of knowledge and skills in authentic, rigorous and relevant situations.

Schools are traditionally charged with "delivering all of the content that a student might theoretically require in life". Instead, the changes advocate for teachers to help students "master the process of learning".

The Assessment processes and Strategies for the 2019 HSC have changed significantly and the examination will focus on fewer options in a subject allowing for more probing essay questions, testing students in-depth analysis and problem-solving skills.

#### **4. Spaces to align with learning.**

Research: Melbourne University is conducting rigorous research to validate the linking learning principles to place ... Teaching (pedagogical) activities require specific spatial qualities to be effective.  
<https://pursuit.unimelb.edu.au/features/rearranging-the-way-we-learn>

These modes have direct implications for learning settings design and learning success.  
<http://www.education.vic.gov.au/documents/school/principals/infrastructure/pedagogyspace.pdf>

Rearranging the way we learn – Research from Melbourne University.  
<https://pursuit.unimelb.edu.au/features/rearranging-the-way-we-learn>

Successful models being implemented across NSW Department of ED Schools, Campbelltown Performing Arts School, Kurri Kurri High School and Liverpool Boys, share a focus on spaces that enhance the modes of learning. The combinations of explicit teaching, one on one, revision, peer to peer, presentations, instructional, individualised, student directed activities, from enquiry learning through to incubators of creativity are being utilised to align our teaching to ‘the way the brain and heart learns’.

Kurri Kurri High School.

<http://www.nbnnews.com.au/2017/10/18/schools-challenge-educational-norms/>

#### **5. Teacher collaboration around the expertise of teaching.**

Variability in the effectiveness of teachers is one of the biggest impacts on student achievement. Teachers working together or what we call collaborative expertise, allows teachers to work together explicitly to improve their teaching through peer collaboration and feedback.

John Hattie’s Educational Research indisputably verifies that teachers collaborating together around the practice of teaching makes the biggest effect size difference.

These traditional staff learning structures are progressively replaced with an alternative paradigm that is about a more holistic design of school as a place where learning is endemic, and is viewed as a sustained collaborative enquiry towards the school’s educational mission. It is about staff sharing a common intellectual mission; a school viewing its practice as a subject of sustained study, its members as a source of learning, its context as a unique environment for the application of learning, and the public knowledge base beyond the school as a rich source of stimulus and expertise to be drawn in.

Reference: Feb 17 - <https://www.phf.org.uk/wp-content/uploads/2014/10/Engaging-School-Handbook-0.pdf>

## 6. Social and Emotional Learning

A 2011 meta-analysis looking at over 270,000 students, for example, found that students who participated in classrooms that provided varied opportunities for learning showed academic gains of more than 11 percentile points over those who had not participated. And a 2015 study between economists and Teachers College revealed an \$11 long-term economic gain for every \$1 spent on a rigorous SEL program. Common sense seems to track with the data: Students who operate within safe spaces and practice regular self-reflection are more likely to take academic risks, engage in collaborative problem solving, and be aware of their own strengths and weaknesses. Parents have always known it, and studies confirm that social and emotional skills can improve a child's sense of well-being and lay the groundwork for success throughout their lives.

*"There is a huge and growing body of research that shows that all great learning happens in social context,"* said Babs Freeman-Loft is, the Nashville district's project manager for social and emotional learning; *"So you really can't divorce the social and emotional from the learning."*

In conclusion, reviewing points 1 - 6 outlines the need for change in the present structure of classrooms, teacher delivery of lessons and the school's capacity to provide each student with an opportunity to build the skills and knowledge they will need to meet the critical thinking and applications needed for the HSC and the world beyond.

### **Ulladulla High School Innovative Learning Spaces for 2018:**

#### **The overview of Hub Learning implementation**

The vision and the implementation for 110 Year 8 students is to provide the opportunity to work in a structured collaborative space, facilitating an integrated teaching program, which is challenging, collaborative, inquiry based and attuned to the research of learning and success. Both Teachers co-teach in collaboration with all students. The space, the pedagogy (teaching) and the content builds skills, attitudes and knowledge for future skills. Explicit instruction about behaviour expectations is clearly communicated. Blue & Indigo and White & Violet are paired as HUB classes for 2018. The four KLA's, Math, Science, English and HISE, will be taught as combined classes (HUBs) for these students. There is a focus on literacy and numeracy progressions to facilitate the integration of syllabus outcomes and inform teaching strategies and spaces.

#### **Spaces are being transformed**

Presently we are utilising the lower level of the Library and G5/G6 'Google Room' as HUB spaces. Each space has been created into areas that align with learning. The school has utilised the existing furniture, however, additional furniture has been ordered to enhance the space, and will arrive this term. The Hub teaching team has been busily collecting feedback from students to make ongoing modifications to the spaces.

Additionally, the school is renovating a space in Q Block (including the removal of walls) to relocate one Hub from the library. Additional furniture is being added to this learning space and will be purpose outfitted within the school's budget.

## **Learning about learning**

On entry to the Hub each student was taken through a series of activities that opened up the metalanguage of HUB Learning; known as O Week – Project ZerO. This explicit teaching explored the functioning of the HUB and the management of the learning within the HUB. Such concepts, as Growth Mindset, Goal Setting, challenging students to understand themselves, self-reflection techniques, leadership, being a good listener and speaker, and critiquing and refining work were explored. The Project ZerO booklet was given to all students and will be available on our Website this week for Parent information.

## **Students have a Hub Mentor**

Each Student is given a Hub mentor to work with them on their educational Journey. The teacher to student ratio is 1 – 14. The mentor is the adult who is overseeing their educational progress, checking in on their development and ensuring the educational personal plan of their mentee is on track. This includes the creation and curation of a Digital Portfolio (or e-Portfolio) to showcase our student's works of excellence – a tool highlighted by leading educational researchers, such as Michelle Selinger, as transforming student learning.

## **Co- Teaching: Collaboration on the expertise of Teaching**

Two Teaching Teams exist for each class who teach together on two classes. There is incredible commitment shown by these teachers, already they have been spending their free time working alongside other HUB teachers, often resulting in 3 or 4 adults in the classroom at one time. Each teacher provides ongoing support for their colleagues who work alongside each other delivering substantive instruction. These teachers have worked together collaborating on projects to integrate their units to ensure learning is authentic, relevant and using future-focused skills.

## **The HUB Lesson**

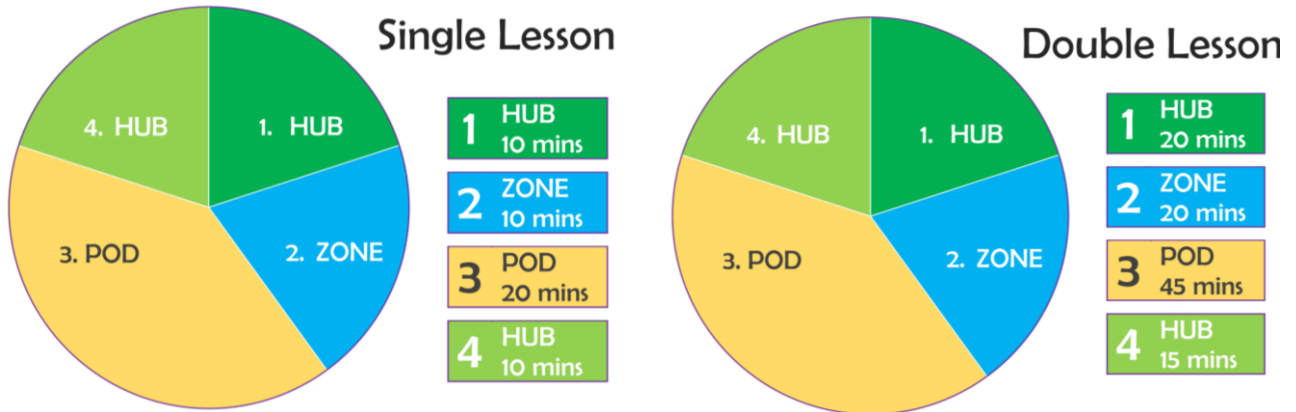
Each lesson is explicitly developed collaboratively with the HUB teachers, who discuss the outcomes of each lesson, and this is explicitly explained to each student. The lessons vary depending on the content, however the structure rarely changes, as the routine aligns to the fundamental principles of successful learning.

Each lesson is divided into four sections. The timing will change slightly depending on whether it is a single or double lesson, however the routine will always be the same:

**Hub-** This refers to the whole group. In this space we will discuss learning intentions for the lesson, plan and reflect upon our work. We'll start and end every lesson together.

**Zone-** This refers to smaller groups of about 5-6. In this space we will take a closer look at our content through master classes and targeted learning. This is a good space to ask questions if you're unsure.

**Pod-** This refers to either your individual work, or your work in a small group, whichever the project requires.



### Strategies employed in the HUB to facilitate student learning

**Driving Question (DQ):** This is the question that launches our investigation. You should be able to answer this question by the end of the creation process.

**Three before me:** The class is your best resource. You're surrounded by a group of people with very different skills and strengths to you. When you have a question, ask three people before you ask the teacher. We will also use 'three before me' when seeking feedback on our work.

**Flip Card:** When you move into your Pods it is the responsibility of each team to place a green/yellow card on their table. Green means your team understands what they're doing and do not require help. If your teacher sees the green card, they won't interrupt your work. If you have a yellow card facing up, it means you have questions and would like help when someone is available. Remember, you always do 'three-before-me' before turning a yellow card.

**Q+A Table:** If you do not understand the work, or require urgent assistance, during Pod time you will need to go to the Q+A Table. Here you will receive expert help from the teacher. Remember to implement three-before-me before coming to the Q+A Table.

**Technology:** Technology is an important part of our work in this room, however, we need to use it responsibly. Phones are to be placed in the phone dock upon entry into the room and left there for the lesson. When using your device, we have a strict 'no game' policy. A school approved laptop is the preferred device and you will need to bring this to every lesson.

## Frequently Asked Questions about HUB Learning:

Question	Response
Will my child get the attention he/she needs in a large class?	The ratio of student to teacher is no different to any other class across the school, realistically, your child will often have up to 4 adults in the room. Each student also has a HUB Mentor (one of the HUB Teachers) who will be your child's go to person on anything about the HUB Learning. If a student, or parent/carer, has any questions, concerns or would like to discuss their progress, please set a time with the mentor to discuss this and how we can help resolve it with you.
Why is Maths (and other subjects) not being streamed due to the HUB?	UHS does not stream any classes – except for stage 5 mathematics and one stage 4 selective class.
Is there enough adequate seating and desks to ensure students do not feel cramped?	Presently we are utilising the lower level of the Library and G5/G6 'Google Room' as HUB spaces. Each space has been created into areas that align with learning. The school has utilised existing furniture, however, additional furniture has been ordered to enhance the space, and will arrive this term. The HUB teaching team have been busily collecting feedback from students to make ongoing modifications to these spaces. Additionally, the school is renovating a space in Q Block (removing walls) to relocate one HUB, from the library. Additional furniture is being added to this learning space and will be purpose outfitted within the school's budget. Ongoing feedback is being taken to ensure students and teachers are comfortable, and flexible options are available for all students.
When do students sit on the floor? For how long?	Students sit together during HUB time – a mode of learning that signifies explicit teaching and reflection. Some students also choose to sit on the floor during POD time, where they are implementing the knowledge gained and practiced during HUB and Zone times. Students sitting on the floor will not be used for extended periods, as some students may feel significant discomfort due to a lack of flexibility. Students with medical concerns have already been provided with alternatives.
Which schools have trialled HUB's? Are they similar to our school setting or have they been selective or private institutions?	<ul style="list-style-type: none"> <li>○ Kurri Kurri High School - Fully comprehensive, co-ed school (the same as UHS)</li> <li>○ Campbelltown Performing Arts - half selective, half comprehensive, co-ed school (running across all courses for stage 4)</li> <li>○ Liverpool Boys HS - male comprehensive HS</li> <li>○ Project Nest – coalition of New Castle and Sydney schools focused on collaborative, futures-focused education in NSW (including support and professional development by leading</li> </ul>



	educators in NSW: eg. Pip Cleaves, Alice Leung, Bianca + Lee Hewes)
Where is the evidence to substantiate this change in structure?	Refer to the comprehensive research and reasoning outlined above.
How were the students/classes selected for the HUB?	Random selection – the same placement process by UHS' Teaching and Learning Support Team for all Stage 4 classes.
Are students selected into the HUB due to them being of lower ability?	This is adamantly not the case, the same selection and placement process by the Learning and Support team is applied across Stage 4 (see above point). Completely mixed ability classes as per UHS structure and planning.
Why were parents not notified prior to the HUBs commencement at the beginning of term	The information was delivered in a general sense through UHS' information channels. The school has rectified this with a comprehensive information brochure and 'Talk and Tour' night to informally gather with parents and students. This first cycle has been a learning journey for all involved.
Will the HUB be continued all year?	Yes, however, this is a very good question, as some other classes may also want to join the HUB. The school is evaluating this over the first semester, which will inform future decisions.
How will the progress of the HUB be monitored?	As with all teaching and learning programs at UHS, they are monitored. This will be monitored closely by the HT, DP and Principal. Student progress is monitored as per normal procedures. Parents/carers may also monitor their child/ward's progress through our Google Learning platform and Digital Portfolios.
Will the students be asked again to comment on their opinion of the HUB?	Feedback is constantly gathered from students on their learning styles, learning environments and learning progress; self-reflection is critical to student growth (both personally and academically). This process of reflection is carried out by teachers across all stages and courses, and adds to the process of revising units and teaching styles to ensure only the best practise is carried forward.
Why has the HUB not started curriculum work when the other classes have already begun? And will my child now be behind?	<p>The HUBs have begun with a 'learning how to learn' program (Project ZerO), which has facilitated their teachers getting to know the students, their learning styles, and entry and extension points for future units of learning. Other classes have had similar orientation lessons (all year 8 English classes for example), an essential element to understanding students and personalising learning.</p> <p>The program has been set to ensure all year 8 classes complete the same work and the same assessments - no child will be left behind.</p> <p><b>Learning about learning:</b> on entry to the Hub each student was taken through a series of activities that opened up the metalanguage of HUB Learning; known as O Week – Project ZerO. This explicit teaching explored the functioning of the HUB</p>

	<p>and the management of the learning within the HUB. Such concepts, as Growth Mindset, Goal Setting, challenging students to understand themselves, self-reflection techniques, leadership, being a good listener and speaker, and critiquing and refining work were explored. The Project ZerO booklet was given to all students and will be available on our Website this week for Parent information.</p>
<p>I am worried about the number of PBL projects, especially that they do not get individual marks. Some students do not do as much work as my child yet they get the same mark. Will the HUB be doing more PBLs than the other classes?</p>	<p>Project Based Learning (PBL) is a pedagogy - a way of learning - advocated at UHS, and used across all stages and courses in our school. Some faculties will employ whole cohort projects, and some teachers will conduct class specific projects. This is not mandated by the school. The HUB will learn course content through PBL, not in addition to.</p> <p>Group work and collaborative learning is a necessary skill, a life-long skill that we seek to ensure all our students master. In a number of projects/assessments, students do in fact receive individual grades, rather than group. However, all will have group grade components, as working with others is essential to successfully entering the community, university and/or the work force.</p>
<p>Will there be greater possibility of disruptive behaviour in such a large class?</p>	<p>The HUB structure operates like any other classroom, and unacceptable behaviour is treated accordingly. The focus on engagement, spaces to support learning and strong structures with collaborative teachers suggest that disruptive behaviour will be reduced. The school will gather data to verify or dispute this assumption.</p>
<p>Will two subjects be taught at the same time? Will students miss instructions or not understand what's going on if this happens?</p>	<p>No - two subjects are not taught simultaneously. Students are taught the necessary content and skills required in line with the Australian Curriculum. The HUB is benefitted by having teachers work collaboratively on this curriculum to find the natural links between content to better integrate student understanding in a way that is relevant to them and the world around them; thus personalising their learning to their needs.</p>
<p>My child will get lost in such a big class and not get the same individual attention as they do in a class of 30.</p>	<p>The ratio of student to teacher is the same as every other class in year 8. The specific structures of the HUB are also designed to minimise this threat, as are strategies such as the Q+A table.</p>
<p>My child does not like the HUB can they opt out and change classes?</p>	<p>You are encouraged to talk with the Mentor. The school also encourages you to have explicit discussions with your child about what learning looks like for them. Learning at times can be awkward, uncomfortable and challenging and it is not all about 'liking' the activity. If needed, the school will encourage contact with the school counsellor to see if there may be greater need to support your child.</p>
<p>Will there be too much noise in the rooms?</p>	<p>Normal classroom noise is to be expected. We expect students to discuss their answers with their peers and be productive,</p>

	however school behavioural policies are followed for any out of the ordinary disruptions.
Will this continue into Year 9? And will all classes be made into HUBs?	The school is evaluating over the first semester and this will inform future decisions.
A student who was advised by all last years' teachers to engage them with more questions was given a response of 'Have you asked 3 people yet?' Please explain what this means and is it a strategy?	One of the techniques in developing each and every student's capacity in any classroom is to use the "Three before me" strategy: <i>The class is your best resource. You're surrounded by a group of people with very different skills and strengths to you. When you have a question, ask three people before you ask the teacher. We will also use 'three before me' when seeking feedback on our work.</i> If students have specific content related questions, they will always receive the teacher's expertise.
Are there too many teachers giving instructions?	The model of teaching practised in the HUB is one of collaboration or co-teaching. Our teachers collaborate consistently to have a lead teacher and support teacher, only reiterating instructions when required to help focus students in need.
How are you keeping track of students learning?	HUBs are using Google Classroom and Drive as a digital platform to support and report on student learning. This allows real time feedback for students to progress their understanding of core concepts. Additionally, students are undergoing training in creating their own Digital Portfolios (e-Portfolios) through Google Sites to showcase, reflect and curate their own learning for discussion with parents/carers and as a portfolio of excellence for prospective employers/universities.