Welcome to the second issue for 2014 of the PYP Essentials – Sharing the journey.

Whilst reading through the IBO latest news and events, two articles stood out to me. The first one discussed a study by Deakin University detailing the research they had undertaken that demonstrated the strong academic foundation of students enrolled in IB early education. It focused on 3-6 year olds in the PYP programme and their higher levels of ‘learning skills’ and awareness of their own learning and personal development. It’s hard not to be impressed when hearing of students becoming so aware of such an important aspect in their own development at such a young age. I am sure we all have young students in our schools that impress us with their ability to understand how best they learn.

The second article focussed its attention on a National Assessment Program (NAP) in Science Literacy (SL) - a test usually conducted randomly. Again Deakin University gave this test to Year 6 students and compared the data with counterparts in other schools. The students in PYP schools performed brilliantly in both the ‘objective test’ and ‘practical task’. With all of us doing our best to implement the new science curriculum and its heavy content expectations, I thought it was positive to see how the previous work done was providing students with important scientific knowledge and that the success was in theory as well as practice.

I find it very heartening that we work in schools delivering a curriculum framework that is continually looking at itself to see how it can best serve students. We are looking at the world we live in and making sure that we provide students with the essential elements they need for the future.

Richard Curtis PYP Essentials Editor/Publisher

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Learner Profile in Arabic at Al Zahra College

Our students at Al Zahra College were learning the learner profile attributes in the Arabic language. Students enjoyed discussions about the meaning of the learner profile attributes and the different ways in which they can practise them in their everyday life. During Arabic classes students were asked to make connections to the learner profile attributes to enhance their understanding of them. We will continue to make connections and investigate the implications of the learner profile attributes to help make our students internationally minded. As we believe that practising these attributes will create responsible individuals in their community and the global communities too.

Angela Illiadis
Al Zahra College

Courage is being a risk taker; courage is doing something even though you’re scared; courage is moving outside of your comfort zone; courage is being prepared to make mistakes to learn something new. At Lindfield, courage is a tremendously important aspect of learning at all year levels. In Term 2, as part of Lindfield’s Positive Attitudes and Life Skills (PALS) program, boys in Year 6 taught their peers in Years K–5 about what the concept of courage meant to them.

After significant training and preparation, the Year 6 boys entered the classrooms with a sense of anticipation as they assumed the role of teacher. This exercise was both daunting and exciting for the Year 6 leaders as it required a significant level of courage on their behalf to get in front of the classroom and guide the younger boys. During the lessons, they did a wonderful job discussing and exhibiting what it means to have courage.

At Lindfield, courageous learning is promoted in all areas of school (academic, social, emotional,
physical) through a supportive and safe learning environment. Our Year 6 boys played an integral role in this as they set the tone in formal and informal situations. As educators it is often easy to overlook the importance of modelling in the classroom, but the older boys did an excellent job of modelling courage to their younger peers, who responded enthusiastically.

This activity proved to be a significant leadership opportunity for the Year 6 boys and their reflections on the lesson were invariably positive. According to Year 6 leader Finn Rose, “We found it rewarding to teach our PALS class with the help of the teachers.” Year 6 leader Tane Blessington learned the importance of preparedness and said the lesson taught him “how important it is to have a prepared lesson that is organised and interesting for our audience”.

Santa Sabina

**A Question of Science**

Our Year 5 students are working towards an understanding of the central idea ‘Scientific principles allow us to understand how materials can be changed or used.’ One of our goals for this unit of inquiry was to include as many hands-on science experiences as possible. We began the unit by carrying out experiments, chosen by the students, connected with states of matter.

Being mindful of allowing students to lead the learning, we decided to approach the investigation of scientific principles by asking the students to design an experiment to prove or disprove one principle. We selected seven principles, including the Greenhouse Effect, gravitational pull and entropy. The students developed experiments and recorded these, including hypotheses, methods and observations. They reported their findings back to the class group. Questions that arose from these experiments addressed misconceptions about the Coriolis Effect, which we were able to clarify through online research.

**Cross campus partnership with Science Department...**

The students had the opportunity to go to the science labs on our Secondary Campus where they worked through three hands-on experiments, with one of our Science Specialist Teachers, to investigate electricity, light and magnetism. The response from the students was very positive. Many commented that they were now excited about science in the years ahead of them! Natalie learned about the magnetism of different materials and Isabella learned about refracting light rays. From these hands-on experiences, a range of questions arose from the students. These showed that the students wanted to inquire further into why copper...
is not magnetic, why magnets attract and repel each other and how the weight of helium compares to other gases. Along with questions from our science specialist about infrared and ultraviolet light, we were able to consider these questions and use them to plan for further inquiry.

Reflection...

Through all of these hands-on experiences, Georgia learned that even if you fail, you are still learning and you can try again. Paris was curious about what each experiment would show and she enjoyed the opportunities to work collaboratively. We achieved our goals of engaging students in hands-on science experiences and using student questions to plan for future learning.

Our journey towards an understanding of International Mindedness...

Currently I am a Year 3 Classroom teacher at Santa Sabina College, and highly engaged and energized with the implementation of the PYP Programme.

One of the most significant aspects of the programme, the values that underpin all IB Programmes is the importance of developing in all students a sense of International Mindedness.

I appreciate that students’ learning allows them to reflect and think on a global level and that the programme enriches our College values and principles.

As we become more familiar with the Learner Profile attributes, in Yr 3 we explored how the attributes represent a peaceful world, allowing us to care for one another and for our planet.

In term 3, as a whole class we came up with a class understanding of what each meant for us.

This is what we developed:

- **Inquirer:** “When the question is hard you need To believe you can answer It……”“Thinking”, “Researching”, “Problem Solving”

- **Knowledgeable:** “Learning new things for enjoyment and new knowledge” “The more you know” “The more you grow”

- **Thinker:** “Thinking how to work out the problem and making sure it makes sense”

- **Communicator:** “Communication And Cooperation Are Important If You Want To Make A Difference Go On….You Can Do It!”

- **Principled:** “Keep the World In Sight and Remember…. Everybody Has Rights!”

- **Open-minded:** “Open Your Eyes to New Opportunities and Understandings”

- **Caring:** “Being Kind In Every Way” “Helping” “Asking Someone Lonely To Be Your Friend” “Shaking Hands” “Hugging”

- **Risk-taker:** “Try New Things” “Challenge Yourself” “You Can Do It”

- **Balanced:** “Keep Everything in Perspective” “Keep Looking Inside the Circle And Outside the Circle”

- **Reflective:** “Looking Back On The Experience And Comparing What You Know Now To What You Knew Before”

These were then composed into posters. The children also acted out what each attribute would look like in a photograph. Photographs were taken and then attached to the poster. Indeed, as a class we are developing a strong sense of ‘internationally mindedness’

*Alex Zahra Yr 3 Teacher Santa Sabina College - Del Monte Campus*
Attitude stars!

In our classroom this term we had our IB attitudes displayed as stars. The display lent itself to a slogan for the class to "reach for the stars". It also provoked us to think about how we could symbolize our goal of reaching for those stars, we decided that we would create our own arms, and then design them, so they represented us. We would then place them on the wall so that they are actually reached for the attitude stars. The class impetus led to an activity during one of our lessons where we had our partners trace our arms and hands. The students embellished their arms using aspects of their heritage, family history, talents, interests, language and culture. The activity drew wonderful responses and celebrated the rich culture and heritage that we have in our classroom. While many of the students chose to use the flags and colours of their national heritage, others chose cultural art such as henna tattoos.

Many students represented themselves through their interests in soccer, pets, and language. We continued the celebration of our rich international heritage with the appointment of a class culture and language leader. This student took on the responsibility of surveying the languages present in our classroom and creating a display that spoke about who we are as a class. This student will also continue to find ways to integrate our classroom languages into aspects of our lessons and displays throughout the remainder of the year.

Sonia Ahmad
Year 5/6 Class Teacher
Australian International Academy, Kellyville Campus

Refugee Provocation

“That’s not fair!” one girl cried as her family’s rations and supplies were taken.

“You have to let us cross the border...we need to escape the war!” pleaded another as she piggybacked her elderly mother.

“This is too hard. I can’t pass the citizenship test,” exclaimed another frustrated student.
‘Passages’ is a live simulation game designed by The UN Refugee Agency (UNHCR) to provide students with a hands-on experience of the challenges facing refugees. A simulation game is an ideal way to live and feel a situation so remote from the students’ daily lives. Year 6 used this experience as a provocation for a recent unit of inquiry, addressing the theme Where We Are In Place And Time and the central idea ‘Migration is a response to human circumstances and challenges’.

The provocation was a daylong event where participants adopted the roles of men, women and children fleeing from some terrible event or situation (war, persecution, famine). Each “family” experienced the challenges faced by refugees from the time they escape to the time they return home. Such experiences included:

- Fleeing a bombardment: The girls were blindfolded and required to find their other family members and travel together to a set meeting point.

- Temporary Shelter: The girls spent time in an overcrowded refugee camp. They could not speak or have any part of their body leave the marked boundary.

- Border Crossing: The girls had to get their family safely across the border (mini-obstacle course) without attracting attention. Once the family had crossed, they were faced with the challenge of correctly filling in identification forms in a language they did not know.

A final debriefing concluded our day and provided the girls the opportunity to express how they felt throughout the game, ask questions and consider our key concepts - causation and perspective.
The provocation was extremely effective in stimulating student interest, prompting questioning, arousing emotions and introducing key vocabulary that would be explored during the unit of inquiry. The live simulation encouraged the girls to recognise why people are forced into refugee situations, helped them to understand the problems confronting refugees and, most importantly, encouraged the students to take action on behalf of refugees.

The ‘Passages’ live role play may be accessed from http://www.unhcr.se/en/resources/forteachers/passages-role-play.html

Sarah Fredericks and Alyssa Scott
Year 6 Teachers
Tara Anglican School for Girls

Trinity Grammar School – Junior School

Central Idea: In a workplace people share responsibility towards a common purpose.

Every young boy at some stage in their childhood has the ambition to be a builder, banker, IT specialist or doctor. This year in Year 2 we continually reflected about the importance of working together as a team and how individual roles contribute to a team effort in achieving a positive outcome.

I was very fortunate to have several fathers give up their time to come and speak to the boys. Mr Yazbek (builder) enthusiastically discussed with the boys the processes and roles involved when a building site is in progress and the importance of everyone working together. Next up was Mr Kanaan (banker) who delivered an insightful summary of the importance of banks in society not just locally but also internationally and the role of the economy working together with banks. Mr Nicoaloa (IT expert) well prepared with an engaging presentation, used the interactive white board to highlight the important roles different people play in order to produce an animated video. Finally Mrs Innes along with her husband role played the important role of an anaesthetist in the hospital and how doctors and nurses work together to give a patient the best possible care.
The boys in Year 2 have continually discussed the presentations given by different parents this year. Involving parents in a meaningful way can’t be underestimated. “Research to date is substantial and conclusive - family engagement in children’s education positively influences their social, emotional, and academic growth and well-being.” (Sanders, M. 2014, p 9).

Shelley Richards - Year 2 - Trinity Grammar School - Junior School.


Trinity Grammar School Junior School

Student learning in Action

The PYP believes that an education needs to extend beyond the acquisition of knowledge and skills and should result in thoughtful and appropriate action. Indeed the measure of a successful inquiry is that it will lead to action. This action does not need to occur immediately and the nature of it can be varied. It might extend a student’s learning further or it may have a social impact. Of course action will look very different according to age, but the role of a PYP school is to challenge all of its learners to choose, act and reflect on their learning in order to make a difference in the world.

This term at Trinity Grammar School Junior School we experienced something that we have never tried before. A student professionally developed the staff on an issue he was clearly more knowledgeable about than many of us - Cyberbullying. Year 6 is currently participating in Exhibition and one student is inquiring into how science, technology and innovative can help solve the problem of cyberbullying. Simultaneously, the staff of the
Junior School has been learning more about Digital Citizenship and how to best cultivate it within our community. James decided to take action as a result of his learning. This term he presented to staff the findings of his inquiry into cyberbullying so far, in order to help deepen their understanding of the topic. His knowledge, passion and dedication to eradicating this issue were clearly evident and the staff was in awe of this. He certainly challenged the stereotype that a teacher needs to be an adult! What a wonderful opportunity for this 10 year old to take action and put into practice the Learner profile he has developed. What a privilege for us as a staff to see the culmination of our hard work developing young minds.

Carolyn Rhodes  
**PYP Coordinator**  
*Trinity Grammar School Junior School*

In the Kindergarten unit of inquiry *Animals go through a process of change* curiosity for *centipedes*’ ignited intrigue and a Mathematical investigation evolved. Students developed mathematical knowledge and skills using the centipede as a stimulus. Their achievements and level of inquiry was acknowledged at a state level,

Santa Sabina  
**Curiosity for centipedes ignites investigation...**

The PYP Curriculum Framework is providing for all stakeholders at Santa Sabina College cohesion and continuity for the learning – we are unified by the ‘common language’ it is giving us to communicate our understandings, discoveries, questions and wondering.

An inquiry approach to education is not new for us on the primary campus, through our mathematical programs we seek to engage students and staff in real life problem solving experiences and contexts. As such as a staff in our second semester of implementation of the PYP we are currently engaged in drafting units of inquiry, with an emphasis on authentic links with new Mathematics syllabus.
being awarded First Place in the State MANSW problem solving competition.

Background to inquiry...

‘A Carnival of Centipedes!’

This investigation was initiated in Term 2; the 
provocation a field trip to the IMAX theatre to view and participate in a film….‘A Bug’s Life.’

Upon returning to school, we were intrigued and curious about the Living Things ‘curiosity table’ – a collection of artefacts of various ‘arthropods’ (We know an arthropod is an invertebrate animal having an exoskeleton!).

“WOW what’s that one…it’s long, and has so many legs” inquired the students.

Indeed, the centipede attracted one and all!

Questions and wonderings about the centipede directed our learning for our Term 2 unit of inquiry “All living things go through a process of change.”

As such the centipede became the catalyst – the stimulus that allowed us to apply many mathematical strategies and discover new mathematical understandings, skills and concepts.

Our inquiry was directed by drawing on prior knowledge and ‘our’ questions, as reinforced by Dewey

“Inquiry questions can’t be framed ahead of time by teachers or curriculum experts. Students have to be part of creating the questions.” (Dewey)

Below is a ‘snapshot’ from the investigation....

Making Connections

Analysing information, looking for patterns, reviewing thinking, making meaning expressing new understandings.

What can we find out about the relationship between the segments of a centipede and the number of legs...Pattern Power!

Investigation continues...

Students attached legs and proceeded to count the number of segments and label using numerical symbols 1, 2, 3, 4, 5 segments etc.

Teacher: If we have 1 segment how many legs?

Students: 4 legs

Students counted by ones.

Teacher: If we have 2 segments, how many legs?

Students : 8 legs

(strategy: students counted on from 4)

Teacher: If we have 3 segments, how many legs

Students : 12 legs, (again counting on from 8)

Interpretation...

The students had in fact created a table of values for their respective centipedes- quite impressive work for Kinders- the power of high expectations!
Number of segments | 1 | 2 | 3 | 4
--- | --- | --- | --- | ---
Number of legs | 4 | 8 | 12 | 16

**Investigation ‘snapshot’ continue...**

**Acting and Applying**

Sharing new learning with others making a difference with my learning applying to new contexts creating/constructing/doing.

**Line of Inquiry 5**

**How long is a centipede?**

**Creating ‘Centipede Measures’...**

We returned to our artefact of the centipede and wondered what materials we could use to measure and describe its length?

We selected different length pipe cleaners and enjoyed creating ‘centipede measures’ of different lengths.

We found out that the length of the pipe cleaners remained unchanged if placed in a straight line, curved or twisted!

**Measuring using centipede measures (informal units)...**

Enthusiastically we used our ‘centipede’ measures to measure different items in the school library.

One group: Sarah, Hannah and Christian used a ‘short’ centipede measure.

Matthew and Alessandro used a ‘long’ centipede measure!

We decided to **measure the same 3 lengths** – library step, book, and library seat, so we could **compare our findings**.

Using insect stickers we then created a data display – picture graph to communicate our findings. **We found out that we all had different results / lengths for the same item measured!**

Hannah commented...

“**We need to use the same ‘centipede measure’ to get the same number!’**

**Indeed a finding....the need for a formal unit to measure.**

Curiosity for centipedes led to great engagement and motivation for Mathematics in a range of learning experiences.

Applying mathematical skills and knowledge in a real life –through a transdisciplinary approach allowed us to understand how Maths is everywhere!
Year Four Money Unit

$55...$60...$65...$100 SOLD!!

Year Four have been learning about fractions, decimals and percentages as part of our money inquiry in mathematics. For all of Term 3, students were credited with Cook’s Currency or Alagna’s Allowance for demonstrating excellence or debited money for minor offences. Each student had their own account book in which they recorded their credits (additions) and debits (subtractions) of decimals. This was all preparation for the auction to be conducted at the end of the term. Students brought in a variety of toys, books and puzzles from home to sell at the auction. They created their own advertisement which included discounts and best buy deals. Once they had picked the favourite items they wished to purchase, the auction was on! It wasn't your typical auction but each student had their own station which housed their advertisement and item to sell. It was all about haggling and bidding for the item to get the best price. Students demonstrated their knowledge and understanding of fractions, decimals and percentages and used an array of strategies for calculating their new balance. The boys were so excited; they would like to continue this for next term.

It was wonderful as a teacher to witness the excitement from the boys, so eager to participate in something so meaningful and purposeful.

Emma Cook
Year 4 Teacher
Trinity Grammar School – Junior School
Newington College, Lindfield

**Learning is Not About the iPad**

The use of iPads has become a welcome addition to the PYP framework at Newington. When used properly, iPads can be a great learning tool for boys and teachers alike.

Now more than ever before, boys are growing up in a world where information is all around them. It is the responsibility of teachers and parents to help our boys make sense of this information and ensure that their experiences with technology are positive. Through professional development opportunities teachers are able to better learn how to adapt their teaching and learning methods to accommodate the on-going changes in Information and Communications Technology (ICT).

Today’s classrooms are significantly different than they were five years ago. We want the students at Newington to be able to collaborate, solve problems, think creatively, show flexibility and be able to communicate effectively with one another.

Whilst the iPad is a great learning tool, it is still the job of teachers and parents to teach students how to be respectful, caring and passionate individuals.

Teachers at Newington strive to educate boys how to be inquirers, knowledgeable, thinkers, communicators, principled, risk-takers, balanced and reflective in their learning. The iPad is just a vehicle to help our boys achieve these learner traits. Whilst all of our Lindfield boys now have an iPad in the classroom, the use of the iPad must above all be driven by learning.

The use of technology in the classroom greatly enhances the boys’ experiences and ensures a connection with real life issues. Boys are given the opportunity to take some control over their own learning and begin to design and create solutions to particular problems.

The 1:1 iPad program at Newington is developing an approach that best suits the needs of our boys within a PYP Framework – we believe that it is a tool that is aiding the learning of our boys and enhancing their overall school experience.

Joel Weekes  
Year 5 Classroom Teacher / PYPC  
Newington College Lindfield K-6

**The King’s Preparatory School**

**Stage One Explore Shelters at The King’s School Prep...and More!**

Every now and again, you plan a lesson that you know your students will love, but quietly you know that it is going to make a huge big mess. I remember when we did some renovating at home a few years ago a builder said to me, “Jo, you have to crack the egg, to make the omelette.” I’ve often thought about this and realised how it relates to the world of inquiry and the PYP model.
The immersion lesson for our recent unit of inquiry about shelters was a reminder to me that as teachers, we also need to be risk-takers and step outside our comfort zone... and not be afraid to make that big mess!

The boys had brought into school, some sheets and blankets from home, but were not told what we would be using them for. When the lesson began, they were told that they needed to build a shelter that their group could fit into comfortably and sleep for the night. They were allowed to use anything around the room. Absolutely anything!

For the next hour and a half, 45 boys planned, organised, communicated, compromised and constructed structures that they then had to sleep in. There were successful moments, and there were certainly failures.

The conversations and questions during this lesson were both fascinating and exciting.

The next day we reflected using photos and discussed the ‘form, function and causation’ of the various structures that the boys had built. It wasn’t until the end of that lesson that we introduced the central idea.

The seeds had been planted, the boys were curious and the unit was rich and alive! It was a wonderful platform for expressive language and texts and helpful in discovering the world of area, perimeter, 2D, 3D and spatial maths concepts.

The immersion had worked and the boys were off and running.

Jo Grinham
Year One Teacher
The King’s School, Sydney

Cranbrook Junior School

Ian Kiernan, AO visits Cranbrook Junior School

A small group of Year 6 boys have been inquiring into various forms of pollution as part of their Exhibition inquiries. They contacted Clean Up Australia to see if there might be any primary source experts who they could interview to assist them in their research. They were delighted to discover that Mr Ian Kiernan, AO, the Chairman of Clean Up Australia had volunteered his time to meet with the boys late in Term 3, on September 17th.
Each group member busily prepared interview questions on a range of key PYP concepts such as change, causation, responsibility and perspective. They included:

- How is plastic changing our beaches?
- How can pollution and rubbish affect our land animals?
- Do you think micro plastics are increasing? What impact does this have?
- What do you think is the role of educating the public and how should it continue to be implemented?
- How do you think communities can continue to help promote Clean up Australia Day? Why don’t you do it more often?

Mr Kiernan remarked that the boys had developed impressive, detailed and multilayered questions and spent well over 90 minutes answering them, as well as discussing how Clean Up Australia was established. He stressed that this organisation is not his, but owned by ‘the people’. Mr Kiernan began Clean up Australia 25 years ago. The thought came to him in a simple way; when he was sailing around the world, he could not believe how dirty the world’s oceans were.

The boys were familiar with the idea of taking action as Ian did all those years ago. He rallied a group of people who all believed in his idea to ‘clean up’ and made the point that ‘cleaning up’ happens every day, not just once a year. Many people ‘clean up’ often. Even when people plant trees, they need to ‘clean up’ first. Clean up happens all the time, every day. Ian made it very clear to the boys that it is the youth who are teaching the older generations about litter and environmental change. They are our future.

Recycling is such an important thing. The main rubbish found in the oceans and around the streets are beverage containers. Plastics are terrible and contain oil. They are hurting our food chain, as the fish and animals eat them, and then we eat the fish and animals. Biodegradable plastic that is safe to use is expensive, which deters many companies from using it.

Mr Kiernan believes that the incentives of recycling in South Australia and the Northern Territory for a small amount of money is fantastic and has definitely made a difference in beverage containers being left around as rubbish. In fact, there has been an 85% reduction in these areas. He encouraged the boys to take action to support the introduction of deposit recycling schemes in NSW.
The, 20-21st September is Clean up the World weekend. He encouraged the boys to join in this initiative and register to participate with him.

Mr Kiernan believes that as a scientist, it’s all about formulae. He reiterated the idea of $E = 1$. The environment comes first. He made us repeat it after him a number of times.

The boys were so encouraged and were really inspired to believe and understand that they are the future, and it is up to them to spread the word to continue to make a difference. The boys invited Mr Kiernan to attend Exhibition 2014 to see the culmination of their inquiries. We are very grateful for his time and wisdom.


*Article written by Jacqueline Brewer and Michaela Allen Waters – Year 6 Teachers*