NAPLAN 15

Newsletter: August 2015

To keep teachers informed, please post this newsletter on staff noticeboards.

Class and school reports are now available on the NAPLAN portal: https://naplan.qcaa.qld.edu.au/naplan/.

For any queries or changes to the results, please lodge an appeal through the test administration page of the portal. All appeals must be received by Friday 18 September.

Student reports

By now, most schools will have received their student reports. Please check them before sending them home. For further information, see the July newsletter and memo 035/15.

Request for additional copy of student report

All schools will now be able to access this form all year round via the NAPLAN portal. Once you have logged in with your school BIC and password, select *Forms* from the list on the left. You will need to complete one form per student. The QCAA will process the application and send the report via Australia Post for you to pass on to parents/carers.

Marking in 2016

Training as a marker and marking the writing responses is one of the best professional development opportunities in writing. If you would like to join the marking team, please go to the QCAA website: www.qcaa.qld.edu.au/MAO/login.jsp to apply through Marker Applications Online.

Problem solving through problem posing


Presented by Claire Stanley

Through problem posing, students develop confidence in mathematical knowledge, procedures and skills. They learn how problems are constructed and deconstructed, the reasoning behind the structure, the strategies for engaging and ways to talk about the problems so they make sense to problem solvers.

Teachers can introduce students to problem posing through structured learning opportunities and gradually reduce the scaffolding until students can build problems in the free category.

Research suggests three categories of problem posing:

1. structured
2. semi-structured
3. free.

Structured means changing an element of the problem: numbers, context, unknowns or wording.

Semi-structured means finishing a problem by:

- completing an open-ended problem
- using a given strategy or process
- starting from a given answer.

Free means students create their own problems.

On the next page is a table to help teachers work through the stages with their students.

Supporting problem posing		
Categories	**What students do**	**What teachers say**
Structured	Students construct a new problem that relates to an existing problem or solution using one of the following methods by Polya (1957): 1. keep the unknown and change the data and the condition 2. keep the data and change the unknown and the condition 3. change the unknown and the data.	*What if the number was ____?* *Change the wording of the problem (syntax) and keep the same reasoning and solution. Tell me if you think it is easier/harder to understand.* *Change the wording of the problem (syntax) and investigate what happens to the problem. How is it the same as the original problem? How is it different to the original problem? How has the reasoning used to solve the problem changed?* *Make a problem with the same mathematics as this problem.* *If this ___ changes, how does it change your reasoning/procedures/operations?* *Pose problems that use different representations in the solution.*
Semi-structured	Students are given an open situation and asked to finish posing the problem. They use known mathematical knowledge, relationships and processes from previous mathematical experiences.	*Look at this data display. Tell me some questions you might ask your friends to solve about the structure/relationships/comparisons within the data set.*
	Students work backwards from the answer and pose the problem.	*Here is the answer. Tell me all the questions that have ___ as the solution.* *Sort those questions into routine and non-routine problems.* *Make some problems that are single-step and some that are multi-step.* *Make problems that use known mathematics.* *Make problems that use a particular reasoning strategy.* *Make a problem that requires thinking about a relationship between at least two components.* *Use these multiple choice responses and work out a context and a question.*
	Students work from a visual (picture, diagram, graph, equation) involving mathematics.	*Use the visual and write a problem about it.* *Write a problem so that the solution is the mathematics of the visual.*
Free	Students generate a problem from a natural or contrived situation.	*Write a mathematics problem for the class to solve. Think about what mathematics you want to use in the problem.* *What mathematics question do you think you could ask if you were writing a question for a competition?* *Make up a mathematics problem that is simple/ difficult to solve.*