THE SCIENCE behind
THE ART OF TEACHING
Evaluation as foundation and inspiration
“...a great teacher is a great artist...Teaching might even be the greatest of the arts since the medium is the human mind and spirit.”

Steinbeck, J. (1955)
Writing Slope

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Communities place high expectations on teachers
Teacher motivations

Source: OECD, TALIS – Australia Country Note 2018
All effective teaching uses evaluation, and uses it consistently.
Teachers are at the forefront of change
Assignment - 20 marks

Topics covered in first term -

1. Something’s Burning - a chemistry based topic dealing with the combustion process, fuels, fire safety and chemical reactions which happen in burning.

2. Flowering Plants - a biology based topic dealing with the importance, structure and functioning of plants.

ASSIGNMENT CHOICES - select one

- Compare and contrast the fuels that we use
- Modern methods of fire fighting and prevention
- What would the Earth be like if the atmosphere contained not 20% but 40% oxygen?
- Applications of Burning. What are some of the important uses of burning?
- Make a model flower, with all its parts and give an explanation to what each part does.
- Design a poster or write a report on how different plants adapt to different environments eg rainforests, deserts, mountains.
- Press some Australian flowers and identify them. This should include their scientific name and where they are located in Australia.
Year 8 Science
The evolution of assessment
Learning progressions
“With clear connections between what comes before and after a particular point in the progression, teachers can calibrate their teaching to any missing precursor understanding or skills revealed by assessment, and determine what the next steps are to move the student forward from that point.”

Brightpath - Poynter Primary School, WA

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Most teachers in the school provide practical support to each other for the application of new ideas (% of Teachers who either agree or strongly agree)
OECD Education 2030 Framework

Australia has relatively fewer students at the high performing level compared to the top countries.

Percentage of Students at Each Performance Level (Mathematics)

Low Level Performers (Levels 1 and below)
- Australia: 65
- OECD Average: 64

Middle Level Performers (Levels 2, 3 and 4)
- Australia: 67
- OECD Average: 63

High Level Performers (Levels 5 & 6)
- Australia: 15
- OECD Average: 12

Top 5 Countries by Performance:
- Shanghai: 56
- Singapore: 41
- Chinese Taipei: 52
- South Korea: 62
- Hong Kong: 60

Source: Australian Council for Education and Research (2013) PISA 2012: How Australia measures up
Australia has relatively fewer students at the high performing level compared to the top countries.

Percentage of Students at Each Performance Level (Scientific Literacy)

A 5% increase in PISA Scores Leads to $12 billion to $26 billion increase in Australia’s GDP by 2066

Source: World Bank, GDP data series and OECD, PISA 2015