Building a future-oriented science education system: Are we nearly there yet?

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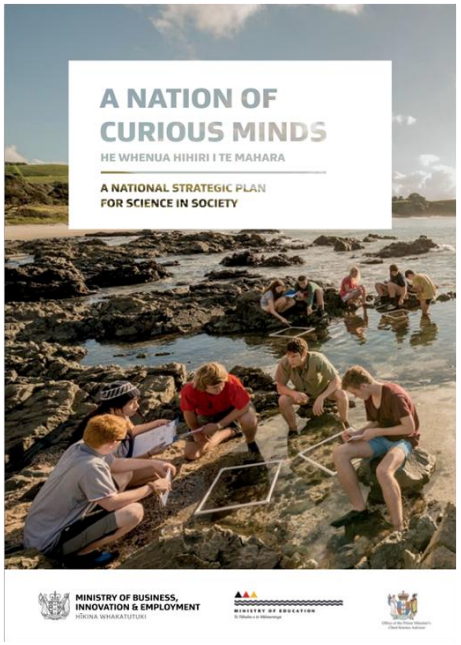
New Zealand must embrace science and technology and innovative thinking as a core strategy for its way ahead. [T]here is no doubt in my mind that a population better educated in science, whether or not they will actually use science in their career, is essential. (Gluckman, 2011, p8)



Recent research

- We are not doing as well as we could;
- We are probably producing enough science graduates for current needs but not our future needs;
- We are not producing a scientifically literate society.

TIMSS 2010-2011

- NZ has a relatively high proportion of very low achievers.
- Māori and Pasifika learners are disproportionately represented in this group.
- Students with lower socio-economic status (SES) had lower achievement than students with higher SES.

PISA

- NZ's average scores in mathematics, science and reading have declined since 2009 but are still above the OECD average.

- Compared with earlier cycles of PISA there are larger proportions of NZ students with low performance in mathematics and science.

New Zealand studies

NMSSA :

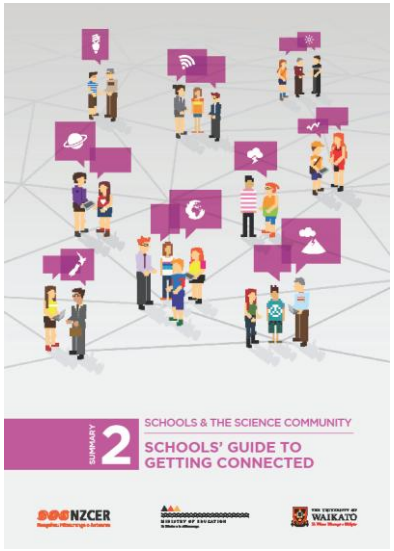
- Students in high decile schools do better than those in low decile schools.
- Year 4 students are more positive about science than Year 8 students.

ERO:

- Effective science teaching in less than a third of the primary schools reviewed.
- Science seems a low priority in primary schools.

Recent policy initiatives include PLD and research

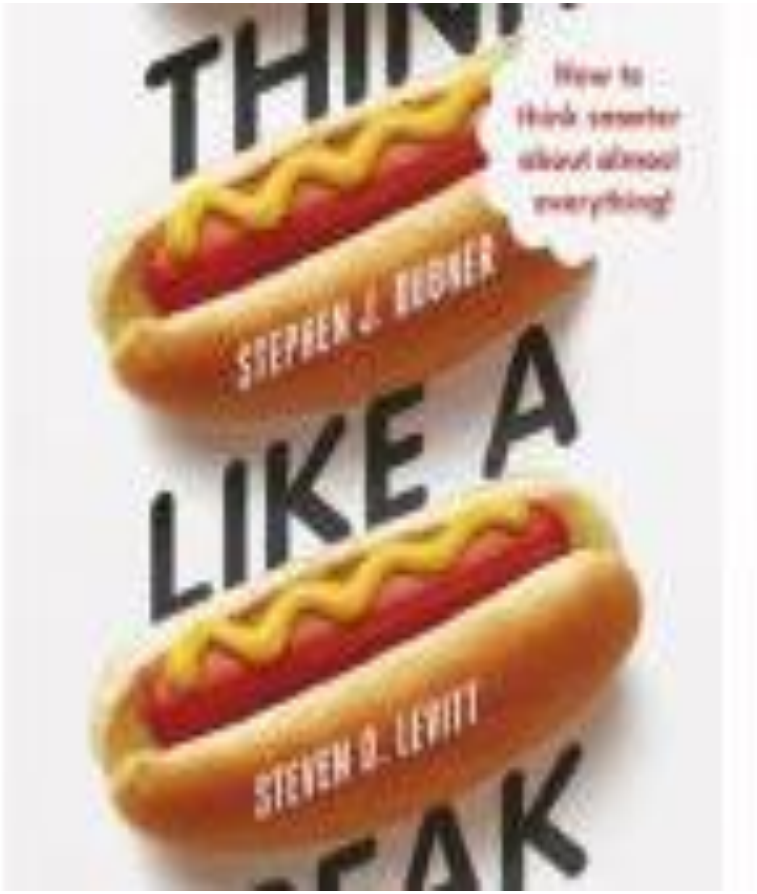
- E-learning in science
- School - science community engagement
- Curriculum support



http://scienceonline.tki.org.nz/New-resources-to-support-science-education

Where to now?

Asking different sorts of questions can help us think differently.



Making it happen