## Primary School Curriculum Development

(Submitted by Berrin Schofield, 2017, while serving as Teacher at International School of Havana, Cuba)

<table>
<thead>
<tr>
<th>Tool(s) used:</th>
<th>• Systems Iceberg</th>
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| Purpose of using tool: | • Research  
• Generating Questions  
• Synthesizing Thinking  
• Guiding Discussion |
| Context of lesson/case study: | Science curriculum review |
| Participants (# and description): | Primary School Curriculum Development team |
| Topic, Theme, or Key Understanding of unit/project: | Despite previous attempts to improve the situation, students that move from the Primary School to the Secondary School are considered by secondary teachers as being “weak” to “very weak” in science. |
| Length of unit/project: | 4 weeks |
| Resources/materials & setting required: | A laptop and a projector |

**Lesson Plan/Description of the Project:**

- We have been here before: the lower school teach science, the student learn science and secondary school science teachers still say they cannot do science when they get to grade 6.
- SOMETHING IN THE SYSTEM IS NOT WORKING!
- See the evidence for a more complete description of what we found out. Frankly I could write an essay on this it is fascinating – short story: The problem is not bad teaching but a fundamental misunderstanding about what science is. Primary teachers do not necessarily know what is and what is not a scientific question and how to ask them. Also the curriculum, probably created by experts that already know, is not overly helpful in ensuring teachers know it and students learn it. The nature of science is implicit not explicit.
- Information was gathered from primary teachers, secondary science teachers and curriculum documentation.

**Reflection**

**Plusses (Things that went well):**

- This approach was very clarifying without being confronting because there is no fault, only different knowledge frameworks.
- The process exposed weakness in the curriculum and the supporting documentation in developing a scientific approach to finding stuff out.
- Everybody was doing the right thing and have been for years hinting at a systemic failure, the process not only found it by suggesting which questions needed to be asked to whom, but provided a clear solution.

**Challenges (Things I would change):**

It is not always easy to challenge the knowledge structures of teachers particularly when looking for a way
to address preserved shortcomings in one group as preserved by another. By looking deeply at the structures that have created the knowledge and pedagogy of lower school teachers it becomes very clear that it is the system not the individuals that has the fault.

**Suggestions for other practitioners and educators:**
This is a powerful tool to find the underlying often hidden causes of systemic shortcomings.

**Evidence and Resources:**