

Improving Problem Solving in Mathematics through Inquiry-Based Learning

Royal Society, 6-9 Carlton House Terrace, London SW1Y 5AG

Monday 11th November, 2013 10.00 – 3:30

The new national curriculum and proposed GCSE assessment objectives cite the importance of developing problem solving and modeling in schools, yet these aspects remain missing in most classrooms. This one-day event draws together a number of development projects from England, Europe and Japan to explore how we might better support pupils in developing problem solving strategies through inquiry-based learning (IBL) in mathematics. The day will include opportunities to learn more about important developments in teaching and learning and contribute your own views in workshop sessions.

Speakers include: Professor Malcolm Swan; Geoff Wake, Associate Professor of Mathematics Education, University of Nottingham; Keiichi Nishimura, Associate Professor of Mathematics Education, Tokyo Gakugei University; Charlie Gilderdale/Alison Kiddle, NRICH; Andrew Hall, AQA.

Programme

10:00 - 10:30 Arrival and coffee
10:30 - 10:40 Introduction and overview of the day

Theme A: The nature and characteristics of IBL and PS

10:40 - 11:10 Lessons from PRIMAS and NRich
11:10 - 11:50 **Workshop 1:** How can we recognize and develop student learning in IBL and problem solving? What does progression look like?

Theme B: Professional development for IBL and PS

11:50 - 12:20 *Lesson Study* in Japan and the UK;
Learning from *IMPULS* and *The Bowland Lesson Study Project*
12:20 - 1:00 **Workshop 2:** What do we know about teaching and learning problem solving? How can we sustain professional development in these areas?

Lunch

Theme C: Creating the climate for IBL and PS

1:45 - 2:15 Assessment: How can we better assess problem solving?
2:15 - 2:30 Policy: How can we influence policy?
2:30 - 3:10 **Workshop 3:** How can assessment better support teaching? What other initiatives can we take?

Future possibilities

3:10 - 3:30 Future projects: Mascil, Nuffield Lesson Study
3:30 Tea and depart