

Early Childhood Pedagogy in the Context of Curriculum Renewal

A Focus on Mathematics

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Workshop Learning Outcomes

- ▶ revisit good pedagogical practices in early childhood classrooms
- ▶ consider good pedagogical practices in early childhood mathematics
- ▶ consider strategies that can be effective in supporting children's mathematical learning in infant classes and which can assist in implementing the prescribed curriculum

Our Beliefs

- ▶ Young children
- ▶ Learning
- ▶ The Teacher

What matters in terms of early learning

- ▶ Rich imaginative learning experiences, including sustained complex play
- ▶ First hand learning experiences (active learning indoor and out)
- ▶ Sustained purposeful talk (promoting sustained shared thinking)
- ▶ Assessment in everyday activity

Making learning visible

When we work with children, when we play and experiment and talk with them, when we watch them and everything they do, we are witnessing a fascinating and inspiring process: we are seeing them learn. As we think about what we see, and try to understand it, we have embarked on the process...that I am calling assessment ...Assessment is part of our daily practice in striving for quality.

Mary Jane Drummond, (2012, p. 12)

Realistic assessment

...as part of their daily lives in classrooms, teachers set themselves the grossly unrealistic task of trying to see and understand everything. Inevitably we fall short. Inevitably we see more of some sorts of learning than of others, more of some children and less of others, more of one aspect of the curriculum and less of others that are not currently, at the front of our minds.

(Drummond, 2012, p. 49)

Curriculum Renewal: International Trends

Walsh 2018

- ▶ a shift towards flexibility in interpretation and enactment of the curriculum at a school level (Walsh p.14)
- ▶ a strong emphasis on providing guidance and support for teachers in relation to effective pedagogies (p.15)

Mathematics Pedagogy (3-8years)

Five (general) pedagogical practices essential

- ▶ Promote maths talk
- ▶ Develop positive dispositions
- ▶ Emphasise mathematical modelling
- ▶ Use cognitively challenging tasks
- ▶ Assess as children engage in mathematics

Research Report No. 18

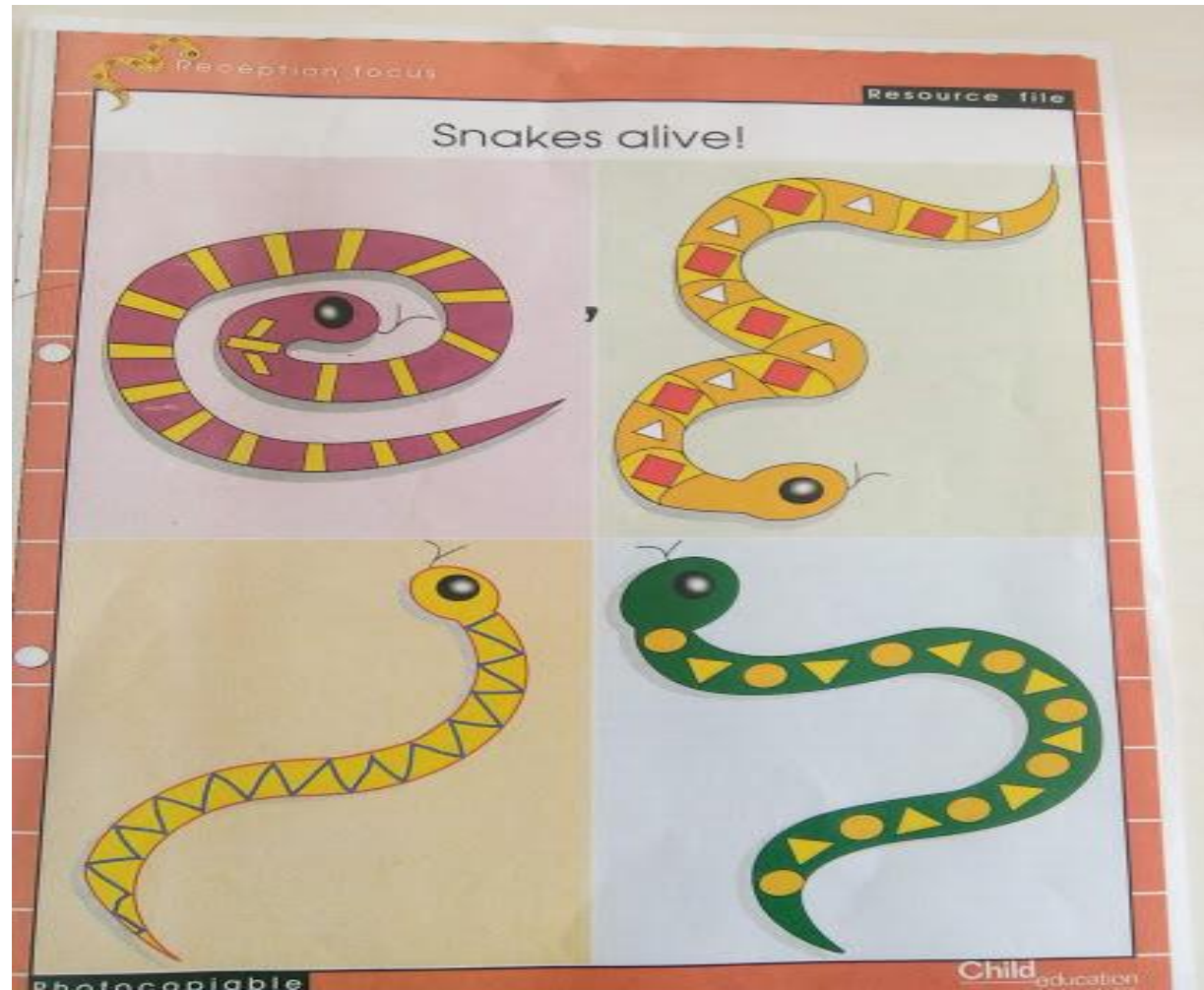
Mathematics in Early Childhood and Primary Education (3-8 years)

Teaching and Learning

Thérèse Dooley, Elizabeth Dunphy and Gerry Shiel

With Deirdre Butler, Dolores Corcoran, Thérèse Farrell, Siún NicMhuiri,
Maura O'Connor, and Joe Travers

International Advisor: Professor Bob Perry



Play activity: Making snakes with playdough

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Children engage with a realistic task ...How to see who has the longest snake

Teacher

- ▶ clarifies for the children the attribute of length (gestures, language)
- ▶ mathematizes the activity of the children ...introduces the language
- ▶ bridges informal understanding with the construction of more formal ideas
- ▶ sets the scene for further development

Big ideas (of measurement)

...convey **key mathematical concepts, skills and processes** which are interconnected within the domain of measurement and across the other domains

Teacher research will reveal

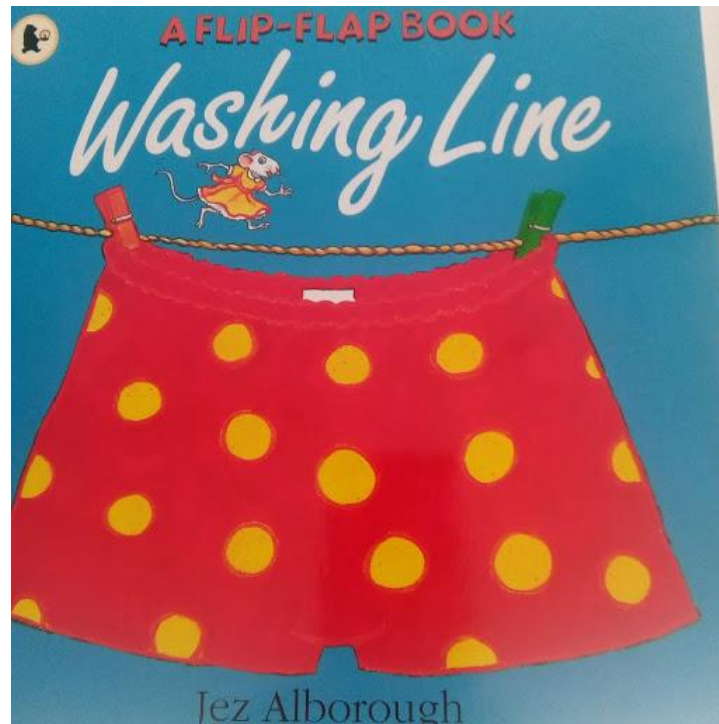
- ▶ Different attributes can be measured, even when measuring a single object
- ▶ All measurements involve a fair comparison
- ▶ Quantifying a measurement helps us describe and compare more precisely

Assessment in everyday activity

The teacher

- ▶ sees children's learning, seeks to understand it and puts this understanding to good use (Drummond , 2012)
- ▶ recognises a range of assessment contexts in which assessments can be carried out
- ▶ uses a range of assessment methods and tools...Fitness for purpose relative to a particular focus, context

There are different kinds of Big!!



TITCH

by PAT HUTCHINS



Sharing Picture Books

- ▶ Integration
- ▶ positive dispositions
- ▶ engagement in maths talk and cognitively challenging tasks
- ▶ Engagement in modelling problems... activities that involves authentic situations that can be interpreted and described in mathematical ways (Lesh and Harel, 2003)

**You'll Soon
Grow into Them,
Titch** by Pat Hutchins



Play-based learning

...a continuum that incorporates varying levels of adult involvement in play. Child-directed activities (free play) are situated at one end of the continuum while teacher-directed play (learning through games) falls at the other end, with mutually directed play (collaboratively designed play) falling in the middle (Pyle and Danniels 2016)

...educators negotiate a balance between allocating time for uninterrupted free play and embedding or extending academic content in different ways within **playful** activities to support children's learning.

(Danniels and Pyle, 2018)

Maths Through Stories

[HTTPS://WWW.MATHSTHROUGHSTORIES.ORG/](https://www.mathsthroughstories.org/)